

BibTeX-File `nhgbib [3].bib`:

## References

- XX-7 [1] Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: IEEE Standard 802.16e.
- ga58 [2] Proprieta di alcune classi di funzioni in piu variabili. 7:102–137, 1958.
- 92 [3] Information Technology Digital Compression and Coding of Continuous-Tone Still Images Requirements and Guidelines, ISO/IEC 10918-1, ITU T.81. 1992.
- saulwa98 [4] Interpolation and extrapolation using a high-resolution discrete Fourier transform. 46(1):31–38, 1998.
- 02 [5] Information technology – Multimedia content description interface, ISO/IEC 15938-1:2002. 2002.
- XX-3 [6] IEEE Standard 802.11a-1999(2003): Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, 2003.
- XX-4 [7] IEEE Standard 802.11g-2003: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, 2003.
- 07 [8] Quasiuniversal in  $l^p_{[0,1]}$  orthogonal series. 3(2):139–150, 2007.
- 08 [9] 3GPP TS36.300: Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN): Overall Description. 2008.
- [10] *to appear in Appl. Anal.*, page 16, 2009.
- 09-2 [11] 3GPP Release 7 HSPA+ (Evolved HSPA) Network Migration Analysis. Jan. 2009.
- 09 [12] A Convolution and product theorem for the linear canonical transform. *IEEE Signal Processing Letters*, 16(10):853 –856, 2009.

- XX-6** [13] IEEE Standard 802.11n-2009: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, 2009.
- XX-5** [14] IEEE Standard 802.16-2009: Air Interface for Broadband Wireless Access Systems, 2009.
- ackosa11** [15] *Asymptotic behavior of distributions and the short-time Fourier transform*, volume XVIII, 2011.
- fapascso11** [16] *Generic Zernike-based Surface representation of Measured Corneal Surface Data*, Sensors and Actuators for Medical Systems and Medical Specific Instrumentation II, Poster Session I, Bari, Italy, 29-31 May, 2011, 2011.
- 12** [17] Overview of 3GPP Release 12 V0.0.3. 2012.
- aachXX** [18] R. M. Aarts and Cheapviagrasoftflavoured67ifs. Vrryl-izqgoodCheapViagraSoftFlavouredelz. *K-Theory*, pages <http://www.erection.org/products/viagra-soft-flavoured.h>.
- abfe08** [19] K. Abou Moustafa and F. Ferrie. Regularized Minimum Volume Ellipsoid Metric for Query-Based Learning. In *Machine Learning and Applications, 2008. ICMLA '08. Seventh International Conference on*, pages 188–193, 2008.
- absi82** [20] J.-F. Abramatic and L. M. Silverman. Nonlinear restoration of noisy images. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, PAMI-4(2):141–149, 1982.
- abdo12** [21] L. Abreu and M. Dörfler. An Inverse Problem for Localization Operators. *preprint*, submitted, <http://arxiv.org/abs/1202.5841>, 2012.
- ab08** [22] L. D. Abreu. The reproducing kernel structure arising from a combination of continuous and discrete orthogonal polynomials into Fourier systems. *Constr. Approx.*, 28(2):219–235, 2008.
- ab10-1** [23] L. D. Abreu. On the structure of Gabor and super Gabor spaces. *Monatsh. Math.*, 161(3):237–253, 2010.
- ab10** [24] L. D. Abreu. Sampling and interpolation in Bargmann-Fock spaces of polyanalytic functions. *Appl. Comput. Harmon. Anal.*, 29(3):287–302, 2010.

ab11

- [25] L. D. Abreu. Wavelet frames with Laguerre functions. *Comptes Rendus Mathématique*, 349:255 – 258, 2011.

abgr10

- [26] L. D. Abreu and K. Gröchenig. Banach Gabor frames with Hermite functions: polyanalytic spaces from the Heisenberg group. *to appear*, page 17, 2010.

abafbofamongst07

- [27] P. Abrial, Y. Moudden, J.-L. Starck, B. Afeyan, J. Bobin, J. Fadili, and M. Nguyen. Morphological component analysis and inpainting on the sphere: Application in physics and astrophysics. *J. Fourier Anal. Appl.*, 13(6):729–748, 2007.

ac96-1

- [28] R. Aceska. Improper integral Theodorescu. *Annuaire, Faculté des Sciences de l'Université 'Sv. Kiril et Metodij' L'Institute des Mathématiques*, 1996.

ac04

- [29] R. Aceska. Analytic wavelets and multiresolution analysis: a note on certain orthogonality conditions. *Proceedings, Faculty of Mechanical Engineering, Skopje*, 23(1):41–47, 2004.

ac12

- [30] R. Aceska. Multi-Wilson systems. 2012.

acdi96

- [31] R. Aceska and D. Dimitrovski. Improper integral Theodorescu. *Annuaire, Faculté des Sciences de l'Université 'Sv. Kiril et Metodij' L'Institute des Mathématiques*, 1996.

acfe12

- [32] R. Aceska and H. G. Feichtinger. Reproducing kernel and variable bandwidth. Technical report, 2012.

ac78

- [33] D. Achilles. *Die Fourier-Transformation in der Signalverarbeitung Kontinuierliche und Diskrete Verfahren der Praxis*. Hochschultext. Berlin-Heidelberg-New York: Springer-Verlag. VII, 188 S., 1978.

ac81

- [34] A. D. Acosta. Inequalities for B-valued random vectors with applications to the strong law of large numbers. *Ann. Probab.*, 9(1):157–161, 1981.

ad08-1

- [35] J. Adams. Guide to the Atlas software: computational representation theory of real reductive groups. Arthur, James (ed.) et al., Representation theory of real reductive Lie groups. AMS-IMS-SIAM joint summer research conference, Snowbird, UT, USA, June 4–8, 2006.

Providence, RI: American Mathematical Society (AMS). Contemporary Mathematics 472, 1-37 (200, 2008).

- `adfo03-1` [36] R. Adams and J. Fournier. *Sobolev spaces. 2nd ed.* Pure and Applied Mathematics 140. New York, NY: Academic Press. xiii and EUR 89.95 and sterling 59.95, 2003.
- `adha11-3` [37] B. Adcock and A. C. Hansen. Generalized sampling and infinite-dimensional compressed sensing. UBC SCAIM Seminar, UBC, November 2011, 2011.
- `adha11` [38] B. Adcock and A. C. Hansen. Generalized sampling and the stable and accurate reconstruction of piecewise analytic functions from their Fourier coefficients. *preprint*, 2011.
- `adha11-2` [39] B. Adcock and A. C. Hansen. Reduced consistency sampling in Hilbert spaces. In *Proceedings of the 9th International Conference on Sampling Theory and Applications (SampTA)*, 2011.
- `adha11-1` [40] B. Adcock and A. C. Hansen. Sharp bounds, optimality and a geometric interpretation for generalised sampling in Hilbert spaces. *preprint*, 2011.
- `adhahete11-1` [41] B. Adcock, A. C. Hansen, E. Herrholz, and G. Teschke. Generalized sampling: extensions to frames and ill-posed problems. *preprint*, 2011.
- `adhahete11` [42] B. Adcock, A. C. Hansen, E. Herrholz, and G. Teschke. Generalized sampling, infinite-dimensional compressed sensing, and semi-random sampling for asymptotically incoherent dictionaries. *preprint*, 2011.
- `adelemgrjap112` [43] A. Adler, V. Emiya, M. Jafari, M. Elad, R. Gribonval, and M. Plumbley. Audio inpainting. *Audio, Speech, and Language Processing, IEEE Transactions on*, 20(3):922–932, 2012.
- `ad04` [44] S. L. Adler. *Quantum theory as an emergent phenomenon*. Cambridge University Press, Cambridge, 2004.
- `afbifi10` [45] M. Afonso, J. Bioucas Dias, and M. Figueiredo. Fast image recovery using variable splitting and constrained optimization. *IEEE Trans. Image Process.*, 19(9):2345–2356, 2010.

- ahbre106** [46] M. Aharon, M. Elad, and A. Bruckstein. The K-SVD: An algorithm for designing of overcomplete dictionaries for sparse representation. *IEEE Trans. Signal Process.*, 54(11):4311–4322, 2006.
- ahro05** [47] Y. Aharonov and D. Rohrlich. *Quantum Paradoxes - Quantum Theory for the Perplexed*. Wiley-VCH, 2005.
- armu05** [48] K. Ahlander and H. Munthe Kaas. Applications of the generalized Fourier transform in numerical linear algebra. *Numer. Algorithms*, 45(4):819–850, 2005.
- ahwi02** [49] R. Ahlswede and A. Winter. Strong converse for identification via quantum channels,. *IEEE Trans. Inform. Theory*, 48(3):569 –579, 2002.
- aich09** [50] N. Ailon and B. Chazelle. The fast Johnson-Lindenstrauss transform and approximate nearest neighbors. *SIAM J. Comput.*, 39(1):302–322, 2009.
- aili11** [51] N. Ailon and E. Liberty. Almost optimal unrestricted fast Johnson-Lindenstrauss transform. In *Symposium on Discrete Algorithms (SODA)*, 2011.
- ai85** [52] H. Aimar. Singular integrals and approximate identities on spaces of homogeneous type. *Trans. Amer. Math. Soc.*, 292:135–153, 1985.
- akch02** [53] A. Akan and L. Chaparro. Discrete rotational Gabor transform. In *Time-Frequency and Time-Scale Analysis, 1996., Proceedings of the IEEE-SP International Symposium on*, pages 169–172, 2002.
- akayse05** [54] E. Akay, E. Sengul, and E. Ayanoglu. Performance Analysis of Beamforming for MIMO OFDM with BICM. volume 1, pages 613–617, May 2005.
- akbo02** [55] O. Akay and G. Boudreaux Bartels. Fractional convolution and correlation via operator methods and an application to detection of linear FM signals. *IEEE Trans. Signal Process.*, 49(5):979–993, 2002.
- akwa81** [56] C. Akemann and M. Walter. Unbounded negative definite functions. *Canad. J. Math.*, 33(4):862–871, 1981.

- ak88 [57] N. Akhiezer. *Lectures on integral transforms. Transl. from the Russian by H. H. McFaden.* Translations of Mathematical Monographs, 70. American Mathematical Society (AMS), 1988.
- akg193 [58] N. Akhiezer and I. Glazman. *Theory of linear operators in Hilbert space. Transl. from the Russian and with a preface by Merlynd Nestell (Two volumes bound as one). Repr. of the 1961 and 1963 transl.* New York, NY: Dover Publications, 1993.
- albadede11 [59] G. Alberti, L. Ballelli, M. De, and V. De. Signal Analyses in 2D, Part I. *Arxiv preprint arXiv:1109.6789*, 2011.
- almaru92 [60] S. A. Albeverio, Z. Ma, and M. Röckner. A Beurling-Deny type structure theorem for Dirichlet forms on general state spaces. *Ideas and methods in mathematical analysis, stochastics, and applications (Oslo, 1988)*, pages 115–123, 1992.
- alalbe96 [61] J. Alda, J. Alonso, and E. Bernabeu. Aberrated laser beams in terms of Zernike polynomials. In J. Alda, J. Alonso, E. Bernabeu, M. Morin, and A. Giesen, editors, *Third International Workshop on Laser Beam and Optics Characterization*, volume 2870 of *Laser beam amplitude and phase*, pages 52–61, Quebec City, Canada, 1996. SPIE.
- almo04 [62] S. Aldosari and J. Moura. Fusion in sensor networks with communication constraints. In *Proceedings of the 3rd international symposium on Information processing in sensor networks*, pages 108–115, 2004.
- almo06 [63] S. Aldosari and J. Moura. Detection in sensor networks: The saddlepoint approximation. *IEEE Trans. Signal Process.*, 55(1):327–340, 2006.
- als97 [64] R. Aldrovandi and L. Saeger. Projective Fourier duality and Weyl quantization. *Internat. J. Theoret. Phys.*, 36(3):573–612, 1997.
- alarmi09 [65] S. Alesker, S. Artstein Avidan, and V. Milman. A characterization of the Fourier transform and related topics. Alexandrov, Alexei (ed.) et al., *Linear and complex analysis. Dedicated to V. P. Havin on the occasion of his 75th birthday.* Providence, RI: American Mathematical Society (AMS). Translations. Series 2. American Mathematical Society 226; Advances in the Ma, 2009.

- alkomapizh10** [66] V. Alexandrov, S. Piskunov, Y. Zhukovskii, E. Kotomin, and J. Maier. First-principles modeling of oxygen interaction with SrTiO<sub>3</sub> (001) surface: Comparative density-functional LCAO and plane-wave study. *Arxiv preprint arXiv:1005.4833*, 2010.
- alanga91-1** [67] S. Ali, J.-P. Antoine, and J.-P. Gazeau. Square integrability of group representations on homogeneous spaces II: Coherent and quasi-coherent states. The case of the Poincaré group. *Ann. Inst. Henri Poincaré, Phys. Théor.*, 55(4):857–890, 1991.
- al11** [68] Y. Alkhutov. Elliptic problems with nonstandard conditions of growth: Zhikov’s approach. *Complex Variables and Elliptic Equations*, 56(7-9):559–571, 2011.
- alangipara11** [69] Y. Alkhutov, S. Antontsev, R. Gilbert, A. Pankov, and V. Radulescu. Preface. *Complex Variables and Elliptic Equations*, 56(7-9):543–544, 2011.
- alha10** [70] A. Almeida and P. Hästö. Besov spaces with variable smoothness and integrability. *J. Funct. Anal.*, 258(5):1628–1655, 2010.
- alsa06** [71] A. Almeida and S. Samko. Characterization of Riesz and Bessel potentials on variable Lebesgue spaces. *J. Funct. Spaces Appl.*, 4(2):113–144, 2006.
- alsa07** [72] A. Almeida and S. Samko. Pointwise inequalities in variable Sobolev spaces and applications. *Z. Anal. Anwend.*, 26(2):179–193, 2007.
- alsa09** [73] A. Almeida and S. Samko. Embeddings of variable Hajlasz-Sobolev spaces into Hölder spaces of variable order. *J. Math. Anal. Appl.*, 353(2):489–496, 2009.
- alhukhso06** [74] M. Almeida, J. Huguenin, R. Souto, and A. Khoury. Theoretical investigation of moire patterns in quantum images. *J. Modern Opt.*, 53(5-6):777–785, 2006.
- amcoma97** [75] L. Ambrosio, A. Coscia, and G. Maso. Fine properties of functions with bounded deformation. *Archive for Rational Mechanics and Analysis*, 139(3):201–238, 1997.

- amdapa10** [76] L. Ambrosio, P. Da, and D. Pallara. BV functions in a Hilbert space with respect to a Gaussian measure. *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Mem. (9) Mat. Appl.*, 21(4):405–414, 2010.
- am00** [77] I. Amidror. *The theory of the moire phenomenon*. Computational Imaging and Vision 15. Dordrecht: Kluwer Academic Publishers, 2000.
- am07** [78] I. Amidror. *The Theory of the Moiré Phenomenon Vol. II: Aperiodic layers*. Computational Imaging and Vision 34. Springer, 2007.
- am09-1** [79] I. Amidror. *The theory of the moire phenomenon. Volume I: Periodic layers. 2nd revised and updated ed.* Computational Imaging and Vision 38. Springer, 2009.
- amhe09** [80] I. Amidror and R. Hersch. The role of Fourier theory and of modulation in the prediction of visible moire effects. *J. Modern Opt.*, 56(9):1103–1118, 2009.
- amhe10** [81] I. Amidror and R. Hersch. Mathematical moire models and their limitations. *J. Modern Opt.*, 57(1):23–36, 2010.
- anbrto09** [82] M. An, A. Brodzik, and R. Tolimieri. Zak Transform. *Ideal Sequence Design in Time-Frequency Space*, pages 1–17, 2009.
- anca09** [83] M. Anastasio and C. Cabrelli. Sampling in a union of frame generated subspace. *Sampl. Theory Signal Image Process.*, 8(3):261–286, September 2009.
- anchdugh09** [84] G. Andersen, L. Dussan, F. Ghebremichael, and K. Chen. Holographic wavefront sensor. *Opt. Eng.*, 48(8):085801, 2009.
- an93** [85] A. Anderson. Quantum canonical transformations and integrability. Beyond unitary transformations. *Physics Letters B*, 319(1-3):157–162, 1993.
- anguze10** [86] G. Anderson, A. Guionnet, and O. Zeitouni. *An Introduction to Random Matrices*, volume 118 of *Cambridge Studies in Advanced Mathematics*. Cambridge University Press, Cambridge, 2010.
- anclpo74** [87] J. Anderson, J. Clunie, and C. Pommerenke. On Bloch functions and normal functions. *J. Reine Angew. Math.*, 270:12–37, 1974.

- `anta78` [88] J. Anderson and D. Taylor. A bandwidth-efficient class of signal-space codes. *Information Theory, IEEE Transactions on*, 24(6):703–712, 1978.
- `ancade11` [89] F. Andersson, M. Carlsson, and H. de. Sparse approximation of functions using sums of exponentials and AAK theory. *J. Approx. Theory*, 163(2):213–248, 2011.
- `ancate12` [90] F. Andersson, M. Carlsson, and L. Tenorio. On the Representation of Functions with Gaussian Wave Packets. *Journal of Fourier Analysis and Applications*, 18:146–181, 2012.
- `an98-3` [91] M. Andersson. On the vector valued Hausdorff-Young inequality. *Ark. Mat.*, 36(1):1–30, 1998.
- `an00` [92] M. Andersson. An inverse problem connected to double orthogonality in Bergman spaces. *Math. Proc. Cambridge Philos. Soc.*, 128(3):535–538, 2000.
- `anknsasm11` [93] M. Andersson, M. Sandborg, O. Smedby, and H. Knutsson. 4D Adaptive Filtering of CT-Heart. In *Proceedings of the SSAB Symposium on Image Analysis, 2011*, 2011.
- `ansusz08` [94] T. Andr’as, A. SZABADOS, and P. SURJ’AN. A NOTE ON THE SYMMETRY PROPERTIES OF LOWDINS ORTHOGONALIZATION SCHEMES. *Collect. Czech. Chem. Commun*, 73(6-7):937–944, 2008.
- `anrare11` [95] P. Andreani, E. Ramos, and R. Vio. Detection of new point sources in WMAP cosmic microwave background maps at high Galactic latitude A new technique to extract point sources from CMB maps. *Astronomy & Astrophysics*, 528(A75), January 2011.
- `ananco08` [96] E. Andruchow, J. Antezana, and G. Corach. Sampling formulae and optimal factorizations of projections. *Sampl. Theory Signal Image Process.*, 7(3):313–331, 2008.
- `anpi09` [97] J.-P. Anker and V. Pierfelice. Nonlinear Schrödinger equation on real hyperbolic spaces. 2009.

- anas11** [98] M. H. Annaby and R. M. Asharabi. Truncation, amplitude, and jitter errors on  $\mathbb{R}$  for sampling series derivatives. 163(3):336–362, March 2011.
- anco06** [99] J. Antezana and G. Corach. Sampling theory, oblique projections and a question by Smale and Zhou. *Appl. Comput. Harmon. Anal.*, 21(2):245–253, 2006.
- anba99** [100] M. Anthony and P. Bartlett. *Neural network learning: theoretical foundations*. Cambridge University Press, Cambridge, 1999.
- anba11** [101] J.-P. Antoine and P. Balazs. Frames and Semi-Frames. *Journal of Phycis A: Mathematical and Theoretical*, 44, 2011.
- anbaXX** [102] J.-P. Antoine and P. Balazs. Frames, Semi-Frames, and Hilbert Scales. *Numerical Functional Analysis and Optimization*, to appear, in press.
- antr10** [103] J.-P. Antoine and C. Trapani. The partial inner product space method: a quick overview. *Adv. Math. Phys.*, Article ID 457635:37, 2010.
- antr11** [104] J.-P. Antoine and C. Trapani. Erratum to “the partial inner product space method: a quick overview”. *Adv. Math. Phys.*, Article ID 272703:1, 2011.
- anbu03** [105] H. Anton and R. Busby. *Contemporary Linear Algebra*. John Wiley & Sons Inc., 2003.
- ansh11** [106] S. Antontsev and S. Shmarev. Elliptic equations with triple variable nonlinearity. *Complex Variables and Elliptic Equations*, 56(7-9):573–597, 2011.
- arbamo09** [107] L. Arambasic, D. Bakic, and M. Moslehian. A characterization of Hilbert  $c^*$ -modules over finite dimensional  $c^*$ -algebras. *Oper. Matrices*, 3(2, article No. 14):235–240, 2009.
- arbara07** [108] L. Arambasic, D. Bakic, and R. Rajic. Dimension functions of orthonormal wavelets. *J. Fourier Anal. Appl.*, 13(3):331–356, 2007.
- arbara10** [109] L. Arambasic, D. Bakic, and R. Rajic. Dimension functions, scaling sequences, and wavelet sets. *Studia Math.*, 198(1):1–32, 2010.

- [arbara10-1](#) [110] L. Arambasic, D. Bakic, and R. Rajic. Finite-dimensional Hilbert  $c^*$ -modules. *Banach J. Math. Anal.*, 4(2):147–157, 2010.
- [arfi84](#) [111] J. Arazy and S. D. Fisher. Some aspects of the minimal, Möbius-invariant space of analytic functions on the unit disc. In Michael Cwikel and Jaak Peetre, editors, *Interpolation spaces and allied topics in analysis (Proc. of the Conference held in Lund, Sweden, August 29 - September 1, 1983)*, volume 1070 of *Lecture Notes in Math.*, pages 24–44. Springer, 1984.
- [arfi85](#) [112] J. Arazy and S. D. Fisher. The uniqueness of the Dirichlet space among Möbius-invariant Hilbert spaces. *Illinois J. Math.*, 29(3):449–462, 1985.
- [arli97](#) [113] N. Arcozzi and X. Li. Riesz transforms on spheres. *Math. Res. Lett.*, 4(2-3):401–412, 1997.
- [argh12](#) [114] A. Arefijamaal and S. Ghasemi. On characterization and stability of alternate dual of g-frames. *Turk. J. Math.*, In Press:9, 2012.
- [ar12](#) [115] A. A. Arefijamaal. The continuous Zak transform and generalized Gabor frames. *Mediterranean Journal of Mathematics*, Online First:13, 2012.
- [arco76](#) [116] M. Arik and D. Coon. Hilbert spaces of analytic functions and generalized coherent states. *J. Mathematical Phys.*, 17(4):524–527, 1976.
- [armuva96](#) [117] M. Arioli, H. Munthe Kaas, and L. Valdettaro. Componentwise error analysis for FFTs with applications to fast Helmholtz solvers. *Numer. Algorithms*, 12(1-2):65–88, 1996.
- [argapr06](#) [118] S. Arivazhagan, L. Ganesan, and S. Priyal. Texture classification using Gabor wavelets based rotation invariant features. *Pattern Recognition Lett.*, 27(16):1976 – 1982, 2006.
- [arheju04](#) [119] S. Aromaa, P. Henttu, and M. Juntti. Transform-selective interference suppression algorithm for spread-spectrum communications. *IEEE Signal Processing Letters*, 12(1):49–51, 2004.
- [arga65](#) [120] N. Aronszajn and E. Gagliardo. Interpolation spaces and interpolation methods. *Ann. Mat. Pura Appl. (4)*, 68(1):51–117, 1965.

- `arhuuz58` [121] K. Arrow, L. Hurwicz, and H. Uzawa. *Studies in Linear and Non-linear Programming*. : Stanford University Press. 229 p., 1958.
- `asfu78` [122] K. Asada and D. Fujiwara. On some oscillatory integral transformations in  $l^2(r^2)$ . *Japan. J. Math. (N.S.)*, 4:299–361, 1978.
- `asfekaXX` [123] G. Ascensi, H. G. Feichtinger, and N. Kaiblinger. Dilation of the Weyl symbol and Balian-Low theorem. *preprint*.
- `aschlu10` [124] A. Ashraf, S. Lucey, and T. Chen. Reinterpreting the application of Gabor filters as a manipulation of the margin in linear support vector machines. *IEEE transactions on pattern analysis and machine intelligence*, 32(7):1335–1341, 2010.
- `asinmo10` [125] N. E. Askour, A. Intissar, and Z. Mouayn. A formula representing Magnetic Berezin Transforms as functions of the Laplacian on  $\mathbb{C}n$ . *Mathematical Physics-Submitted on 17 Apr 2010*, page 9, 2010.
- `abasmarat10` [126] D. Assefa, L. Mansinha, K. Tiampo, H. Rasmussen, and K. Abdella. Local quaternion Fourier transform and color image texture analysis. *Signal Process.*, 90(6):1825–1835, 2010.
- `as98` [127] S. Astashkin. Tensor product in symmetric function spaces. *Arxiv preprint math/9812155*, 1998.
- `asdi10` [128] F. Astengo and B. Di Blasio. Huygens’ principle and a Paley-Wiener type theorem on Damek-Ricci spaces. *Ann. Math. Blaise Pascal*, 17(2):327–340, 2010.
- `at83-1` [129] M. Atiyah. Angular momentum, convex polyhedra and algebraic geometry. *Proc. Edinburgh Math. Soc. (2)*, 26(2):121–133, 1983.
- `rglgrhilamaruot94` [130] M. Atiyah, A. Borel, G. Chaitin, D. Friedan, J. Glimm, J. Gray, M. Hirsch, S. Lane, B. Mandelbrot, D. Ruelle, and o. others. Responses to Theoretical Mathematics: Toward a cultural synthesis of mathematics and theoretical physics by A. Jaffe and F. Quinn. *Bulletin of the American Mathematical Society*, 30(2):178–207, 1994.
- `atso10` [131] C. Atkinson and J. Soria. Algebraic reconstruction techniques for tomographic particle image velocimetry. In *16th Australasian Fluid Mechanics Conference (AFMC)*, pages 191–198, 2010.

- `auco05` [132] P. Auscher and T. Coulhon. Riesz transform on manifolds and Poincare inequalities. *Ann. Sc. Norm. Super. Pisa, Cl. Sci. (5)*, 4(3), 2005.
- `apu11` [133] G. Autuori and P. Pucci. Asymptotic stability for Kirchhoff systems in variable exponent Sobolev spaces. *Complex Variables and Elliptic Equations*, 56(7-9):715–753, 2011.
- `avcodoissh08` [134] A. Averbuch, R. R. Coifman, D. L. Donoho, M. Israeli, and Y. Shkolnisky. A framework for discrete integral transformations. I: The pseudopolar Fourier transform. *SIAM J. Sci. Comput.*, 30(2):764–784, 2008.
- `avcodoissh08` [135] A. Averbuch, R. R. Coifman, D. L. Donoho, M. Israeli, Y. Shkolnisky, and I. Sedelnikov. A framework for discrete integral transformations: II. The 2D discrete Radon transform. *SIAM J. Sci. Comput.*, 30(2):785–803, 2008.
- `avho05` [136] R. Averkamp and C. Houdre. Wavelet thresholding for nonnecessarily Gaussian noise: functionality. *Ann. Statist.*, 33(5):2164–2193, 2005.
- `bafgr07` [137] M. Baake, D. Frettlöh, and U. Grimm. A radial analogue of Poisson’s summation formula with applications to powder diffraction and pinwheel patterns. *J. Geom. Phys.*, 57(5):1331–1343, 2007.
- `bajemaob12` [138] F. Bach, R. Jenatton, J. Mairal, and G. Obozinski. Optimization with sparsity-inducing penalties. *Foundations and Trends in Machine Learning*, 4(1):1–106, 2012.
- `bagi70` [139] G. Backus and F. Gilbert. Uniqueness in the inversion of inaccurate gross earth data. *Philos. Trans. Roy. Soc. London Ser. A*, 266(1173):123–192, 1970.
- `bagu10` [140] G. Badrinath and P. Gupta. Stockwell transform based palm-print recognition. *Applied Soft Computing*, In Press, Corrected Proof:–, 2010.
- `bada10` [141] K. Bagadi and S. Das. MIMO-OFDM channel estimation using pilot carriers. *Int. J. Comp. Appl.*, 2:81–88, May 2010.

- batr96** [142] F. Bagarello and C. Trapani.  $L^p$ -spaces as quasi  $*$ -algebras. *J. Math. Anal. Appl.*, 197(3):810–824, 1996.
- ba79-4** [143] R. Bagby. Riesz potentials and Fourier multipliers. Harmonic analysis in Euclidean spaces, Part 1, Williamstown/ Massachusetts 1978, Proc. Symp. Pure Math., Vol. 35, 115-119 (1979)., 1979.
- bami01** [144] B. Bagchi and G. Misra. Homogeneous operators and projective representations of the Möbius group: A survey. *Proc. Indian Acad. Sci., Math. Sci.*, 111(4):415–437, 2001.
- bata10** [145] B. Bah and J. Tanner. Improved bounds on restricted isometry constants for Gaussian matrices. *SIAM J. Matrix Anal. Appl.*, 31(5):2882–2898, 2010.
- bafega09** [146] H. Bahouri, C. Fermanian Kammerer, and I. Gallagher. Phase-space analysis and pseudodifferential calculus on the Heisenberg group. *Arxiv preprint arXiv:0904.4746*, 2009.
- basi10** [147] Z. Bai and J. Silverstein. *Spectral analysis of large dimensional random matrices*. Springer Series in Statistics. Springer, New York, Second edition, 2010.
- ba10-5** [148] B. Bailey. Sampling and recovery of multidimensional bandlimited functions via frames. *J. Math. Anal. Appl.*, 367(2):374–388, 2010.
- ba12** [149] B. A. Bailey. Multivariate polynomial interpolation and sampling in Paley-Wiener spaces. *J. Approx. Theory*, 164(4):460–487, 2012.
- bascsi11** [150] B. A. Bailey, T. Schlumprecht, and N. Sivakumar. Nonuniform sampling and recovery of multidimensional bandlimited functions by Gaussian radial-basis functions. *J. Fourier Anal. Appl.*, 17(3):519–533, 2011.
- babocagilumo07** [151] D. Bailey, J. M. Borwein, N. Calkin, R. Girgensohn, D. Luke, and V. Moll. *Experimental mathematics in action*. A K Peters Ltd., Wellesley, MA, 2007.
- banosa08** [152] W. Bajwa, A. Sayeed, and R. Nowak. Learning sparse doubly-selective channels. Monticello, IL, Sep. 2008.

- ba05-5** [153] D. Bakic. On admissible generalized multiresolution analyses. *Grazer Math. Ber.*, 348:15–30, 2005.
- ba06-3** [154] D. Bakic. Semi-orthogonal parseval frame wavelets and generalized multiresolution analyses. 21(3):281–304, 2006.
- bakrwi05** [155] D. Bakic, I. Krishtal, and E. Wilson. Parseval frame wavelets with  $e_n^{(2)}$ -dilations. *Appl. Comput. Harmon. Anal.*, 19(3):386–431, 2005.
- bakr10** [156] R. Balan and I. Krishtal. An almost periodic noncommutative Wiener’s Lemma. *J. Math. Anal. Appl.*, 370(2):339–349, 2010.
- bara05** [157] R. Balasubramanian and R. Radha. Hardy-type inequalities for Hermite expansions. *JIPAM, J. Inequal. Pure Appl. Math.*, 6(1):Paper No. 12, 4 p, 2005.
- babajaso11** [158] P. Balazs, D. Bayer, F. Jaiilet, and P. Sondergaard. The phase derivative around zeros of the short-time Fourier transform. *J. Funct. Anal.*, page 22, 2011.
- babaraXX** [159] P. Balazs, D. Bayer, and A. Rahimi. Multipliers for continuous frames in Hilbert spaces. *J. Phys. A*, Special issue: Coherent states, to appear.
- bachahemo11** [160] P. Balazs, C. Cabrelli, S. B. Heineken, and U. Molter. Frames by Multiplication. *Current Development in Theory and Applications of Wavelets*, to appear, 2011.
- badohojave11** [161] P. Balazs, M. Dörfler, F. Jaiilet, N. Holighaus, and G. A. Velasco. Theory, implementation and applications of nonstationary Gabor Frames. *J. Comput. Appl. Math.*, 236(6):14811496, 2011.
- bakemapi09** [162] P. Baldi, G. Kerkyacharian, D. Marinucci, and D. Picard. Subsampling needlet coefficients on the sphere. *Bernoulli*, 15(2):438–463, 2009.
- ba91-1** [163] M. Balk. Polyanalytic functions and their generalizations. Complex analysis I. *Encycl. Math. Sci.* 85, 195-253 (1997); translation from *Itogi Nauki Tekh., Ser. Sovrem. Probl. Math., Fundam Napravleniya* 85, 187-246 (1991)., 1991.

- bawe92** [164] T. Banchoff and J. Wermer. *Undergraduate Texts in Mathematics*. Springer New York, second edition edition, 1992.
- bafiges08** [165] S. Banerjee, A. Gelfand, A. Finley, and H. Sang. Gaussian predictive process models for large spatial data sets. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 70(4):825–848, 2008.
- ba10-2** [166] S. Bannert. Banach-Gelfand Triples and Applications in Time-Frequency Analysis. Master’s thesis, University of Vienna, 2010.
- bast07** [167] R. Baraniuk and P. Steeghs. Compressive radar imaging. pages 128–133, April 2007.
- bady11** [168] A. Baranov and K. Dyakonov. The Feichtinger conjecture for reproducing kernels in model subspaces. *J. Geom. Anal.*, 21(2):276–287, 2011.
- bamevi08-1** [169] J. Bardsley, J. Merikoski, and R. Vio. The stabilizing properties of nonnegativity constraints in least-squares image reconstruction. *Int. J. Pure Appl. Math.*, 43(1):95–109, 2008.
- babugik140** [170] V. Bargmann, P. Butera, L. Girardello, and J. R. Klauder. Some formal properties of the density matrix. 1940.
- bamo60** [171] V. Bargmann and M. Moshinsky. Group theory of harmonic oscillators::(I). The Collective Modes. *Nuclear physics*, 18:697–712, 1960.
- ba1emo03** [172] I. Barhumi, G. Leus, and M. Moonen. Optimal training design for MIMO OFDM systems in mobile wireless channels. *IEEE Trans. Signal Process.*, 51:1615–1624, Jun. 2003.
- base10** [173] J. Barral and S. Seuret. *Recent developments in fractals and related fields*. Applied and Numerical Harmonic Analysis. Boston, MA: Birkhäuser, Based on the international conference on fractals and related fields, Monastir, Tunisia, September 2007 held in honor of Jacques Peyriere, 2010.
- babe11** [174] B. Barrios and J. J. Betancor. Characterizations of anisotropic Besov spaces. *Math. Nachr.*, 284(14-15):1796–1819, 2011.

- bakuoz97** [175] B. Barshan, M. Kutay, and H. Ozaktas. Optimal filtering with linear canonical transformations. *Optics Communications*, 135(1-3):32–36, 1997.
- ba11-1** [176] S. Bartels. Total variation minimization with finite elements: convergence and iterative solution. *preprint*, 2011.
- ba08-5** [177] L. Bartholdi. On amenability of group algebras. I. *Israel J. Math.*, 168:153–165, 2008.
- babo10** [178] L. Bartholdi and O. Bogopolski. On abstract commensurators of groups. *J. Group Theory*, 13(6):903–922, 2010.
- bapo09** [179] L. Bartholdi and F. Pochon. On growth and torsion of groups. *Groups Geom. Dyn.*, 3(4):525–539, 2009.
- ba78-1** [180] A. Baskakov. Spectral criteria for almost periodicity of solutions of functional equations. *Mathematical Notes*, 24(2):606–612, 1978.
- a1ba02** [181] M. Bastiaans and T. Alieva. Wigner distribution moments in fractional Fourier transform systems. *J. Opt. Soc. Amer. A*, 19(9):1763–1773, 2002.
- bawo03** [182] M. J. Bastiaans and K. Wolf. Phase reconstruction from intensity measurements in linear systems. *JOSA A*, 20(6):1046–1049, 2003.
- badipr10** [183] C. Bastos, N. Dias, and J. Prata. Wigner measures in noncommutative quantum mechanics. *Comm. Math. Phys.*, 299(3):709–740, 2010.
- ba10-4** [184] D. Basu. *Introduction To Classical And Modern Analysis And Their Application To Group Representation theory*. Hackensack, NJ: World Scientific. 400 p., 2010.
- ba11** [185] D. Basu. *Introduction to Classical and Modern Analysis and Their Application to Group Representation Theory*. World Scientific, 2011.
- ba09-5** [186] H. Baum. *Eichfeldtheorie: Eine Einführung in Die Differentialgeometrie auf Faserbündeln*. Springer-Lehrbuch Masterclass. Springer, 2009.
- ba12-2** [187] C. Baumgarten. A geometrical method of decoupling. *Submitted on 4 Jan 2012*, 2012.

- ba12-1** [188] C. Baumgarten. A symplectic method to generate multivariate normal distributions. *Submitted on 16 May 2012*, 2012.
- ba99-5** [189] R. Baxter. SAR image compression with the Gabor transform. *Geoscience and Remote Sensing, IEEE Transactions on*, 37(1):574–588, 1999.
- ba10-3** [190] D. Bayer. *Bilinear Time-Frequency Distributions and Pseudodifferential Operators*. PhD thesis, 2010.
- base09-1** [191] I. Bayram and I. Selesnick. On the frame bounds of iterated filter banks. *Appl. Comput. Harmon. Anal.*, 27(2):255–262, 2009.
- bewo10-1** [192] R. Beals and R. Wong. *Special Functions - A Graduate Text*. Cambridge University Press, 2010.
- bewo10** [193] R. Beals and R. Wong. *Special Functions. A Graduate Text*. Cambridge Studies in Advanced Mathematics 126. Cambridge: Cambridge University Press. ix, 456 p., 2010.
- be95-5** [194] A. Beardon. *Graduate Texts in Mathematics - The Geometry of Discrete Groups*. Springer, 1995.
- be95-4** [195] A. Beardon. *The Geometry of Discrete Groups*. 91. Springer-Verlag, New York, 1995.
- bede73** [196] A. Beavers and E. Denman. A computational method for eigenvalues and eigenvectors of a matrix with real eigenvalues. *Numer. Math.*, 21:389–396, 1973.
- be11** [197] M. Beceanu. New estimates for a time-dependent Schrödinger equation. *Duke Math. J.*, 159(3):417–477, 2011.
- be09-2** [198] I. Bechar. A Bernstein-type inequality for stochastic processes of quadratic forms of Gaussian variables. *preprint*, 2009.
- bete09** [199] A. Beck and M. Teboulle. A fast iterative shrinkage-thresholding algorithm for linear inverse problems. *SIAM J. Imaging Sci.*, 2(1):183–202, 2009.
- bero07** [200] M. Beck and S. Robins. *Computing The Continuous Discretely*. 2007.

- beboca11** [201] S. Becker, J. Bobin, and E. Candès. NESTA: A fast and accurate first-order method for sparse recovery. *SIAM J. Imaging Sci.*, 4(1):1–39, 2011.
- be02-1** [202] H. Begehr. Orthogonal decompositions of the function space  $L_2(\bar{D}; C)$ . *J. Reine Angew. Math.*, 549:191–219, 2002.
- bebubuwe09** [203] Z. Belhachmi, D. Bucur, B. Burgeth, and J. Weickert. How to choose interpolation data in images. *SIAM J. Appl. Math.*, 70(1):333–352, 2009.
- bemese10** [204] Y. Belov, T. Mengestie, and K. Seip. Unitary discrete Hilbert transforms. *J. Anal. Math.*, 112:383–393, 2010.
- bemese11** [205] Y. Belov, T. Mengestie, and K. Seip. Discrete Hilbert transforms on sparse sequences. *Proc. Lond. Math. Soc. (3)*, 103(1):73–105, 2011.
- bega10** [206] D. Beltita and J. E. Gale. Universal objects in categories of reproducing kernels. *Revista Matemática Iberoamericana*, 27(1):123–179, 2010.
- bebe09** [207] I. Beltita and D. Beltita. A survey on Weyl calculus for representations of nilpotent Lie groups. *Arxiv preprint arXiv:0910.1994*, 2009.
- bebe10** [208] I. Beltita and D. Beltita. Algebras of symbols associated with the Weyl calculus for Lie group representations. *Arxiv preprint arXiv:1008.2935*, 2010.
- bebe11-1** [209] I. Beltita and D. Beltita. Continuity of magnetic Weyl calculus. *J. Funct. Anal.*, 260(7):1944–1968, 2011.
- bebe11** [210] I. Beltita and D. Beltita. Modulation spaces of symbols for representations of nilpotent Lie groups. *J. Fourier Anal. Appl.*, 17(2):290–319, 2011.
- bebr00** [211] J.-D. Benamou and Y. Brenier. A computational fluid mechanics solution to the Monge-Kantorovich mass transfer problem. *Numer. Math.*, 84(3):375–393, 2000.
- bebewo12** [212] J. Benedetto, R. Benedetto, and J. Woodworth. Optimal Ambiguity Functions and Weils Exponential Sum Bound. *J. Fourier Anal. Appl.*, 18(3):471–487, 2012.

- beoh11** [213] A. Benyi and T. Oh. Modulation spaces, Wiener amalgam spaces, and Brownian motions. *Advances in Math.*, 228(5):2943 – 2981, 2011.
- be63-2** [214] F. A. Berezin. Canonical transformations in representations of second quantization. *Dokl. Akad. Nauk SSSR*, 150:959–962, 1963.
- be75-2** [215] F. A. Berezin. General concept of quantization. *Communications in Mathematical Physics*, 40(2):153–174, 1975.
- bemi99** [216] A. Berg and W. Mikhael. A survey of mixed transform techniques for speech and image coding. In *Circuits and Systems, 1999. ISCAS '99. Proceedings of the 1999 IEEE International Symposium on*, volume 4, pages 106 –109, Orlando, FL, USA, jul 1999.
- be00-2** [217] A. Berge. Symplectic lattices. In *Quadratic forms and their applications: proceedings of the Conference on Quadratic Forms and Their Applications, July 5-9, 1999, University College Dublin*, volume 272, page 9, 2000.
- behuwazh10** [218] C. Berger, Z. Wang, J. Huang, and S. Zhou. Application of Compressive Sensing to Sparse Channel Estimation. *IEEE Comm. Mag.*, 48:164–174, Nov. 2010.
- bepwizh10** [219] C. Berger, S. Zhou, J. Preisig, and P. Willett. Sparse Channel Estimation for Multicarrier Underwater Acoustic Communication: From Subspace Methods to Compressed Sensing. *IEEE Trans. Signal Process.*, 58:1708–1721, Mar. 2010.
- beinru08** [220] R. Berinde, P. Indyk, and M. Ruzic. Practical near-optimal sparse recovery in the L1 norm. In *Proc. Allerton*, 2008.
- beno94** [221] M. Z. Berkolaiko and I. Y. Novikov. Unconditional bases in spaces of functions of anisotropic smoothness. *Proc. Steklov Inst. Math.*, 204(3):27–41, 1994.
- beta96** [222] D. Bernier and K. F. Taylor. Wavelets from square-integrable representations. *SIAM J. Math. Anal.*, 27(2):594–608, 1996.
- be24** [223] S. Bernstein. Sur une modification de l'inégalité de Tchebichef. *Annals Science Institute Sav. Ukraine, Sect. Math. I*, 1924.

- be27** [224] S. Bernstein. *Theory of Probability*. Moscow, 1927.
- be64-2** [225] O. Besov. Investigation of a family of function spaces in connection with theorems of imbedding and extension. *Am. Math. Soc., Transl., II. Ser.*, 40:85–126, 1964.
- be09-1** [226] O. Besov. Weighted function spaces with constant and variable smoothness. Begehr, H. G. W. (ed.) et al., More progresses in analysis. Proceedings of the 5th international ISAAC congress, Catania, Italy, July 25–30, 2005. Hackensack, NJ: World Scientific. 55-66 (2009)., 2009.
- beda10** [227] J. J. Betancor and W. Damian. Anisotropic local Hardy spaces. *J. Fourier Anal. Appl.*, 16(5):658–675, 2010.
- befamaro08** [228] J. J. Betancor, J. Farina, T. Martinez, and L. Rodriguez Mesa. Higher order Riesz transforms associated with Bessel operators. *Ark. Mat.*, 46(2):219–250, 2008.
- bebebo10** [229] N. Bettaibi, R. Bettaieb, and S. Bouaziz. Wavelet transform associated with the  $q$ -Dunkl operator. *Tamsui Oxf. J. Math. Sci.*, 26(1):77–101, 2010.
- bego11** [230] A. Bettayeb and T. Goodman. Some properties of multi-box splines. *J. Approx. Theory*, 163(2):197–212, February 2011.
- bedede02** [231] R. Beukema, M. De, and G. De. *A Gelfand triple approach to Wigner and Husimi representations*. Eindhoven University of Technology, Department of Mathematics and Computing Science, 2002.
- bero04** [232] A. Beutelspacher and U. Rosenbaum. *Projective Geometry from Foundations to Applications (Projektive Geometrie von den Grundlagen bis zu den Anwendungen) 2nd Revised and Expanded ed.* Vieweg Studium 41, Aufbaukurs Mathematik. Braunschweig: Vieweg. x, 2004.
- bemo10** [233] G. Beylkin and L. Monzón. Approximation by exponential sums revisited. *Appl. Comput. Harmon. Anal.*, 28(2):131–149, 2010.
- be03-5** [234] S. Bezdidko. Study of the properties of Zernike’s orthogonal polynomials. In S. N. Bezdidko, J. M. Sasian, R. J. Koshel, and P. K. Manhart, editors, *Proc. SPIE, Novel Optical Systems Design and Optimization*

VI, volume 5174 of *Poster Session*, pages 227–234, San Diego, CA, USA, 2003. SPIE.

- bhwu97-1** [235] G. Bhowmik and J. Wu. On the asymptotic behaviour of the number of subgroups of finite abelian groups. *Arch. Math. (Basel)*, 69(2):95–104, 1997.
- birits09** [236] P. Bickel, Y. Ritov, and A. Tsybakov. Simultaneous analysis of lasso and Dantzig selector. *Ann. Statist.*, 37(4):1705–1732, 2009.
- anbisc09** [237] M. Bieri, R. Andreev, and C. Schwab. Sparse tensor discretization of elliptic sPDEs. *SIAM J. Sci. Comput.*, 31:4281–4304, 2009.
- bi94** [238] J. Bigun. Speed, frequency, and orientation tuned 3-D Gabor filter banks and their design. In *Pattern Recognition, Conference C: Signal Processing, Proceedings of the 12th IAPR International Conference on*, volume 3, pages 184–187, Jerusalem, 1994. IEEE.
- bi96** [239] C. Binder. Edmund Hlawka zum 80. Geburtstag. Befragt von Christa Binder (Edmund Hlawka on the occasion of his 80th birthday. An interview with Christa Binder). *NTM Zeitschrift für Geschichte der Wissenschaften, Technik und Medizin*, 4(1):201–213, 1996.
- bicodadepewo10** [240] P. Binev, A. Cohen, W. Dahmen, R. A. DeVore, G. Petrova, and P. Wojtaszczyk. Convergence rates for greedy algorithms in reduced basis methods. *preprint*, 2010.
- bipo08** [241] E. Binz and S. Pods. *The Geometry of Heisenberg Groups*. American Mathematical Society, 2008.
- bikaso91** [242] M. Birman, G. Karadzhov, and M. Solomyak. Boundedness Conditions and Spectrum Estimates for the Operators  $b(x)a(d)$  and Their Analogs. Estimates and asymptotics for discrete spectra of integral and differential equations, Pap. Semin. Math. Phys., Leningrad/Russia 1989-90, Adv. Sov. Math. 7, 85-106 (1991)., 1991.
- bjsi12** [243] I. Bjelakovic and R. Siegmund Schultze. Quantum Stein’s lemma revisited, inequalities for quantum entropies, and a concavity theorem of Lieb. *preprint*, 2012.

- b103** [244] R. Blahut. *Algebraic Codes for Data Transmission*. Cambridge Univ. Press, Cambridge, U.K., 2003.
- blcata11** [245] J. Blanchard, C. Cartis, and J. Tanner. Compressed sensing: how sharp is the restricted isometry property? *SIAM Rev.*, 53(1):105–125, 2011.
- blth10** [246] J. Blanchard and A. Thompson. On support sizes of restricted isometry constants. *Appl. Comput. Harmon. Anal.*, 29(3):382–390, 2010.
- blcamu11** [247] S. Blanes, F. Casas, and A. Murua. Error analysis of splitting methods for the time dependent Schrödinger equation. *SIAM J. Sci. Comput.*, 33(4):1525–1548, 2011.
- arb102** [248] O. Blasco and J. Arregui. Multipliers on vector valued Bergman spaces. *Canad. J. Math.*, 54(6):1165–1186, 2002.
- blca09** [249] O. Blasco and J. Calabuig. Fourier analysis with respect to bilinear maps. *Acta Math. Sin. (Engl. Ser.)*, 25(4):519–530, 2009.
- b104** [250] D. P. Blecher. Are operator algebras Banach algebras? Lau, Anthony To-Ming (ed.) et al., *Banach algebras and their applications*. Proceedings of the 16th international conference, University of Alberta, Edmonton, Canada, July 27–August 9, 2003. Providence, RI: American Mathematical Society (AMS). Contemporary, 2004.
- b104-1** [251] D. P. Blecher. One-sided ideals and approximate identities in operator algebras. *J. Aust. Math. Soc.*, 76(3):425–448, 2004.
- blka08** [252] D. P. Blecher and U. Kashyap. Morita equivalence of dual operator algebras. *J. Pure Appl. Algebra*, 212(11):2401–2412, 2008.
- b11e04** [253] D. P. Blecher and M. Le. *Operator Algebras and their Modules An operator Space Approach*. Claderon Press, 2004.
- blma05** [254] D. P. Blecher and B. Magajna. Duality and operator algebras. II: Operator algebras as Banach algebras. *J. Funct. Anal.*, 226(2):485–493, 2005.
- blhets10** [255] V. Blondel, J. Hendrickx, and J. Tsitsiklis. Continuous-time average-preserving opinion dynamics with opinion-dependent communications. *SIAM J. Control Optim.*, 48(8):5214–5240, 2010.

- blthun01** [256] T. Blu, P. Thévenaz, and M. Unser. MOMS: Maximal-order interpolation of minimal support. *IEEE Trans. Image Process.*, 10(7):1069 – 1080, July 2001.
- blda04** [257] T. Blumensath and M. Davies. On shift-invariant sparse coding. *Independent Component Analysis and Blind Signal Separation*, pages 1205–1212, 2004.
- blda05** [258] T. Blumensath and M. Davies. A fast importance sampling algorithm for unsupervised learning of over-complete dictionaries. In *Acoustics, Speech, and Signal Processing, 2005. Proceedings.(ICASSP'05). IEEE International Conference on*, volume 5, pages v–213, 2005.
- blda07** [259] T. Blumensath and M. Davies. Compressed sensing and source separation. *Independent Component Analysis and Signal Separation*, pages 341–348, 2007.
- blda08-1** [260] T. Blumensath and M. Davies. Gradient pursuits. *IEEE Trans. Signal Process.*, 56:2370–2382, Jun. 2008.
- blda08** [261] T. Blumensath and M. Davies. Iterative thresholding for sparse approximations. *J. Fourier Anal. Appl.*, 14:629–654, 2008.
- blda09-1** [262] T. Blumensath and M. Davies. Sampling theorems for signals from the union of finite-dimensional linear subspaces. *Information Theory, IEEE Transactions on*, 55(4):1872–1882, 2009.
- blda10** [263] T. Blumensath and M. Davies. Normalized iterative hard thresholding: guaranteed stability and performance. *IEEE J. Sel. Topics Sig. Process.*, 4(2):298–309, april , 2010.
- bosm38** [264] R. Boas and F. Smithies. On the characterization of a distribution function by its Fourier transform. *Amer. J. Math.*, 60:523–531, 1938.
- abbeboli05** [265] B. Boashash, A. Belouchrani, K. Abed Meraim, and N. Linh Trung. *Time-Frequency Signal Processing for Wireless Communication*. CRC Press, 2005.
- bofr92** [266] B. Boashash and G. Frazer. Time-varying higher-order spectra, generalised Wigner-Ville distribution and the analysis of underwater acoustic data. In *icassp*, pages 193–196, 1992.

- bocaku11** [267] B. G. Bodmann, P. Casazza, and G. Kutyniok. A quantitative notion of redundancy for finite frames. *Appl. Comput. Harmon. Anal.*, 30(3):348–362, 2011.
- bocrkulimaszte93** [268] M. Bodruzzaman, X. Li, K. Kuah, L. Crowder, M. Malkani, H. Szu, and B. Telfer. Speaker recognition using neural network and adaptive wavelet transform. In M. Bodruzzaman, X. Li, K. E. Kuah, L. Crowder, M. Malkani, H. H. Szu, B. A. Telfer, F. O. Huck, and R. D. Juday, editors, *Proc. SPIE, Visual Information Processing II, Wavelet Transform*, volume 1961, pages 391–400, Orlando, FL, USA, Friday 16 April 1993, 1993. SPIE.
- bogrra04** [269] A. Boettcher, S. Grudsky, and d. Ramirez. Approximating inverses of Toeplitz matrices by circulant matrices. *Methods Appl. Anal.*, 11(2):211–220, 2004.
- bobumo08** [270] A. Boggess, B. Bunch, and C. Moore. Fourier series and the Lubkin W-transform. *Numer. Algorithms*, 47(2):133–142, 2008.
- bora09** [271] A. Boggess and A. Raich. A simplified calculation for the fundamental solution to the heat equation on the Heisenberg group. *Proc. Amer. Math. Soc.*, 137(3):937–944, 2009.
- boco02** [272] P. Boggiatto and E. Cordero. Anti-Wick quantization with symbols in  $L^p$  spaces. *Proc. Amer. Math. Soc.*, 130(9):2679–2685 (electronic), 2002.
- bo74** [273] A. Bohm. Rigged Hilbert space and quantum mechanics. Technical report, Texas Univ., Austin (USA). Center for Particle Theory, 1974.
- bo08-4** [274] F. Bolley. Separability and completeness for the Wasserstein distance. Donati-Martin, Catherine (ed.) et al., Séminaire de probabilités XLI. Some papers are selected contributions of the seminars in Nancy 2005 and Luminy 2006. Berlin: Springer. Lecture Notes in Mathematics 1934, 371-377 (2008)., 2008.
- boka10** [275] A. Bonami and A. Karoui. Uniform estimates of the prolate spheroidal wave functions and spectral approximation in Sobolev spaces, 2010.
- bopo87** [276] A. Bonami and S. Poornima. Nonmultipliers of the Sobolev spaces  $W^{k,1}(R^n)$ . *J. Funct. Anal.*, 71:175–181, 1987.

- [bota09] [277] J. Bonet and J. Taskinen. Toeplitz operators on the space of analytic functions with logarithmic growth. *J. Math. Anal. Appl.*, 353(1):428–435, 2009.
- [bolaug07] [278] A. Bonfigliolo, E. Lanconelli, and F. Uguzzoni. *Stratified Lie Groups and Potential Theory for their Sub-Laplacians*. Springer Berlin / Heidelberg, 2007.
- [bohasa11] [279] B. Bongioanni, E. Harboure, and O. Salinas. Classes of weights related to Schrödinger operators. *J. Math. Anal. Appl.*, 373(2):563–579, 2011.
- [bonoXX] [280] R. Bonner and R. Nossal. 2. Principles of Laser-Doppler Flowmetry. *Laser-Doppler blood flowmetry*, pages 17–45.
- [bo81] [281] J.-M. Bony. Calcul symbolique et propagation des singularites pour les equations aux derivees partielles non lineaires(Symbolic calculus and propagation of singularities for nonlinear partial differential equations). *Ann. Sci. cole Norm. Sup. (4)*, 14(2):209–246, 1981.
- [bo10-3] [282] L. Books. *Multivariate Interpolation: Non-Uniform Rational B-Spline, Bezier Triangle, Bezier Surface, Kriging, Microsphere Projection*. Books LLC, 2010.
- [boha99] [283] D. Borah and B. Hart. Frequency-selective fading channel estimation with a polynomial time-varying channel model. *IEEE Trans. Comm.*, 47:862–873, Jun. 1999.
- [bo09] [284] M. Bordeaux. Loi de Weyl presque sure pour un systeme differentiel en dimension 1. In *Annales Henri Poincare*, pages 1–32, 2009.
- [bo96-3] [285] A. Borichev. Beurling algebras and the generalized Fourier transform. *Proc. Lond. Math. Soc., III. Ser.*, 73(2):431–480, 1996.
- [boly07] [286] A. Borichev and Y. Lyubarskii. Uniqueness theorems for Korenblum type spaces. *J. Anal. Math.*, 103:307–329, 2007.
- [boly10] [287] A. Borichev and Y. Lyubarskii. Riesz bases of reproducing kernels in Fock-type spaces. *J. Inst. Math. Jussieu*, 9(3):449–461, 2010.
- [bolymath10] [288] A. Borichev, Y. Lyubarskii, E. Malinnikova, and P. Thomas. Radial growth of functions in the Korenblum space. *St. Petersburg Math. J.*, 21(6):877–891, 2010.

- borost99** [289] S. Borman, M. Robertson, and R. Stevenson. Block-matching sub-pixel motion estimation from noisy, under-sampled frames: An empirical performance evaluation. In S. Borman, M. A. Robertson, R. L. Stevenson, K. Aizawa, R. L. Stevenson, and Y.-Q. Zhang, editors, *Visual Communications and Image Processing '99, Motion estimation*, volume 3653 (from 1998) of *Proceedings of the SPIE*, pages 1442–1451, San Jose, CA, USA, jan 1999.
- bost98-1** [290] S. Borman and R. Stevenson. Spatial resolution enhancement of low-resolution image sequences: A comprehensive review with directions for future research. Technical report, Department of electrical engineering, University of Notre Dame, Notre Dame, Indiana, USA, jul, 1998.
- bost98** [291] S. Borman and R. Stevenson. Super-resolution from image sequences—a review. In *Circuits and Systems, 1998. Proceedings. 1998 Midwest Symposium on*, pages 374–378, Notre Dame, IN, USA, aug 1998.
- bost99-1** [292] S. Borman and R. Stevenson. Simultaneous multi-frame MAP super-resolution video enhancement using spatio-temporal priors. In *Image Processing, 1999. ICIP 99. Proceedings. 1999 International Conference on*, volume 3, pages 469–473, 1999.
- bost03** [293] S. Borman and R. Stevenson. Image resampling and constraint formulation for multi-frame super-resolution restoration. In S. Borman, R. L. Stevenson, C. A. Bouman, and R. L. Stevenson, editors, *Computational Imaging, Image rendering and processing II*, volume 5016 of *Proceedings of the SPIE*, pages 208–219, Santa Clara, CA, USA, jan 2003.
- bost04** [294] S. Borman and R. Stevenson. Linear models for multi-frame super-resolution restoration under non-affine registration and spatially varying PSF. In S. Borman, R. L. Stevenson, C. A. Bouman, and E. L. Miller, editors, *Computational imaging II, Registration and mosaicing*, volume 5299 of *Proceedings of the SPIE*, pages 234–245, San Jose, CA, USA, jan 2004.
- babo04** [295] J. Borwein and D. Bailey. *Mathematics by Experiment*. A K Peters Ltd., Natick, MA, 2004.

- babo08** [296] J. Borwein and D. Bailey. *Mathematics by experiment*. A K Peters Ltd., Wellesley, MA, Second edition, 2008.
- babogi04** [297] J. Borwein, D. Bailey, and R. Girgensohn. *Experimentation in mathematics*. A K Peters Ltd., Natick, MA, 2004.
- boboXX** [298] J. Borwein and P. Borwein. *Experimental and Computational Mathematics: Selected Writings*. ?
- bode09** [299] J. Borwein and K. Devlin. *The computer as crucible. An introduction to experimental mathematics*. A K Peters Ltd., Wellesley, MA, 2009.
- bode11** [300] J. Borwein and K. Devlin. *Experimental mathematics. An example-oriented introduction*. Heidelberg: Spektrum Akademischer Verlag(Springer), 2011.
- bororo08** [301] J. M. Borwein, E. Rocha, and J. Rodrigues. *Communicating mathematics in the digital era (CMDE 2006)*. A K Peters Ltd., Wellesley, MA, 2008.
- bo08-5** [302] S. Bosch. *Linear Algebra (Lineare Algebra) 4th revised Ed*. Springer-Lehrbuch. Berlin: Springer. x, 297 p. EUR 26.95 and SFR 44.00, 2008.
- bo90-2** [303] J. Bost. Principe d’Oka, K-théorie et systèmes dynamiques non commutatifs. *Inventiones Mathematicae*, 101(1):261–333, 1990.
- bogr03** [304] A. Böttcher and S. Grudsky. Fejér means and norms of large Toeplitz matrices. *Acta Math. Sci.*, 69(3-4):889–900, 2003.
- bo10-2** [305] P. Bouboulis. Wirtinger’s Calculus in general Hilbert Spaces. *Arxiv preprint arXiv:1005.5170*, 2010.
- boma11-1** [306] P. Bouboulis and M. Mavroforakis. Reproducing kernel Hilbert spaces and fractal interpolation. *J. Comput. Appl. Math.*, 235(12):3425–3434, 2011.
- both10-1** [307] P. Bouboulis and S. Theodoridis. The Complex Gaussian Kernel LMS algorithm. *Artificial Neural Networks–ICANN 2010*, pages 11–20, 2010.

- both11** [308] P. Bouboulis and S. Theodoridis. Extension of Wirtinger’s calculus in reproducing kernel Hilbert spaces and the complex kernel LMS. *IEEE Trans. Signal Process.*, 59(3):964–978, 2011.
- bokuraXX** [309] P. Boufounos, G. Kutyniok, and H. Rauhut. Sparse recovery from combined fusion frame measurements. *preprint*.
- bohi91** [310] N. Bouleau and F. Hirsch. *Dirichlet Forms and Analysis on Wiener Space*. de Gruyter Studies in Mathematics. 14. Berlin etc.: de Gruyter. x, 325 p., 1991.
- bola08** [311] G. Bourdaud and d. Lanza. Regularity of the symbolic calculus in Besov algebras. *Studia Math.*, 184(3):271–298, 2008.
- bopura11** [312] M.-M. Boureau, P. Pucci, and V. Radulescu. Multiplicity of solutions for a class of anisotropic elliptic equations with variable exponent. *Complex Variables and Elliptic Equations*, 56(7-9):755–767, 2011.
- bo88** [313] J. Bourgain. A remark on the uncertainty principle for Hilbertian basis. *J. Funct. Anal.*, 79(1):136–143, 1988.
- bodifokoku11-1** [314] J. Bourgain, S. Dilworth, K. Ford, S. Konyagin, and D. Kutzarova. Breaking the  $k^2$ -barrier for explicit RIP matrices. In *STOC’11*, pages 637–644, 2011.
- bodifokoku11** [315] J. Bourgain, S. Dilworth, K. Ford, S. Konyagin, and D. Kutzarova. Explicit constructions of RIP matrices and related problems. *Duke Math. J.*, 159(1):145–185, 2011.
- bogu11** [316] J. Bourgain and L. Guth. Bounds on oscillatory integral operators. *C. R., Math., Acad. Sci. Paris*, 349(3-4):137–141, 2011.
- botz89** [317] J. Bourgain and L. Tzafriri. Restricted invertibility of matrices and applications. Analysis at Urbana. Vol. II: Analysis in abstract spaces, Proc. Spec. Year Mod. Anal., Urbana/Ill. 1986-87, Lond. Math. Soc. Lect. Note Ser. 138, 61-107 (1989)., 1989.
- botz91** [318] J. Bourgain and L. Tzafriri. On a problem of Kadison and Singer. *J. Reine Angew. Math.*, 420:1–43, 1991.

- boma11** [319] H. Bourles and B. Marinescu. *Linear Time-varying Systems Algebraic-analytic Approach*. Lecture Notes in Control and Information Sciences 410. Berlin: Springer. xxv, 635 p., 2011.
- bo02-1** [320] O. Bousquet. A Bennett concentration inequality and its application to suprema of empirical processes. *C. R., Math., Acad. Sci. Paris*, 334(6):495–500, 2002.
- bo74-1** [321] d. Boutet. Hypoelliptic operators with double characteristics and related pseudodifferential operators. *Commun. Pure Appl. Anal.*, 27:585–639, 1974.
- bore11** [322] J. Bowley and L. Rebollo Neira. Sparsity and “Something else”: an approach to encrypted image folding. *IEEE Signal Process. Letters*, 18(3):189–192, 2011.
- bo1e07** [323] M. Bownik and J. Lemvig. The canonical and alternate duals of a wavelet frame. *Appl. Comput. Harmon. Anal.*, 23(2):263–272, 2007.
- bo1e11** [324] M. Bownik and J. Lemvig. Affine and quasi-affine frames for rational dilations. *Trans. Amer. Math. Soc.*, 363(4):1887–1924, 2011.
- bo92-1** [325] J. Boyd. A fast algorithm for Chebyshev, Fourier, and sinc interpolation onto an irregular grid. *J. Comput. Phys.*, 103(2):243–257, 1992.
- bo92-2** [326] J. Boyd. Multipole expansions and pseudospectral cardinal functions: A new generalization of the fast Fourier transform. *J. Comput. Phys.*, 103(1):184–186, 1992.
- bo01-6** [327] J. Boyd. *Chebyshev and Fourier Spectral Methods*. Dover Publications, Inc., 2nd (revised) edition, 2001.
- bolero10** [328] M. Bozzini, L. Lenarduzzi, and M. Rossini. Polyharmonic splines: an approximation method for noisy scattered data of extra-large size. *Appl. Math. Comput.*, 216(1):317–331, 2010.
- boro02** [329] M. Bozzini and M. Rossini. Testing methods for 3D scattered data interpolation. In M. Gasca, editor, *Proc. of the 6th international workshop, MAIA 2001. Multivariate approximation and interpolation with applications*, volume 20, pages 111–135, Almuécar, Spain, September 10-14, 2001, 2002. Academia de Ciencias Exactas, Fisicas.

- br83-1** [330] R. Bracewell. Discrete Hartley transform. *J. Opt. Soc. Am.*, 73(12):1832–1835, 1983.
- brdowo99** [331] A. Bracken, H. Doebner, and J. Wood. Bounds on integrals of the Wigner function. *Physical Review Letters*, 83(19):3758–3761, 1999.
- bre1wo03** [332] A. Bracken, D. Ellinas, and J. Wood. Group theory and quasiprobability integrals of Wigner functions. *Journal of Physics A: Mathematical and General*, 36:L297, 2003.
- bre1wo04** [333] A. Bracken, D. Ellinas, and J. Wood. Non-positivity of the Wigner function and bounds on associated integrals. *Acta Physica Hungarica B) Quantum Electronics*, 20(1):121–124, 2004.
- brwa10** [334] A. Bracken and P. Watson. The quantum state vector in phase space and Gabor’s windowed Fourier transform. *Journal of Physics A: Mathematical and Theoretical*, 43:395304, 2010.
- brsa09** [335] R. Bradley and C. Sandifer. *Cauchys Cours danalyse*. Springer, 2009.
- brrav109** [336] M. Brady, S. Raben, and P. Vlachos. Methods for Digital Particle Image Sizing (DPIS): Comparisons and improvements. *Flow Measurement and Instrumentation*, 20(6):207–219, 2009.
- br08** [337] D. Brandwood. A complex gradient operator and its application in adaptive array theory. *Microwaves, Optics and Antennas, IEE Proceedings H*, 130(1):11–16, 2008.
- brwh71** [338] J. Brault and O. White. The analysis and restoration of astronomical data via the fast Fourier transform. *Astronomy and Astrophysics*, 13:169, jul 1971.
- br10-1** [339] A. Braverman. Pursuing the double affine Grassmannian, I: Transversal slices via instantons on A k-Singularities. *Duke Mathematical Journal*, 152(2):175–206, 2010.
- brfi12** [340] A. Braverman and M. Finkelberg. Pursuing the double affine Grassmannian II: Convolution. *Advances in Mathematics*, 230(1):414 – 432, 2012.

- br83-2** [341] E. Brieskorn. *Lineare Algebra und Analytische Geometrie I Noten Zu Einer Vorlesung mit Historischen Anmerkungen von Erhard Scholz*. Braunschweig - Wiesbaden: Friedr. Vieweg & Sohn. VIII, 636 S., 1983.
- br85-1** [342] E. Brieskorn. *Lineare Algebra und Analytische Geometrie II*. Friedr. Vieweg & Sohn, Braunschweig, 1985.
- br85** [343] E. Brigham. *FFT Schnelle Fourier-Transformation*. Einführung in die Nachrichtentechnik. [Introduction to Information Technology]. R. Oldenbourg Verlag, Munich, 1985.
- brgr10** [344] D. Brody and E. Graefe. Coherent states and rational surfaces. *Journal of Physics A: Mathematical and Theoretical*, 43:255205, 2010.
- brke11** [345] M. Brokate and G. Kersting. *Measure and integral. (Mass und Integral.)*. Mathematik Kompakt. Basel: Birkhäuser. vi, 158 p. EUR 18.90, 2011.
- brda05** [346] G. Brown and F. Dai. Approximation of smooth functions on compact two-point homogeneous spaces. *J. Funct. Anal.*, 220(2):401–423, 2005.
- brstwewe03** [347] T. Brox, M. Welk, G. Steidl, and J. Weickert. Equivalence results for TV diffusion and TV regularisation. Griffin, Lewis D. (ed.) et al., Scale space methods in computer vision. 4th international conference, Scale Space 2003, Isle of Skye, UK, June 10–12, 2003. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 2695, 86-100 (2003)., 2003.
- brcadajop184** [348] R. Brualdi, D. Carlson, B. Datta, C. Johnson, R. Plemmons, and R. J. Plemmons. *Contemporary Mathematics - Linear Algebra and Its Role in Systems Theory*. Volume 47 edition, 1984.
- brdoe109** [349] A. Bruckstein, D. L. Donoho, and M. Elad. From sparse solutions of systems of equations to sparse modeling of signals and images. *SIAM Rev.*, 51(1):34–81, 2009.
- br76** [350] J. Brudnyi. Piecewise polynomial approximation, embedding theorem and rational approximation. In *Approximation Theory (Proceedings of an International Colloquium Held at Bonn, Germany, June 811, 1976)*, volume 556 of *Lecture Notes in Mathematics*, pages 73–98. Springer, 1976.

- brkr81** [351] J. Brudnyi and N. Krugljak. Functors of real interpolation. *Dokl. Akad. Nauk SSSR*, 256(1):14–17, 1981.
- brle06-1** [352] K. Bryan and T. Leise. The \$25,000,000,000 eigenvector: The linear algebra behind google. *SIAM Rev.*, 48(3):569–581, 2006.
- buva11** [353] P. Bühlmann and d. van. *Statistics for high-dimensional data*. Springer Series in Statistics. Springer, Heidelberg, 2011.
- bu84** [354] H.-Q. Bui. Characterizations of weighted Besov and Triebel-Lizorkin spaces via temperatures. *J. Funct. Anal.*, 55(1):39–62, January 1984.
- bupa11** [355] H.-Q. Bui and M. Paluszynski. On the phi and psi transforms of Frazier and Jawerth. *Math. Nachr.*, 2011.
- bupata97** [356] H.-Q. Bui, M. Paluszynski, and M. H. Taibleson. Characterization of the Besov-Lipschitz and Triebel-Lizorkin spaces. The case  $q < 1$ . 3(Special Issue):837–846, 1997.
- buma06** [357] A. Bultheel and H. Martinez Sulbaran. Recent developments in the theory of the fractional Fourier and linear canonical transforms. *Bulletin of the Belgian mathematical Society-Simon Stevin*, 2006.
- buga06** [358] V. Burenkov and A. Garcia. Estimates of regularized solutions of integral equations of the first kind in anisotropic spaces with fractional orders of smoothness. *Inverse Problems*, 22(5):1739–1759, 2006.
- bulatats10** [359] M. Burger, Y. Landa, N. Tanushev, and R. Tsai. Discovering a point source in unknown environments. Chirikjian, Gregory S. (ed.) et al., Algorithmic foundations of robotics VIII. Selected contributions of the eighth international workshop on the algorithmic foundations of robotics (WAFR 2008), Guanajuato, México, December 7–9, 2008. Berlin: Springer., 2010.
- bebumoos11** [360] M. Burger, M. Moeller, M. Benning, and S. Osher. An adaptive inverse scale space method for compressed sensing. Technical Report 11-08, UCLA, 2011.
- budiflwe07** [361] B. Burgeth, S. Didas, L. Florack, and J. Weickert. A generic approach to diffusion filtering of matrix-fields. *Computing*, 81(2-3):179–197, 2007.

- budywazw11** [362] N. Burq, S. Dyatlov, R. Ward, and M. Zworski. Weighted eigenfunction estimates with applications to compressed sensing. *Arxiv preprint arXiv:1111.2383*, 2011.
- bupa85** [363] C. Burrus and T. Parks. *DFT/FFT and Convolution Algorithms - Theory and implementation*. Texas Instruments Inc., 1985.
- bupe07** [364] P. Busch and D. Pearson. Universal joint-measurement uncertainty relation for error bars. *J. Math. Phys.*, 48(8):082103, 10, 2007.
- busc84** [365] P. L. Butzer and D. Schulz. Limit theorems with  $O$ -rates for random sums of dependent Banach-valued random variables. *Math. Nachr.*, 119:59–75, 1984.
- busc07** [366] S. Buyalo and V. Schroeder. *Elements of asymptotic geometry*. EMS monographs in mathematics. European Mathematical Society, 2007.
- buniro10** [367] E. Buzano, F. Nicola, and L. Rodino. *Global Pseudo-Differential Calculus on Euclidean Spaces*. Springer Verlag, 2010.
- byxu08** [368] R. Byers and H. Xu. A new scaling for Newton’s iteration for the polar decomposition and its backward stability. *SIAM J. Matrix Anal. Appl.*, 30(2):822–843, 2008.
- ca04-3** [369] A. Cabello. Bibliographic guide to the foundations of quantum mechanics and quantum information. *Arxiv preprint quant-ph/0012089*, 2004.
- cach10** [370] N. Cadigan and J. Chen. Kernel regression estimators for nonparametric model calibration in survey sampling. *J. Stat. Theory Pract.*, 4(1):1–25, 2010.
- ca11-1** [371] A. M. Caetano. On the type of convergence in atomic representations. *Complex Var. Elliptic Equ.*, 56(10-11):875–883, 2011.
- cafa06** [372] A. M. Caetano and W. Farkas. Local growth envelopes of Besov spaces of generalized smoothness. *Z. Anal. Anwend.*, 25(3):265–298, 2006.
- cagoop11** [373] A. M. Caetano, A. Gogatishvili, and B. Opic. Embeddings and the growth envelope of Besov spaces involving only slowly varying smoothness. *J. Approx. Theory*, 163(10):1373–1399, 2011.

- cacali12 [374] J. Cahill, P. Casazza, and S. Li. Non-orthogonal fusion frames and the sparsity of fusion frame operators. *J. Fourier Anal. Appl.*, 18(2):287–308, 2012.
- cali11 [375] J. Cahill and S. Li. Dimension invariance of finite frames of translates and Gabor frames. *Advances in Computational Mathematics*, Online first:1–16.
- cawaxu10-1 [376] T. Cai, L. Wang, and G. Xu. New bounds for restricted isometry constants. *IEEE Trans. Inform. Theory*, 56(9):4388–4394, 2010.
- cali02 [377] Y. Cai and Q. Lin. Decentered elliptical Gaussian beam. *Appl. Opt.*, 41(21):4336–4340, Jul 2002.
- cacom011 [378] F. Cakoni, D. Colton, and P. Monk. *The linear sampling method in inverse electromagnetic scattering*, volume 80 of *CBMS-NSF Regional Conference Series in Applied Mathematics 80*. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, PA, 2011.
- cacahekupeXX [379] R. Calderbank, P. Casazza, A. Heinecke, G. Kutyniok, and A. Pezeshki. Sparse fusion frames: existence and construction. *Advances in Computational Mathematics*, pages 1–31.
- ca66-2 [380] A. P. Calderon. Spaces between  $L^1$  and  $L^\infty$  and the theorem of Marcinkiewicz. *Studia Math.*, 26:273–299, 1966.
- ca76-1 [381] A. P. Calderon. Inequalities for the maximal function relative to a metric. *Studia Math.*, 57:297–306, 1976.
- ca07-1 [382] C. Candan. On higher order approximations for Hermite-Gaussian functions and discrete fractional Fourier transforms. *IEEE Signal Processing Letters*, 14(10):699–702, oct. 2007.
- cakuoz02 [383] C. Candan, M. Kutay, and H. Ozaktas. The discrete fractional Fourier transform. *IEEE Trans. Signal Process.*, 48(5):1329–1337, 2002.
- caoz03 [384] C. Candan and H. M. Ozaktas. Sampling and series expansion theorems for fractional Fourier and other transforms. *Signal Process.*, 83(11):2455–2457, 2003.
- cala92 [385] J. Candel Haro and H. Lai. Multipliers in continuous vector-valued function spaces. *Bull. Austral. Math. Soc.*, 46(2):199–204, 1992.

- [cala95] [386] J. Candéal Haro and H. Lai. Multipliers in vector-valued function spaces under convolution. *Acta Math. Hungar.*, 67(3):175–192, 1995.
- [cata07] [387] E. Candes and T. Tao. The Dantzig selector: statistical estimation when  $p$  is much larger than  $n$ . *Ann. Statist.*, 35(6):2313–2351, 2007.
- [caelnera11] [388] E. J. Candès, Y. C. Eldar, D. Needell, and P. Randall. Compressed sensing with coherent and redundant dictionaries. *Appl. Comput. Harmon. Anal.*, 31(1):59 – 73, 2011.
- [cap109] [389] E. J. Candès and Y. Plan. Near-ideal model selection by  $\ell_1$  minimization. *Ann. Statist.*, 37(5A):2145–2177, 2009.
- [cap111-1] [390] E. J. Candès and Y. Plan. A probabilistic and RIPless theory of compressed sensing. *Information Theory, IEEE Transactions on*, 57(11):7235 – 7254, November 2011.
- [cahuquza06] [391] C. Canuto, M. Hussaini, A. Quarteroni, and T. Zang. *Spectral Methods Fundamentals in Single Domains*. Scientific Computation. Berlin: Springer. xxiii, 563 p. EUR 85.55, 2006.
- [brca03-1] [392] C. Capus and K. Brown. Fractional Fourier transform of the Gaussian and fractional domain signal support. In *Vision, Image and Signal Processing, IEE Proceedings-*, volume 150, pages 99–106, 2003.
- [brca03] [393] C. Capus and K. Brown. Short-time fractional Fourier methods for the time-frequency representation of chirp signals. *The Journal of the Acoustical Society of America*, 113:3253, 2003.
- [calasc11] [394] D. Carando, S. Lassalle, and P. Schmidberg. The reconstruction formula for Banach frames and duality. *J. Approx. Theory*, 163(5):640 – 651, 2011.
- [ca56] [395] C. Caratheodory. *Variationsrechnung und Partielle Differentialgleichungen Erster Ordnung Bd I: Theorie Der Partiellen Differentialgleichungen Erster Ordnung*. Leipzig: B. G. Teubner Verlagsgesellschaft XI, 171 S., 1956.
- [caerkr1a00] [396] G. Cariolaro, T. Erseghe, P. Kraniuskas, and N. Laurenti. Multiplicity of fractional Fourier transforms and their relationships. *IEEE Transactions on Signal Processing*, 48(1):227–241, 2000.

- `caerkr1a02` [397] G. Cariolaro, T. Erseghe, P. Kraniuskas, and N. Laurenti. A unified framework for the fractional Fourier transform. *IEEE Trans. Signal Process.*, 46(12):3206–3219, 2002.
- `cacegu12` [398] A. Carmi, Y. Censor, and P. Gurfil. Convex feasibility modeling and projection methods for sparse signal recovery. *Journal of Computational and Applied Mathematics*, In Press:26, 2012.
- `ca94-3` [399] M. Carmo. *Differential Forms and Applications*. Universitext (1979). Springer-Verlag, 1994.
- `ca11` [400] G. Carneiro. Graph-based methods for the automatic annotation and retrieval of art prints. In *ICMR '11, Proc. of the 1st ACM International Conference on Multimedia Retrieval*, volume Article No.32, page 8, Trento, Italy, April 17-20, 2011. ACM (Association for Computing Machinery) New York, NY.
- `cafazo08` [401] I. Carrizo, S. Favier, and F. Zó. Extension of the best approximation operator in Orlicz spaces. 2008.
- `cafaz11` [402] I. Carrizo, S. Favier, and F. Z'ó. A characterization of the extended best  $\phi$ -approximation operator. *Numer. Funct. Anal. Optim.*, 32(3):254–266, 2011.
- `ca05-1` [403] A. Carvalho. Box dimension, oscillation and smoothness in function spaces. *J. Funct. Spaces Appl.*, 3(3):287–320, 2005.
- `cafimi12` [404] P. Casazza, M. Fickus, and D. Mixon. Auto-tuning unit norm frames. *Appl. Comput. Harmon. Anal.*, 32(1):1–15, 2012.
- `cafimiwazh11` [405] P. Casazza, M. Fickus, D. Mixon, Y. Wang, and Z. Zhou. Constructing tight fusion frames. *Appl. Comput. Harmon. Anal.*, 30(2):175–187, 2011.
- `cahekrku10` [406] P. Casazza, A. Heinecke, F. Krahmer, and G. Kutyniok. Optimally Sparse Frames. *Arxiv preprint arXiv:1009.3663*, 2010.
- `cahekuXX` [407] P. Casazza, A. Heinecke, and G. Kutyniok. Optimally sparse fusion frames: Existence and construction. *Submitted 2010*, page 4.
- `catr09` [408] P. Casazza and J. Tremain. Revisiting the Bourgain-Tzafriri restricted invertibility theorem. *Oper. Matrices*, 3(1):97–110, 2009.

- cakuliro07** [409] P. G. Casazza, G. Kutyniok, S. Li, and C. J. Rozell. Modeling sensor networks with fusion frames. In *Wavelets XII, Special Session on Finite-Dimensional Frames, Time-Frequency Analysis, and Applications*, volume 6701, page 11, San Diego, CA, USA, 2007.
- cahehe11** [410] J. Castaneda, R. Heusdens, and R. Hendriks. A Generalized Poisson Summation Formula and its Application to Fast Linear Convolution. *IEEE Signal Processing Letters*, 18(9):501–504, sept 2011.
- cage07** [411] D. Cates and A. Gelb. Detecting derivative discontinuity locations in piecewise continuous functions from Fourier spectral data. *Numer. Algorithms*, 46(1):59–84, 2007.
- casz92** [412] H. Caulfield and H. Szu. Parallel discrete and continuous wavelet transforms. *Opt. Eng.*, 31(9):1835–1839, September 1992.
- cesa08** [413] T. Ceccherini Silberstein and A. Samet Vaillant. Gromov’s translation algebras, growth and amenability of operator algebras. *Exposition. Math.*, 26(2):141–162, 2008.
- ce10** [414] J. Cerda. *Linear Functional Analysis*. Graduate Studies in Mathematics 116. Providence, RI: American Mathematical Society (AMS) and Madrid: Real Sociedad Matemática Española. xiii, 330 p., 2010.
- cefekate11** [415] P. Cerejeiras, M. Ferreira, U. Kähler, and G. Teschke. Inversion of the noisy Radon transform on  $SO(3)$  by Gabor frames and sparse recovery principles. *Appl. Comput. Harmon. Anal.*, 31(3):325–345, 2011.
- cechfiihmowawi06** [416] M. Cetin, L. Chen, I. Fisher, A. Ihler, R. Moses, M. Wainwright, and A. Willsky. Distributed fusion in sensor networks. *IEEE Signal Processing Magazine*, 23(4):42–55, 2006.
- cechmc09** [417] V. Cevher, R. Chellappa, and J. McClellan. Vehicle speed estimation using acoustic wave patterns. *IEEE Trans. Signal Process.*, 57(1):30–47, 2009.
- chgulepaXX** [418] D. Chafai, O. Guédon, G. Lécué, and A. Pajor. *Interactions between compressed sensing, random matrices and high dimensional geometry*. to appear.

- ch09-2** [419] N. Chakrabarti. A representation of non-uniformly sampled deterministic and random signals and their reconstruction using sample values and derivatives. *Arxiv preprint arXiv:0905.0397*, 2009.
- chve07** [420] J. Chamberland and V. Veeravalli. Wireless sensors in distributed detection applications. *IEEE Signal Processing Magazine*, 24(3):16–25, 2007.
- cachcrnopo10** [421] A. Chambolle, V. Caselles, D. Cremers, M. Novaga, and T. Pock. An introduction to total variation for image analysis. In *Theoretical foundations and numerical methods for sparse recovery*, volume 9 of *Radon Ser. Comput. Appl. Math.*, pages 263–340. Walter de Gruyter, Berlin, 2010.
- chpo11** [422] A. Chambolle and T. Pock. A first-order primal-dual algorithm for convex problems with applications to imaging. *J. Math. Imaging Vision*, 40:120–145, 2011.
- ch11** [423] D. Chamorro. Improved Sobolev inequalities and Muckenhoupt weights on stratified Lie groups. *J. Math. Anal. Appl.*, 377(2):695–709, 2011.
- chngyayi07** [424] T. Chan, M. K. Ng, A. Yau, and A. Yip. Superresolution image reconstruction using fast inpainting algorithms. *Appl. Comput. Harmon. Anal.*, 23(1):3–24, 2007.
- chhupuzh09** [425] T.-M. Chan, J. Zhang, J. Pu, and H. Huang. Neighbor embedding based super-resolution algorithm through edge detection and feature selection. *Pattern Recognition Lett.*, 30(5):494 – 502, April 2009.
- chparewi10** [426] V. Chandrasekaran, B. Recht, P. Parrilo, and A. Willsky. The convex geometry of linear inverse problems. *preprint*, 2010.
- ch71-1** [427] R. Chaney. Note on Fourier series on the p-adic integers. *Duke Math. J.*, 38:387–393, 1971.
- ch71** [428] R. Chaney. Note on Fourier-Stieltjes transforms of continuous and absolutely continuous measures. *Pr. Mat.*, 15:147–149, 1971.
- chlishwe06** [429] L. Chang, Z. Wei, W. Shen, and Z. Lin. Wavefront fitting of interferogram with Zernike polynomials based on SVD. In L. Chang,

Z. Wei, W. Shen, Z. Lin, X. Hou, J. Yuan, J. C. Wyant, H. Wang, and S. Han, editors, *Proc. SPIE, 2nd International Symposium on Advanced Optical Manufacturing and Testing Technologies: Optical Test and Measurement Technology and Equipment*, volume 6150 of *Session 3-3*, page 61500G(6). SPIE, 2006.

ch66 [430] R. Chang. Synthesis of band-limited orthogonal signals for multi-channel data transmission. *Bell System Tech. J.*, 45:1775–1796, Dec. 1966.

chchhe10 [431] M. Charina, C. Chui, and W. He. Tight frames of compactly supported multivariate multi-wavelets. *J. Comput. Appl. Math.*, 233(8):2044–2061, 2010.

alchkhmi07 [432] A. Chaudhry, A. Khan, A. Ali, and A. Mirza. A hybrid image restoration approach: Using fuzzy punctual kriging and genetic programming. *International Journal of Imaging Systems and Technology*, 17(4):224–231, 2007.

chun09 [433] K. Chaudhury and M. Unser. Construction of Hilbert transform pairs of wavelet bases and Gabor-like transforms. *IEEE Trans. Signal Process.*, 57(9):3411–3425, 2009.

chcomeou09 [434] F. Chazal, D. Cohen Steiner, L. Memoli, and S. Oudot. Gromov-Hausdorff Stable Signatures for Shapes using Persistence. *Computer Graphics Forum (proc. SGP 2009)*, 2009.

chfiko09 [435] A. Chebira, M. Fickus, and J. Kovacevic. Classifying compact convex sets with frames. *Appl. Comput. Harmon. Anal.*, 27(1):73–86, 2009.

chch96 [436] C.-C. Chen and D. Chen. Multi-resolutional Gabor filter in texture analysis. *Pattern Recognition Lett.*, 17(10):1069 – 1076, 1996.

chdedifa12 [437] J. Chen, Q. Deng, Y. Ding, and D. Fan. Estimates on fractional power dissipative equations in function spaces. *Nonlinear Analysis: Theory, Methods & Applications*, 75(5):2959 – 2974, 2012.

chzh06 [438] L. Chen and D. Zhao. Application of fractional Fourier transform on spatial filtering. *Optik - International Journal for Light and Electron Optics*, 117(3):107 – 110, 2006.

- chqi09 [439] Q. Chen and T. Qian. Sampling theorem and multi-scale spectrum based on non-linear Fourier atoms. *Appl. Anal.*, 88(6):903–919, June 1009.
- chwawa08 [440] Q. Chen, Y. Wang, and Y. Wang. A sampling theorem for non-bandlimited signals using generalized sinc functions. *Comput. Math. Appl.*, 56(6):1650–1661, 2008.
- bichlu89 [441] S. Chen, S. Billings, and W. Luo. Orthogonal least squares methods and their application to nonlinear system identification. *Intl. J. Contr.*, 50(5):18731896, 1989.
- chmc97 [442] S. Chen and S. McLaughlin. Blind channel identification based on higherorder cumulant fitting using genetic algorithms. pages 184–188, Jul. 1997.
- chla75 [443] Y.-K. Chen and H.-C. Lai. Multipliers of Lorentz spaces. *Hokkaido Math. J.*, 4(2):247–260, 1975.
- chc11a06 [444] T. Chew, R. Clare, and R. Lane. A comparison of the Shack-Hartmann and pyramid wavefront sensors. *Optics communications*, 268(2):189–195, 2006.
- aj79 [445] A. K. Chilana and A. Kumar. Spectral synthesis in Segal algebras on hypergroups. *Pacific J. Math.*, Volume 80(Number 1):59–76., 1979.
- ch12 [446] G. Chirikjian. *Applied and Numerical Harmonic Analysis - Stochastic Models, Information Theory and Lie Groups*, volume 2. Birkhäuser Verlag, 2012.
- chky01 [447] G. Chirikjian and A. Kyatkin. *Engineering Applications of Noncommutative Harmonic Analysis With Emphasis on Rotation and Motion Groups*. Boca Raton, FL: CRC Press. xxii, 2001.
- chde11 [448] J. Chiu and L. Demanet. Matrix probing and its conditioning. *SIAM J. Numer. Anal.*, 50(1):171–193, 2012.
- choz09 [449] Y. Cho and T. Ozawa. Sobolev inequalities with symmetry. *Commun. Contemp. Math.*, 11(3):355–365, 2009.

- [450] Y.-K. Cho. Continuous characterization of the Triebel-Lizorkin spaces and Fourier multipliers. *Bull. Korean Math. Soc.*, 47(4):839–857, 2010.
- [451] B. Choe and K. Nam. Double integral characterizations of harmonic Bergman spaces. *J. Math. Anal. Appl.*, 379(2):889 – 909, 2011.
- [452] W.-P. Choi, S.-H. Tse, K.-W. Wong, and K.-M. Lam. Simplified Gabor wavelets for human face recognition. *Pattern Recognition*, 41(3):1186–1199, 2008.
- [453] F. Chouchene. Harmonic analysis associated with the Jacobi-Dunkl operator on  $] - \frac{\pi}{2}, \frac{\pi}{2}[$ . *J. Comput. Appl. Math.*, 178(1-2):75–89, 2005.
- [454] B. Chow, P. Lu, and L. Ni. *Hamilton's Ricci flow*. Graduate studies in mathematics. American Mathematical Society/Science Press, 2006.
- [455] S. Chrétien and S. Darses. Invertibility of random submatrices via tail decoupling and a matrix Chernoff inequality. *preprint*, 2011.
- [456] M. Christ and D. Geller. Singular integral characterizations of Hardy spaces on homogeneous groups. *Duke Math. J.*, 51(3):547–598, 1984.
- [457] J. G. Christensen. Sampling in reproducing kernel Banach spaces on Lie groups. *J. Approx. Theory*, 164(1):179–203, 2012.
- [458] O. Christensen, H. G. Feichtinger, and S. Paukner. *Gabor Analysis for Imaging*, volume 3, pages 1271–1307. Springer Berlin, 2011.
- [459] O. Christensen, H. Kim, R. Kim, and J. Lim. Riesz sequences of translates and generalized duals with support on  $[0, 1]$ . *J. Geom. Anal.*, 16(4):585–596, 2006.
- [460] O. Christensen, H. Kim, and R. Y. Kim. On the duality principle by Casazza, Kutyniok and Lammers. Technical report, February 2010.
- [461] O. Christensen and R. S. Laugesen. Approximately dual frame pairs in Hilbert spaces and applications to Gabor frames. *Sampl. Theory Signal Image Process.*, 2010.
- [462] T. Christiansen and M. Zworski. Probabilistic Weyl laws for quantized tori. *Comm. Math. Phys.*, 299(2):305–334, 2010.

- chli94 [463] C. Chui and C. Li. A general framework of multivariate wavelets with duals. *Appl. Comput. Harmon. Anal.*, 1(4):368–390, 1994.
- chli95-1 [464] C. Chui and C. Li. Multivariate interpolating wavelets. Chui, C. K. (ed.) et al., *Approximation theory VIII. Vol. 2. Wavelets and multilevel approximation. Papers from the 8th Texas international conference, College Station, TX, USA, January 8–12, 1995*. Singapore: World Scientific. Ser. Approx. Decompos. 6, 9, 1995.
- chsu07 [465] C. Chui and Q. Sun. Characterizations of tight over-sampled affine frame systems and over-sampling rates. *Appl. Comput. Harmon. Anal.*, 22(1):1–15, 2007.
- chzh99 [466] C. K. Chui and L. Zhong. Polynomial interpolation and Marcinkiewicz-Zygmund inequalities on the unit circle. *J. Math. Anal. Appl.*, 233(1):387–405, May 1999.
- chla11 [467] C.-K. Chun Kit and L. Lai. On Fourier frame of absolutely continuous measures. *J. Funct. Anal.*, 261(10):2877 – 2889, 2011.
- civa07 [468] O. Ciaurri and J. Varona. A Whittaker-Shannon-Kotelnikov sampling theorem related to the Dunkl transform. *Proc. Amer. Math. Soc.*, 135(9):2939–2947, 2007.
- civa10 [469] O. Ciaurri and J. Varona. An uncertainty inequality for Fourier-Dunkl series. *J. Comput. Appl. Math.*, 233(6):1499–1504, 2010.
- cikasa05 [470] P. Cifuentes, K. S. Kazarian, and A. San Antolin. Characterization of scaling functions in a multiresolution analysis. *Proc. Amer. Math. Soc.*, 133(4):1013–1023, 2005.
- ci79 [471] J. Cima. The basic properties of Bloch functions. *Int. J. Math. Math. Sci.*, 2:369–413, 1979.
- ciro00 [472] J. Cima and W. Ross. *The Backward Shift On The Hardy space*, volume 79 of *Mathematical Surveys and Monographs*. American Mathematical Society, Providence, RI, 2000.
- cits98 [473] H. Cirpan and M. Tsatsanis. Stochastic Maximum Likelihood Methods for Semi Blind Channel Estimation. *IEEE Signal Process. Letters*, 5:21–24, Feb. 1998.

- `clmu73` [474] J. Claerbout and F. Muir. Robust modeling of erratic data. *Geophys. J. Internat.*, 38:826–844, Oct. 1973.
- `clni11` [475] M. Clausel and S. Nicolay. Wavelets techniques for pointwise anti-Hölderian irregularity. *Constr. Approx.*, 33(1):41–75, 2011.
- `c172` [476] A. Cline. Rate of convergence of Lawson’s algorithm. *Math. Commun.*, 26:167–176, 1972.
- `cosc11` [477] H. Cobian and A. Schulze Halberg. Time-dependent Schrödinger equations with effective mass in (2+1) dimensions: intertwining relations and Darboux operators. *J. Phys. A*, 44(28):285301, 14p., 2011.
- `cope91` [478] F. Cobos and J. Peetre. Interpolation of compact operators: The multidimensional case. *Proc. Lond. Math. Soc., III. Ser.*, 63(2):371–400, 1991.
- `co77` [479] W. G. Cochran. *Sampling techniques*. John Wiley & Sons, 1977.
- `co00-2` [480] A. Cohen. Wavelet methods in numerical analysis. Ciarlet, P. G. (ed.) et al., Handbook of numerical analysis. Vol. 7: Solution of equations in  $\mathbb{R}^n$  (Part 3). Techniques of scientific computing (Part 3). Amsterdam: North-Holland/ Elsevier. 417-711 (2000)., 2000.
- `codefora11` [481] A. Cohen, R. A. DeVore, S. Foucart, and H. Rauhut. Recovery of functions of many variables via compressive sensing. In *Proc. SampTA 2011, Singapore.*, 2011.
- `coza11` [482] J. Cohen and A. Zayed. *Wavelets And Multiscale Analysis Theory And Applications*. Birkhäuser, 2011.
- `cohu98` [483] P. Cohen and R. Hudson. Generators of quantum stochastic flows and cyclic cohomology. *Math. Proc. Cambridge Philos. Soc.*, 123(2):345–363, 1998.
- `coluwa07` [484] W. Cohn, G. Lu, and P. Wang. Sub-elliptic global high order Poincaré inequalities in stratified Lie groups and applications. *J. Funct. Anal.*, 249(2):393–424, 2007.
- `co06-1` [485] R. R. Coifman. Geometric harmonic analysis in high dimensions: challenges and opportunities. Jensen, Gary R. (ed.) et al., 150 years

of mathematics at Washington University in St. Louis. Sesquicentennial of mathematics at Washington University, St. Louis, MO, USA, October 3–5, 2003. Providence, RI: American Mathematical Society (AMS). *Contempora*, 2006.

- `cocwrosawe82` [486] R. R. Coifman, M. Cwikel, R. Rochberg, Y. Sagher, and G. Weiss. A theory of complex interpolation for families of Banach spaces. *Adv. in Math.*, 43(3):203–229, 1982.
- `come97-1` [487] R. R. Coifman and F. Meyer. Brushlets: A tool for directional image analysis and image compression. *Appl. Comput. Harmon. Anal.*, 4(2):147–187, 1997.
- `cogrnepe98` [488] D. Cojoc, P. Grattoni, R. Nerino, and G. Pettiti. Image description using Gabor wavelets. In *Proc. SPIE, OPTIKA '98: 5th Congress on Modern Optics*, volume 3573 of *Optical Systems, Imaging, and Micro-Optics*, page 4, Budapest, Hungary, 1998.
- `cogh10` [489] P. Cojuhari and A. Gheondea. Closed embeddings of Hilbert spaces. *J. Math. Anal. Appl.*, 369(1):60–75, 2010.
- `bacoerpu02` [490] S. Coleri, M. Ergen, A. Puri, and A. Bahai. Channel Estimation Techniques Based on Pilot Arrangement in OFDM Systems. *IEEE Trans. Broadcasting*, 48(3):223–229, Sep. 2002.
- `co92-2` [491] M. Combescure. A generalized coherent state approach of the quantum dynamics for suitable time-dependent Hamiltonians. 1992.
- `co09` [492] M. Combescure. Circulant matrices, Gauss sums and mutually unbiased bases. I: The prime number case. *Cubo*, 11(4):73–86, 2009.
- `coto07` [493] F. Concetti and J. Toft. Trace ideals for Fourier integral operators with non-smooth symbols. In *Pseudo-differential operators: partial differential equations and time-frequency analysis*, volume 52 of *Fields Inst. Commun.*, pages 255–264. Providence, RI, 2007.
- `coto09` [494] F. Concetti and J. Toft. Schatten-von Neumann properties for Fourier integral operators with non-smooth symbols. I. *Ark. Mat.*, 47(2):295–312, 2009.

- [co88-1] [495] A. Connes. Entire cyclic cohomology of Banach algebras and characters of  $\theta$ -summable Fredholm modules. *K-Theory*, 1(6):519–548, 1988.
- [co89-2] [496] A. Connes. Compact metric spaces, Fredholm modules, and hyperfiniteness. *Ergodic Theory Dynam. Systems*, 9(2):207–220, 1989.
- [co95-3] [497] A. Connes. Geometry from the spectral point of view. *Lett. Math. Phys.*, 34(3):203–238, 1995.
- [co06-2] [498] A. Connes. Noncommutative geometry and physics. Alimi, Jean-Michel (ed.) et al., Albert Einstein century international conference, Paris, France, 18–22 July 2005. Invited papers. With CD-ROM, which contains the contributed papers of this conference. Melville, NY: American Institute of Physics (AIP). AI, 2006.
- [co08-1] [499] A. Connes. A unitary invariant in Riemannian geometry. *Int. J. Geom. Methods Mod. Phys.*, 5(8):1215–1242, 2008.
- [co08-2] [500] A. Connes. On the spectral characterization of manifolds. *Arxiv preprint arXiv:0810.2088*, 2008.
- [cocoma09] [501] A. Connes, C. Consani, and M. Marcolli. The Weil proof and the geometry of the adèles class space. Tschinkel, Yuri (ed.) et al., Algebra, arithmetic, and geometry. In honor of Yu. I. Manin on the occasion of his 70th birthday. Vol. I. Boston, MA: Birkhäuser. Progress in Mathematics 269, 339-405 (2009)., 2009.
- [cohiXX] [502] A. Connes and N. Higson. Asymptotic morphisms and operator K-theory. In *preparation for the Proceedings of the 1997 AMS meeting on K-theory, Seattle, Washington*.
- [cohi90] [503] A. Connes and N. Higson. Deformations, asymptotic morphisms, and bivariant K-theory. *CR Acad. Sci. Paris I*, 311:101–106, 1990.
- [cos199] [504] J. Conway and N. J. A. Sloane. *Sphere Packings, Lattices and Groups*. Volume 290. Third Edition edition, 1999.
- [cohawe93] [505] R. Cook, D. Hawkins, and S. Weisberg. Exact iterative computation of the robust multivariate minimum volume ellipsoid estimator. *Statistics & Probability Letters*, 16(3):213–218, 1993.

- [co90-3] [506] J. Cooley. How the FFT gained acceptance. In *A history of scientific computing (Proc. of the ACM, Princeton, NJ, 1987)*, ACM Press Hist. Ser., pages 133–140. ACM, New York, 1990.
- [bocogarast69] [507] J. Cooley, R. Garwin, C. Rader, B. Bogert, and T. J. Stockham. The 1968 Arden house workshop on fast Fourier transform processing. *Audio and Electroacoustics, IEEE Transactions on*, 17(2):66 – 76, jun 1969.
- [colewe67] [508] J. Cooley, P. Lewis, and P. Welch. Historical notes on the fast Fourier transform. *Proceedings of the IEEE*, 55(10):1675 – 1677, oct. 1967.
- [co87] [509] J. W. Cooley. The re-discovery of the fast Fourier transform algorithm. *Microchimica Acta*, 93(3):33–45, 1987.
- [co70] [510] J. Cooper. Functional equations for linear transformations. *Proc. Lond. Math. Soc., III. Ser.*, 20:1–32, 1970.
- [coma11] [511] E. Copuroglu and B. Mamedov. Use of binomial coefficients in fast and accurate calculation of Löwdin- $\alpha$  radial functions. *J. Math. Chem.*, 49(1):201–207, 2011.
- [cogi11] [512] G. Corach and J. Giribet. Oblique projections and sampling problems. *Integr. Equ. Oper. Theory*, 70(3):307–322, 2011.
- [cogima09] [513] G. Corach, J. I. Giribet, and A. Maestriperi. Sard’s approximation processes and oblique projections. *Studia Math.*, 194(1):65–80, 2009.
- [coma05] [514] G. Corach and A. Maestriperi. Weighted generalized inverses, oblique projections and least squares problems. *Numer. Funct. Anal. Optim.*, 26(6):659–673, 2005.
- [coma10] [515] G. Corach and A. Maestriperi. Redundant decompositions, angles between subspaces and oblique projections. *Publ. Mat.*, 54(2):461–484, 2010.
- [comast01] [516] G. Corach, A. Maestriperi, and D. Stojanoff. Oblique projections and Schur complements. *Acta Sci. Math. (Szeged)*, 67(1-2):337–356, 2001.
- [co04] [517] E. Cordero. Wavelet MRA on the interval with dilation factor  $m$ . *Rend. Sem. Mat. Univ. Politec. Torino*, 62(1):39–57, 2004.

- `codenota10` [518] E. Cordero, M. De, K. Nowak, and A. Tabacco. Dimensional upper bounds for admissible subgroups for the metaplectic representation. *Mathematische Nachrichten*, 283(7):982–993, 2010.
- `cogrni11` [519] E. Cordero, K. Gröchenig, and F. Nicola. Approximation of Fourier integral operators by Gabor multipliers. *preprint*, 2011.
- `cogrniro12` [520] E. Cordero, K. Gröchenig, F. Nicola, and L. Rodino. The Wiener property for a class of Fourier integral operators. *Arxiv preprint arXiv:1201.4079*, 2012.
- `elfa08` [521] E. Cordero and F. Nicola. Boundedness of Schroedinger type propagators on modulation spaces, 2008.
- `cook11` [522] E. Cordero and K. A. Okoudjou. Dilation properties for weighted modulation spaces. to be published, 2011.
- `co89-3` [523] A. Cordoba. Dirac combs. *Lett. Math. Phys.*, 17(3):191–196, 1989.
- `colerist09` [524] T. Cormen, C. Leiserson, R. Rivest, and C. Stein. *Introduction to Algorithms*. The MIT Press, 3rd edition, 2009.
- `codadosc09` [525] B. Cornelis, A. Doooms, I. Daubechies, and P. Schelkens. Report on digital image processing for art historians. In *Proc. of SAMPTA'09*, page 4, Marseille, May 18-22, 2009, 2009.
- `co84-2` [526] J. Costas. A study of a class of detection waveforms having nearly ideal range-Doppler ambiguity properties. *Proceedings of the IEEE*, 72:996–1009, 1984.
- `coheje00` [527] P. Coste, F. Hessel, and A. Jerraya. Multilanguage codesign using SDL and Matlab. *Proc. SASIMI 2000*, pages 49–55, 2000.
- `cohejelerosusuze99` [528] P. Coste, F. Hessel, M. Le, Z. Sugar, M. Romdhani, R. Suescun, N. Zergainoh, and A. Jerraya. Multilanguage design of heterogeneous systems. In *Hardware/Software Codesign, 1999.(CODES'99) Proceedings of the Seventh International Workshop on*, pages 54–58, 1999.
- `coenkrra05` [529] S. Cotter, B. Rao, K. Engan, and K. Kreutz Delgado. Sparse solutions to linear inverse problems with multiple measurement vectors. *IEEE Trans. Signal Process.*, 53:2477–2488, Jul. 2005.

- `cosi08-1` [530] T. Coulhon and A. Sikora. Gaussian heat kernel upper bounds via the Phragmen-Lindelöf theorem. *Proc. Lond. Math. Soc. (3)*, 96(2):507–544, 2008.
- `cosi10` [531] T. Coulhon and A. Sikora. Riesz meets Sobolev. *Colloq. Math.*, 118(2):685–704, 2010.
- `cogrpascsu08` [532] B. Coull, A. Gryparis, C. Paciorek, H. Suh, and J. Schwartz. The Use of Spatial Exposure Predictions in Health Effects Models: An Application to PM Epidemiology. *Epidemiology*, 19(6):S37, 2008.
- `coeskepove10` [533] M. Cowling, L. Escauriaza, C. E. Kenig, G. Ponce, and L. Vega. The Hardy uncertainty principle revisited. *Arxiv preprint arXiv:1005.1543*, 2010.
- `co84-3` [534] H. S. M. Coxeter. Surprising relationships among unitary reflection groups. *Proceedings of the Edinburgh Mathematical Society (Series 2)*, 27(02):185–194, 1984.
- `crfdafo02` [535] M. Craizer, D. A. J. Fonini, and E. A. B. da Silva. Alpha-expansions: a class of frame decompositions. *Appl. Comput. Harmon. Anal.*, 13(2):103–115, 2002.
- `cr38` [536] H. Cramér. Sur un nouveau théorème-limite de la théorie des probabilités. *Actual. sci. industr.*, 736:5–23, 1938.
- `crjo08` [537] N. Cressie and G. Johannesson. Fixed rank kriging for very large spatial data sets. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 70(1):209–226, 2008.
- `crrosa12` [538] R. Criado, M. Romance, and . Sánchez. Interest point detection in images using complex network analysis. *Journal of Computational and Applied Mathematics*, 236(12):2975 – 2980, 2012.
- `cr04` [539] R. Cristi. *Modern Digital Signal Processing*. Brooks/Cole Pub Co, 2004.
- `crfi10` [540] D. Cruz Uribe and A. Fiorenza. Convergence in variable Lebesgue spaces. (Convergence in variable Lebesgue spaces.). *Publ. Mat., Barc.*, 54(2):441–459, 2010.

- crfine04 [541] D. Cruz Uribe, A. Fiorenza, and C. Neugebauer. Corrections to “The maximal function on variable  $L^p$  spaces. *Ann. Acad. Sci. Fenn., Math.*, 29(1):247–249, 2004.
- cuzh07 [542] F. Cucker and D.-X. Zhou. *Learning theory: an approximation theory viewpoint*. Cambridge Monographs on Applied and Computational Mathematics. Cambridge University Press, Cambridge, 2007.
- cwni84 [543] M. Cwikel and P. Nilsson. The coincidence of real and complex interpolation methods for couples of weighted Banach lattices. In M. Cwikel, P. Nilsson, M. Cwikel, and J. Peetre, editors, *Interpolation Spaces and Allied Topics in Analysis(Proceedings of the Conference held in Lund, Sweden, August 29 September 1, 1983)*, volume 1070 of *Lecture Notes in Mathematics*, pages 54–65. Springer Berlin / Heidelberg, 1984.
- cwsash12 [544] M. Cwikel, Y. Sagher, and P. Shvartsman. A new look at the John Nirenberg and John Stroemberg theorems for BMO. *Journal of Functional Analysis*, 263(1):129 – 166, 2012.
- da06-2 [545] P. Da. *An Introduction to Infinite-dimensional Analysis*. Universitext. Springer-Verlag, Berlin, 2006.
- da03-2 [546] S. da. Atomic decomposition with evolutionary pursuit. *Digital Signal Processing*, 13(2):317–337, 2003.
- dago11 [547] U. Daepf and P. Gorkin. *Reading, Writing, and Proving*. Springer, Second Edition edition, 2011.
- dalomasate08 [548] S. Dahlke, D. Lorenz, P. Maass, C. Sagiv, and G. Teschke. The canonical coherent states associated with quotients of the affine Weyl-Heisenberg group. *J. Appl. Funct. Anal.*, 3(2):215–232, 2008.
- dadiguha03 [549] X. Dai, Y. Diao, Q. Gu, and D. Han. The existence of subspace wavelet sets. *J. Comput. Anal. Appl.*, 155(1):83–90, June 2003.
- ilupapasispwewe98 [550] X. Dai, Q. Gu, D. Han, D. Larson, R. Liang, S. Lu, D. Speegle, G. Garrigos, E. Hernandez, M. Paluszynski, M. Papadakis, H. Sikić, D. Weiland, and G. Weiss. Basic properties of wavelets. *J. Fourier Anal. Appl.*, 4(4-5):575–594, 1998.

- dalasp97 [551] X. Dai, D. R. Larson, and D. M. Speegle. Wavelet sets in  $\mathbb{R}^n$ . *J. Fourier Anal. Appl.*, 3(4):451–456, 1997.
- da93-3 [552] M. Dal. *An introduction to  $\Gamma$ -convergence*. Progress in Nonlinear Differential Equations and their Applications, 8. Birkhäuser Boston Inc., Boston, MA, 1993.
- dapiri10 [553] P. D’Ancona, V. Pierfelice, and F. Ricci. On the wave equation associated to the Hermite and the twisted Laplacian. *J. Fourier Anal. Appl.*, 16(2):294–310, 2010.
- daqiy011 [554] P. Dang, T. Qian, and Z. You. Hardy-Sobolev spaces decomposition in signal analysis. *J. Fourier Anal. Appl.*, 17(1):36–64, 2011.
- bedaduhuzh10 [555] A. Dani, B. Huang, J. Bergan, C. Dulac, and X. Zhuang. Superresolution imaging of chemical synapses in the brain. *Neuron*, 68(5):843–856, December 2010.
- dagaph11 [556] D. Danielli, N. Garofalo, and N. Phuc. Hardy-Sobolev type inequalities with sharp constants in Carnot-Carathéodory spaces. *Potential Anal.*, 34(3):223–242, 2011.
- da09-1 [557] S. Das. *Mathematical methods for wireless channel estimation and equalization*. PhD thesis, University of Vienna, Vienna, Austria, September, 2009.
- da09 [558] A. Dasgupta. Rigged Hilbert Spaces. 2009.
- dawo07 [559] A. Dasgupta and M. Wong. Weyl transforms and the heat equation for the sub-Laplacian on the Heisenberg group. Rodino, Luigi (ed.) et al., New developments in pseudo-differential operators. Selected papers of the 6th congress of the International Society for Analysis, its Applications and Computation (ISAAC), the ISAAC Group in Pseudo-Differential Operators (IGPDO, 2007.
- dagu03 [560] S. Dasgupta and A. Gupta. An elementary proof of a theorem of Johnson and Lindenstrauss. *Random Structures Algorithms*, 22(1):60–65, 2003.
- dak185 [561] I. Daubechies and J. R. Klauder. Quantum-mechanical path integrals with Wiener measure for all polynomials Hamiltonians. II. *J. Math. Phys.*, 26(9):2239–2256, 1985.

- damoto99** [562] L. Daudet, M. Morvidone, and B. Torr sani. Time-frequency and time-scale vector fields for deforming time-frequency and time-scale representations. In *Proceedings of SPIE*, volume 3813, pages 2–15, 1999.
- daer39** [563] H. Davenport and P. Erd s. On sums of positive integral  $k$ th powers. *Ann. of Math. (2)*, 40:553–536, 1939.
- dawa10** [564] M. Davenport and M. Wakin. Analysis of orthogonal matching pursuit using the restricted isometry property. *IEEE Trans. Inform. Theory*, 56:4395–4401, Sep. 2010.
- cedahe09** [565] R. Davidi, G. T. Herman, and Y. Censor. Perturbation-resilient block-iterative projection methods with application to image reconstruction from projections. *Int. Trans. Oper. Res.*, 16(4):505–524, 2009.
- da92-2** [566] L. Davies. The asymptotics of Rousseeuw’s minimum volume ellipsoid estimator. *The Annals of Statistics*, 20(4):1828–1843, 1992.
- dae112** [567] M. Davies and Y. Eldar. Rank Awareness in Joint Sparse Recovery. *IEEE Trans. Inform. Theory*, 58(2):1135–1146, 2012.
- damazh94** [568] G. Davis, S. Mallat, and Z. Zhang. Adaptive time-frequency decompositions. *Opt. Eng.*, 33(7):2183–2191, 1994.
- de02-3** [569] B. de. The upper error bound of a new near-optimal code. *Information Theory, IEEE Transactions on*, 21(4):441–445, 2002.
- lude12** [570] G. de and F. Luef. Sub-Gaussian estimates for Wigner functions and their relation with the notion of symplectic capacity. *preprint*, 2011.
- de94-1** [571] J. de. An uncertainty principle for integral operators. *J. Funct. Anal.*, 122(1):247–253, 1994.
- de03-5** [572] J. de. Determinate multidimensional measures, the extended Carleman theorem and quasi-analytic weights. *Ann. Probab.*, 31(3):1205–1227, 2003.
- de04-7** [573] J. de. Subspaces with equal closure. *Constr. Approx.*, 20(1):93–157, 2004.

- sisvde09** [574] J. de, C. Svensson, and S. Silvestrov. Algebraic curves for commuting elements in the  $q$ -deformed Heisenberg algebra. *J. Algebra*, 321(4):1239–1255, 2009.
- dedero09** [575] M. De, V. De, and L. Rosasco. Elastic-net regularization in learning theory. *J. Complexity*, 25(2):201–230, 2009.
- movede11** [576] S. de, D. Morozov, and M. Vejdemo Johansson. Persistent cohomology and circular coordinates. *Discrete Comput. Geom.*, 45(4):737–759, 2011.
- de11** [577] M. de Gosson. *Symplectic Methods in Harmonic Analysis and in Mathematical Physics*, volume 7 of *Pseudo-Differential Operators. Theory and Applications*. Birkhäuser/Springer Basel AG, Basel, 2011.
- deon12** [578] M. A. de Gosson and D. Onchis. Multivariate symplectic Gabor frames with Gaussian windows. *J. Fourier Anal. Appl.*, 2012.
- de85-1** [579] J. De Sousa Pinto. A generalized Hankel convolution. *SIAM J. Math. Anal.*, 16:1335–1346, 1985.
- demose80** [580] J. Deenen, M. Moshinsky, and T. Seligman. Canonical transformations to action and angle variables and their representations in quantum mechanics: III. The general problem. *Annals of Physics*, 127(2):458–477, 1980.
- defrorouse11** [581] A. Defant, L. Frerick, J. Ortega Cerdà, M. Ounaies, and K. Seip. The Bohnenblust-Hille inequality for homogeneous polynomials is hypercontractive. *Ann. Math. (2)*, 174(1):485–497, 2011.
- dedi10** [582] A. Deitmar and N. Diamantis. A new multiple Dirichlet series induced by a higher-order form. *Acta Arith.*, 142(4):303–309, 2010.
- depe09** [583] S. Dekel and P. Petrushev. Anisotropic function spaces with applications. DeVore, Ronald (ed.) et al., *Multiscale, nonlinear and adaptive approximation. Dedicated to Wolfgang Dahmen on the occasion of his 60th birthday*. Berlin: Springer. 137-167 (2009)., 2009.
- depewe11** [584] S. Dekel, P. Petrushev, and T. Weissblat. Hardy spaces on  $r^n$  with pointwise variable anisotropy. *J. Fourier Anal. Appl.*, 17(5):1066–1107, 2011.

- `fefemanade08` [585] C. del, A. Fernandez, I. Ferrando, F. Mayoral, and F. Naranjo. Multiplication operators on spaces of integrable functions with respect to a vector measure. *J. Math. Anal. Appl.*, 343(1):514–524, 2008.
- `deha03` [586] G. Del and M. Haardt. IlmProp: A flexible geometry-based simulation environment for multiuser MIMO communications, Sep. 2003.
- `desc89` [587] F.-J. Deltos and W. Schempp. Interpolation projectors and closed ideals. Approximation and function spaces, Proc. 27th Semest., Warsaw/Pol. 1986, Banach Cent. Publ. 22, 89-98 (1989)., 1989.
- `egomeratatowiwo09` [588] E. Demaine, F. Gomez Martin, H. Meijer, D. Rappaport, P. Taslakian, G. Toussaint, T. Winograd, and D. Wood. The distance geometry of music. *Computational Geometry*, 42(5):429–454, 2009.
- `dedeXX` [589] F. DeMari and E. DeVito. A mock metaplectic representation.
- `deduho07` [590] J. Demmel, I. Dumitriu, and O. Holtz. Fast linear algebra is stable. *Numerische Mathematik*, 108(1):59–91, 2007.
- `de86` [591] N. Dencker. The Weyl calculus with locally temperate metric and weights. *Ark. Mat.*, 24:59–79, 1986.
- `detawa06` [592] B. Deng, R. Tao, and Y. Wang. Convolution theorems for the linear canonical transform and their applications. *Science in China Series F: Information Sciences*, 49(5):592–603, 2006.
- `de11-2` [593] A. Derighetti. *Convolution Operators On Groups*. Springer Berlin / Heidelberg, 2011.
- `de11-1` [594] P. Devaraj. Reconstruction from local discrete averages on the plane. *J. Math. Anal. Appl.*, 373(1):13–19, 2011.
- `dehomi89` [595] R. A. DeVore, R. Howard, and C. A. Micchelli. Optimal nonlinear approximation. *Manuscripta Math.*, 63:469–478, 1989.
- `depewo08` [596] R. A. DeVore, G. Petrova, and P. Wojtaszczyk. Anisotropic smoothness spaces via level sets. *Commun. Pure Appl. Anal.*, 61(9):1264–1297, 2008.

- depewo11** [597] R. A. DeVore, G. Petrova, and P. Wojtaszczyk. Approximation of functions of few variables in high dimensions. *Constr. Approx.*, 33(1):125–143, 2011.
- dh89** [598] J. D’Haeyer. Gaussian filtering of images: A regularization approach. *Signal Processing*, 18(2):169–181, 1989.
- digolupr11** [599] N. Dias, M. de Gosson, F. Luef, and J. N. Prata. Quantum mechanics in phase space: The Schroedinger and the Moyal representations. *preprint*, 2011.
- dipr05** [600] N. Dias and J. N. Prata. Deformation quantization and Wigner functions. *Modern Phys. Lett. A*, 20(17-18):1371–1385, 2005.
- dipr09** [601] N. Dias and J. N. Prata. The Narcowich-Wigner spectrum of a pure state. *Rep. Math. Phys.*, 63(1):43–54, 2009.
- dipr04** [602] N. C. Dias and J. N. Prata. Time dependent transformations in deformation quantization. *J. Math. Phys.*, 45(3):887–901, 2004.
- dileru11** [603] L. Diening, D. Lengeler, and M. Ruzicka. The Stokes and Poisson problem in variable exponent spaces. *Complex Variables and Elliptic Equations*, 56(7-9):789–811, 2011.
- di80-1** [604] J. Dieudonn’e. *Special Functions And Linear Representations Of Lie Groups*. AMS, 1980.
- bidish08** [605] C. Diez, F. Shao, and J. Bille. Pyramid and Hartmann-Shack wavefront sensor with artificial neural network for adaptive optics. *J. Modern Opt.*, 55(4-5):683–689, 2008.
- diri07** [606] P. Diggle and P. Ribeiro. *Model-based Geostatistics*. Springer, 2007.
- discst09** [607] T. Dijkema, C. Schwab, and R. Stevenson. An adaptive wavelet method for solving high-dimensional elliptic PDEs. *Constr. Approx.*, 30(3):423–455, 2009.
- dist10** [608] T. Dijkema and R. Stevenson. A sparse Laplacian in tensor product wavelet coordinates. *Numer. Math.*, 115(3):433–449, 2010.

- dikamorascXX [609] A. Dimakis, S. Kar, J. Moura, M. Rabbat, and A. Scaglione. Gossip algorithms for distributed signal processing. *Proceedings of the IEEE*, (99):1–18.
- di02 [610] M. Dimassi. Resonances for slowly varying perturbations of a periodic Schrödinger operator. *Canad. J. Math.*, 54(5):998–1037, 2002.
- di05-1 [611] M. Dimassi. Spectral shift function and resonances for slowly varying perturbations of periodic Schrödinger operators. *J. Funct. Anal.*, 225(1):193–228, 2005.
- ac96 [612] D. Dimitrovski and R. Aceska. Un calcul immédiat de l’Integrale Theodorescu. *Annuaire, Faculté des Sciences de l’Université ‘Sv. Kiril et Metodij’ L’Institute des Mathématiques*, 37:13–27, 1996.
- acdi197 [613] D. Dimitrovski, R. Aceska, and A. Ilievska. Approximately equal integrals Theodorescu. *Annuaire, Faculté des Sciences de l’Université ‘Sv. Kiril et Metodij’ L’Institute des Mathématiques*, 1997.
- di74 [614] N. Dinculeanu. *Integration on Locally Compact Spaces. Translation in English of a Romanian Version*. Monographs and Textbooks on Pure and Applied Mathematics. Leyden: Noordhoff International Publishing. XV, 626 p., 1974.
- dije77 [615] J. Dixmier and F. Jellet. *C\*-algebras*. North-Holland Amsterdam, 1977.
- dj95-1 [616] A. Djemai. Introduction to Dubois-Violette’s noncommutative differential geometry. *Internat. J. Theoret. Phys.*, 34(6):801–887, 1995.
- dj95 [617] A. Djemai. The lattice quantum phase space and the Yang-Baxter equation. *Internat. J. Modern Phys. A*, 10(23):3303–3318, 1995.
- dj96 [618] A. Djemai. Quantum mechanics as a matrix symplectic geometry. *Internat. J. Theoret. Phys.*, 35(3):519–556, 1996.
- dj96-1 [619] A. Djemai. Quantum mechanics, knot theory, and quantum doubles. *Internat. J. Theoret. Phys.*, 35(10):2029–2056, 1996.
- dj04 [620] A. Djemai. Noncommutative classical mechanics. *Internat. J. Theoret. Phys.*, 43(2):299–314, 2004.

- [dj04-1] [621] A. Djemai. On quantum mechanics on noncommutative quantum phase space. *Commun. Theor. Phys. (Beijing)*, 41(6):837–844, 2004.
- [djpist01] [622] I. Djurovic, S. Stankovic, and I. Pitas. Digital watermarking in the fractional Fourier transformation domain. *Journal of Network and Computer Applications*, 24(2):167 – 173, April 2001.
- [dmkrov77] [623] V. Dmitriev, S. Krein, and V. I. Ovchinnikov. Fundamentals of the theory of interpolation of linear operators. In *Geometry of linear spaces and operator theory (Russian)*, pages 31–74. Jaroslav. Gos. Univ., Yaroslavl, 1977.
- [dove03] [624] M. N. Do and M. Vetterli. *Contourlets*, volume 10 of *Beyond Wavelets (Studies in Computational Mathematics)*, chapter 4, pages 83–104. Academic Press, September 2003.
- [dokupo10] [625] M. Döhler, S. Kunis, and D. Potts. Nonequispaced hyperbolic cross fast Fourier transform. *SIAM J. Numer. Anal.*, 47(6):4415–4428, 2010.
- [donasa09] [626] J. Dolbeault, B. Nazaret, and G. Savare. A new class of transport distances between measures. *Calc. Var. Partial Differ. Equ.*, 34(2):193–231, 2009.
- [do89-1] [627] P. Domich. Residual Hermite normal form computations. *ACM Trans. Math. Softw.*, 15(3):275–286, 1989.
- [dokatr87] [628] P. Domich, R. Kannan, and L. Trotter. Hermite normal form computation using modulo determinant arithmetic. *Math. Oper. Res.*, 12:50–59, 1987.
- [domuvowa10] [629] G. Don, K. Muir, G. Volk, and J. Walker. Music: Broken symmetry, geometry, and complexity. *Notices Amer. Math. Soc.*, 57(1):30–49, 2010.
- [dotr71] [630] T. Donaldson and N. Trudinger. Orlicz-Sobolev spaces and imbedding theorems. *J. Funct. Anal.*, 8:52–75, 1971.
- [dodyho10] [631] B. Dong, N. Dyn, and K. Hormann. Properties of dual pseudo-splines. *Appl. Comput. Harmon. Anal.*, 29(1):104–110, 2010.

- [do95] [632] D. Donoho. De-noising by soft-thresholding. 41(3):613–627, 1995.
- [do92-1] [633] D. L. Donoho. Superresolution via sparsity constraints. *SIAM J. Math. Anal.*, 23(5):1309–1331, 1992.
- [dohu04] [634] D. L. Donoho and X. Huo. BeamLab and reproducible research. *Int. J. Wavelets Multiresolut. Inf. Process.*, 2(4):391–414, 2004.
- [dokuXX] [635] D. L. Donoho and G. Kutyniok. Microlocal analysis of the geometric separation problem. *Comm. Pure Appl. Math.*, to appear.
- [domarashst09] [636] D. L. Donoho, A. Maleki, I. Rahman, M. Shahram, and V. Stodden. Reproducible research in computational harmonic analysis. *Computing in Science & Engineering*, 11(1):8–18, 2009.
- [dota09-1] [637] D. L. Donoho and J. Tanner. Observed universality of phase transitions in high-dimensional geometry, with implications for modern data analysis and signal processing. *Philos. Trans. R. Soc. Lond. Ser. A Math. Phys. Eng. Sci.*, 367(1906):4273–4293, 2009.
- [doga84] [638] A. Dooley and G. Gaudry. An extension of deLeeuw’s theorem to the  $n$ -dimensional rotation group. *Ann. Inst. Fourier (Grenoble)*, 34(2):111–135, 1984.
- [doga86] [639] A. Dooley and G. Gaudry. On  $l^p$  multipliers of Cartan motion groups. *J. Funct. Anal.*, 67:1–24, 1986.
- [dowi06] [640] A. Dooley and N. Wildberger. Orbital convolution theory for semi-direct products. *J. Lie Theory*, 16(4):743–776, 2006.
- [doow11] [641] A. Doostan and H. Owahdi. A non-adapted sparse approximation of PDEs with stochastic inputs. *J. Comput. Phys.*, 230:3015–3034, 2011.
- [dojo06] [642] F. Dopico and C. Johnson. Complementary bases in symplectic matrices and a proof that their determinant is one. *Linear algebra and its applications*, 419(2-3):772–778, 2006.
- [doma11] [643] M. Dörfler and E. Matusiak. Nonstationary Gabor Frames - Existence and Construction. *preprint*, <http://arxiv.org/abs/1112.5262>, 2011.

- [doto11] [644] M. Dörfler and B. Torr sani. Representation of operators by sampling in the time-frequency domain. *Sampl. Theory Signal Image Process.*, 10(1-2):172–190, 2011.
- [drme96] [645] J. Dr ger and N. Mermin. Superspace groups without the embedding: the link between superspace and Fourier-space crystallography. *Physical review letters*, 76(9):1489–1492, 1996.
- [drha01] [646] A. Dragt and T. Hakiouglu. The Moyal-Lie theory of phase space quantum mechanics. *J. Phys. A, Math. Gen.*, 34(34):6603–6615, 2001.
- [dr09-1] [647] C. Dructu. Relatively hyperbolic groups: geometry and quasi-isometric invariance. *Comment. Math. Helv.*, 84(3):503–546, 2009.
- [drsa05] [648] C. Dructu and M. Sapir. Relatively hyperbolic groups with rapid decay property. *Internat. Math. Res. Notices*, (19):1181–1194, 2005.
- [dr85] [649] D. Dryanov. Generalization of the Whittaker-Kotelnikov-Shannon sampling theorem. *C. R. Acad. Bulg. Sci.*, 38:1319–1322, 1985.
- [dugu97] [650] L. Duan and G. Guo. Noise of quantum solitons and their quasi-coherent states. *Sci. China Ser. A*, 40(1):83–92, 1997.
- [bacedu08] [651] M. Duarte, V. Cevher, and R. Baraniuk. Model-based compressive sensing for signal ensembles. Sep. 2008.
- [duhesm00] [652] D. Dubin, M. Hennings, and T. Smith. *Mathematical aspects of Weyl quantization and phase*. World Scientific, 2000.
- [andude10] [653] A. A. Duchkov, F. Andersson, and H. de. Discrete almost-symmetric wave packets and multiscale geometrical representation of (seismic) waves. *Geoscience and Remote Sensing, IEEE Transactions on*, 48(9):3408–3423, 2010.
- [du99] [654] R. Dudley. *Uniform central limit theorems*, volume 63 of *Cambridge Studies in Advanced Mathematics*. Cambridge University Press, Cambridge, 1999.
- [duve86] [655] P. Duhamel and M. Vetterli. Cyclic convolution of real sequences: Hartley versus Fourier and new schemes. In *Acoustics, Speech, and Signal Processing, IEEE International Conference on ICASSP '86*, volume 11, pages 229 – 232, apr 1986.

- duve87 [656] P. Duhamel and M. Vetterli. Improved Fourier and Hartley transform algorithms: Application to cyclic convolution of real data. *Acoustics, Speech and Signal Processing, IEEE Transactions on*, 35(6):818 – 824, jun 1987.
- duko10 [657] J. J. Duistermaat and J. Kolk. *Distributions Theory and Applications. Transl. from the Dutch by J. P. Van Braam Houckgeest*. Cornerstones. Basel: Birkhäuser. xvi, 445 p., 2010.
- du08 [658] R. Duits. Image processing. I. Scores. (Onderzoek: partituren in de beeldanalyse I. Schaalpartituren.). 2008.
- dufr10 [659] R. Duits and E. Franken. Left-invariant parabolic evolutions on  $se(2)$  and contour enhancement via invertible orientation scores. II: Nonlinear left-invariant diffusions on invertible orientation scores. *Q. Appl. Math.*, 68(2):293–331, 2010.
- dufujabrflas11 [660] R. Duits, H. Führ, B. Janssen, M. Bruurmijn, L. Florack, and H. van Assen. Evolution Equations on Gabor Transforms and their Applications. *Arxiv preprint arXiv:1110.6087*, 2011.
- du85-1 [661] D. Dunavant. High degree efficient symmetrical Gaussian quadrature rules for the triangle. *Int. J. Numer. Methods Eng.*, 21:1129–1148, 1985.
- dusiya11 [662] X. Duong, A. Sikora, and L. Yan. Weighted norm inequalities, Gaussian bounds and sharp spectral multipliers. *J. Funct. Anal.*, 260(4):1106–1131, 2011.
- dug102 [663] M. Dupr’e and J. Glazebrook. Holomorphic framings for projections in a Banach algebra. *Georgian Mathematical Journal*, 9(3):481–494, 2002.
- duglpr11 [664] M. Dupre, J. Glazebrook, and E. Previato. Differential algebras with Banach-algebra coefficients II: The operator cross-ratio tau-function and the Schwarzian derivative. *Complex Analysis and Operator Theory*, pages 1–22, 2011.
- duglpr12 [665] M. Dupre, J. Glazebrook, and E. Previato. Differential algebras with Banach-algebra coefficients I: From C\*-algebras to the K-theory of

the spectral curve. *Complex Analysis and Operator Theory*, pages 1–25, 2012.

- ardu02** [666] L. Durak and O. Arikan. Generalized time-bandwidth product optimal short-time Fourier transformation. In *Acoustics, Speech, and Signal Processing, 2002. Proceedings.(ICASSP'02). IEEE International Conference on*, volume 2, pages 1465–1468, 2002.
- duhapi09** [667] D. Dutkay, D. Han, and G. Picioroaga. Parseval frames for ICC groups. *J. Funct. Anal.*, 256(9):3071–3090, 2009.
- dusa02** [668] C. Duyar and B. Sagir. Multipliers and relative completions of vector-valued  $L^p(G, A)$  spaces. *N. Z. J. Math.*, 31(1):33–38, 2002.
- du10** [669] J. Duzelovic. Weyl Darstellung der metaplektischen Operatoren und die fraktionale Fourier Transformation der Gaussfunktion. Master’s thesis, 2010.
- dve109** [670] T. Dvorkind and Y. C. Eldar. Robust and consistent sampling. *IEEE Signal Processing Letters*, 16(9):739–742, sept. 2009.
- dy92** [671] K. Dyakonov. Interpolating functions of minimal norm, star-invariant subspaces, and kernels of Toeplitz operators. *Proc. Amer. Math. Soc.*, 116(4):1007–1013, 1992.
- baeaha08** [672] J. Eaton, D. Bateman, and S. Hauberg. *GNU Octave Manual, Version 3*. Network Theory Limited, 3 for Octave Version 3.0.2 edition, 2008.
- eb00** [673] F. B. Ebobisse. Fine properties of the functions with bounded deformation and their applications to variational problems. (Abstract of thesis). *Boll. Unione Mat. Ital., Sez. A, Mat. Soc. Cult. (8)*, pages 77–80, 2000.
- ecluphwa10** [674] S. Echterhoff, W. Lück, N. Phillips, and S. Walters. The structure of crossed products of irrational rotation algebras by finite subgroups of  $SL_2(\mathbb{Z})$ . *J. Reine Angew. Math.*, 639:173–221, 2010.
- ecgakn11** [675] C. Eck, H. Garcke, and P. Knabner. *Mathematical Modelling (Mathematische Modellierung) 2nd Revised ed.* Springer-Lehrbuch. Berlin: Springer. xiv, 513 p., 2011.

- [edha10](#) [676] H. Edelsbrunner and J. Harer. *Computational Topology*. American Mathematical Society, Providence, RI, 2010.
- [edszuy06](#) [677] A. Eden, M. Uyttendaele, and R. Szeliski. Seamless image stitching of scenes with large motions and exposure differences. In *Computer Vision and Pattern Recognition, 2006 IEEE Computer Society Conference on*, volume 2, pages 2498–2505, 2006.
- [ef09](#) [678] E. G. Effros. A matrix convexity approach to some celebrated quantum inequalities. *Proc. Natl. Acad. Sci. USA*, 106(4):1006–1008, 2009.
- [eg71](#) [679] Y. V. Egorov. Canonical transformations and pseudodifferential operators. *Trans. Moscow Math. Soc.*, 24:1–28, 1971.
- [eh08](#) [680] M. Ehler. Compactly supported multivariate pairs of dual wavelet frames obtained by convolution. *Int. J. Wavelets Multiresolut. Inf. Process.*, 6(2):183–208, 2008.
- [eh10](#) [681] M. Ehler. The multiresolution structure of pairs of dual wavelet frames for a pair of Sobolev spaces. *Jaen J. Approx.*, 2(2):193 – 214, December 2010.
- [eirash86](#) [682] P. Einziger, S. Raz, and M. Shapira. Gabor representation and aperture theory. *JOSA A*, 3(4):508–522, 1986.
- [ahe106](#) [683] M. Elad and M. Aharon. Image denoising via sparse and redundant representations over learned dictionaries. *IEEE Trans. Image Process.*, 15(12):3736 –3745, 2006.
- [elst98](#) [684] B. Elbel and G. Steidl. Fast Fourier transforms for nonequispaced data. Chui, Charles K. (ed.) et al., *Approximation theory IX*. Volume 2. Computational aspects. Proceedings of the 9th international conference, Nashville, TN, USA, January 3–6, 1998. Nashville, TN: Vanderbilt University Press. *Innovations in Applied Mathematics*, 1998.
- [boelku10](#) [685] Y. Eldar, P. Kuppinger, and H. Bölcskei. Compressed sensing of block-sparse signals: Uncertainty relations and efficient recovery. *IEEE Trans. Signal Process.*, 58:3042–3054, Jun. 2010.
- [elku12](#) [686] Y. Eldar and G. Kutyniok, editors. *Compressed Sensing - Theory and Applications*. Cambridge Univ. Press, 2012.

- elne11** [687] Y. Eldar and D. Needell. Acceleration of randomized Kaczmarz method via the Johnson-Lindenstrauss lemma. *Numer. Algorithms*, 58(2):163–177, 2011.
- e103** [688] Y. C. Eldar. Sampling with arbitrary sampling and reconstruction spaces and oblique dual frame vectors. *J. Fourier Anal. Appl.*, 9(1):77–96, January 2003.
- elmi09-1** [689] Y. C. Eldar and T. Michaeli. Beyond bandlimited sampling. *IEEE Signal Processing Magazine*, 26(3):48–68, may 2009.
- elhalu11** [690] M. Eleuteri, P. Harjulehto, and T. Lukkari. Global regularity and stability of solutions to elliptic equations with nonstandard growth. *Complex Variables and Elliptic Equations*, 56(7-9):599–622, 2011.
- dadue103** [691] A. Elgammal, R. Duraiswami, and L. Davis. Efficient Kernel density estimation using the fast Gauss transform with applications to color modeling and tracking. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 25:1499–1504, 2003.
- elrato01** [692] A. Elias Juarez, N. Razo Razo, and M. Torres Cisneros. Estimation of interferogram aberration coefficients using wavelet bases and Zernike polynomials. In A. A. Elias Juarez, N. Razo Razo, M. Torres Cisneros, A. F. Laine, M. A. Unser, and A. Aldroubi, editors, *Proc. SPIE, Wavelets: Applications in Signal and Image Processing IX*, volume 4478 of *Feature Extraction*, pages 373–382, San Diego, CA, USA, 2001. SPIE.
- bre108** [693] D. Ellinas and A. Bracken. Phase-space-region operators and the Wigner function: Geometric constructions and tomography. *Physical Review A*, 78(5):52106(9), 2008.
- elts06** [694] D. Ellinas and I. Tsohantjis. Region operators of wigner function: Transformations, realizations and bounds. *Reports on Mathematical Physics*, 57(1):69–87, 2006.
- en10-1** [695] J. Ender. On compressive sensing applied to radar. *Signal Processing*, 90(5):1402 – 1414, 2010.
- enna06** [696] K.-J. Engel and R. Nagel. *A Short Course on Operator Semigroups*. Springer-Verlag, 2006.

- [en11] [697] N. Engeltzeder. *Linear Time Variant Systems and Gabor Riesz Bases*. PhD thesis, University of Vienna, 2011.
- [en07-1] [698] M. Engliš. Toeplitz Operators and Group Representations. *The Journal of Fourier Analysis and Applications*, 13(3):243–265, 2007.
- [enporo10] [699] M. Entov, L. Polterovich, and D. Rosen. Poisson brackets, quasi-states and symplectic integrators. *Discrete Contin. Dyn. Syst.*, 28(4):1455–1468, 2010.
- [babeenma11] [700] E. Enzinger, P. Balazs, D. Marelli, and T. Becker. A logarithmic based pole-zero vocal tract model estimation for speaker verification. In *Proceedings of the International Conference on Acoustics, Speech and Signal Processing 2011*, Prague, May 2011.
- [ep73] [701] H. Epstein. Remarks on two theorems of E. Lieb. *Comm. Math. Phys.*, 31:317–325, 1973.
- [ergr05-1] [702] S. Ericsson and N. Grip. Efficient wavelet prefilters with optimal time-shifts. *IEEE Trans. Signal Process.*, 53(7):2451–2461, 2005.
- [ergr11] [703] S. Ericsson and N. Grip. Using a natural deconvolution for analysis of perturbed integer sampling in shift-invariant spaces. *J. Math. Anal. Appl.*, 373(1):271–286, 2011.
- [er11] [704] J. Erven. *Taschenbuch der Ingenieurmathematik. Grundlagen, Formelsammlung, Tabellen*. München: Oldenbourg Verlag, 2011.
- [ererho10] [705] J. Erven, M. Erven, and J. Hörwick. *Vorkurs Mathematik. Ein kompakter Leitfaden*. München: Oldenbourg Verlag, 4., korrigierte und erweiterte Auflage edition, 2010.
- [ersc11] [706] J. Erven and D. Schwägerl. *Mathematik für Ingenieure*. München: Oldenbourg Verlag, 4., korrigierte Auflage edition, 2011.
- [esra11] [707] R. Escalante and M. Raydan. *Alternating projection methods*, volume 8 of *Fundamentals of Algorithms*. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, PA, 2011.
- [eskepove10] [708] L. Escauriaza, C. E. Kenig, G. Ponce, and L. Vega. The sharp Hardy uncertainty principle for Schrödinger evolutions. *Duke Math. J.*, 155(1):163–187, 2010.

- [es12] [709] G. Eshel. *Spatiotemporal data analysis*. Princeton University Press, 2012.
- [esgoonozuz07] [710] G. Esmer, V. Uzunov, L. Onural, H. Ozaktas, and A. Gotchev. Diffraction field computation from arbitrarily distributed data points in space. *Signal Processing: Image Communication*, 22(2):178 – 187, 2007.
- [ev01] [711] G. Evangelista. Flexible Wavelets for Music Signal Processing. *Journal of New Music Research*, 30(1):13–22, 2001.
- [blevya00] [712] G. Evans, J. Blackledge, and P. Yardley. *Numerical Methods for Partial Differential Equations*. Springer Verlag, 2000.
- [elfami10] [713] T. Faktor, T. Michaeli, and Y. C. Eldar. Nonlinear and nonideal sampling revisited. *IEEE Signal Processing Letters*, 17(2):205 –208, feb. 2010.
- [fa11-1] [714] X. Fan. Anisotropic variable exponent Sobolev spaces and  $\Delta$ -Laplacian equations. *Complex Variables and Elliptic Equations*, 56(7-9):623–642, 2011.
- [faha08] [715] G. Farin and D. Hansford. *Mathematical Principles for Scientific Computing and Visualization*. A K Peters Ltd., Wellesley, MA, 2008.
- [fa00] [716] W. Farkas. Atomic and subatomic decompositions in anisotropic function spaces. *Math. Nachr.*, 209:83–113, 2000.
- [fara93] [717] S. Farkash and S. Raz. The legality problem of linear systems in Gabor time-frequency space. *Signal Process.*, 34(3):283–295, 1993.
- [fa11] [718] D. Farnsworth. Hankel operators, the Segal-Bargmann space, and symmetrically-normed ideals. *J. Funct. Anal.*, 260(5):1523 – 1542, 2011.
- [fast10-1] [719] B. Farrell and T. Stohmer. Inverse-Closedness of a Banach algebra of integral operators on the Heisenberg group. *J. Operator Theory*, 64:189–205, 2010.
- [fe07-1] [720] C. Fefferman.  $c^m$  extension by linear operators. *Ann. Math. (2)*, 166(3):779–835, 2007.

- fe07** [721] C. Fefferman. Smooth interpolation of functions on  $\setminus^n$ . In *Rosenblatt, Joseph M. (ed.) et al., Topics in harmonic analysis and ergodic theory. Based on talks delivered by plenary speakers at a conference on harmonic analysis and ergodic theory, Chicago, IL, USA, December 2-4, 2005*, volume 444, pages 167–173. American Mathematical Society (AMS), 2007.
- fe09-5** [722] C. Fefferman. Extension of  $c^{m,\omega}$ -smooth functions by linear operators. *Rev. Mat. Iberoam.*, 25(1):1–48, 2009.
- fe09-4** [723] C. Fefferman. Fitting a  $c^m$ -smooth function to data III. *Ann. Math. (2)*, 170(1):427–441, 2009.
- fe09-3** [724] C. Fefferman. Whitney’s extension problems and interpolation of data. *Bull. Amer. Math. Soc. (N.S.)*, 46(2):207–220, 2009.
- fe10-2** [725] C. Fefferman. The  $c^m$  norm of a function with prescribed jets I. *Rev. Mat. Iberoam.*, 26(3):1075–1098, 2010.
- fegr12** [726] C. Fefferman and R. C. Graham. *The Ambient Metric*. Annals of Mathematics Studies 178. Princeton, NJ: Princeton University Press. v and sterling 55.00, \$ 80.00/hbk and \$ 55.00, 2012.
- fek109-1** [727] C. Fefferman and B. Klartag. Fitting a  $c^m$ -smooth function to data I. *Ann. Math. (2)*, 169(1):315–346, 2009.
- fek109** [728] C. Fefferman and B. Klartag. Fitting a  $c^m$ -smooth function to data II. *Rev. Mat. Iberoam.*, 25(1):49–273, 2009.
- ferisa74** [729] C. Fefferman, N. Riviere, and Y. Sagher. Interpolation between  $H^p$  spaces: the real method. *Trans. Amer. Math. Soc.*, 191:75–81, 1974.
- fest72** [730] C. Fefferman and E. M. Stein.  $H^p$  spaces of several variables. *Acta Math.*, 129(3-4):137–193, 1972.
- fehe10** [731] H. G. Feichtinger and S. B. Heineken. Spline-like spaces with slowly varying kernels. *preprint*, 2010.
- fe06-2** [732] C. Felber. *50 Vorschläge für eine gerechtere Welt*. Zsolnay, Paul, 2006.

- fe09-2** [733] C. Felber. Neue Werte für die Wirtschaft. *Eine Alternative zwischen Kommunismus und Kapitalismus*. Wien, Deuticke, 2009.
- fe10-1** [734] C. Felber. *Die Gemeinwohl-Ökonomie: Das Wirtschaftsmodell der Zukunft*. Deuticke, 2010.
- dofe88** [735] J. Fell and R. Doran. *Representations of \*-algebras, Locally Compact Groups, and Banach \*- Algebraic Bundles Vol 1: Basic representation theory of Groups and Algebras*. Pure and Applied Mathematics, 125. Nosten, 1988.
- dofe88-1** [736] J. Fell and R. Doran. *Representations of \*-algebras, Locally Compact Groups, and Banach \*-algebraic Bundles Vol 2: Banach \*-algebraic Bundles, Induced Representations, and the Generalized Mackey analysis*. Pure and Applied Mathematics, 126. Boston, 1988.
- fegr1e10** [737] G. Fendler, K. Gröchenig, and M. Leinert. Convolution-dominated integral operators. *Banach Center Publications*, 89:121–127, 2010.
- femana11** [738] A. Fernandez, F. Mayoral, and F. Naranjo. Real interpolation method on spaces of scalar integrable functions with respect to vector measures. *J. Math. Anal. Appl.*, 376(1):203–211, 2011.
- femana10** [739] A. Fernandez, F. Mayoral, F. Naranjo, and E. Sanchez P’erez. Complex interpolation of spaces of integrable functions with respect to a vector measure. *Collect. Math.*, 61(3):241–252, 2010.
- fegajo05** [740] C. Fernandez, A. Galbis, and D. Jornet. Pseudodifferential operators on non-quasianalytic classes of Beurling type. *Studia Math.*, 167(2):99–131, 2005.
- fepape08** [741] C. Fernandez Gonzalez, C. Palazuelos, and D. Perez Garcia. The natural rearrangement invariant structure on tensor products. *J. Math. Anal. Appl.*, 343(1):40–47, July 2008.
- fe75-1** [742] X. Fernique. Régularité des trajectoires des fonctions aléatoires gaussiennes. In *École d’Été de Probabilités de Saint-Flour, IV-1974*, pages 1–96. Lecture Notes in Math., Vol. 480. Springer, Berlin, 1975.
- fe97-1** [743] X. Fernique. *Fonctions Aléatoires Gaussiennes, Vecteurs Aléatoires Gaussiens*. Université de Montréal Centre de Recherches Mathématiques, Montreal, QC, 1997.

- fe09-1** [744] M. Ferreira. Spherical continuous wavelet transforms arising from sections of the Lorentz group. *Appl. Comput. Harmon. Anal.*, 26(2):212–229, 2009.
- fehi11** [745] P. J. S. G. Ferreira and J. R. Higgins. The establishment of sampling as a scientific principle -A striking case of multiple discovery. *Notices of the American Mathematical Society*, 58(10):1446–1450, November 2011.
- fefoko03** [746] J. Feuto, I. Fofana, and K. Koua. Spaces of functions with integrable fractional mean on locally compact groups (Espaces de fonctions à moyenne fractionnaire intégrable sur les groupes localement compacts). *Afr. Mat., Sér. III*, 15:73–91, 2003.
- fefoko10** [747] J. Feuto, I. Fofana, and K. Koua. Weighted norm inequalities for a maximal operator in some subspace of amalgams. *Canad. Math. Bull.*, 53(2):263–277, 2010.
- fehi05** [748] R. Feynman and A. Hibbs. *Quantum Mechanics and Path Integrals*. Daniel F. Styer, Emended Edition edition, 2005.
- fimote08** [749] S. Filippas, L. Moschini, and A. Tertikas. On a class of weighted anisotropic Sobolev inequalities. *J. Funct. Anal.*, 255(1):90–119, 2008.
- fi82** [750] A. Filippenko. The importance of atmospheric differential refraction in spectrophotometry. *Publications of the Astronomical Society of the Pacific*, 94:715–721, 1982.
- fima11** [751] S. Filippov and V. Manko. Unitary and non-unitary matrices as a source of different bases of operators acting on hilbert spaces. *Journal of Russian Laser Research*, pages 1–12, 2011.
- fimi06** [752] W. Fink and D. Micol. simEye: computer-based simulation of visual perception under various eye defects using Zernike polynomials. *Journal of Biomedical Optics*, 11(5):054011(12), October 2006.
- fi84** [753] C. Finol. Linear transformations intertwining with group representations. *Notas Mat.*, 63:89 p., 1984.
- fi91** [754] C. Fisk. Traffic performance analysis at roundabouts. *Transportation Research Part B: Methodological*, 25(2-3):89 – 102, 1991.

- [befi08] [755] A. Fitouhi and R. Bettaieb. Wavelet transforms in the  $q^2$ -analogue Fourier analysis. *Math. Sci. Res. J.*, 12(9):202–214, 2008.
- [f188] [756] P. Flandrin. Maximum signal energy concentration in a time-frequency domain. volume 4, pages 2176 – 2179, 1988.
- [flgora07] [757] A. K. Fletcher, S. Rangan, and V. K. Goyal. Rate-distortion bounds for sparse approximation. In *IEEE/SP 14th Workshop on Statistical Signal Processing (SSP)*, pages 254–258, 2007.
- [f172] [758] T. M. Flett. Lipschitz spaces of functions on the circle and the disc. *J. Math. Anal. Appl.*, 39:125–158, 1972.
- [fosa11] [759] I. Fofana and M. Sanogo. Fourier transform and compactness in  $(L^q, l^p)^\alpha$  and  $M^{p,\alpha}$  spaces. *Commun. Math. Anal.*, 11(2):139–153, 2011.
- [fo1i61] [760] C. Foias and J. Lions. Sur certains theoremes d’interpolation. *Acta Sci. Math. (Szeged)*, 22:269–282, 1961.
- [fohavy11] [761] M. Fornasier, J. Haskovec, and J. Vybíral. Particle systems and kinetic equations modeling interacting agents in high dimension. *preprint*, 2011.
- [forawa10] [762] M. Fornasier, H. Rauhut, and R. Ward. Low-rank matrix recovery via iteratively reweighted least squares minimization. *SIAM J. Optim.*, 21(4):1614–1640, 2011.
- [fozu07] [763] B. Fornberg and J. Zuev. The Runge phenomenon and spatially variable shape parameters in RBF interpolation. *Comput. Math. Appl.*, 54(3):379–398, August 2007.
- [befoze02] [764] H. Foroosh, J. Zerubia, and M. Berthod. Extension of phase correlation to subpixel registration. *IEEE Trans. Image Process.*, 11(3):188–200, mar 2002.
- [fo11] [765] B. Forrest. Projective operator spaces, almost periodicity and completely complemented ideals in the Fourier algebra. *Rocky Mountain J. Math.*, 41(1):155–176, 2011.

- fohasc10** [766] L. Forzani, E. Harboure, and R. Scotto. Harmonic analysis related to Hermite expansions. Cabrelli, Carlos (ed.) et al., Recent developments in real and harmonic analysis. In honor of Carlos Segovia. Boston, MA: Birkhäuser. Applied and Numerical Harmonic Analysis, 2010.
- fo11-1** [767] S. Foucart. Stability and robustness of weak orthogonal matching pursuits. In *AMS Spring 2011 Southeastern Conference*, Springer Proceedings in Mathematics, 2011.
- fo12** [768] S. Foucart. Stability and robustness of  $\ell_1$ -minimizations with Weibull matrices and redundant dictionaries. *preprint*, 2012.
- fr99-2** [769] M. Frank. Geometrical aspects of Hilbert  $C^*$ -modules. *Positivity*, 3(3):215–243, 1999.
- fr01-1** [770] M. Frank. Hilbertian versus Hilbert  $W^*$ -modules and applications to  $L^2$ - and other invariants. *Acta Appl. Math.*, 68(1-3):227–242, 2001.
- frpati02** [771] M. Frank, V. I. Paulsen, and T. Tiballi. Symmetric approximation of frames and bases in Hilbert spaces. *Trans. Amer. Math. Soc.*, 354(2):777–793, 2002.
- frsh10** [772] M. Frank and K. Sharifi. Generalized inverses and polar decomposition of unbounded regular operators on Hilbert  $C^*$ -modules. *J. Operator Theory*, 64(2):377–386, 2010.
- cofrwo10** [773] T. Frankcombe, M. Collins, and G. Worth. Converged quantum dynamics with modified Shepard interpolation and Gaussian wave packets. *Chemical Physics Letters*, 489(4-6):242–247, 2010.
- fr86** [774] J. Franke. On the spaces  $\mathbf{F}_{pq}^s$  of Triebel-Lizorkin type: pointwise multipliers and spaces on domains. *Math. Nachr.*, 125:29–68, 1986.
- bofr94** [775] G. Fraser and B. Boashash. Multiple window spectrogram and time-frequency distributions. In *Acoustics, Speech, and Signal Processing, 1994. ICASSP-94., 1994 IEEE International Conference on*, volume 4, pages IV–293, 1994.
- frnaso10-1** [776] W. Freeden, M. Nashed, and T. Sonar. *Handbook of Geomathematics Vol 2*. Springer, 2010.

- blfrhemowo08** [777] F. Freimuth, Y. Mokrousov, D. Wortmann, S. Heinze, and S. Blügel. Maximally localized Wannier functions within the FLAPW formalism. *Physical Review B*, 78(3):035120, 2008.
- frkova02** [778] B. Frey, R. Koetter, and A. Vardy. Signal-space characterization of iterative decoding. *Information Theory, IEEE Transactions on*, 47(2):766–781, 2002.
- frXX** [779] S. Friedberg.
- frinsp03** [780] S. Friedberg, A. Insel, and L. Spence. *Linear Algebra Fourth Edition*. PHI, 2003.
- fr05** [781] S. Friedland. A new approach to generalized singular value decomposition. *SIAM J. Matrix Anal. Appl.*, 27(2):434–444 (electronic), 2005.
- frst81** [782] J. Friedman and W. Stuetzle. Projection pursuit regressions. *J. Amer. Statist. Soc.*, 76:817823, 1981.
- frjo98** [783] M. Frigo and S. Johnson. FFTW: An adaptive software architecture for the FFT. In *Proceedings of the 1998 IEEE International Conference on Acoustics, Speech and Signal Processing, 1998.*, volume 3, pages 1381–1384, 1998.
- frjo98-1** [784] M. Frigo and S. Johnson. FFTW users manual. *Massachusetts Institute of Technology*, 1998.
- defr09** [785] J. Fripiat and J. Delhalle. Efficient calculation of the exchange in the Fourier representation of HF-LCAO-CO equations for 1D periodic systems. *International Journal of Quantum Chemistry*, 109(13):2960–2967, 2009.
- fu11** [786] M. Fuchs. Computable upper bounds for the constants in Poincaré-type inequalities for fields of bounded deformation. *Math. Methods Appl. Sci.*, 34(15):1920–1932, 2011.
- fu97** [787] M. Fugiarolas. Entropy ideals and matrix operators of Besov-type. *Acta Math. Hungar.*, 75(1-2):55–64, 1997.
- fu99** [788] M. Fugiarolas. Besov spaces and a trace ideal. *Acta Math. Hungar.*, 82(1-2):75–81, 1999.

- fuXX** [789] H. Führ. Admissible Vectors for the Regular Representation. *Proc. Amer. Math. Soc.*
- fu81** [790] P. Fuhrmann. *Linear systems and operators in Hilbert space*. New York etc.: McGraw-Hill International Book Company. X, 325 p. DM 114.91, 1981.
- fu12** [791] P. Fuhrmann. *A Polynomial Approach to Linear algebra 2nd Ed.* Universitext. New York, NY: Springer. xvi, 2012.
- fuho05** [792] M. Fukuda and A. S. Holevo. On Weyl-covariant channels. *Arxiv preprint quant-ph/0510148*, 2005.
- bafujo09** [793] K. Fukumizu, F. Bach, and M. Jordan. Kernel dimension reduction in regression. *Ann. Statist.*, 37(4):1871–1905, 2009.
- fuosta11** [794] M. Fukushima, Y. Oshima, and M. Takeda. *Dirichlet Forms and Symmetric Markov Processes 2nd revised and Extended Ed.* de Gruyter Studies in Mathematics 19. Berlin: Walter de Gruyter. x, 489 p., 2011.
- ga00** [795] J.-P. Gabardo. Hilbert spaces of distributions having an orthogonal basis of exponentials. *J. Fourier Anal. Appl.*, 6(3):277–298, 2000.
- gana98** [796] J.-P. Gabardo and M. Nashed. Nonuniform multiresolution analyses and spectral pairs. *J. Funct. Anal.*, 158(1):209–241, 1998.
- ga63** [797] E. Gagliardo. A common structure in various families of functional spaces II. Quasilinear interpolation spaces. *Ricerche Mat.*, 12:87–107, 1963.
- ga69-4** [798] E. Gagliardo. Caratterizzazione costruttiva di tutti gli spazi di interpolazione tra spazi di Banach. In *Symposia Mathematica (INDAM, Rome, 1968)*, volume 2, pages 95–106. Academic Press, London, 1969.
- ga08-1** [799] A. Galántai. Subspaces, angles and pairs of orthogonal projections. *Linear and Multilinear Algebra*, 56(3):227–260, May 2008.
- gaka02** [800] N. Galatsanos and A. K. Katsaggelos. Methods for choosing the regularization parameter and estimating the noise variance in image restoration and their relation. *IEEE Trans. Image Process.*, 1(3):322–336, 2002.

- `gawa11` [801] J. E. Gale and A. Wawrzynczyk. Standard ideals in weighted algebras of Korenblyum and Wiener types. *Math. Scand.*, 108(2):291–319, 2011.
- `bebrgasewewe05` [802] I. Galic, J. Weickert, M. Welk, A. Bruhn, A. Belyaev, and H.-P. Seidel. Towards PDE-based image compression. Paragios, Nikos (ed.) et al., Variational, geometric, and level set methods in computer vision. Third international workshop, VLISM 2005, Beijing, China, October 16, 2005. Proceedings. Berlin: Springer. Lecture Notes in Computer Science 3752, 37-48 (2005)., 2005.
- `cogano06` [803] L. Galleani, L. Cohen, and A. Noga. A time-frequency approach to the adjustable bandwidth concept. *Digital Signal Processing*, 16(5):454 – 467, 2006.
- `gakipa11` [804] W. Gangbo, H. Kim, and T. Pacini. Differential forms on Wasserstein space and infinite-dimensional Hamiltonian systems. 2011.
- `gagrnist11` [805] W. Gansterer, G. Niederbrucker, S. Grotthoff, and H. Straková. Robust Distributed Orthogonalization Based on Randomized Aggregation. In *Proceedings of the Workshop on Latest Advances in Scalable Algorithms for Large-Scale Systems (ScalA) held in conjunction with the 24th IEEE/ACM International Conference on High Performance Computing, Networking, Storage and Analysis (SC) 2011*, New York, NY, USA, 2011. ACM.
- `gagrnist12` [806] W. Gansterer, G. Niederbrucker, H. Straková, and S. Grotthoff. Scalable and Fault Tolerant Orthogonalization Based on Randomized Aggregation. *Journal of Computational Science*, 2012.
- `gastze11` [807] W. Gansterer, T. Zemen, and H. Straková. Distributed QR Factorization Based on Randomized Algorithms. In *Proceedings of the 9th International Conference on Parallel Processing and Applied Mathematics*, Lecture Notes in Computer Science, Torun, Poland, 2011. Springer Verlag.
- `gahukelo09` [808] W. Gao, N. Huyen, H. Loi, and Q. Kemaio. Real-time 2D parallel windowed Fourier transform for fringe pattern analysis using graphics processing unit. *Optics Express*, 17(25):23147–23152, 2009.

- gawu12 [809] W. Gao and Z. Wu. Quasi-interpolation for linear functional data. *Journal of Computational and Applied Mathematics*, 236(13):3256 – 3264, 2012.
- chgazhzh04 [810] Z. Gao, L. Chen, S. Zhou, and R. Zhu. Computer-aided alignment for a reference transmission sphere of an interferometer. *Opt. Eng.*, 43(1):69–74, 2004.
- game78 [811] C. Gapaillard and C. Merucci. Espaces fonctionnels de Banach - Méthode discrete l'interpolation. *Ark. Mat.*, 16:161–170, 1978.
- gamupe11 [812] A. G. García, M. Muoz Bouzo, and G. Pérez Villalón. Regular multivariate sampling and approximation in  $L_p$  shift-invariant spaces. *J. Math. Anal. Appl.*, 380(2):607 – 627, 2011.
- gaka95 [813] J. Garcia Cuerva and K. S. Kazarian. Spline wavelet bases of weighted spaces. García-Cuerva, José (ed.) et al., *Fourier analysis and partial differential equations. Proceedings of the conference held in Miraflores de la Sierra, Madrid, Spain, June 15–20, 1992*. Boca Raton, FL: CRC Press. *Studies in Advanced Mathematics*. 169-, 1995.
- gamato93 [814] J. Garcia Cuerva, R. Macias, and J.-L. Torrea. The Hardy-Littlewood property of Banach lattices. *Israel J. Math.*, 83(1-2):177–201, 1993.
- gahesiso06 [815] G. Garrigos, E. Hernandez, H. Sikic, and F. Soria. Further results on the connectivity of Parseval frame wavelets. *Proc. Amer. Math. Soc.*, 134(11):3211–3221, 2006.
- gahesisowewi03 [816] G. Garrigos, E. Hernandez, H. Sikic, F. Soria, G. Weiss, and E. Wilson. Connectivity in the set of tight frame wavelets (TFW). *Glas. Mat., III. Ser.*, 38(1):75–98, 2003.
- flgagrXX [817] M. Gasser, A. Flexer, and T. Grill. On Computing Morphological Similarity of Audio Signals,. *Proceedings of the 8th Sound and Music Computing Conference , Padova, Italy, 2011*.
- ga09-5 [818] G. Gat. On almost everywhere convergence of Fourier series on unbounded Vilenkin groups. *Publ. Math.*, 75(1-2):85–94, 2009.
- gapi86 [819] G. I. Gaudry and R. Pini. Bernstein's theorem for compact, connected Lie groups. *Math. Proc. Cambridge Philos. Soc.*, 99:297–305, 1986.

- gapi87 [820] G. I. Gaudry and R. Pini. Motion groups and absolutely convergent Fourier transforms. *J. Austral. Math. Soc. Ser. A*, 43:385–397, 1987.
- ga08 [821] S. Z. Gautam. A critical-exponent Balian-Low theorem. *Math. Res. Lett.*, 15(3):471–783, May 2008.
- ga11 [822] L. Gavruta. Frames for operators. *Appl. Comput. Harmon. Anal.*, In Press, Corrected Proof:–, 2011.
- gaga10 [823] L. Gavruta and P. Gavruta. Frames in duality. In *Proceedings of the 12th symposium of mathematics and its applications, 'Politehnica' University of Timisoara*, pages 100–107, Timisoara, Romania, November 5-7, 2009, 2010.
- gaga10-1 [824] P. Gavruta and L. Gavruta.  $\psi$ -aditive mappings and HyersUlam stability. In P. Gavruta, L. Gavruta, P. M. Pardalos, T. M. Rassias, and A. A. Khan, editors, *Nonlinear Analysis and Variational Problems*, volume 35 of *Springer Optimization and Its Applications*, pages 81–86. Springer New York, 2010.
- gajukrwu07 [825] V. Gayral, J.-H. Jureit, T. Krajewski, and R. Wulkenhaar. Quantum field theory on projective modules. *J. Noncommut. Geom.*, 1(4):431–496, 2007.
- ge88-1 [826] M. Geisler. Besov spaces on compact Lie groups. *Math. Nachr.*, 139:193–205, 1988.
- gegr08 [827] P. Geladi and H. F. Grahn. *Multivariate and Hyperspectral Image Analysis*, volume 15 (General articles), page 26. Wiley, Online Library, 2008.
- ge07 [828] A. Gelb. Reconstruction of piecewise smooth functions from non-uniform grid point data. *J. Sci. Comput.*, 30(3):409–440, 2007.
- ge84 [829] D. Geller. Spherical harmonics, the Weyl transform and the Fourier transform on the Heisenberg group. *Canad. J. Math.*, 36:615–684, 1984.
- gema09-2 [830] D. Geller and A. Mayeli. Continuous wavelets on compact manifolds. *Math. Z.*, 262(4):895–927, 2009.

- gewr11** [831] Q. Geng and J. Wright. On the local correctness of  $ell^1$ -minimization for dictionary learning. *preprint*, 2011.
- geto95** [832] I. Gertner and R. Tolimieri. Multiplicative Zak Transform. *Journal of Visual Communication and Image Representation*, 6(1):89–95, 1995.
- geze90** [833] I. Gertner and Y. Y. Zeevi. Zak-Gabor representation of images. In *Proc. SPIE, Visual Communications and Image Processing '90: Fifth in a Series*, volume 1360 of *Pattern Recognition*, pages 1738–1748, Lausanne, Switzerland, October 1990.
- bgegopa02** [834] D. Gesbert, H. Bölcskei, D. Gore, and A. Paulraj. Outdoor MIMO Wireless Channels: Models and Performance Prediction. *IEEE Trans. Comm.*, 50:1926–1934, Dec. 2002.
- gh12** [835] A. Ghaani Farashahi. *Non-commutative time-frequency analysis*. PhD thesis, Department Of Mathematics, Ferdowsi University of Mashhad, 2012.
- gh10** [836] R. Ghrist. Configuration spaces, braids, and robotics. Berrick, A. Jon (ed.) et al., Braids. Introductory lectures on braids, configurations and their applications. Based on the program “Braids, 2010.
- gi97** [837] G. Giannakis. Filterbanks for blind channel identification and equalization. *IEEE Signal Process. Letters*, pages 184–187, Jun. 1997.
- giis11** [838] P. Gibilisco and T. Isola. On a refinement of Heisenberg uncertainty relation by means of quantum Fisher information. *J. Math. Anal. Appl.*, 375(1):270–275, 2011.
- gi94** [839] P. Gilkey. *Invariance Theory: The Heat Equation and the Atiyah-Singer Index Theorem*. CRC Press, 2nd edition, 1994.
- giri10** [840] R. Giova and T. Ricciardi. A sharp weighted Wirtinger inequality and some related functional spaces. *Bulletin of the Belgian Mathematical Society-Simon Stevin*, 17(1):209–218, 2010.
- gimamape12** [841] J. Giribet, A. Maestriperi, F. Pería, and P. Massey. On frames for Krein spaces. *Journal of Mathematical Analysis and Applications*, 393(1):122 – 137, 2012.

- gi85 [842] S. Giulini. Bernstein and Jackson theorems for the Heisenberg group. *J. Austral. Math. Soc. Ser. A*, 38:241–254, 1985.
- gi86 [843] S. Giulini. Approximation and Besov spaces on stratified groups. *Proc. Amer. Math. Soc.*, 96(4):569–578, 1986.
- baglir09 [844] D. Glasner, S. Bagon, and M. Irani. Super-resolution from a single image. In *Computer Vision, 2009 IEEE 12th International Conference on*, pages 349–356, Kyoto, October 2009.
- glporasisovo04 [845] J. Glover, Z. Pop Stojanovic, M. Rao, H. Sikic, R. Song, and Z. Vondracek. Harmonic functions of subordinate killed Brownian motion. *J. Funct. Anal.*, 215(2):399–426, 2004.
- gl188 [846] E. Gluskin. Extremal properties of orthogonal parallelepipeds and their applications to the geometry of Banach spaces. *Mat. Sb. (N.S.)*, 136(178)(1):85–96, 1988.
- glol11 [847] E. Gluskin and A. Olevskii. Invertibility of sub-matrices and the octahedron width theorem. *Israel Journal of Mathematics*, 186:61–68, 2011.
- go10 [848] M. Gockenbach. *Finite-Dimensional Linear Algebra*. Taylor and Francis, 2010.
- gola94 [849] I. Gohberg and H. J. Landau. Prediction and the inverse of Toeplitz matrices. Zahar, R. V. M. (ed.), *Approximation and computation: a Festschrift in honor of Walter Gautschi*. Proceedings of the Purdue conference, West Lafayette, IN, USA, December 2-5, 1993. Boston, US: Birkhäuser. ISNM, Int. Ser. Numer. Math. 119, 219-229 (1994)., 1994.
- go12 [850] J. Golan. *The Linear Algebra a Beginning Graduate Student ought to know. 3rd ed.* Dordrecht: Springer. xii, 497 p., 2012.
- gosi08 [851] B. Gold and R. Simons. *Proof and other dilemmas. Mathematics and philosophy*. Spectrum Series. The Mathematical Association of America (MAA), Washington, DC, 2008.
- gogo05 [852] S. Golomb and G. Gong. *Signal design for good correlation*. Cambridge University Press, Cambridge, 2005.

- [gora89] [853] A. Gonchar and E. Rakhmanov. Equilibrium distributions and degree of rational approximation of analytic functions. *Math. USSR-Sb.*, 62(2):305–348, 1989.
- [gogr07] [854] V. Gonzalez and C. C. Graham. On the support of tempered distributions. *Arch. Math. (Basel)*, 88(2):133–142, 2007.
- [argohelosatovi06] [855] J. Gonzalez Nuevo, F. Argueso, M. Lopez Caniego, L. Toffolatti, J. Sanz, P. Vielva, and D. Herranz. The Mexican Hat Wavelet Family. Application to point source detection in CMB maps, 2006.
- [go71] [856] I. Good. The relationship between two fast Fourier transforms. *IEEE Trans. Comput.*, 20:310–317, 1971.
- [go04-1] [857] R. Goodman. Alice through looking glass after looking glass: the mathematics of mirrors and kaleidoscopes. *Amer. Math. Monthly*, 111(4):281–298, 2004.
- [gowa85] [858] R. Goodman and N. R. Wallach. Projective unitary positive-energy representations of  $\text{diff}(S^1)$ . *J. Funct. Anal.*, 63(3):299 – 321, 1985.
- [goha06] [859] T. Goodman and D. Hardin. Refinable multivariate spline functions. In *Topics in multivariate approximation and interpolation*, volume 12 of *Stud. Comput. Math.*, pages 55–83. Elsevier B. V., Amsterdam, 2006.
- [gorita09] [860] A. Göpfert, T. Riedrich, and C. Tammer. *Applied Functional Analysis Motivations and Methods for Mathematicians and Economists (Angewandte Funktionalanalysis Motivationen Und Methoden für Mathematiker Und Wirtschaftswissenschaftler)*. Studium. Studienbücher Wirtschaftsmathematik. Wiesbaden: Vieweg+Teubner. xiv, 390 p. EUR 29.90, 2009.
- [go95] [861] R. Gopinath. Nonlinear recovery of sparse signals from narrowband data. In *Proceedings of the Acoustics, Speech, and Signal Processing, 1995 - Volume 02*, ICASSP '95, page 3, Washington, DC, USA., 1995. IEEE Computer Society.
- [go85-1] [862] Y. Gordon. Some inequalities for Gaussian processes and applications. *Israel J. Math.*, 50(4):265–289, 1985.

- [go87] [863] Y. Gordon. Elliptically contoured distributions. *Probab. Theory Related Fields*, 76(4):429–438, 1987.
- [go88-1] [864] Y. Gordon. Gaussian processes and almost spherical sections of convex bodies. *Ann. Probab.*, 16(1):180–188, 1988.
- [golere73] [865] Y. Gordon, D. Lewis, and J. Retherford. Banach ideals of operators with applications. *J. Funct. Anal.*, 14:85–129, 1973.
- [golere73-1] [866] Y. Gordon, D. Lewis, and J. Retherford. Banach ideals of operators with applications to the finite dimensional structure of Banach spaces. Proc. internat. Sympos. partial diff. Equ. Geometry normed lin. Spaces II. *Israel J. Math.*, 13:348–360, 1973.
- [gokove99] [867] V. K. Goyal, J. Kovacevic, and M. Vetterli. Quantized frame expansions as source channel codes for erasure channels. In *dcc*, page 326, 1999.
- [chgovezh02] [868] V. K. Goyal, J. Zhuang, M. Vetterli, and C. Chan. Transform coding using adaptive bases and quantization. In *Image Processing, 1996. Proceedings., International Conference on*, volume 1, pages 365–368, 2002.
- [grpo09] [869] M. Graef and D. Potts. Sampling sets and quadrature formulae on the rotation group. *Numer. Funct. Anal. Optim.*, 30(7-8):665–688, 2009.
- [ancateXX] [870] E. Graefe and R. Schubert. On the representation of functions with Gaussian wave packets. *Physical Review A*, pages 1–36.
- [grsc11] [871] E. Graefe and R. Schubert. Wave-packet evolution in non-Hermitian quantum systems. *Physical Review A*, 83(6):060101, 2011.
- [grku08] [872] M. Gräf and S. Kunis. Stability results for scattered data interpolation on the rotation group. *Electron. Trans. Numer. Anal.*, 31:30–39, 2008.
- [dogrgrku02] [873] R. Graf, C. Kuo, A. Dowling, and W. Graham. On the horn effect of a tyre/road interface, Part I: Experiment and computation. *Journal of Sound and Vibration*, 256(3):417 – 431, September 2002.
- [gr11-5] [874] L. Grafakos. Multilinear harmonic analysis. In *Nonlinear analysis, function spaces and applications. Vol. 9 (NAFSA 9) Proceedings of*

*the 9th International School held in Trest, September 11-17, 2010*, page 33, 2011.

- grmito10 [875] L. Grafakos, A. Miyachi, and N. Tomita. On multilinear Fourier multipliers of limited smoothness. *to appear*, page 22, 2010.
- gr07-1 [876] C. C. Graham. The support of pseudomeasures on  $R$ . *Math. Proc. Cambridge Philos. Soc.*, 142(1):149–152, 2007.
- gr08-3 [877] C. C. Graham. The support of tempered distributions. *Math. Proc. Cambridge Philos. Soc.*, 144(2):495–498, 2008.
- grko09 [878] A. Gramfort and M. Kowalski. Improving M/EEG source localization with an inter-condition sparse prior. pages 141–144, Paris, France, Jun. 2009.
- gr84-1 [879] B. Gramsch. Relative Inversion in der Störungstheorie von Operatoren und  $\Psi$ -Algebren. *Math. Ann.*, 269(1):27–71, 1984.
- gr95 [880] A. Graps. An introduction to wavelets. *IEEE Comput. Science and Engineering*, 2(2):50–61, 1995.
- gr11-4 [881] J. Grcar. How ordinary elimination became Gaussian elimination. *Historia Math.*, 38(2):163–218, 2011.
- gr11-3 [882] J. Grcar. Mathematicians of Gaussian elimination. *Notices Amer. Math. Soc.*, 58(6):782–792, 2011.
- gr76-4 [883] W. Greub. *Lineare Algebra. Korr. Nachdruck der 1. Aufl.* Heidelberger Taschenbücher. Band 179. Berlin-Heidelberg-New York: Springer-Verlag. XI, 219 S., 1976.
- badegrmaro02 [884] R. Gribonval, E. Bacry, S. Mallat, P. Depalle, and X. Rodet. Analysis of sound signals with high resolution matching pursuit. In *Time-Frequency and Time-Scale Analysis, 1996., Proceedings of the IEEE-SP International Symposium on*, pages 125–128, Paris, France, 2002.
- gr11-6 [885] R. Grigorchuk. Milnor’s Problem on the Growth of Groups and its Consequences. *Arxiv preprint arXiv:1111.0512*, 2011.
- grpa06 [886] R. Grigorchuk and I. Pak. Groups of intermediate growth: an introduction for beginners. *Arxiv preprint math.GR/0607384*, 78, 2006.

- gr96-2** [887] D. R. Grigore. The projective unitary irreducible representations of the Galilei group in 1+2 dimensions. *J. Math. Phys.*, 37(1):460–473, 1996.
- grpa11** [888] R. Grimaldi and P. Pansu. Bounded geometry, growth and topology. *J. Math. Pures Appl. (9)*, 95(1):85–98, 2011.
- gr66** [889] P. Grisvard. Commutativité de deux foncteurs d’interpolation et applications. *J. Math. Pures Appl. (9)*, 45:207–290, 1966.
- gr85-4** [890] P. Grisvard. *Elliptic Problems in Nonsmooth Domains*, volume 24 of *Monographs and Studies in Mathematics*. Pitman (Advanced Publishing Program), Boston, MA, 1985.
- gr07-3** [891] K. Gröchenig. Wiener’s Lemma: Theme and variations. *Short course at summer school on ‘Harmonic Analysis, Wavelets, and Image Processing’*, September 2007.
- gr11-1** [892] K. Gröchenig. Multivariate Gabor frames and sampling of entire functions of several variables. *Appl. Comput. Harmon. Anal.*, 31(2):218–227, September 2011.
- grst11** [893] K. Gröchenig and J. Stöckler. Gabor frames and totally positive functions. *preprint*, 2011.
- grto10** [894] K. Gröchenig and J. Toft. The range of localization operators and lifting theorems for modulation and Bargmann-Fock spaces. *to appear*, page 23, 2010.
- gr11** [895] P. Grohs. Continuous shearlet tight frames. *J. Fourier Anal. Appl.*, 17(3):506–518, 2011.
- gr93-3** [896] M. Gromov. Asymptotic invariants of infinite groups. In *Geometric group theory, Vol. 2 (Sussex, 1991)*, volume 182 of *London Math. Soc. Lecture Note Ser.*, pages 1–295. Cambridge Univ. Press, Cambridge, 1993.
- bagrkapase06** [897] M. Gromov, M. Katz, P. Pansu, S. Bates, and S. Semmes. *Metric structures for Riemannian and non-Riemannian spaces*. Modern Birkhuser Classics. Birkhäuser, 2006.

- [grpa91] [898] M. Gromov and P. Pansu. Rigidity of lattices: an introduction. In *Geometric topology: recent developments (Montecatini Terme, 1990)*, volume 1504 of *Lecture Notes in Math.*, pages 39–137. Springer, Berlin, 1991.
- [gr75-1] [899] L. Gross. Logarithmic Sobolev inequalities. *Amer. J. Math.*, 97(4):1061–1083, 1975.
- [grsi01] [900] S. Grudsky and B. Silbermann. Approximate identities, almost-periodic functions and Toeplitz operators. *Acta Appl. Math.*, 65(1-3):237–271, 2001.
- [grva02] [901] S. Grudsky and N. Vasilevski. Toeplitz operators on the Fock space: Radial component effects. *Integr. Equ. Oper. Theory*, 44(1):10–37, 2002.
- [grke11] [902] W. Gryc and T. Kemp. Duality in Segal-Bargmann spaces. *J. Funct. Anal.*, 261(6):1591 – 1623, 2011.
- [guha00] [903] Q. Gu and D. Han. On multiresolution analysis (MRA) wavelets in  $\mathbb{R}^n$ . *J. Fourier Anal. Appl.*, 6(4):437–447, 2000.
- [guha09-3] [904] Q. Gu and D. Han. Wavelet frames for (not necessarily reducing) affine subspaces II: The structure of affine subspaces. *Appl. Comput. Harmon. Anal.*, 27(1):47–54, 2009.
- [guxixi09-2] [905] X. Guanlei, W. Xiaotong, and X. Xiaogang. Generalized entropic uncertainty principle on fractional Fourier transform. *Signal Process.*, 89(12):2692–2697, 2009.
- [guxixi09-3] [906] X. Guanlei, W. Xiaotong, and X. Xiaogang. Generalized entropic uncertainty principle on fractional Fourier transform. *Signal Process.*, 89(12):2692–2697, 2009.
- [guxixi09-1] [907] X. Guanlei, W. Xiaotong, and X. Xiaogang. Uncertainty inequalities for linear canonical transform. *Signal Processing, IET*, 3(5):392–402, 2009.
- [gu85] [908] D. Guedj. Nicholas Bourbaki, collective mathematician. An interview with Claude Chevalley. 7(2):18–22, 1985.

- [gu00-1] [909] E. Guentner. Wick quantization and asymptotic morphisms. *Houston J. Math*, 26:361–375, 2000.
- [gu03] [910] E. Guentner. Berezin quantization and K-homology. *Communications in mathematical physics*, 240(3):423–446, 2003.
- [guhitr00] [911] E. Guentner, N. Higson, and J. Trout. Equivariant  $E$ -theory for  $C^*$ -algebras. *Mem. Amer. Math. Soc.*, 148(703):viii+86, 2000.
- [gulu05] [912] N. Guglielmi and C. Lubich. Numerical periodic orbits of neutral delay differential equations. *Discrete Contin. Dyn. Syst.*, 13(4):1057–1067, 2005.
- [guis06] [913] D. Guido and T. Isola. The problem of completeness for Gromov-Hausdorff metrics on  $C^*$ -algebras. *J. Funct. Anal.*, 233(1):173–205, 2006.
- [guis11] [914] M. Guillemard and A. Iske. Curvature analysis of frequency modulated manifolds in dimensionality reduction. *Calcolo*, 48(1):107–125, 2011.
- [gust83] [915] V. Guillemin and S. Sternberg. The Frobenius reciprocity theorem from a symplectic point of view. In *Nonlinear partial differential operators and quantization procedures (Clausthal, 1981)*, volume 1037 of *Lecture Notes in Math.*, pages 242–256. Springer, Berlin, 1983.
- [gust86] [916] V. Guillemin and S. Sternberg. A generalization of the notion of polarization. *Ann. Global Anal. Geom.*, 4(3):327–347, 1986.
- [gust05] [917] V. Guillemin and S. Sternberg. The moment map revisited. *J. Differential Geom.*, 69(1):137–162, 2005.
- [gunese05] [918] H. Gunawan, O. Neswan, and W. Setya Budhi. A Formula for Angles between Subspaces of Inner Product Spaces. *Contributions to Algebra and Geometry*, 46(2):311–320, 2005.
- [gulaposayi10] [919] C. Güntürk, M. Lammers, A. Powell, R. Saab, and Ö. Yilmaz. Sobolev duals for random frames and sigma-delta quantization of compressed sensing measurements. *preprint*, 2010.
- [gula08-1] [920] K. Guo and D. Labate. Sparse shearlet representation of Fourier integral operators. *Electron. Res. Announc. Math. Sci.*, 14:7–19, 2008.

- [gula10] [921] K. Guo and D. Labate. Optimally sparse 3D approximations using shearlet representations. *Electron. Res. Announc. Math. Sci.*, 17:125–137, 2010.
- [gumowo10] [922] Q. Guo, S. Molahajloo, and M. Wong. Phases of modified Stockwell transforms and instantaneous frequencies. *Journal of Mathematical Physics*, 51:052101, 2010.
- [guhaho10] [923] S. Gurevich, R. Hadani, and R. Howe. Quadratic reciprocity and the sign of the Gauss sum via the finite Weil representation. *Internat. Math. Res. Notices*, 2010(19):3729–3745, 2010.
- [guumva07] [924] V. Guruswami, C. Umans, and S. Vadhan. Unbalanced expanders and randomness extractors from Parvaresh-Vardy codes. In *IEEE Conference on Computational Complexity*, pages 237–246, 2007.
- [gupe77] [925] J. Gustavsson and J. Peetre. Interpolation of Orlicz spaces. *Studia Math.*, 60(1):33–59, 1977.
- [baceguoz08] [926] H. Guven, H. Ozaktas, A. Cetin, and B. Barshan. Signal recovery from partial fractional Fourier domain information and its applications. *Signal Processing, IET*, 2(1):15–25, march 2008.
- [har95] [927] U. Haagerup and M. Rordam. Perturbations of the rotation  $C^*$ -algebras and of the Heisenberg commutation relation. *Duke Math. J.*, 77(3):627–656, 1995.
- [dahaseze09] [928] J. Haber, F. Zeilfelder, O. Davydov, and H. Seidel. Smooth approximation and rendering of large scattered data sets. In *Visualization, 2001. VIS'01. Proceedings*, pages 341–571, 2009.
- [hasi11-1] [929] R. Hadani and A. Singer. Representation theoretic patterns in three dimensional cryo-electron microscopy. I: The intrinsic reconstitution algorithm. *Ann. Math.*, 174(2):1219–1241, 2011.
- [hasi11-2] [930] R. Hadani and A. Singer. Representation theoretic patterns in three-dimensional cryo-electron microscopy. II: The class averaging problem. *Annals of Mathematics*, 11(5):589–616, 2011.
- [hasj08] [931] M. Hager and J. Sjöstrand. Eigenvalue asymptotics for randomly perturbed non-selfadjoint operators. *Math. Ann.*, 342(1):177–243, 2008.

- [haru90] [932] T. Hagerup and C. Rüb. A guided tour of Chernoff bounds. *Inform. Process. Lett.*, 33(6):305–308, 1990.
- [haheli11] [933] J. Haldar, D. Hernando, and Z. Liang. Compressed-sensing MRI with random encoding. *IEEE Trans. Med. Imaging*, 30(4):893–903, 2011.
- [hayizh08] [934] E. Hale, W. Yin, and Y. Zhang. Fixed-point continuation for  $\ell_1$ -minimization: methodology and convergence. *SIAM J. Optim.*, 19(3):1107–1130, 2008.
- [hama95-1] [935] G. Haley and B. Manjunath. Rotation-invariant texture classification using modified Gabor filters. In *Image Processing, 1995. Proceedings., International Conference on*, volume 1, pages 262–265, Washington, DC , USA, oct 1995.
- [ha08-2] [936] B. Hall. Berezin-Toeplitz quantization on Lie groups. *J. Funct. Anal.*, 255(9):2488–2506, 2008.
- [ha92] [937] K. Hallatschek. Fouriertransform on sparse grids with hierarchical bases. (Fouriertransformation auf dünnen Gittern mit hierarchischen Basen.). *Numer. Math.*, 63(1):83–97, 1992.
- [ha99] [938] G. Haller. *Chaos Near Resonance*. Applied Mathematical Sciences. 138. New York, NY: Springer. xvi, 1999.
- [haha64] [939] J. Hammersley and D. Handscomb. *Monte Carlo Methods*. London: Methuen & Co Ltd, 1964.
- [ha80-1] [940] R. Hamming. The unreasonable effectiveness of mathematics. *Amer. Math. Monthly*, 87(2):81–90, 1980.
- [ha10-2] [941] B. Han. Pairs of frequency-based nonhomogeneous dual wavelet frames in the distribution space. *Appl. Comput. Harmon. Anal.*, 29(3):330–353, 2010.
- [ha12-1] [942] B. Han. Nonhomogeneous wavelet systems in high dimensions. *Appl. Comput. Harmon. Anal.*, 32(2):169 – 196, March 2012.
- [ha09-7] [943] D. Han. Dilations and completions for Gabor systems. *J. Fourier Anal. Appl.*, 15(2):201–217, 2009.

- hajilamo08** [944] D. Han, W. Jing, D. Larson, and R. Mohapatra. Riesz bases and their dual modular frames in Hilbert  $C^*$ -modules. *J. Math. Anal. Appl.*, 343(1):246–256, 2008.
- ha1a08** [945] D. Han and D. Larson. Frame duality properties for projective unitary representations. *Bull. Lond. Math. Soc.*, 40(4):685–695, 2008.
- ha07-3** [946] F. Han. Hexagonal multicarrier modulation: a robust transmission scheme for time-frequency dispersive channels. *IEEE Trans. Signal Process.*, 55(5):1955–1961, 2007.
- hama07** [947] J. Han and K.-K. Ma. Rotation-invariant and scale-invariant Gabor features for texture image retrieval. *Image and Vision Computing*, 25(9):1474 – 1481, 2007.
- halelisu04** [948] K.-Y. Han, S.-W. Lee, J.-S. Lim, and K.-M. Sung. Channel estimation for OFDM with fast fading channels by modified Kalman filter. *IEEE Trans. Consumer Electronics*, 50:443–449, May 2004.
- guhawa11** [949] L. Han, B. Wang, and B. Guo. Inviscid limit for the derivative Ginzburg-Landau equation with small data in modulation and Sobolev spaces. *Appl. Comput. Harmon. Anal.*, In Press, Corrected Proof:–, 2011.
- ha09-6** [950] Y. Han. New characterizations of inhomogeneous Besov and Triebel-Lizorkin spaces over spaces of homogeneous type. *Acta Math. Sin. (Engl. Ser.)*, 25(11):1787–1804, 2009.
- hamuya08** [951] Y. Han, D. Müller, and D. Yang. A theory of Besov and Triebel-Lizorkin spaces on metric measure spaces modeled on Carnot-Carathéodory spaces. 2008.
- ha11** [952] A. C. Hansen. On the solvability complexity index, the  $n$ -pseudospectrum and approximations of spectra of operators. *J. Amer. Math. Soc.*, 24(1):81–124, 2011.
- ha10-3** [953] C. Hansen. *Discrete inverse problems: Insight and algorithms*, volume 7 of *Fundamentals of Algorithms*. Society for Industrial and Applied Mathematics (SIAM), 2010.

- hape82** [954] F. Hansen and G. Pedersen. Jensen's inequality for operators and Löwner's theorem. *Math. Ann.*, 258(3):229–241, 1982.
- hape03** [955] F. Hansen and G. Pedersen. Jensen's operator inequality. *Bull. Lond. Math. Soc.*, 35(4):553–564, 2003.
- hasc11** [956] M. Hansen and C. Schwab. Analytic regularity and nonlinear approximation of a class of parametric, semilinear elliptic PDEs. *preprint*, 2011.
- hasi11** [957] M. Hansen and W. Sickel. Best m-term approximation and Lizorkin-Triebel spaces. *J. Approx. Theory*, 163(8):923 – 954, 2011.
- ha94-1** [958] P. Hansen. Regularization tools: A Matlab package for analysis and solution of discrete ill-posed problems. *Numer. Algorithms*, 6(1-2):1–35, 1994.
- hawr71** [959] D. Hanson and F. Wright. A bound on tail probabilities for quadratic forms in independent random variables. *Ann. Math. Statist.*, 42:1079–1083, 1971.
- hasa05** [960] M. Hansson and J. Sandberg. Multiple windows for estimation of locally stationary transients in the electroencephalogram. In M. Hansson and J. Sandberg, editors, *Annual International Conference of the IEEE Engineering in Medicine and Biology - Proceedings*, volume 7 VOLS, pages 7293–7296, 2005.
- hasavi07** [961] E. Harboure, O. Salinas, and B. Viviani. A look at  $BMO_\varphi(\omega)$  through Carleson measures. *J. Fourier Anal. Appl.*, 13(3):267–284, 2007.
- hahala11** [962] P. Harjulehto, P. Hästö, and V. Latvala. Boundedness of solutions of the non-uniformly convex, non-standard growth Laplacian. *Complex Variables and Elliptic Equations*, 56(7-9):643–657, 2011.
- ha72** [963] H. Harmuth. *Transmission of Information By Orthogonal Functions 2nd Ed.* Berlin-Heidelberg-New York: Springer-Verlag. XII, 393 p. with 210 fig., 1972.
- hasc09** [964] D. D. Haroske and C. Schneider. Besov spaces with positive smoothness on  $\sphericalangle^n$ , embeddings and growth envelopes. *J. Approx. Theory*, 161(2):723–747, 2009.

- ha02-2 [965] F. Harris. Comments on “Ewald summation technique for one-dimensional charge distributions”. *Comput. Phys. Commun.*, 146(2):271–273, 2002.
- chfoha10 [966] P. Harris, M. Charlton, and A. S. Fotheringham. Moving window kriging with geographically weighted variograms. *Stochastic Environmental Research and Risk Assessment*, 24(8):1193–1209, 2010.
- hazi00 [967] R. Hartley and A. Zisserman. *Multiple view geometry in computer vision. With foreword by Olivier Faugeras. 2nd edition.* Cambridge: Cambridge University Press, 2004.
- hazi04 [968] R. Hartley and A. Zisserman. *Multiple view geometry in computer vision. With foreword by Olivier Faugeras. 2nd edition.* Cambridge: Cambridge University Press, 2004.
- hainkapr12-1 [969] H. Hassanieh, P. Indyk, D. Katabi, and E. Price. Nearly optimal sparse Fourier transform. In *STOC*, 2012.
- hainkapr12 [970] H. Hassanieh, P. Indyk, D. Katabi, and E. Price. Simple and practical algorithm for sparse Fourier transform. In *SODA*, 2012.
- ha07-2 [971] H. Hassanpour. Improved SVD-based technique for enhancing the time-frequency representation of signals. *IEEE International Symposium on Circuits and Systems*, pages 1819 – 1822, May 2007.
- bohame02 [972] H. Hassanpour, M. Mesbah, and B. Boashash. SVD-based technique for enhancing the time-frequency representation of signals. pages 113–116, December 2002.
- ha09-5 [973] J. D. Haupt. *New theory and methods in adaptive and compressive sampling for sparse discovery.* PhD thesis, The University of Wisconsin - Madison, August 2009.
- bacahano09 [974] J. D. Haupt, R. G. Baranuik, R. M. Castro, and R. D. Nowak. Compressive distilled sensing: Sparse recovery using adaptivity in compressive measurements. In *Proc. 43rd Asilomar Conf. Signals, Systems, and Computers*, pages 1551 – 1555, Pacific Grove, CA, November 2009.

- [cahano09] [975] J. D. Haupt, R. M. Castro, and R. D. Nowak. Distilled sensing: Selective sampling for sparse signal recovery. In *Proc. 12th International Conference on Artificial Intelligence and Statistics (AISTATS)*, pages 216–223, Clearwater Beach, Florida, April 2009.
- [cahano10] [976] J. D. Haupt, R. M. Castro, and R. D. Nowak. Distilled sensing: Adaptive sampling for sparse detection and estimation. *Arxiv preprint arXiv:1001.5311*, 2010.
- [cahano10-1] [977] J. D. Haupt, R. M. Castro, and R. D. Nowak. Improved bounds for sparse recovery from adaptive measurements. In *IEEE International Symposium on Information Theory Proceedings (ISIT)*, pages 1563–1567, Austin, TX, June 2010.
- [hano10] [978] J. D. Haupt and R. D. Nowak. Adaptive sensing for sparse recovery. *preprint*, 2010.
- [halu11] [979] F. Haußer and Y. Luchko. *Mathematische Modellierung mit MATLAB - Eine praxisorientierte Einführung*. Spektrum Akademischer Verlag Heidelberg 2011, 2011.
- [hali10] [980] S. Haykin and K. Liu. *Handbook on array processing and sensor networks*. Wiley-IEEE Press, 2010.
- [coha00] [981] P. Haynes and M. Cote. Parallel fast Fourier transforms for electronic structure calculations. *Comput. Phys. Commun.*, 130(1-2):130–136, 2000.
- [hatu09] [982] M. L. Hazelton and B. A. Turlach. Nonparametric density deconvolution by weighted kernel estimators. *Statistics and Computing*, 19(3):217–228, 2009.
- [heli10] [983] T.-X. He and E.-B. Lin. *Wavelet Analysis and its Applications. Numerical Methods, Computer Graphics and Economics*. Hackensack, NJ: World Scientific. 250 p., 2010.
- [hela11] [984] X.-G. He and K.-S. Lau. On the Weyl-Heisenberg frames generated by simple functions. *J. Funct. Anal.*, 261(4):1010–1027, 2011.
- [hehesh08] [985] J. J. Healy, B. M. Hennelly, and J. T. Sheridan. Additional sampling criterion for the linear canonical transform. *Opt. Lett.*, 33(22):2599–2601, 2008.

- herhsh10-1** [986] J. J. Healy, W. T. Rhodes, and J. Sheridan. Cross terms of the Wigner distribution function and aliasing in numerical simulations of paraxial optical systems. *Opt. Lett.*, 35(8):1142–1144, 2010.
- hesh08** [987] J. J. Healy and J. Sheridan. Cases where the linear canonical transform of a signal has compact support or is band-limited. *Opt. Lett.*, 33(3):228–230, February 2008.
- hesh10** [988] J. J. Healy and J. Sheridan. Fast linear canonical transforms. *J. Opt. Soc. Amer. A*, 27(1):21–30, 2010.
- hesh10-1** [989] J. J. Healy and J. Sheridan. Reevaluation of the direct method of calculating Fresnel and other linear canonical transforms. *Opt. Lett.*, 35(7):947–949, 2010.
- he96-1** [990] E. Hebey. *Sobolev spaces on Riemannian Manifolds*. Lecture Notes in Mathematics. 1635. Berlin: Springer. x, 116 p., 1996.
- helise97** [991] H. Hedenmalm, P. Lindqvist, and K. Seip. A Hilbert space of Dirichlet series and systems of dilated functions in  $L^2(0, 1)$ . *Duke Math. J.*, 86(1):1–37, 1997.
- helise99** [992] H. Hedenmalm, P. Lindqvist, and K. Seip. Addendum to: “A Hilbert space Dirichlet series and systems of dilated functions in  $l_2(0, 1)$ . *Duke Math. J.*, 99(1):175–178, 1999.
- buhejo85** [993] M. T. Heideman, D. H. Johnson, and C. S. Burrus. Gauss and the history of the fast Fourier transform. *Arch. Hist. Exact Sci.*, 34:265–277, 1985.
- hekotu07** [994] T. Heikkinen, P. Koskela, and H. Tuominen. Sobolev-type spaces from generalized Poincaré inequalities. *Studia Math.*, 181(1):1–16, 2007.
- he08-1** [995] C. Heil. *The density theorem and the Homogeneous Approximation Property for Gabor frames*. Birkhäuser, 2008.
- he11** [996] C. Heil. *A Basis Theory Primer. Expanded ed.* Applied and Numerical Harmonic Analysis. Basel: Birkhäuser, 2011.
- he03-3** [997] P. Heinlein. Discretizing continuous wavelet transforms using integrated wavelets. *Appl. Comput. Harmon. Anal.*, 14(3):238–256, 2003.

- drhesc03** [998] P. Heinlein, J. Drexler, and W. Schneider. Integrated wavelets for enhancement of microcalcifications in digital mammography. *Medical Imaging, IEEE Transactions on*, 22(3):402–413, march 2003.
- he01-1** [999] J. Heinonen. *Lectures on analysis on metric spaces*. Springer Verlag, 2001.
- hehowo10** [1000] T. Heinosaari, A. S. Holevo, and M. Wolf. The semigroup structure of Gaussian channels. *Quantum Inf. Comput.*, 10(7-8):619–635, 2010.
- heklvi09** [1001] T. Heittola, A. Klapuri, and T. Virtanen. Musical instrument recognition in polyphonic audio using source-filter model for sound separation. In *Proc. 10th International Society for Music Information Retrieval Conference (ISMIR 2009)*, pages 327–332, 2009.
- he10-2** [1002] A. Y. Helemskii. *Quantum Functional Analysis: Non-coordinate Approach*, volume 56 of *University Lecture Series*. American Mathematical Society, December 2010.
- he84-1** [1003] B. Helffer. *Théorie Spectrale Pour des Opérateurs Globalement Elliptiques*. 1984.
- he10-1** [1004] P. Hellekalek. A notion of diaphony based on  $p$ -adic arithmetic. *Acta Arith.*, 145(3):273–284, 2010.
- hemo84** [1005] W. Hendee and C. Morgan. Magnetic resonance imaging Part I - Physical principles. *West J. Med.*, 141(4):491–500, 1984.
- hesh03** [1006] B. Hennelly and J. Sheridan. Optical image encryption by random shifting in fractional Fourier domains. *Opt. Lett.*, 28(4):269–271, Feb 2003.
- hesh05** [1007] B. Hennelly and J. Sheridan. Fast numerical algorithm for the linear canonical transform. *JOSA A*, 22(5):928–937, 2005.
- hema07** [1008] D. Henrion and J. Malick. SDLS: a Matlab package for solving conic least-squares problems. *Arxiv preprint arXiv:0709.2556*, 2007.
- hest09-1** [1009] M. Herman and T. Strohmer. High-resolution radar via compressed sensing. *IEEE Trans. Signal Process.*, 57(6):2275–2284, 2009.

- hesi07** [1010] E. Hernandez and H. Sikic. Schauder bases of integer translates. *Appl. Comput. Harmon. Anal.*, 23(2):259–262, 2007.
- hesiwewi10-1** [1011] E. Hernandez, H. Sikic, G. Weiss, and E. Wilson. Cyclic subspaces for unitary representations of LCA groups; generalized Zak transform. *Colloq. Math.*, 118(1):313–332, 2010.
- hesiwewi10** [1012] E. Hernandez, H. Sikic, G. Weiss, and E. Wilson. On the properties of the integer translates of a square integrable function. In P. Cifuentes, editor, *Harmonic analysis and partial differential equations (8th international conference, El Escorial, Madrid, Spain, June 16-20, 2008)*, volume 505 of *Contemporary Mathematics*, pages 233–249. American Mathematical Society (AMS), 2010.
- he60** [1013] C. Herz. The spectral theory of bounded functions. *Trans. Amer. Math. Soc.*, 94:181–232, 1960.
- he73** [1014] C. Herz. Harmonic synthesis for subgroups. *Ann. Inst. Fourier (Grenoble)*, 23(3):91–123, 1973.
- hi86** [1015] N. J. Higham. Computing the polar decomposition-with applications. *SIAM J. Sci. Statist. Comput.*, 7(4):1160–1174, 1986.
- hi93** [1016] N. Higson. On the K-theory proof of the index theorem. In *Index theory and operator algebras: proceedings of a CBMS regional conference held August 6-10, 1991 with support from the National Science Foundation*, volume 148, page 67, 1993.
- hi08-1** [1017] S. Hildebrandt. *Analysis 2*. Springer, 2008.
- hio’scwi84** [1018] M. Hillery, R. O’Connell, M. Scully, and E. P. Wigner. Distribution functions in physics: Fundamentals. *Physics Reports*, 106(3):121 – 167, 1984.
- hi10** [1019] A. Hinrichs. Optimal importance sampling for the approximation of integrals. *J. Complexity*, 26(2):125–134, 2010.
- hiun07** [1020] A. Hirabayashi and M. Unser. Consistent sampling and signal recovery. *IEEE Trans. Signal Process.*, 55(8):4104–4115, August 2007.
- hile01** [1021] J.-B. Hiriart Urruty and C. Lemaréchal. *Fundamentals of Convex Analysis*. Grundlehren Text Editions. Springer-Verlag, Berlin, 2001.

- [hi57](#) [1022] I. Hirschman. A note on entropy. *Amer. J. Math.*, 79(1):152–156, 1957.
- [hihu77](#) [1023] J. Hirschman and D. Hughes. *Extreme eigenvalues of Toeplitz operators*. Lecture Notes in Mathematics, Vol. 618. Springer-Verlag, Berlin, 1977.
- [hjlimath98](#) [1024] P. Hjorth, P. Lisonuek, S. Markvorsen, and C. Thomassen. Finite metric spaces of strictly negative type. *Linear Algebra Appl.*, 270:255–273, 1998.
- [hl93](#) [1025] E. Hlawka. Nachruf auf Nikolaus Hofreiter (Obituary for Nikolaus Hofreiter). *Monatsh. Math.*, 116(3-4):263–273, 1993.
- [hosc10](#) [1026] V. Hoang and C. Schwab. Sparse tensor Galerkin discretizations for parametric and random parabolic PDEs. I: Analytic regularity and gpc-approximation. *preprint*, 2010.
- [hoscXX](#) [1027] V. Hoang and C. Schwab. Analytic regularity and gpc approximation for parametric and random 2nd order hyperbolic PDEs. *Anal. Appl. (Singap.)*, to appear.
- [hola12](#) [1028] J. Hogan and J. Lakey. *Duration and Bandwidth Limiting. Prolate Functions, Sampling, and Applications*. Applied and Numerical Harmonic Analysis. Boston, MA: Birkhäuser. xvii and SFR 106.50 and sterling 72.00, 2012.
- [hoizla10](#) [1029] J. A. Hogan, S. Izu, and J. D. Lakey. Sampling approximations for time- and bandlimiting. *Sampl. Theory Signal Image Process.*, 9(1-3):91–117, 2010.
- [hola06-2](#) [1030] J. A. Hogan and J. Lakey. Periodic nonuniform sampling in shift-invariant spaces. In C. Heil, editor, *Harmonic analysis and applications. In Honor of John J. Benedetto*, volume Part V Sampling Theory and Shift-Invariant Spaces of *Appl. Numer. Harmon. Anal.*, chapter 12, pages 253–287. Birkhäuser Boston, 2006.
- [hola09](#) [1031] J. A. Hogan and J. Lakey. Non-translation-invariance and the synchronization problem in wavelet sampling. *Acta Appl. Math.*, 107(1-3):373–398, 2009.

- [ho74-1](#) [1032] J. Högborn. Aperture synthesis with a non-regular distribution of interferometer baselines. *Astronom. and Astrophys.*, 15:417, 1974.
- [alhoth03](#) [1033] A. Hohoueto, S. Ali, and T. Kengatharam. Coherent state lattices and square integrability of representations. *Journal of Physics A: Mathematical and General*, 36:11817, 2003.
- [ho78-1](#) [1034] A. S. Holevo. Estimation of shift parameters of a quantum state. *Rep. Math. Phys.*, 13(3):379–399, 1978.
- [ho79-6](#) [1035] A. S. Holevo. Covariant measurements and uncertainty relations. *Rep. Math. Phys.*, 16(3):385–400, 1979.
- [ho11](#) [1036] A. S. Holevo. Information capacity of quantum observable. *Arxiv preprint arXiv:1103.2615*, 2011.
- [ho11-1](#) [1037] A. S. Holevo. *Probabilistic and Statistical Aspects of Quantum Theory*, volume 1 of *Quaderni. Monographs*. Edizioni della Normale, Pisa, Second edition, 2011.
- [ho81-1](#) [1038] A. Holland. A survey of degree of approximation of continuous functions. *SIAM Rev.*, 23(3):344–379, 1981.
- [boglhoni11](#) [1039] D. Holland, M. Bostock, L. Gladden, and D. Nietlispach. Fast multidimensional NMR spectroscopy using compressed sensing. *Angew. Chem. Int. Ed.*, 50(29):6548–6551, 2011.
- [ho95-1](#) [1040] M. Holschneider. *Wavelets - An Analysis Tool (Oxford Mathematical Monographs)*. Clarendon Press, 1995.
- [hotowa10](#) [1041] A. Holst, J. Toft, and P. Wahlberg. Weyl product algebras and classical modulation spaces. Warszawa: Polish Academy of Sciences, Institute of Mathematics. Banach Center Publications, 2010.
- [dolhohove11](#) [1042] A. Holzapfel, G. Velasco, N. Holighaus, M. Dörfler, and A. Flexer. Advantages of nonstationary Gabor transforms in beat tracking. In *Proceedings of MIRUM11.*, November 2011.
- [duhove94](#) [1043] J. Hong, M. Vetterli, and P. Duhamel. Basefield transforms with the convolution property. In *Proceedings of the IEEE*, volume 82, pages 400–412, mar 1994.

- fuh097** [1044] C. Hope and D. Furlong. Time-Frequency Distributions for Timbre Morphing: The Wigner Distribution versus the STFT. 1997.
- hoob75** [1045] C. Horowicz and D. M. Oberlin. Restrictions of Hp functions to the diagonal of Un. *Indiana U. Math. J.*, 24:767–772, 1975.
- ho09-1** [1046] R. Hoskins. *Delta Functions: An introduction to Generalised Functions 2nd ed.* Chichester: Horwood Publishing. vi, 270 p., 2009.
- ho43** [1047] H. Hotelling. Some new methods in matrix calculation. *Ann. Math. Stat.*, 14:1–34, 1943.
- ho49** [1048] H. Hotelling. Practical problems of matrix calculation. Proc. Berkeley Sympos. Math. Statist. and Probability (August, 1945 and January, 1946), 275-293 (1949)., 1949.
- ho10-2** [1049] A. Howard. *Elementary Linear Algebra with Supplemental Applications: International Student Version.* 2010.
- ho03-3** [1050] A. Howard and R. C. Busby. *Contemporary Linear Algebra, Student Solutions Manual.* John Wiley & Sons Inc., 2003.
- ho10-1** [1051] R. Howard. PDF estimation via characteristic function and an orthonormal basis set. In N. E. Mastorakis and Mladenov, editors, *Proc. of the 14th WSEAS international conference on Systems: part of the 14th WSEAS CSCC multiconference*, volume 1 of *ICS'10*, page 6, Stevens Point, Wisconsin, USA, 2010. World Scientific and Engineering Academy and Society (WSEAS).
- hrya03** [1052] N. Hritonenko and Y. Yatsenko. *Applied Mathematical Modelling of Engineering Problems.* Applied Optimization. 81. Dordrecht: Kluwer Academic Publishers. xxi, 286 p., 2003.
- hswe98** [1053] M.-H. Hsieh and C.-H. Wei. Channel estimation for OFDM systems based on comb-type pilot arrangement in frequency selective fading channels. *IEEE Trans. Consumer Electronics*, 44(1):217–225, February 1998.
- huma04** [1054] Z. Hu and Z. Ma. Beurling-Deny formula of semi-Dirichlet forms. *Comptes Rendus Mathematique*, 338(7):521–526, 2004.

- [avhu06] [1055] K. Huang and S. Aviyente. Rotation invariant texture classification with ridgelet transform and Fourier transform. In *Image Processing, 2006 IEEE International Conference on*, pages 2141–2144, Atlanta, GA, oct. 2006.
- [cahu10] [1056] S. Huang and G. Cao. Trace class Toeplitz operators with unbounded symbols on weighted Bergman spaces. *Acta Math. Sin. (Engl. Ser.)*, 26(8):1567–1574, 2010.
- [humaperaru05] [1057] R. Huber, H. Ramoser, K. Mayer, H. Penz, and M. Rubik. Classification of coins using an eigenspace approach. 26(1):61–75, January 2005.
- [lgihehukalemaot05] [1058] N. Hubin, B. Ellerbroek, R. Arsenault, R. Clare, R. Dekany, L. Gilles, M. Kasper, G. Herriot, L. Le, E. Marchetti, and o. others. Adaptive optics for extremely large telescopes. *Proceedings of the International Astronomical Union*, 1(S232):60–85, 2005.
- [bagrhulalo05] [1059] C. Huck, M. Baake, B. Langfeld, P. Gritzmann, and K. Lord. Discrete tomography of mathematical quasicrystals: a primer. Herman, Gabor T. (ed.) et al., Proceedings of the workshop on discrete tomography and its applications, New York, NY, USA, June 13–15, 2005. Amsterdam: Elsevier. *Electronic Notes in Discrete Mathematics* 20, 179-191 (2005)., 2005.
- [hu92-1] [1060] S. Huestis. Interpolation formulas for oversampled band-limited functions. *SIAM Rev.*, 34(3):477–481, 1992.
- [hu92-2] [1061] S. Huestis. Optimum kernels for oversampled signals. *The Journal of the Acoustical Society of America*, 92:1172, 1992.
- [hupask95] [1062] T. Huffman, C. Park, and D. Skoug. Analytic Fourier-Feynman transforms and convolution. *Trans. Amer. Math. Soc.*, 347(2):661–673, 1995.
- [hup103] [1063] W. Huffman and V. Pless. *Fundamentals of error-correcting codes*. Cambridge University Press, Cambridge, 2003.
- [hu07] [1064] M. Huhtanen. Factoring matrices into the product of two matrices. *BIT Numerical Mathematics*, 47(4):793–808, 2007.

- [hu70] [1065] A. Hulanicki. On symmetry of group algebras of discrete nilpotent groups. *Studia Math.*, 35:207–219 (errata insert), 1970.
- [hu70-1] [1066] A. Hulanicki. On the spectral radius in group algebras. *Studia Math.*, 34:209–214, 1970.
- [hu70-2] [1067] A. Hulanicki. On positive functionals on a group algebra multiplicative on a subalgebra. *Studia Math.*, 37:163–171, 1970/71.
- [hule09] [1068] A. Hulanicki and M. Letachowicz. Functional calculi for convolution operators on a discrete, periodic, solvable group. *J. Funct. Anal.*, 256(3):700–717, 2009.
- [hu09-2] [1069] B. Hunt. The application of constrained least squares estimation to image restoration by digital computer. *Computers, IEEE Transactions on*, 100(9):805–812, 2009.
- [hu73] [1070] B. R. Hunt. The application of constrained least squares estimation to image restoration by digital computer. *Computers, IEEE Transactions on*, C-22(9):805–812, sept. 1973.
- [hu66-1] [1071] R. Hunt. On  $L(p, q)$  spaces. *Enseignement Math. (2)*, 12:249–276, 1966.
- [hu40] [1072] K. Husimi. Some formal properties of the density matrix. *Proc. Phys.-Math. Soc. Japan, III. Ser.*, (22):264–314, 1940.
- [hu10] [1073] O. Hutnik. A note on wavelet subspaces. *Monatsh. Math.*, 160(1):59–72, 2010.
- [hu11] [1074] O. Hutnik. On boundedness of Calderon-Toeplitz operators. *Integr. Equ. Oper. Theory*, 70(4):583–600, 2011.
- [huhu10] [1075] M. Hutnikova and O. Hutnik. An alternative description of Gabor spaces and Gabor-Toeplitz operators. *Rep. Math. Phys.*, 66(2):237–250, 2010.
- [hupesivo04-1] [1076] M. Huzak, M. Perman, H. Sikic, and Z. Vondracek. Ruin probabilities and decompositions for general perturbed risk processes. *Ann. Appl. Probab.*, 14(3):1378–1397, 2004.

- hupesivo04** [1077] M. Huzak, M. Perman, H. Sikic, and Z. Vondracek. Ruin probabilities for competing claim processes. *J. Appl. Probab.*, 41(3):679–690, 2004.
- hykaoj01** [1078] A. Hyvärinen, J. Karhunen, and E. Oja. *Independent Component Analysis*. Wiley-Interscience, 2001.
- ibmamasive10** [1079] A. Ibort, V. Man’ko, G. Marmo, A. Simoni, and F. Ventriglia. On the tomographic picture of quantum mechanics. *Phys. Lett. A*, 374(26):2614–2617, 2010.
- ib10** [1080] N. Ibragimov. *A Practical Course in Differential Equations and Mathematical Modelling Classical and New methods Nonlinear Mathematical Models Symmetry and Invariance Principles*. Hackensack, NJ: World Scientific and Beijing: Higher Education Press. xiv, 348 p., 2010.
- ieXX** [1081] P. IEEE. The working group for wireless local area networks (WLANs).
- ieXX-1** [1082] P. IEEE. The working group on broadband wireless access standards.
- il75** [1083] R. Illner. A class of  $L^p$ -bounded pseudo-differential operators. *Proc. Amer. Math. Soc.*, 51:347–355, 1975.
- il06** [1084] N. Il’yasov. Structural properties of periodic functions with absolutely convergent Fourier series. *Russ. Math.*, 50(1):23–31, 2006.
- giin10** [1085] P. Indyk and A. C. Gilbert. Sparse recovery using sparse matrices. *Proc. IEEE*, 98(6):937 – 947, 2010.
- inru08** [1086] P. Indyk and M. Ruzic. Near-optimal sparse recovery in the L1 norm. In *Proc. FOCS*, 2008.
- inso10** [1087] A. Infante and F. Soria. On the maximal operator associated with certain rotational invariant measures. *Acta Math. Sin. (Engl. Ser.)*, 26(6):993–1004, 2010.
- irka93** [1088] T. Irino and H. Kawahara. Signal reconstruction from modified auditory wavelet transform. *IEEE Trans. Signal Process.*, 41(12):3549–3554, 1993.

- ir80** [1089] I. Irodova. On the properties of the scale of spaces  $B_p$ ,  $(\lambda\theta)$  for  $0 < p < 1$ . *Sov. Math., Dokl.*, 21:53–55, 1980.
- is06-1** [1090] H. Ishi. Wavelet transforms for semidirect product groups with not necessarily commutative normal subgroups. *J. Fourier Anal. Appl.*, 12(1):37–52, 2006.
- is74** [1091] H. Ishii. On some Fourier multipliers and partial differential equations. *Math. Jap.*, 19:139–163, 1974.
- guisXX** [1092] A. Iske and M. Guillemand. On groupoid  $C^*$ -algebras, persistent homology and time-frequency analysis. *preprint*, to appear.
- akis08** [1093] D. Israfilov and R. Akgün. Approximation by polynomials and rational functions in weighted rearrangement invariant spaces. *J. Math. Anal. Appl.*, 346(2):489–500, 2008.
- ivpexu10** [1094] K. Ivanov, P. Petrushev, and Y. Xu. Sub-exponentially localized kernels and frames induced by orthogonal expansions. *Math. Z.*, 264(2):361–397, 2010.
- iw10-1** [1095] M. Iwen. Improved approximation guarantees for sublinear-time Fourier algorithms. *preprint*, 2010.
- iwte10** [1096] M. A. Iwen and A. H. Tewfik. Adaptive group testing strategies for target detection and localization in noisy environments. *preprint*, 2010.
- iziziz11** [1097] K. Izuchi, K. Izuchi, and Y. Izuchi. Blaschke products and the rank of backward shift invariant subspaces over the bidisk. *J. Funct. Anal.*, 261(6):1457 – 1468, 2011.
- izsa10** [1098] M. Izuki and Y. Sawano. The Haar wavelet characterization of weighted Herz spaces and greediness of the Haar wavelet basis. *J. Math. Anal. Appl.*, 362(1):140–155, 2010.
- izsa11** [1099] M. Izuki and Y. Sawano. Atomic decomposition for weighted Besov and Triebel-Lizorkin spaces. *Mathematische Nachrichten*, pages  $n/a - n/a$ , 2011.
- izsa12** [1100] M. Izuki and Y. Sawano. Atomic decomposition for weighted Besov and Triebel-Lizorkin spaces. *Math. Nachr.*, 285(1):103–126, 2012.

- jaobve09 [1101] L. Jacob, G. Obozinski, and J. Vert. Group Lasso with overlap and graph Lasso. In *Proceedings of the 26th Annual International Conference on Machine Learning*, pages 433–440, 2009.
- ja96-2 [1102] N. Jacob. *Pseudo-differential operators and Markov processes*. Mathematical Research Notes. Vol. 94. Berlin: Akademie Verlag, 1996.
- ja01-1 [1103] N. Jacob. *Pseudo differential operators and Markov processes. In 3 vol. Vol. 1: Fourier analysis and semigroups*. Imperial College Press, 2001.
- ja02-1 [1104] N. Jacob. *Pseudo-differential operators and Markov processes. Vol. II: Generators and their potential theory*. Imperial College Press, 2002.
- ja05-3 [1105] N. Jacob. *Pseudo differential operators and Markov processes. Vol III: Markov processes and applications*. Imperial College Press, 2005.
- ja09-1 [1106] L. Jacques. A Short Note on Compressed Sensing with Partially Known Signal Support. Technical report, 2009.
- chdujape11 [1107] L. Jacques, L. Duval, C. Chaux, and G. Peyre. A panorama on multi-scale geometric representations, intertwining spatial, directional and frequency selectivity, 2011.
- babojala11 [1108] L. Jacques, J. Laska, P. Boufounos, and R. Baraniuk. Robust 1-bit compressive sensing via binary stable embeddings of sparse vectors. *Preprint*, 2011.
- brbrdahunjapo09 [1109] S. Jafarpour, G. Polatkan, E. Brevdo, S. Hughes, A. Brasoveanu, and I. Daubechies. Stylistic analysis of paintings using complex wavelets and random forest learning algorithm. In *17th European Signal Processing Conference (EUSIPCO 2009)*, Color and multispectral image acquisition and processing of artworks, pages 1220–1224, Glasgow, Scotland, UK, August 24-28, 2009.
- jaqu93 [1110] A. Jaffe and F. Quinn. Theoretical mathematics: Toward a cultural synthesis of mathematics and theoretical physics. *Bull. Amer. Math. Soc. (N.S.)*, 29(1):1–13, 1993.
- ja90-3 [1111] A. Jakimovski. Spline interpolation of data of power growth, 1990.

- [jaru79] [1112] A. Jakimovski and D. Russell. On beta-duals of matrix fields, 1979.
- [jaru84] [1113] A. Jakimovski and D. Russell. Hermite spline interpolation of data of power growth. In *Constructive theory of functions, Proc. Int. Conf., Varna/Bulg. 1984*, pages 430–438, 1984.
- [jaru85] [1114] A. Jakimovski and D. Russell. Spline interpolation of data of power growth applied to discrete and continuous Riesz means. *Analysis*, 5:287–299, 1985.
- [jarust84] [1115] A. Jakimovski, D. Russell, and M. Stieglitz. Spline interpolation of power-dominated data. In P. L. Butzer and B. Sz. Nagy, editors, *Approximation theory and functional analysis, Anniv. Vol., Proc. Conf., Oberwolfach 1983, ISNM 65*, pages 403–414, 1984.
- [ja94-6] [1116] P. Jaming. Restricted invertibility, Kadison-Singer extension problem and applications to harmonic analysis. (Inversibilité restreinte, problème d’extension de Kadison-Singer et applications à l’analyse harmonique. (D’après J. Bourgain et L. Tzafriri).). Déchamps, Myriam (ed.) et al., *Cours: Analyse fonctionnelle et harmonique 1992-1993*. Orsay: Université de Paris-Sud, Publ. Math. Orsay. 94-24, 71-154 (1994)., 1994.
- [ja07] [1117] P. Jaming. Nazarov’s uncertainty principles in higher dimension. *J. Approx. Theory*, 149(1):30–41, 2007.
- [ja10] [1118] P. Jaming. A characterization of Fourier transforms. *Colloq. Math.*, 118(2):569–580, 2010.
- [ja78] [1119] S. Janson. Mean oscillation and commutators of singular integral operators. *Ark. Mat.*, 16:263–270, 1978.
- [ja81-6] [1120] S. Janson. Minimal and maximal methods of interpolation. *J. Funct. Anal.*, 44:50–73, 1981.
- [ja83] [1121] S. Janson. Minimal and maximal methods of interpolation of Banach spaces. Harmonic analysis, Conf. in Honor A. Zygmund, Chicago 1981, Vol. 2, 732-739 (1983)., 1983.
- [janipe84] [1122] S. Janson, P. Nilsson, and J. Peetre. Notes on Wolff’s note on interpolation spaces (with appendix by Zafran, Misha). *Proc. Lond. Math. Soc., III. Ser.*, 48:283–299, 1984.

- [jape84] [1123] S. Janson and J. Peetre. Higher order commutators of singular integral operators. In *Proc. Conf. Interpolation spaces and allied topics in analysis (Lund, 1983)*, volume 1070 of *Lecture Notes in Math.*, pages 125–142. Springer, Berlin, 1984.
- [jawo82] [1124] S. Janson and T. Wolff. Schatten classes and commutators of singular integral operators. *Ark. Mat.*, 20:301–310, 1982.
- [ja06-2] [1125] A. Janssen. Zak transform characterization of  $s_0$ . *Sampl. Theory Signal Image Process.*, 5(2):141–162, 2006.
- [ja06-3] [1126] B. Janssens. Unifying decoherence and the Heisenberg principle. *Arxiv preprint quant-ph/0606093*, 2006.
- [jast04] [1127] F. Jarre and J. Stoer. *Optimierung*. Springer, 2004.
- [ja10-1] [1128] J. Jayakumari. MIMO-OFDM for 4G wireless systems. *Int. J. Eng. Sc. Tech.*, 2:2886–2889, Jul. 2010.
- [jekuposc11] [1129] F. Jensen, W. Kuperman, M. Porter, and H. Schmidt. *Computational Ocean Acoustics*. Springer, second edition edition, 2011.
- [jeni96] [1130] O. R. Jensen and E. B. Nielsen. A Bose-Fock space quantization of the Witt algebra. *Rep. Math. Phys.*, 37(1-3):157–161, 1996.
- [chjepa00] [1131] W. Jeon, K. Paik, and Y. Cho. An efficient channel estimation technique for OFDM systems with transmitter diversity. *Proc. IEEE PIMRC-00*, 2:1246–1250, Sep. 2000.
- [je87-1] [1132] K. Jetter. Uniqueness of Gauss-Birkhoff quadrature formulas. *SIAM J. Numer. Anal.*, 24:147–154, 1987.
- [jilixi10] [1133] X. Jia, T. Xing, and W. Lin. Analysis of absolute testing based on even-odd functions by Zernike polynomials. In X. Jia, T. Xing, W. Lin, Y. Zhang, J. Sasi'an, L. Xiang, and S. To, editors, *Proc. SPIE, 5th International Symposium on Advanced Optical Manufacturing and Testing Technologies: Optical Test and Measurement Technology and Equipment*, volume 7656 of *Poster Session*, page 76563E(6). SPIE, 2010.
- [hajj07] [1134] M. Jiang and L. Hanzo. Multiuser MIMO-OFDM for next-generation wireless systems. *Proc. IEEE*, 95:1430–1469, Jul. 2007.

- [jiyayu11] [1135] X. Jiang, D. Yang, and W. Yuan. Real interpolation for grand Besov and Triebel-Lizorkin spaces on RD-spaces. *Ann. Acad. Sci. Fenn., Math.*, 36(2):509–529, 2011.
- [jo70] [1136] M. Jodeit. Restrictions and extensions of Fourier multipliers. *Studia Math.*, 34:215–226, 1970.
- [jo1a00] [1137] G. Johnson and M. Lapidus. *The Feynman Integral and Feynmans Operational Calculus*. Oxford Science Publications, 2000.
- [jo97-2] [1138] M. J. Johnson. An upper bound on the approximation power of principal shift-invariant spaces. *Constr. Approx.*, 13(2):155–176, 1997.
- [jowa10] [1139] R. Johnson and C. Warner. The convolution algebra  $H^1(R)$ . *J. Funct. Spaces Appl.*, 8(2):167–179, 2010.
- [joli84] [1140] W. Johnson and J. Lindenstrauss. Extensions of Lipschitz mappings into a Hilbert space. In *Conference in modern analysis and probability (New Haven, Conn., 1982)*, volume 26 of *Contemp. Math.*, pages 189–206. Amer. Math. Soc., Providence, RI, 1984.
- [jome09] [1141] S. Jokar and V. Mehrmann. Sparse solutions to underdetermined Kronecker product systems. *Linear Algebra and Its Applications*, 431(12):2437–2447, 2009.
- [jomepfys10] [1142] S. Jokar, V. Mehrmann, M. Pfetsch, and H. Yserentant. Sparse approximate solution of partial differential equations. *Applied numerical mathematics*, 60(4):452–472, 2010.
- [jo05] [1143] P. Jolissaint. On property (T) for pairs of topological groups. *Enseign. Math. (2)*, 51(1-2):31–45, 2005.
- [jowa84] [1144] A. Jonsson and H. Wallin. *Function spaces on subsets of  $\mathbf{R}^n$* , volume 2 of *Math. Rep.* 1984.
- [jo06-1] [1145] C. Jordan. Réduction d’un réseau de formes quadratiques ou bilinéaires. *Journal de Mathématiques Pures et Appliquées*, pages 403–438, 1906.
- [jomepa08] [1146] P. E. T. Jorgensen, K. D. Merrill, and J. A. Packer. *Representations, Wavelets, and Frames*. Applied and Numerical Harmonic Analysis. Birkhäuser, Boston, MA, 2008.

- josuwe94 [1147] P. E. T. Jorgensen, L. Schmitt, and R. Werner.  $q$ -canonical commutation relations and stability of the Cuntz algebra. *Pacific J. Math.*, 165(1):131–151, 1994.
- joth11 [1148] K. Jotsaroop and S. Thangavelu. Toeplitz operators with special symbols on Segal-Bargmann spaces. *Integr. Equ. Oper. Theory*, 69(3):317–346, 2011.
- joth11-1 [1149] K. Jotsaroop and S. Thangavelu. Toeplitz operators with special symbols on Segal-Bargmann spaces. *Integr. Equ. Oper. Theory*, 69(3):317–346, 2011.
- joki11 [1150] D. Joyner and J.-L. Kim. *Selected Unsolved Problems In Coding Theory*. Birkhäuser, 2011.
- jokrtu04 [1151] D. Joyner, R. Kreminski, and J. Turisco. *Applied Abstract Algebra*. Baltimore, MD: Johns Hopkins University Press. xii, 2004.
- juka85 [1152] O. Juneja and G. Kapoor. *Analytic functions - growth aspects*. Research Notes in Mathematics, 104. Pitman Advanced Publishing Program, 1985.
- hehljusc11 [1153] A. Jung, S. Schmutzhard, F. Hlawatsch, and A. O. Hero. Performance bounds for sparse parametric covariance estimation in Gaussian models. *Proc. ICASSP'11, Prag, CZ, May 2011*, 2011.
- jush04 [1154] J.-H. Jung and B. Shizgal. Generalization of the inverse polynomial reconstruction method in the resolution of the Gibbs phenomenon. *J. Comput. Appl. Math.*, 172(1):131–151, 2004.
- jush05 [1155] J.-H. Jung and B. Shizgal. Inverse polynomial reconstruction of two dimensional Fourier images. *J. Sci. Comput.*, 25(3):367–399, 2005.
- ju06-1 [1156] P. Jung. Weighted norms of ambiguity functions and Wigner distributions. In *Information Theory, 2006 IEEE International Symposium on*, pages 1519–1523, Seattle, WA, July 2006.
- juwu04 [1157] P. Jung and G. Wunder. Iterative pulse shaping for Gabor signaling in WSSUS channels. In *Signal Processing Advances in Wireless Communications, 2004 IEEE 5th Workshop on*, pages 368–372, July 2004.

- juwawu04** [1158] P. Jung, G. Wunder, and C.-S. Wang. OQAM/IOTA downlink air interface for UMTS HSDPA evolution. In *9th International OFDM-Workshop (InOWo 2004)*, pages 153–157, Dresden, Germany, September 2004.
- jume10** [1159] M. Junge and T. Mei. Noncommutative Riesz transforms—a probabilistic approach. *Amer. J. Math.*, 132(3):611–680, 2010.
- ka11** [1160] W. Kaballo. *Grundkurs Funktionalanalysis*. Spektrum Akademischer Verlag, 2011.
- kalazh09** [1161] V. Kaftal, D. Larson, and S. Zhang. Operator-valued frames. *Trans. Amer. Math. Soc.*, 361(12):6349–6385, 2009.
- kaka63** [1162] J.-P. Kahane and V. Katznelson. Contribution à deux problèmes, concernant les fonctions de la classe A. *Israel J. Math.*, 1:110–131, 1963.
- ka10** [1163] N. Kaiblinger. On the Lehmer constant of finite cyclic groups. *Acta Arith.*, 142(1):79–84, 2010.
- ka11-1** [1164] N. Kaiblinger. Cyclotomic rings with simple Euclidean algorithm. *JP J. Algebra Number Theory Appl.*, 2011.
- kala07** [1165] I. Kalliomaki and J. Lampinen. On steerability of Gabor-type filters for feature detection. *Pattern Recognition Lett.*, 28(8):904 – 911, 2007.
- kana72** [1166] W. Kammerer and M. Nashed. On the convergence of the conjugate gradient method for singular linear operator equations. *SIAM J. Numer. Anal.*, 9(1):165–181, 1972.
- kame12** [1167] J. Kane and J. Mertz. Debunking myths about gender and mathematics performance. *Notices of the American Mathematical Society*, 59(1):10–21, 2012.
- kakw11** [1168] S. Kang and K. Kwon. Generalized average sampling in shift invariant spaces. *J. Math. Anal. Appl.*, 377(1):70 – 78, 2011.
- kascta95** [1169] E. Kaniuth, G. Schlichting, and K. F. Taylor. Minimal primal and Glimm ideal spaces of group  $C^*$ -algebras. *J. Funct. Anal.*, 130(1):43–76, 1995.

- [kata96] [1170] E. Kaniuth and K. F. Taylor. Minimal projections in  $L^1$ -algebras and open points in the dual spaces of semi-direct product groups. *J. Lond. Math. Soc. (2)*, 53(1):141–157, 1996.
- [ka11-2] [1171] Y. Kanjin. Hardy’s inequalities for Hermite and Laguerre expansions revisited. *J. Math. Soc. Japan*, 63(3):753–767, 2011.
- [kasc05] [1172] A. Kannu and P. Schniter. MSE-optimal training for linear time-varying channels. volume 3, pages 789–792, Mar. 2005.
- [kasc08] [1173] A. Kannu and P. Schniter. Design and analysis of MMSE pilot-aided cyclic-prefixed block transmission for doubly selective channels. *IEEE Trans. Signal Process.*, 56:1148–1160, Mar. 2008.
- [akka64] [1174] L. Kantorovich and G. Akilov. *Functional Analysis In Normed Spaces Translated From The Russian*. Pergamon Press, 1964.
- [kamu03] [1175] L. Kaplan and R. Murenzi. Pose estimation of SAR imagery using the two dimensional continuous wavelet transform. *Pattern Recognit. Lett.*, 24(14):2269–2280, 2003.
- [ka06-3] [1176] M. Kapovich. Triangle inequalities in path metric spaces. *Arxiv preprint math/0611118*, 2006.
- [ka07-7] [1177] M. Kapovich. Energy of harmonic functions and Gromov’s proof of Stallings’ theorem. *Arxiv preprint arXiv:0707.4231*, 2007.
- [ka07-6] [1178] M. Kapovich. On sequences of finitely generated discrete groups. *Arxiv preprint arXiv:0708.2671*, 2007.
- [kamo09] [1179] S. Kar and J. Moura. Distributed consensus algorithms in sensor networks with imperfect communication: Link failures and channel noise. *IEEE Trans. Signal Process.*, 57(1):355–369, 2009.
- [kamo10] [1180] S. Kar and J. Moura. Distributed consensus algorithms in sensor networks: Quantized data and random link failures. *IEEE Trans. Signal Process.*, 58(3):1383–1400, 2010.
- [kana78] [1181] M. Karasev and V. Nazauikinskiui. Quantization of rapidly oscillating symbols. *Mat. Sb. (N.S.)*, 106(148)(2):183–213, 1978.

- [ka10-1] [1182] A. Karoui. Uncertainty principles, prolate spheroidal wave functions, and applications. Barral, Julien (ed.) et al., Recent developments in fractals and related fields. Based on the international conference on fractals and related fields, Monastir, Tunisia, September 2007 held in honor of Jacques Peyriere. Boston, MA: Birkhäuser. Applied and, 2010.
- [kamo09-1] [1183] A. Karoui and T. Moumni. Spectral analysis of the finite Hankel transform and circular prolate spheroidal wave functions. *Journal of computational and applied mathematics*, 233(2):315–333, 2009.
- [ka03-2] [1184] M. Kassmann. On Regularity for Beurling–Deny Type Dirichlet Forms. *Potential Analysis*, 19(1):69–87, 2003.
- [ka50] [1185] T. Kato. Upper and lower bounds of eigenvalues. *Physical Review*, 77(3):413–413, 1950.
- [ka08-2] [1186] A. Katsevich. Motion compensated local tomography. 2008.
- [kaku10] [1187] S. Kaushik and V. Kumar. A note on fusion Banach frames. *Arch. Math. (Brno)*, 46(3):203–209, 2010.
- [ke04-1] [1188] F. Keinert. *Wavelets And Multiwavelets*. Boca Raton, FL: Chapman and Hall/CRC. xii, 2004.
- [kekora94-1] [1189] S. Kelly, M. Kon, and L. Raphael. Pointwise convergence of wavelet expansions. *Bull. Amer. Math. Soc., New Ser.*, 30(1):87–94, 1994.
- [ke07] [1190] Q. Kemao. Two-dimensional windowed Fourier transform for fringe pattern analysis: Principles, applications and implementations. *Optics and Lasers in Engineering*, 45(2):304 – 317, 2007.
- [gakewa08-1] [1191] Q. Kemao, W. Gao, and H. Wang. Windowed Fourier-filtered and quality-guided phase-unwrapping algorithm. *Appl. Opt*, 47(29):5420–5428, Oct 2008.
- [gakewa08] [1192] Q. Kemao, H. Wang, and W. Gao. Windowed Fourier transform for fringe pattern analysis: theoretical analyses. *Appl. Opt*, 47(29):5408–5419, Oct 2008.
- [gike11] [1193] J. Kepner and J. Gilbert. *Graph algorithms in the language of linear algebra*. SIAM, 2011.

- kengpi11** [1194] G. Kerkyacharian, T. Ngoc, and D. Picard. Localized spherical deconvolution. *Ann. Statist.*, 39(2):1042–1068, 2011.
- kepepixu09** [1195] G. Kerkyacharian, P. Petrushev, D. Picard, and Y. Xu. Decomposition of Triebel-Lizorkin and Besov spaces in the context of Laguerre expansions. *J. Funct. Anal.*, 256(4):1137–1188, 2009.
- ke03-2** [1196] D. Kerr. Matricial quantum Gromov-Hausdorff distance. *J. Funct. Anal.*, 205(1):132–167, 2003.
- keli09** [1197] D. Kerr and H. Li. On Gromov-Hausdorff convergence for operator metric spaces. *J. Operator Theory*, 62(1):83–109, 2009.
- kakhmo09** [1198] U. Khan, S. Kar, and J. Moura. Higher dimensional consensus algorithms in sensor networks. In *Acoustics, Speech and Signal Processing, 2009. ICASSP 2009. IEEE International Conference on*, pages 2857–2860, 2009.
- ravo06** [1199] A. Y. Khrennikov and Rakić, editors. *p-adic mathematical physics*, volume 826 of *AIP Conference Proceedings*, Melville, NY, 2006. American Institute of Physics.
- kiprse97** [1200] T. Kilgore, J. Prestin, and K. Selig. Polynomial wavelets and wavelet packet bases. *Studia Sci. Math. Hungar.*, 33(4):419–431, 1997.
- alcakima11** [1201] D. Kim, S. Ali, C. Cafaro, and S. Mancini. Information geometry of quantum entangled Gaussian wave-packets. *Arxiv preprint arXiv:1104.1250*, 2011.
- ki09-2** [1202] E. King. *Wavelet and frame theory: frame bound gaps, generalized shearlets, Grassmannian fusion frames, and p-adic wavelets*. PhD thesis, 2009.
- ki89** [1203] J. King. A minimal error conjugate gradient method for ill-posed problems. *J. Optim. Theory Appl.*, 60(2):297–304, 1989.
- kipo09** [1204] H. Kirshner and M. Porat. On the role of exponential splines in image interpolation. *IEEE Trans. Image Process.*, 18(10):2198–2208, oct. 2009.
- kikuli11** [1205] P. Kittipoom, G. Kutyniok, and W.-Q. Lim. Construction of compactly supported shearlet frames. *Constr. Approx.*, In Press, 2011.

- kikuli12** [1206] P. Kittipoom, G. Kutyniok, and W.-Q. Lim. Construction of compactly supported shearlet frames. *Constr. Approx.*, 35(1):21–72, 2012.
- klrari11** [1207] E. Klann, R. Ramlau, and W. Ring. A Mumford-Shah level-set approach for the inversion and segmentation of SPECT/CT data. *Inverse Probl. Imaging*, 5(1):137–166, 2011.
- klvi08** [1208] A. Klapuri and T. Virtanen. Automatic music transcription. In David Havelock, Sonoko Kuwano, and Michael Vorländer, editors, *Handbook of signal processing in acoustics, Vol.1*, Part IV, chapter 20, Musical acoustics, pages 277–303. Springer Science+Business Media, LLC, 2008.
- heklvi10** [1209] A. Klapuri, T. Virtanen, and T. Heittola. Sound source separation in monaural music signals using excitation-filter model and em algorithm. In *Proc. Acoustics Speech and Signal Processing (ICASSP), IEEE International Conference on*, pages 5510–5513, march 2010.
- k111** [1210] J. R. Klauder. *A Modern Approach to Functional Integration*. Boston, MA: Birkhäuser. xv, 2011.
- k111-1** [1211] J. R. Klauder. The utility of affine variables and affine coherent states. *Arxiv preprint arXiv:1108.3380*, 2011.
- dak184** [1212] J. R. Klauder and I. Daubechies. Quantum mechanical path integrals with Wiener measures for all polynomials Hamiltonians. *Phys. Rev. Lett.*, 52(14):1161–1164, 1984.
- klkonowe06** [1213] R. Klette, R. Kozera, L. Noakes, and J. Weickert. *Geometric Properties for Incomplete Data*. Springer, 2006.
- klmuro06** [1214] A. Klimov, J. L. Romero, and C. Munoz. Geometrical approach to the discrete Wigner function in prime power dimensions. *J. Phys. A, Math. Gen.*, 39(46):14471–14497, 2006.
- k112** [1215] A. Klotz. Spectral invariance of Besov-Bessel subalgebras. *J. Approx. Theory*, 164:268–296, 2012.
- brclknstue11** [1216] F. Knoll, C. Clason, K. Bredies, M. Uecker, and R. Stollberger. Parallel Imaging With Nonlinear Reconstruction Using Variational Penalties. *Magnetic Resonance in Medicine*, 2011.

- kn80** [1217] P. Knopf. Weak-type multipliers. *Studia Math.*, 67:73–84, 1980.
- kn10** [1218] M. Knorrenschild. *Numerische Mathematik Eine beispielorientierte Einführung*. Hanser Verlag, 2010.
- kosu11** [1219] M. Kobayashi and M. Sugimoto. The inclusion relation between Sobolev and modulation spaces. *J. Funct. Anal.*, 260(11):3189 – 3208, June 2011.
- kosuto09-1** [1220] M. Kobayashi, M. Sugimoto, and N. Tomita. On the  $L^2$ -boundedness of pseudo-differential operators and their commutators with symbols in  $\alpha$ -modulation spaces. *J. Math. Anal. Appl.*, 350(1):157–169, 2009.
- cakokuozot08** [1221] A. Koc, H. Ozaktas, C. Candan, A. Kutay, and o. others. Digital computation of linear canonical transforms. *IEEE Trans. Signal Process.*, 56(6):2383–2394, June 2008.
- hekooz10** [1222] A. Koc, H. Ozaktas, and L. Hesselink. Fast and accurate algorithm for the computation of complex linear canonical transforms. *J. Opt. Soc. Amer. A*, 27(9):1896–1908, Sep 2010.
- ko09-2** [1223] A. Kochubei.  $p$ -adic spherical coordinates and their applications. 2009.
- ko04-2** [1224] M. Kolountzakis. The study of translational tiling with Fourier analysis. Brandolini, Luca (ed.) et al., *Fourier analysis and convexity*. Boston, MA: Birkhäuser. Applied and Numerical Harmonic Analysis, 131-187 (2004)., 2004.
- kolizh03** [1225] W. Kong, D. Zhang, and W. Li. Palmprint feature extraction using 2-D Gabor filters. *Pattern Recognition*, 36(10):2339 – 2347, 2003.
- cokoliuy07** [1226] J. Kopf, M. Cohen, D. Lischinski, and M. Uyttendaele. Joint bilateral upsampling. In *ACM SIGGRAPH 2007 papers*, pages 96–es, 2007.
- kopo10** [1227] K. A. Kopotun and B. Popov. Moduli of smoothness of splines and applications in constrained approximation. *Jaen J. Approx.*, 2(1):79 – 91, June 2010.
- ko11** [1228] A. Kornell. Quantum Functions. *Arxiv preprint arXiv:1101.1694*, 2011.

- ko1e07** [1229] P. Koskela and J. Lehtbäck. Quasihyperbolic growth conditions and compact embeddings of Sobolev spaces. *Michigan Math. J.*, 55(1):183–193, 2007.
- kos154-1** [1230] G. Koster and J. Slater. Wave Functions for Impurity Levels. *Phys. Rev. A*, 95(5):9, Sep 1954.
- cadujako11** [1231] V. Kostina, M. Duarte, S. Jafarpour, and R. Calderbank. The value of redundant measurement in compressed sensing. In *Acoustics Speech and Signal Processing (ICASSP), 2011 IEEE International Conference on*, page 4, 2011.
- koqi06** [1232] K.-I. Kou and T. Qian. Shannon sampling in the Clifford analysis setting. *Z. Anal. Anwend.*, 24(4):853–870, 2006.
- dokosi12** [1233] M. Kowalski, K. Siedenbarg, and M. Dörfler. Social Sparsity! Neighborhood Systems Enrich Structured Shrinkage Operators. *preprint*, submitted, <http://hal.archives-ouvertes.fr/hal-00691774>, 2012.
- fokokp09** [1234] B. A. Kpata, I. Fofana, and K. Koua. Necessary condition for measures which are  $(l^q, l^p)$  multipliers. *Ann. Math. Blaise Pascal*, 16(2):339–353, 2009.
- kr72** [1235] I. Kra. *Automorphic Forms and Kleinian Groups*. Mathematics Lecture Note Series. Reading, Mass.: W. A. Benjamin, 1972.
- krpfra09** [1236] F. Krahmer, G. E. Pfander, and P. Rashkov. Applications of the uncertainty principle for finite abelian groups to communications engineering. *Bulg. J. Phys.*, 36(1):54–59, 2009.
- krpa02** [1237] S. Krantz and H. Parks. *The Implicit Function Theorem. History, Theory, And Applications*. Boston, MA: Birkhäuser., 2002.
- kr78-1** [1238] S. G. Krantz. Intrinsic Lipschitz classes on manifolds with applications to complex function theory and estimates for the  $\bar{\partial}$  and  $\bar{\partial}_b$  equations. *Manuscripta Math.*, 24(4):351–378, 1978.
- kr08** [1239] I. Krasikov. On the Erdelyi-Magnus-Nevai conjecture for Jacobi polynomials. *Constr. Approx.*, 28(2):113–125, 2008.
- alkr03** [1240] A. Krasowska and S. Ali. Wigner functions for a class of semi-direct product groups. *J. Phys. A, Math. Gen.*, 36(11):2801–2820, 2003.

- babakrriwa11** [1241] W. Kreuzer, H. Waubke, G. Rieckh, and P. Balazs. A 3D model to simulate vibrations in a layered medium with stochastic material parameters. *J. Comput. Acoust.*, 19(2):139 – 154, 2011.
- krsk11** [1242] A. Krivoshein and M. Skopina. Approximation by frame-like wavelet systems. *Appl. Comput. Harmon. Anal.*, 31(3):410–428, 2011.
- kr09-2** [1243] J. Krommweh. Bildapproximation mittels der Tetrolet-Transformation. *19. Rhein-Ruhr-Workshop*, page 33, 2009.
- kr10** [1244] J. Krommweh. *Gerichtete Haarwavelet-Systeme in der Bildverarbeitung*. PhD thesis, 2010.
- kr10-1** [1245] J. Krommweh. Image approximation by adaptive tetrolet transform. In Laurent Fesquet and Bruno Torr sani, editors, *SAMPTA'09 - 8th international conference on Sampling Theory and Applications*, volume published online, page 4, Marseille, France, 2010.
- kr10-2** [1246] J. Krommweh. Tetrolet transform: A new adaptive Haar wavelet algorithm for sparse image representation. *Journal of Visual Communication and Image Representation*, 21(4):364 – 374, 2010.
- krma10** [1247] J. Krommweh and J. Ma. Tetrolet shrinkage with anisotropic total variation minimization for image approximation. *Signal Process.*, 90(8):2529–2539, 2010.
- krmo08** [1248] B. Kr n and R. M ller. Analogues of Cayley graphs for topological groups. *Math. Z.*, 258(3):637–675, 2008.
- krrisc11** [1249] K. Kroschel, G. Rigoll, and B. Schuller. *Statistische Informationstechnik - Signal -und Mustererkennung, Parameter-und Signalschätzung*. Springer Berlin Heidelberg, 5. Auflage edition, 2011.
- kuta10** [1250] W. Kuang and L. Tao. Gabor representation for radar signals via real-valued discrete Gabor transform. *Computer Technology and Development*, 10:–, 2010.
- ku96-1** [1251] T. Kuhn. *The structure of scientific revolutions*. University of Chicago press, 1996.

**kust60** [1252] R. A. Kunze and E. Stein. Uniformly bounded representations and harmonic analysis of the  $2 \times 2$  real unimodular group. *Amer. J. Math.*, 82(1):1–62, 1960.

**dogrgrku02-1** [1253] C. Kuo, R. Graf, A. Dowling, and W. Graham. On the horn effect of a tyre/road interface, Part II: Asymptotic theories. *Journal of Sound and Vibration*, 256(3):433 – 445, September 2002.

**boduku11** [1254] P. Kuppinger, G. Durisi, and H. Bölcskei. Uncertainty relations and sparse signal recovery for pairs of general signal sets. *Preprint*, 2011.

**kuoszh09** [1255] H. Kurke, D. Osipov, and A. Zheglov. Formal punctured ribbons and two-dimensional local fields. *J. Reine Angew. Math.*, 629:133–170, 2009.

**kula12** [1256] G. Kutyniok and D. Labate. *Shearlets Multiscale analysis for Multivariate Data (to appear)*. Applied and Numerical Harmonic Analysis. Boston, MA: Birkhäuser., 2012.

**kusa09** [1257] G. Kutyniok and T. Sauer. Adaptive directional subdivision schemes and shearlet multiresolution analysis. *SIAM J. Math. Anal.*, 41(4):1436–1471, 2009.

**kwpe80** [1258] S. Kwapien and A. Pelczynski. Absolutely summing operators and translation invariant spaces of functions on compact abelian groups. *Math. Nachr.*, 94:303–340, 1980.

**chky00** [1259] A. Kyatkin and G. Chirikjian. Algorithms for fast convolutions on motion groups. *Appl. Comput. Harmon. Anal.*, 9(2):220–241, 2000.

**lana11** [1260] E. Lagunas and M. Najar. Sparse Channel Estimation based on Compressed Sensing for Ultra WideBand Systems. pages 365–369, Sep. 2011.

**la71-3** [1261] H.-C. Lai. On the multipliers of  $A^p(G)$ -algebras. *Tohoku Math. J.*, 23:641–662, 1971.

**la72** [1262] H.-C. Lai. A characterization of the multipliers of Banach algebras. *Yokohama Math. J.*, 20:45–50, 1972.

**la74-2** [1263] H.-C. Lai. Multipliers of a Banach algebra in the second conjugate algebra as an idealizer. *Tohoku Math. J.*, 26:431–452, 1974.

- [1a85-3] [1264] H.-C. Lai. Multipliers for some spaces of Banach algebra valued functions. *Rocky Mountain J. Math.*, 15:157–166, 1985.
- [1a85-2] [1265] H.-C. Lai. Multipliers of Banach valued function spaces. *J. Austral. Math. Soc. Ser. A*, 39:51–62, 1985.
- [1a85-1] [1266] H.-C. Lai. Translation invariant operators and multipliers of vector valued functions. *Math. Res. Cent. Rep., Symp. Taipei/Taiwan 1985*, 244-256 (1985), 1985.
- [ch1a88] [1267] H.-C. Lai and T.-K. Chang. Translation invariant operators and multipliers of Banach-valued function spaces. In *Analysis, Proc. Conf., Singapore 1986*, volume 150 of *Math. Stud.*, pages 151–162. North-Holland, 1988.
- [1aye86] [1268] H.-C. Lai and Y. Yeh. On the multipliers of the p-class Banach algebras in an  $H^*$ -algebra. *Tamkang J. Math.*, 17(2):71–85, 1986.
- [1asc09] [1269] M.-J. Lai and L. Schumaker. A domain decomposition method for computing bivariate spline fits of scattered data. *SIAM J. Numer. Anal.*, 47(2):911–928, 2009.
- [1ast06] [1270] M.-J. Lai and J. Stöckler. Construction of multivariate compactly supported tight wavelet frames. *Appl. Comput. Harmon. Anal.*, 21(3):324–348, 2006.
- [1a77-2] [1271] H. J. Landau. The notion of approximate eigenvalues applied to an integral equation of laser theory. *Q. Appl. Math.*, 35:165–172, 1977.
- [1a98-4] [1272] H. J. Landau. Maximum entropy and maximum likelihood in spectral estimation. *IEEE Trans. Inform. Theory*, 44(3):1332–1336, 1998.
- [1aratawa08] [1273] J. Lang, R. Tao, Q. Ran, and Y. Wang. The multiple-parameter fractional Fourier transform. *Science in China Series F: Information Sciences*, 51(8):1010–1024, 2008.
- [1atawa10] [1274] J. Lang, R. Tao, and Y. Wang. The discrete multiple-parameter fractional Fourier transform. *SCIENCE CHINA Information Sciences*, 53(11):2287–2299, 2010.
- [1a09-3] [1275] D. Langemann. Total ponderomotive force on an extended test body. *Int. J. Math. Math. Sci.*, 2009.

- lapr10** [1276] D. Langemann and J. Prestin. Multivariate periodic wavelet analysis. *Appl. Comput. Harmon. Anal.*, 28(1):46–66, 2010.
- lata08** [1277] D. Langemann and M. Tasche. Phase reconstruction by a multilevel iteratively regularized Gauss-Newton method. 2008.
- lata09** [1278] D. Langemann and M. Tasche. Multilevel phase reconstruction for a rapidly decreasing interpolating function. *Result. Math.*, 53(3-4):333–340, 2009.
- lalelisost11** [1279] D. Lantzberg, R. Levie, F. Lieb, N. Sochen, and H.-G. Stark. Deliverable 2.1: Comprehensive Construction Schemes of Uncertainty Minimizers. Technical report, 2011.
- lamasc07-1** [1280] F. Lanzara, V. Maz’ya, and G. Schmidt. Approximate approximations from scattered data. 145(2):141–170, April 2007.
- lamasc07** [1281] F. Lanzara, V. Maz’ya, and G. Schmidt. Approximate approximations on nonuniform grids. *Matematiche*, 62(2):303–318, 2007.
- lasc09-1** [1282] F. Lanzara and G. Schmidt. Cubature of integral operators by approximate quasi-interpolation. Cialdea, Alberto (ed.) et al., Analysis, partial differential equations and applications. The Vladimir Maz’ya anniversary volume. Selected papers of the international workshop, Rome, Italy, June 30–July 3, 2008. Basel: Birkhäuser. Operator Theory: Advanc, 2009.
- brclcohula10** [1283] O. Lardiere, R. Conan, R. Clare, C. Bradley, and N. Hubin. Compared performance of different centroiding algorithms for high-pass filtered laser guide star Shack-Hartmann wavefront sensors. In L. Olivier, C. Rodolphe, C. Richard, B. Colin, H. Norbert, B. L. Ellerbroek, M. Hart, N. Hubin, and P. L. Wizinowich, editors, *Adaptive Optics Systems II; Wavefront Sensors II*, volume 7736, page 773627, San Diego, California, USA, 2010. SPIE.
- lascspata06** [1284] D. Larson, E. Schulz, D. Speegle, and K. F. Taylor. Explicit cross-sections of singly generated group actions. Heil, Christopher (ed.), Harmonic analysis and applications. In Honor of John J. Benedetto. Basel: Birkhäuser. Applied and Numerical Harmonic Analysis, 2006.

- [aaha1a08](#) [1285] E. Larsson, K. Aahlander, and A. Hall. Multi-dimensional option pricing using radial basis functions and the generalized Fourier transform. *J. Comput. Appl. Math.*, 222(1):175–192, 2008.
- [baboda1a11](#) [1286] J. Laska, P. Boufounos, M. Davenport, and R. Baraniuk. Democracy in action: Quantization, saturation, and compressive sensing. *Appl. Comput. Harmon. Anal.*, 31(3):429–443, 2011.
- [1a96-2](#) [1287] R. Latała. Tail and moment estimates for sums of independent random vectors with logarithmically concave tails. *Studia Math.*, 118(3):301–304, 1996.
- [1a12](#) [1288] A. J. Laub. *Computational matrix analysis*. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, PA, 2012.
- [1a83-1](#) [1289] R. Laughlin. Anomalous quantum Hall effect: an incompressible quantum fluid with fractionally charged excitations. *Physical Review Letters*, 50(18):1395–1398, 1983.
- [1a00-1](#) [1290] D. Lawrence. A stability property of nonlinear sampled-data systems with slowly varying inputs. *IEEE Trans. Automat. Control*, 45(3):592–596, 2000.
- [1a61](#) [1291] C. Lawson. *Contributions to the Theory of Linear Least Maximum Approximation*. PhD thesis, 1961.
- [1eslwe10](#) [1292] Q. T. Le Gia, I. H. Sloan, and H. Wendland. Multiscale analysis in Sobolev spaces on the sphere. *SIAM J. Numer. Anal.*, 48(6):2065–2090, 2010.
- [1e11](#) [1293] V. Lebedev. Absolutely convergent Fourier series. An improvement of the Beurling-Helson theorem. to be published, 2011.
- [elle97](#) [1294] H. Le Bret and L. El Ghaoui. Robust solutions to least-squares problems with uncertain data. *SIAM Journal on Matrix Analysis and Applications*, 18:1035–1064, 1997.
- [1e91-1](#) [1295] J. Lechleider. A new interpolation theorem with application to pulse transmission. *Communications, IEEE Transactions on*, 39(10):1438–1444, 1991.

- [leva11](#) [1296] J. Lederer and S. van de Geer. The Bernstein-Orlicz norm and deviation inequalities. *preprint*, 2011.
- [lemumusm00](#) [1297] J.-P. Leduc, F. Mujica, R. Murenzi, and M. Smith. Spatiotemporal wavelets: a group-theoretic construction for motion estimation and tracking. *SIAM J. Appl. Math.*, 61(2):596–632 (electronic), 2000.
- [leresartr10](#) [1298] J. Lee, B. Recht, R. Salakhutdinov, N. Srebro, and J. A. Tropp. Practical large-scale optimization for max-norm regularization. In *Advances in Neural Information Processing Systems 23 (NIPS)*, pages 1297–1305, Vancouver, December 2010.
- [leve07](#) [1299] J. Lee and M. Verleysen. *Nonlinear Dimensionality Reduction*. Springer, 2007.
- [le89-1](#) [1300] P.-Y. Lee. *Lanzhou Lectures on Henstock Integration*. Series in Real Analysis, 2. London etc.: World Scientific. viii, 1989.
- [esle11](#) [1301] R. Legarda Saenz and A. Espinosa Romero. Wavefront reconstruction using multiple directional derivatives and Fourier transform. *Opt. Eng.*, 50(4):040501(4), 2011.
- [aidukolesituzw08](#) [1302] J. Lehtinen, M. Zwicker, E. Turquin, J. Kontkanen, F. Durand, F. X. Sillion, and T. Aila. A meshless hierarchical representation for light transport. *ACM Trans. Graph.*, 27(3), August 2008.
- [chlelix11](#) [1303] N. Lei, J. Chai, P. Xia, and Y. Li. A fast algorithm for the multivariate Birkhoff interpolation problem. *Journal of Computational and Applied Mathematics*, 236(6):1656 – 1666, 2011.
- [le09-2](#) [1304] J. Lemvig. Constructing pairs of dual bandlimited framelets with desired time localization. *Adv. Comput. Math.*, 30(3):231–247, 2009.
- [lelelo82](#) [1305] A. Lenstra, H. Lenstra, and L. Lovász. Factoring polynomials with rational coefficients. *Math. Ann.*, 261:515–534, 1982.
- [fahle03](#) [1306] S. Leon, E. Herman, and R. Faulkenberry. *ATLAST Computer Exercises for Linear Algebra*. Pearson Education Inc., 2nd edition, 2003.
- [lesp11](#) [1307] G. Leoni and D. Spector. Characterization of Sobolev and BV spaces. *J. Funct. Anal.*, 261(10):2926 – 2958, 2011.

- [lep079] [1308] H. Leptin and D. Poguntke. Symmetry and nonsymmetry for locally compact groups. *J. Funct. Anal.*, 33(2):119–134, 1979.
- [le04] [1309] A. Lerner. Weighted norm inequalities for the local sharp maximal function. *J. Fourier Anal. Appl.*, 10(5):465–474, 2004.
- [le05-1] [1310] A. Lerner. A new approach to rearrangements of maximal operators. *Bull. Lond. Math. Soc.*, 37(5):771–777, 2005.
- [le04-1] [1311] G. Leus. On the estimation of rapidly varying channels. volume 4, pages 2227–2230, Sep. 2004.
- [leseus02] [1312] B. Lev, A. Semenov, and C. Usenko. Scalar charged particle in Weyl–Wigner–Moyal phase space. Constant magnetic field. *Journal of Russian Laser Research*, 23(4):347–368, 2002.
- [le1e09] [1313] R. Levanda and A. Leshem. Radio astronomical image formation using sparse reconstruction techniques. In *Electrical and Electronics Engineers in Israel, 2008. IEEEI 2008. IEEE 25th Convention of*, pages 716–720, 2009.
- [le06-2] [1314] R. LeVeque. Wave propagation software, computational science, and reproducible research. Sanz-Solé, Marta (ed.) et al., Proceedings of the international congress of mathematicians (ICM), Madrid, Spain, August 22–30, 2006. Volume III: Invited lectures. Zürich: European Mathematical Society (EMS). 1227-1253 (2006)., 2006.
- [doliva10] [1315] B. Li, M. Dong, and M. Vai. Modelling cardiovascular physiological signals using adaptive hermite and wavelet basis functions. *Signal Processing, IET*, 4(51):588–597, oct. 2010.
- [litawaxu09] [1316] B.-Z. Li, R. Tao, T.-Z. Xu, and Y. Wang. The Poisson sum formulae associated with the fractional Fourier transform. *Signal Processing*, 89(5):851–856, 2009.
- [limcq194] [1317] C. Li, A. McIntosh, and T. Qian. Clifford algebras, Fourier transforms and singular convolution operators on Lipschitz surfaces. *Rev. Mat. Iberoam.*, 10(3):665–721, 1994.
- [jiliraxi08] [1318] C. Li, H. Xian, C. Rao, and W. Jiang. Measuring statistical error of Shack-Hartmann wavefront sensor with discrete detector arrays. *J. Modern Opt.*, 55(14):2243–2255, 2008.

- liwuzh11** [1319] D. Li, G. Wu, and X. Zhang. Two sufficient conditions in frequency domain for Gabor frames. *Appl. Math. Lett.*, 24(4):506–511, April 2011.
- li06-1** [1320] H. Li. Order-unit quantum Gromov-Hausdorff distance. *J. Funct. Anal.*, 231(2):312–360, 2006.
- li09-1** [1321] H. Li. Metric aspects of noncommutative homogeneous spaces. *J. Funct. Anal.*, 257(7):2325–2350, 2009.
- lisuxu08** [1322] H. Li, J. Sun, and Y. Xu. Discrete Fourier analysis, cubature, and interpolation on a hexagon and a triangle. *SIAM J. Numer. Anal.*, 46(4):1653–1681, 2008.
- lilisu09** [1323] M. Li, H. Li, and J. Sun. Nonequispaced fast Fourier transform on parallel hexagon. *J. Numer. Methods Comput. Appl.*, 30(1):58–69, 2009.
- leliqi11** [1324] P. Li, I. Leong, and T. Qian. A class of Fourier multipliers on starlike Lipschitz surfaces. *J. Funct. Anal.*, 261(6):1415 – 1445, 2011.
- lix107-1** [1325] S. Li and J. Xian. Biorthogonal multiple wavelets generated by vector refinement equation. *Sci. China Ser. A*, 50(7):1015–1025, 2007.
- lipr07-1** [1326] W. Li and J. Preisig. Estimation of rapidly time-varying sparse channels. *IEEE J. Oceanic Eng.*, 32:927–939, Oct. 2007.
- li02-2** [1327] Y. Li. Simplified channel estimation for OFDM systems with multiple transmit antennas. *IEEE Trans. Wireless Comm.*, 1:67–75, Jan. 2002.
- ciliso98** [1328] Y. Li, L. Cimini, and N. Sollenberger. Robust channel estimation for OFDM systems with rapid dispersive fading channels. *IEEE Trans. Comm.*, 46:902–915, Jul. 1998.
- calilixu03** [1329] Y. Li, Z. Li, Y. Cai, and Y. Xu. An improved channel estimation scheme for OFDM systems by tracking the subspace. volume 2, pages 1109–1113, 2003.
- lil111** [1330] Y. Li and Q. Lian. Multi-window Gabor frames and oblique Gabor duals on discrete periodic sets. *SCIENCE CHINA Mathematics*, 54(5):987–1010, 2011.

- arlise99** [1331] Y. Li, N. Seshadri, and S. Ariyavisitakul. Channel estimation for OFDM systems with transmitter diversity in mobile wireless channels. *IEEE J. Sel. Areas Comm.*, 17:461–471, Mar. 1999.
- lizh11** [1332] Y.-Z. Li and F.-Y. Zhou. GMRA-based construction of framelets in reducing subspaces of  $L^2(\mathbb{R}^d)$ . 9(2):237–268, 2011.
- hali10-1** [1333] Z. Li and D. Han. Constructing super Gabor frames: the rational time-frequency lattice case. *Sci. China, Math.*, 53(12):3179–3186, 2010.
- lipa96** [1334] J. Liang and T. Parks. A translation-invariant wavelet representation algorithm with applications. *IEEE Trans. Signal Process.*, 44(2):225–232, 1996.
- li73-1** [1335] E. Lieb. Convex trace functions and the Wigner-Yanase-Dyson conjecture. *Advances in Math.*, 11:267–288, 1973.
- lios10** [1336] E. Lieb and Y. Ostrover. Localization of multidimensional Wigner distributions. *J. Math. Phys.*, 51(10):102101, 6, 2010.
- liso91** [1337] E. Lieb and J. Solovej. Quantum coherent operators: a generalization of coherent states. *Lett. Math. Phys.*, 22(2):145–154, 1991.
- lith05** [1338] E. Lieb and W. Thirring. Inequalities for the moments of the eigenvalues of the Schrödinger Hamiltonian and their relation to Sobolev inequalities. In *The stability of matter: from atoms to stars. Selecta of Elliott H. Lieb. Fourth edition*, volume Part III, pages 205–239. Springer, 2005.
- li96-1** [1339] E. Liflyand. Fourier transforms of radial functions. *Integral Transforms Spec. Funct.*, 4(3):279–300, 1996.
- litr98** [1340] E. Liflyand and W. Trebels. On asymptotics for a class of radial Fourier transforms. *Z. Anal. Anwendungen*, 17(1):103–114, 1998.
- li74** [1341] G. Lindblad. Expectations and entropy inequalities for finite quantum systems. *Comm. Math. Phys.*, 39:111–119, 1974.
- li91-1** [1342] P. Linnell. Zero divisors and group von Neumann algebras. *Pacific J. Math.*, 149(2):349–363, 1991.

- li92-1** [1343] P. Linnell. Zero divisors and  $L^2(G + y)$ . *C. R. Acad. Sci. Paris Sér. I Math.*, 315(1):49–53, 1992.
- li63** [1344] J. Lions. Theoremes de trace et d’interpolation. IV. *Math. Ann.*, 151:42–56, 1963.
- li58** [1345] J.-L. Lions. Espaces intermediaires entre espaces hilbertiens et applications. *Bull. Math. Soc. Sci. Math. Phys. R. P. Roumaine (N.S.)*, 2(50):419–432, 1958.
- li61** [1346] J.-L. Lions. *Equations differentielles operationnelles et problemes aux limites*. Die Grundlehren der mathematischen Wissenschaften, Bd. 111. Springer-Verlag, Berlin, 1961.
- lima68** [1347] J.-L. Lions and E. Magenes. *Problemes aux limites non homogenes et applications. Vol. 1*. Travaux et Recherches Mathematiques, No. 17. Dunod, 1968.
- lime79** [1348] P.-L. Lions and B. Mercier. Splitting algorithms for the sum of two nonlinear operators. *SIAM J. Numer. Anal.*, 16:964–979, 1979.
- lima10** [1349] S. Lisini and A. Marigonda. On a class of modified Wasserstein distances induced by concave mobility functions defined on bounded intervals. *Manuscripta Math.*, 133(1-2):197–224, 2010.
- li85** [1350] R. G. Littlejohn. Symplectically invariant WKB wave functions. *Phys. Rev. Lett.*, 54(16):1742–1745, 1985.
- li86-1** [1351] R. G. Littlejohn. Wave-packet evolution and quantization. *Phys. Rev. Lett.*, 56(19):2000–2003, 1986.
- li65** [1352] W. Littman. Multipliers in  $l^p$  and interpolation. *Bull. Amer. Math. Soc.*, 71:764–766, 1965.
- galizh10** [1353] C. Liu, W. Gaetz, and H. Zhu. The Stockwell transform in studying the dynamics of brain functions, 2010.
- limo04** [1354] E. Liu and J. Moura. Fusion in sensor networks: convergence study. In *Acoustics, Speech, and Signal Processing, 2004. Proceedings.(ICASSP’04). IEEE International Conference on*, volume 3, 2004.

- ellisa05** [1355] K. Liu, G. El, and A. Sayeed. On optimal parametric field estimation in sensor networks. In *Statistical Signal Processing, 2005 IEEE/SP 13th Workshop on*, pages 1170–1175, Bordeaux, july 2005.
- lipopr08** [1356] W. Liu, P. Pokharel, and J. Principe. The kernel least-mean-square algorithm. *IEEE Trans. Signal Process.*, 56(2):543–554, 2008.
- halipr10** [1357] W. Liu, J. Principe, and S. Haykin. Kernel Adaptive Filtering: A Comprehensive Introduction. *Wiley Publishing*, page 209, 2010.
- li11** [1358] Y. Liu. Universal low-rank matrix recovery from Pauli measurements. *preprint*, 2011.
- lisuto09** [1359] Y. Liu, D. Sun, and K. Toh. An implementable proximal point algorithmic framework for nuclear norm minimization. *preprint*, 2009.
- baliro11** [1360] M. Liuni, P. Balazs, and A. Röbel. Sound Analysis and Synthesis Adaptive in Time and Two Frequency Bands. In *Proc. of the 14th Int. Conference on Digital Audio Effects (DAFx-11), Paris, France, September 19-23*, volume accepted, September 2011.
- lirororo11** [1361] M. Liuni, A. Röbel, M. Romito, and X. Rodet. Rényi information measures for spectral change detection. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2011*, pages 3824–3827, May 2011.
- grllmova10** [1362] A. Llagostera Casanovas, G. Monaci, P. Vanderghenst, and R. Grillon. Blind audiovisual source separation based on sparse redundant representations. *IEEE Trans. Multimed.*, 12(5):358–371, August 2010.
- felo00** [1363] K. W. Lo and B. G. Ferguson. Broadband passive acoustic technique for target motion parameter estimation. *Aerospace and Electronic Systems, IEEE Transactions on*, 36(1):163–175, jan 2000.
- biloluzh10** [1364] M. Long, L. Biao, W. Lu ping, and S. Zhen kang. Optical flow field estimation in noise environment. In *Computer Application and System Modeling (ICASM), 2010 International Conference on*, volume 10, pages V10–274–V10–277, oct. 2010.

- [1365] M. Long and W. Lu ping. Optical flow field estimation of nature scene images. In *Advanced Computer Theory and Engineering (ICACTE), 2010 3rd International Conference on*, volume 3, pages V3–294 –V3–297, aug. 2010.
- [1366] I. L’OPEZ and W. URBINA. ON SOME FUNCTIONS OF THE LITTLEWOOD PALEY THEORY FOR  $g_{\text{ammad}}$  AND A CHARACTERIZATION OF GAUSSIAN SOBOLEV SPACES OF INTEGER ORDER. *Rev. Un. Mat. Argentina*, 45:2.
- [1367] A.-J. López Moreno and J.-M. Latorre Palacios. Localization results for generalized Baskakov/Mastroianni and composite operators,. *J. Math. Anal. Appl.*, 380,(2):425 – 439,, 2011,.
- [1368] R. Lopez Valcarce, D. Hurtado, C. Mosquera, and F. Perez Gonzalez. Bias analysis and removal of a microphone array based road traffic speed estimator. In *Proc.EUSIPCO, XII. European Signal Processing Conference , September 6-10, 2004, Vienna, Austria*, pages 609–612, 2004.
- [1369] R. Lopez Valcarce, C. Mosquera, and F. Perez Gonzalez. Estimation of road vehicle speed using two omnidirectional microphones: A maximum likelihood approach. *EURASIP J. Appl. Signal Process.*, 2004(8):1059–1077, 2004.
- [1370] A. Lorbert and P. Ramadge. The Rotational Lasso. In *Acoustics, Speech and Signal Processing (ICASSP), 2011 IEEE International Conference on*, pages 3896 –3899, may 2011.
- [1371] G. Lorentz. *Approximation of Functions*. Chelsea Publishing Co., New York, Second edition, 1986.
- [1372] P. Loughlin. Do bounded signals have bounded amplitudes? *Multi-dimensional Syst. Signal Process.*, 9(4):419–424, 1998.
- [1373] G. Loy and A. Zelinsky. Fast radial symmetry for detecting points of interest. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, 25(8):959 – 973, aug. 2003.
- [1374] A. Lozano, G. Swirszcz, and N. Abe. Group orthogonal matching pursuit for variable selection and prediction. Dec. 2009.

- [lutsXX] [1375] L.-T. Lu and K.-J. Tsai. Channel estimation in a proposed IEEE802.11n OFDM MIMO WLAN system. pages 1–5, Princeton, USA, Apr. 2007.
- [luva10-1] [1376] W. Lu and N. Vaswani. Modified basis pursuit denoising (modified-BPDN) for noisy compressive sensing with partially known support. pages 3926–3929, Dallas, TX, Mar. 2010.
- [lu99-1] [1377] D. Lubinsky. On converse Marcinkiewicz-Zygmund inequalities in  $L_p$ ,  $p \geq 1$ . *Constr. Approx.*, 15(4):577–610, 1999.
- [lu11-1] [1378] F. Luef. A property of symplectic lattices and applications to Gabor analysis and noncommutative tori. *preprint*, 2011.
- [lu11-3] [1379] F. Luef. Rieffel projections in rotation algebras and the Walnut representation. *preprint*, 2011.
- [lu11-2] [1380] F. Luef. The Theorem of Stone-von Neumann, revisited. *preprint*, 2011.
- [lu82] [1381] J. Luetzen. *The Prehistory of the Theory of Distributions*. Studies in the History of Mathematics and Physical Sciences, Vol. 7. New York - Heidelberg - Berlin: Springer-Verlag. VIII, 1982.
- [b11uunvo10] [1382] F. Luisier, C. Vonesch, T. Blu, and M. Unser. Fast interscale wavelet denoising of Poisson-corrupted images. *Signal Process.*, 90(2):415–427, February 2010.
- [lu00-1] [1383] S. Luo. Deforming Gabor frames by quadratic Hamiltonians. *Integral Transforms Spec. Funct.*, 9(1):69–74, 2000.
- [galilusw06] [1384] Z. Luo, M. Gaspar, J. Liu, and A. Swarni. Distributed signal processing in sensor networks. *IEEE Sign. Process. Mag.*, 23(4):14–15, Jun. 2006.
- [luta10] [1385] W. Lusky and J. Taskinen. On weighted spaces of holomorphic functions of several variables. *Isr. J. Math.*, 176:381–399, 2010.
- [dolupa07] [1386] M. Lustig, D. Donoho, and J. Pauly. Sparse MRI: The application of compressed sensing for rapid MR imaging. *Magn. Reson. Med.*, 58(6):1182–1195, 2007.

- `lupa10` [1387] K. Lux and H. Pahlings. *Representations of Groups - A Computational Approach*. Cambridge Univ. Press, 2010.
- `lyne11` [1388] Y. Lyubarskii and P. Nes. Gabor frames with rational density. *Arxiv preprint arXiv:1108.2684*, 2011.
- `lyse97-1` [1389] Y. Lyubarskii and K. Seip. Complete interpolating sequences for Paley-Wiener spaces and Muckenhoupt's  $(a_p)$  condition. *Rev. Mat. Iberoam.*, 13(2):361–376, 1997.
- `lyse99` [1390] Y. Lyubarskii and K. Seip. Convergence and summability of Gabor expansions at the Nyquist density. *J. Fourier Anal. Appl.*, 5(2-3):127–157, 1999.
- `lyse02` [1391] Y. Lyubarskii and K. Seip. Weighted Paley-Wiener spaces. *J. Amer. Math. Soc.*, 15(4):979–1006, 2002.
- `masuyazh07` [1392] J. Ma, Y. Zhang, X. Su, and Y. Yao. Maximal Ratio Combining in Cellular MIMO-CDMA Downlink Systems. pages 4243–4248, Jun. 2007.
- `cachmawazh07` [1393] S. Ma, X. Zhu, G. Chen, J. Wang, and J. Cao. Parametric adaptive time-frequency representation based on time-sheared Gabor atoms. *J. Syst. Eng. Electron.*, 18(1):1–7, 2007.
- `mapuwe09` [1394] H. Maas, T. Putze, and P. Westfeld. Recent developments in 3D-PTV and Tomo-PIV. *Imaging Measurement Methods for Flow Analysis*, pages 53–62, 2009.
- `ma10-5` [1395] A. Macdonald. *Linear and Geometric Algebra*. Alan Macdonald, 2010.
- `maXX-1` [1396] G. Mackey. *Unitary Group Representations In Physics, Probability, And Number Theory*. Mathematics Lecture Note Series.
- `ma65-1` [1397] G. Mackey. Some remarks on symplectic automorphisms. *Proc. Amer. Math. Soc.*, 16:393–397, 1965.
- `chfajomatr12` [1398] L. Mackey, M. Jordan, R. Chen, B. Farrell, and J. A. Tropp. Matrix concentration inequalities via the method of exchangeable pairs. *preprint*, 2012.

- mapatu02** [1399] Y. Maday, A. Patera, and G. Turinici. A priori convergence theory for reduced-basis approximations of single-parameter elliptic partial differential equations. In *Proceedings of the Fifth International Conference on Spectral and High Order Methods (ICOSAHOM-01) (Uppsala)*, volume 17, pages 437–446, 2002.
- ma99-5** [1400] J. Madore. *An introduction to noncommutative differential geometry and its physical applications*. London Mathematical Society lecture note series. Cambridge University Press, 1999.
- ma03-4** [1401] V. Mahajan. Zernike polynomials and aberration balancing. In V. N. Mahajan, P. Z. Mouroulis, W. J. Smith, and R. B. Johnson, editors, *Proc. SPIE, Current Developments in Lens Design and Optical Engineering IV; Optical Design*, volume 5173, pages 1–17, San Diego, CA, USA, August 2003. SPIE.
- ma86-3** [1402] J. Maillard. On the twisted convolution product and the Weyl transformation of tempered distributions. *Journal of Geometry and Physics*, 3(2):231–261, 1986.
- badokrma11** [1403] P. Majdak, P. Balazs, W. Kreuzer, and M. Dörfler. Increasing the Signal-to-Noise Ratio in system Identification with Exponential Sweeps by Thresholding in the Time-Frequency Domain. In *ICASSP 2011*, Prag, 2011.
- mari97** [1404] V. Majernik and L. Richterek. Entropic uncertainty relations. *European Journal of Physics*, 18:79, 1997.
- ma09-9** [1405] A. Maleki. Convergence analysis of iterative thresholding algorithms. In *Proc. of Allerton Conference on Communication, Control, and Computing*, 2009.
- drma95** [1406] N. Malik and T. Dracos. Interpolation schemes for three-dimensional velocity fields from scattered data using Taylor expansions. *Journal of Computational Physics*, 119(2):231–243, 1995.
- ma10-1** [1407] M. Malloy. Back-projection using sub-sampled Fourier matrices for spectrum sensing. *preprint*, 2010.
- ma99-6** [1408] H. Malvar. A modulated complex lapped transform and its applications to audio processing. In *Proc. IEEE Int. Conf. Acoustics, Speech,*

and *Signal Processing*, page 14211424, Phoenix, AZ , USA, 15-19 Mar 1999, March 1999.

- flma03** [1409] H. Malvar and D. A. F. Florencio. Improved spread spectrum: a new modulation technique for robust watermarking. *IEEE Trans. Signal Process.*, 51(4):898–905, 2003.
- agma50** [1410] S. Mandelbrojt and S. Agmon. Une generalisation du theoreme tauberien de Wiener. *Acta Sci. Math. Szeged 12 B*, pages 167–176, 1950.
- ma99-7** [1411] Y. Manin. *Frobenius Manifolds, quantum Cohomology, and Moduli spaces*. Colloquium Publications. American Mathematical Society (AMS). 47. Providence, RI: American Mathematical Society (AMS). xiii, 1999.
- ma10-2** [1412] M. Mantoiu. Modulation and Hilbert Space Representations for Rieffel’s Pseudodifferential Calculus. *Arxiv preprint arXiv:1010.0411*, 2010.
- mapu11** [1413] M. Mantoiu and R. Purice. Abstract composition laws and their modulation spaces. *Arxiv preprint arXiv:1107.3344*, 2011.
- ma09-8** [1414] D. Marchette. Filtered kernel density estimation. *Wiley Interdisciplinary Reviews: Computational Statistics*, 1(1):106–109, 2009.
- mash72** [1415] M. Marcus and L. Shepp. Sample behavior of Gaussian processes. In *Proceedings of the Sixth Berkeley Symposium on Mathematical Statistics and Probability (Univ. California, Berkeley, Calif., 1970/1971), Vol. II: Probability theory*, pages 423–441, Berkeley, Calif., 1972. Univ. California Press.
- matr02** [1416] D. Martinez and J. Trout. Asymptotic spectral measures, quantum mechanics, and E-theory. *Communications in mathematical physics*, 226(1):41–60, 2002.
- matr02-1** [1417] D. Martinez and J. Trout. Asymptotic spectral measures, quantum mechanics, and E-theory. *Communications in mathematical physics*, 226(1):41–60, 2002.
- maXX-2** [1418] D. Mary. cosamp.m.

- mase11** [1419] J. Marzo and K. Seip.  $l^\infty$  to  $l^p$  constants for Riesz projections. *Bull. Sci. Math.*, 135(3):324–331, 2011.
- ma07-7** [1420] P. Massart. *Concentration Inequalities and Model Selection*, volume 1896 of *Lecture Notes in Mathematics*. Springer, Berlin, 2007.
- marust09** [1421] P. Massey, M. Ruiz, and D. Stojanoff. The structure of minimizers of the frame potential on fusion frames. *J. Fourier Anal. Appl.*, pages 1–30, 2009.
- name10** [1422] B. Matei and Y. Meyer. Simple quasicrystals are sets of stable sampling. *Complex Var. Elliptic Equ.*, 55(8-10):947–964, 2010.
- bagima10** [1423] G. Mateos, J. Bazerque, and G. Giannakis. Distributed sparse linear regression. *IEEE Trans. Signal Process.*, 58(10):5262–5276, 2010.
- ma99-4** [1424] C. Math. Interpolation of bilinear operators between Banach function spaces. *Collect. Math*, 50(3):311–321, 1999.
- ma73** [1425] G. Matheron. The intrinsic random functions and their applications. *Adv. Appl. Probab.*, 5(3):439–468, December 1973.
- ma10-4** [1426] J. Matousek. *Thirty-three Miniatures Mathematical and Algorithmic Applications of Linear Algebra*. Student Mathematical Library 53. Providence, RI: American Mathematical Society (AMS). x, 2010.
- hlma06** [1427] G. Matz and F. Hlawatsch. Time-varying communication channels: Fundamentals, recent developments, and open problems. *Proc. EUSIPCO-06, Florence, Italy*, September 2006.
- mameva09** [1428] G. Mauceri, S. Meda, and M. Vallarino. Estimates for functions of the Laplacian on manifolds with bounded geometry. *Math. Res. Lett.*, 16(5-6):861–879, 2009.
- mameva11** [1429] G. Mauceri, S. Meda, and M. Vallarino. Hardy-type spaces on certain noncompact manifolds and applications. *J. Lond. Math. Soc. (2)*, 84(1):243–268, 2011.
- ma08-2** [1430] A. Mayeli. Shannon multiresolution analysis on the Heisenberg group. *J. Math. Anal. Appl.*, 348(2):671–684, 2008.

- [maro10] [1431] V. Maz'ya and J. Rossmann. *Elliptic Equations in Polyhedral Domains*, volume 162 of *Mathematical Surveys and Monographs*. American Mathematical Society, Providence, RI, 2010.
- [mash09] [1432] V. Maz'ya and T. Shaposhnikova. *Theory of Sobolev Multipliers*. Springer Berlin / Heidelberg, 2009.
- [mc78-1] [1433] P. McCarthy. Lifting of projective representations of the Bondi-Metzner-Sachs group. *Proc. Roy. Soc. London Ser. A*, 358(1693):141–171, 1978.
- [mcpa72] [1434] J. McClellan and T. Parks. Eigenvalues and eigenvectors of the discrete Fourier transformation. *IEEE Trans. Audio and Electroacoustics*, 20(1), 1972.
- [mc98] [1435] C. McDiarmid. Concentration. In *Probabilistic methods for algorithmic discrete mathematics*, volume 16 of *Algorithms Combin.*, pages 195–248. Springer, Berlin, 1998.
- [mc05-1] [1436] S. McKillup. *Statistics Explained An Introductory Guide for Life Scientists*. Cambridge Univ Press, 2005.
- [dymc10] [1437] S. McKillup and M. Dyar. *Geostatistics Explained. An Introductory Guide for Earth Scientists*. Cambridge: Cambridge University Press. xvi, 396 p., 2010.
- [mesjva08] [1438] S. Meda, P. Sjögren, and M. Vallarino. On the  $h^1 - l^1$  boundedness of operators. *Proc. Amer. Math. Soc.*, 136(8):2921–2931, 2008.
- [mesjva09] [1439] S. Meda, P. Sjögren, and M. Vallarino. Atomic decompositions and operators on Hardy spaces. *Rev. Unión Mat. Argent.*, 50(2):15–22, 2009.
- [meva10] [1440] S. Meda and M. Vallarino. Weak type estimates for spherical multipliers on noncompact symmetric spaces. *Trans. Amer. Math. Soc.*, 362(6):2993–3026, 2010.
- [jomesh06] [1441] B. Mehri, D. Shadman, and S. Jokar. Least Square Approximation by Linear Combination of Exponential Functions. *Journal of Mathematics and Statistics*, 2(2):391–394, 2006.

- menara92** [1442] R. Mehrotra, K. Namuduri, and N. Ranganathan. Gabor filter-based edge detection. *Pattern Recognition*, 25(12):1479 – 1494, 1992.
- memo75** [1443] P. Mello and M. Moshinsky. Nonlinear canonical transformations and their representations in quantum mechanics. *J. Math. Phys.(NY)*, v. 16, no. 10, pp. 2017-2028, 16(10), 1975.
- me74** [1444] O. Melsheimer. Rigged Hilbert space formalism as an extended mathematical formalism for quantum systems. I. General theory. *Journal of Mathematical Physics*, 15:902, 1974.
- me07-1** [1445] F. Memoli. Symposium on Point Based Graphics. pages 81–90, 2007.
- me09** [1446] F. Memoli. Spectral Gromov-Wasserstein distances for shape matching. In *Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (ICCV workshop, NORDIA '09)*, october 2009.
- me10** [1447] F. Memoli. A spectral notion of Gromov-Wasserstein distance and related methods. *Appl. Comput. Harmon. Anal.*, 2010.
- me11** [1448] F. Mémoli. A spectral notion of Gromov-Wasserstein distance and related methods. *Appl. Comput. Harmon. Anal.*, 30(3):363 – 401, 2011.
- me11-1** [1449] F. Memoli. GromovWasserstein distances and the metric approach to object matching. *Foundations of Computational Mathematics*, In Press:1–71, April 2011.
- me10-1** [1450] S. Mendelson. Empirical processes with bounded  $\psi_1$  diameter. *Geom. Funct. Anal.*, 20(4):988–1027, 2010.
- mepato07** [1451] S. Mendelson, A. Pajor, and N. Tomczak Jaegermann. Reconstruction and subgaussian operators in asymptotic geometric analysis. *Geom. Funct. Anal.*, 17(4):1248–1282, 2007.
- me08** [1452] M. Mendicute. *Effects of channel estimation and implementation on the performance of MIMO wireless systems*. PhD thesis, 2008.
- femeo109** [1453] V. Menegatto, C. Oliveira, and J. Ferreira. On the nuclearity of integral operators. *Positivity*, 13(3):519–541, 2009.

- meov05** [1454] E. Mengi and M. Overton. Algorithm for the computation of the pseudospectral radius and the numerical radius of a matrix. *IMA J. Numer. Anal.*, 25(4):648–669, 2005.
- me84-1** [1455] C. Merucci. Applications of interpolation with a function parameter to Lorentz, Sobolev and Besov spaces. Interpolation spaces and allied topics in analysis, Proc. Conf., Lund/Swed. 1983, Lect. Notes Math. 1070, 183-201 (1984)., 1984.
- andimeoh11** [1456] A. Meyer, J. Diepenbrock, F. Ohl, and J. Annemüller. Evaluation and comparison of different machine learning approaches to auditory spectro-temporal receptive field estimation. *BMC Neuroscience*, 12(Suppl 1):P4, 2011.
- mi87-1** [1457] D. Middleton. Channel Modeling and Threshold Signal Processing in Underwater Acoustics: An Analytical Overview. *IEEE J. Oceanic Eng.*, 12(1):4–28, 1987.
- mirast11** [1458] M. Mihailescu, V. Radulescu, and D. Stancu Dumitru. A CaffarelliKohnNirenberg-type inequality with variable exponent and applications to PDEs. *Complex Variables and Elliptic Equations*, 56(7-9):659–669, 2011.
- bemi96-1** [1459] W. Mikhael and A. Berg. Image representation using nonorthogonal basis images with adaptive weight optimization. *Signal Processing Letters, IEEE*, 3(6):165 –167, jun 1996.
- misp88** [1460] W. Mikhael and A. Spanias. A fast frequency-domain adaptive algorithm. *Proceedings of the IEEE*, 76(1):80 –82, jan 1988.
- misp89** [1461] W. Mikhael and A. Spanias. Accurate representation of time-varying signals using mixed transforms with applications to speech. *Circuits and Systems, IEEE Transactions on*, 36(2):329 –331, feb 1989.
- misp89-1** [1462] W. Mikhael and A. Spanias. Efficient modeling of dominant transform components representing time-varying signals. *IEEE Trans. Circuits and Systems*, 36(2):331–334, 1989.
- mi10** [1463] P. Milanfar. *Super-resolution Imaging*, volume 1. CRC Press, 2010.
- pe10** [1464] P. Milanfar. *Super-Resolution Imaging*, volume 1. CRC Press, 2011.

- fogogomisu10** [1465] B. Miller, J. Goodman, K. Forsythe, J. Sun, and V. K. Goyal. A multi-sensor compressed sensing receiver: Performance bounds and simulated results. In *Signals, Systems and Computers, 2009 Conference Record of the Forty-Third Asilomar Conference on*, pages 1571–1575, 2010.
- almi06** [1466] H. Minn and N. Al Dhahir. Optimal training signals for MIMO OFDM channel estimation. *IEEE Trans. Wireless Comm.*, 5:1158 – 1168, May 2006.
- chmimu07** [1467] A. Mirza, A. Chaudhry, and B. Munir. Spatially adaptive image restoration using fuzzy punctual kriging. *Journal of Computer Science and Technology*, 22(4):580–589, 2007.
- elmi09-2** [1468] M. Mishali and Y. Eldar. Blind multi-band signal reconstruction: Compressed sensing for analog signals. *IEEE Trans. Signal Process.*, 57:993–1009, Mar. 2009.
- hami76** [1469] J. Mitchell and K. Hahn. Representation of linear functionals in  $H^p$  spaces over bounded symmetric domains in  $C^N$ . *J. Math. Anal. Appl.*, 56(2):379–396, 1976.
- mi84-1** [1470] B. Mityagin. An interpolation theorem for modular spaces. In *Interpolation spaces and allied topics in analysis (Lund, 1983)*, volume 1070 of *Lecture Notes in Math.*, pages 10–23. Springer, 1984.
- nish64** [1471] B. Mityagin and A. Shvarts. Functors in categories of Banach spaces. *Russian Math. Surveys*, 19(2):65–127, 1964.
- miniritato09** [1472] A. Miyachi, F. Nicola, S. Rivetti, A. Tabacco, and N. Tomita. Estimates for unimodular Fourier multipliers on modulation spaces. *Proc. Amer. Math. Soc.*, 137(11):3869–3883, 2009.
- minaohsh11** [1473] Y. Mizuta, E. Nakai, T. Ohno, and T. Shimomura. Riesz potentials and Sobolev embeddings on Morrey spaces of variable exponents. *Complex Variables and Elliptic Equations*, 56(7-9):671–695, 2011.
- limo11** [1474] Q. Mo and S. Li. New bounds on the restricted isometry constant  $\delta_{2k}$ . *Appl. Comput. Harmon. Anal.*, in press, 2011.

- [mo96] [1475] G. Mockenhaupt. *Bounds in Lebesgue spaces of oscillatory integral operators*. PhD thesis, Siegen: Univ.-GHS Siegen, Fachbereich Mathematik (Habil.), 52 p., 1996.
- [mowo11] [1476] S. Molahajloo and M. Wong. Diagonalization of Weyl transforms and heat equations for time-dependent Hermite operators. *Complex Anal. Oper. Theory*, 5(1):283–298, 2011.
- [chmonapaso98] [1477] V. Molebny, I. Chyzh, V. Sokurenko, I. Pallikaris, and L. Naoumidis. Eye aberration analysis with Zernike polynomials. In V. V. Molebny, I. H. Chyzh, V. M. Sokurenko, I. G. Pallikaris, L. P. Naoumidis, P. O. Rol, K. M. Joos, and F. Manns, editors, *Proc. SPIE, Ophthalmic Technologies VIII*, volume 3246 of *Eye Modeling*, pages 228–237. SPIE, 1998.
- [mo01] [1478] A. F. Molisch, editor. *Wideband Wireless Digital Communications*. Prentice Hall, Englewood Cliffs (NJ), 2001.
- [mo10-1] [1479] A. F. Molisch, editor. *Wireless Communications*. John Wiley and Sons, Ltd., 2nd edition, 2010.
- [axmemo04] [1480] A. Montillo, D. Metaxas, and L. Axel. Extracting tissue deformation using Gabor filter banks. In *Proc. SPIE: Physiology, Function, and Structure from Medical Images*, volume 5369 of *Cardiac Imaging*, page 9 pages, San Diego, CA, USA, 2004.
- [memo11] [1481] C. Moore and S. Mertens. *The Nature of Computation*. Oxford: Oxford University Press. xvii, 985 p., 2011.
- [memo01] [1482] M. Morelli and U. Mengali. A comparison of pilot-aided channel estimation methods for OFDM systems. *IEEE Trans. Signal Process.*, 49(12):3065–3073, December 2001.
- [ardimo10] [1483] S. Moreno Picot, M. Arevalillo Herraiez, and W. Diaz Villanueva. A linear cost algorithm to compute the discrete gabor transform. *IEEE Trans. Signal Process.*, 58(5):2667–2674, May 2010.
- [mo01-1] [1484] S. Morita. *Geometry of differential forms*. Translations of mathematical monographs. American Mathematical Society, 2001.

- arfogimo82** [1485] J. Morlet, G. Arens, E. Fourgeau, and D. Giard. Wave propagation and sampling theory-Part I: Complex signal and scattering in multi-layered media. *Geophys. J. Internat.*, 47(2-SEISMIC):203–221, 1982.
- arfogimo82-1** [1486] J. Morlet, G. Arens, E. Fourgeau, and D. Giard. Wave propagation and sampling theory-Part II: Sampling theory and complex waves. *Geophys. J. Internat.*, 47(2-SEISMIC):222–236, 1982.
- moxi94** [1487] J. M. Morris and H. Xie. Fast algorithms for generalized discrete Gabor expansions. *Signal Process.*, 39(3):317–331, 1994.
- mo94** [1488] N. Morrison. *Introduction To Fourier Analysis*. John Wiley and Sons, Ltd., 1994.
- camo80** [1489] M. Moshinsky and G. Carcia Calderon. Wigner distribution functions and the representation of canonical transformations in quantum mechanics. *Journal of Physics A: Mathematical and General*, 13:L185, 1980.
- moqu71** [1490] M. Moshinsky and C. Quesne. Linear canonical transformations and their unitary representations. *Journal of Mathematical Physics*, 12:1772, 1971.
- mose78** [1491] M. Moshinsky and T. Seligman. Canonical transformations to action and angle variables and their representations in quantum mechanics. *Annals of Physics*, 114(1-2):243–272, September 1978.
- mose79-1** [1492] M. Moshinsky and T. Seligman. Canonical transformations to action and angle variables and their representation in quantum mechanics. II. The Coulomb problem. *Ann. Physics*, 120(2):402–422, August 1979.
- mose79** [1493] M. Moshinsky and T. Seligman. Canonical transformations to action and angle variables and their representations. *Journal of Physics A: Mathematical and General*, 12(6):L135–L139, 1979.
- mosh00** [1494] M. Moshinsky and A. Sharma. Canonical transformations for time evolution and their representation in Wigner distribution phase space. *Annals of Physics*, 282(1):138–153, 2000.
- kllumo03** [1495] J. Moura, J. Lu, and M. Kleiner. Intelligent sensor fusion: A graphical model approach. In *Acoustics, Speech, and Signal Processing, 2003*.

*Proceedings.(ICASSP'03). 2003 IEEE International Conference on*, volume 6, 2003.

**motr98** [1496] M. Mourou and K. Trimèche. Inversion of the Weyl integral transform and the Radon transform on  $\mathbb{R}^n$  using generalized wavelets. *Monatsh. Math.*, 126(1):73–83, 1998.

**chmamusiza05** [1497] N. Mukunda, G. Marmo, A. Zampini, S. Chaturvedi, and R. Simon. Wigner–Weyl isomorphism for quantum mechanics on Lie groups. *Journal of Mathematical Physics*, 46:012106, 2005.

**mu98-1** [1498] C. Müller. *Analysis of Spherical Symmetries in Euclidean Spaces*. Applied Mathematical Sciences. 129. New York, NY: Springer., 1998.

**muva10** [1499] D. Müller and M. Vallarino. Wave equation and multiplier estimates on Damek-Ricci spaces. *J. Fourier Anal. Appl.*, 16(2):204–232, 2010.

**ermuun02** [1500] A. Munoz, R. Ertlé, and M. Unser. Continuous wavelet transform with arbitrary scales and  $O(N)$  complexity. *Signal Process.*, 82(5):749–757, May 2002.

**mu06-2** [1501] H. Munthe Kaas. On group Fourier analysis and symmetry preserving discretizations of PDEs. *J. Phys. A, Math. Gen.*, 39(19):5563–5584, 2006.

**mude99** [1502] B. Muquet and C. de. Blind and Semi-Blind Channel Identification Methods using Second Order Statistics for OFDM Systems. volume 5, page 27452748, Mar. 1999.

**dumude02** [1503] B. Muquet, C. de, and P. Duhamel. Subspace-based blind and semi-blind channel estimation for OFDM systems. *IEEE Trans. Signal Process.*, 50(7):1699–1712, July 2002.

**aldekelumuvaXX** [1504] M. Murphy, M. Alley, J. Demmel, K. Keutzer, S. Vasanawala, and M. Lustig. Fast  $\ell_1$ -SPIRiT compressed sensing parallel imaging MRI: Scalable parallel implementation and clinically feasible runtime. *IEEE Trans. Med. Imaging*, to appear.

**na11** [1505] A. Naidu. Centrality of Löwdin orthogonalizations. *Arxiv preprint arXiv:1105.3571*, pages 1–6, 2011.

- daelgrna11** [1506] S. Nam, M. Davies, M. Elad, and R. Gribonval. The cospars analysis model and algorithms. *preprint*, 2011.
- na78** [1507] N. Namboodiri. *Survey sampling and measurement. Papers presented at the 2nd symposium on survey sampling held at the Chapel Hill campus of the University of North Carolina, April 14-17, 1977*. Quantitative Studies in Social Relations. New York etc.: Academic Press. XXI, 364 p. \$ 23.00, 1978.
- menara94** [1508] K. Namuduri, R. Mehrotra, and N. Ranganathan. Efficient computation of Gabor filter based multiresolution responses. *Pattern Recognition*, 27(7):925 – 938, 1994.
- napr03** [1509] V. Narayanan and K. Prabhu. The fractional Fourier transform: theory, implementation and error analysis. *Microprocessors and Microsystems*, 27(10):511 – 521, 2003.
- nasu10** [1510] M. Nashed and Q. Sun. Sampling and reconstruction of signals in a reproducing kernel subspace of  $L^p(\mathbb{R}^d)$ . *J. Funct. Anal.*, 258(7):2422–2452, 2010.
- nawa75** [1511] M. Nashed and G. Wahba. Generalized inverses in reproducing kernel spaces: An approach to regularization of linear operator equations. *SIAM J. Math. Anal.*, pages 974–987, 1975.
- nawa95** [1512] M. Nashed and G. G. Walter. Reproducing kernel Hilbert spaces from sampling expansions. Ismail, Mourad E. H. (ed.) et al., *Mathematical analysis, wavelets, and signal processing. An international conference on mathematical analysis and signal processing, Cairo University, Cairo, Egypt, January 3-9, 1994*. Providence, RI: American Mathematical, 1995.
- naobth10** [1513] F. Nazarov, R. Oberlin, and C. Thiele. A Calderón-Zygmund decomposition for multiple frequencies and an application to an extension of a lemma of Bourgain. *Math. Res. Lett.*, 17(3):529–545, 2010.
- narevo11** [1514] F. Nazarov, A. Reznikov, and A. Volberg. The proof of  $a_2$  conjecture in a geometrically doubling metric space. *Submitted on 7 Jun 2011*, to be published, 2011.

- nata10** [1515] S. Nazarov and J. Taskinen. On essential and continuous spectra of the linearized water-wave problem in a finite pond. *Math. Scand.*, 106(1):141–160, 2010.
- nest04** [1516] M. Necker and G. Stuber. Totally blind channel estimation for OFDM on fast varying mobile radio channels. *IEEE Trans. Wireless Comm.*, 3:1512–1525, Sep. 2004.
- neve08** [1517] D. Needell and R. Vershynin. Greedy signal recovery and uncertainty principles. In *Proc. SPIE*, volume 6814, February 2008.
- newa12** [1518] D. Needell and R. Ward. Stable image reconstruction using total variation minimization. *preprint*, 2012.
- cine98** [1519] R. Negi and J. Cioffi. Pilot tone selection for channel estimation in a mobile OFDM system. *IEEE Trans. Consumer Electronics*, 44(3):1122–1128, August 1998.
- ne10** [1520] A. Nekvinda. A note on one-sided maximal operator in  $L^{p(\cdot)}(R)$ . *Math. Inequal. Appl.*, 13(4):887–897, 2010.
- nepi10** [1521] A. Nekvinda and L. Pick. Optimal estimates for the Hardy averaging operator. *Math. Nachr.*, 283(2):262–271, 2010.
- neXX** [1522] D. Nelson. Linear Operations on Summable Functions. *Trans. Amer. Math. Soc.*
- ne74** [1523] E. Nelson. Notes on non-commutative integration. *J. Funct. Anal.*, 15:103–116, 1974.
- ne11** [1524] Y. Neretin. *Lectures on Gaussian Integral operators and Classical Groups*. EMS Series of Lectures in Mathematics. Zürich: European Mathematical Society (EMS). xii, 559 p. EUR 58.00, 2011.
- nest06** [1525] S. Neshveyev and E. Stormer. *Dynamical entropy in operator algebras*. Number Bd. 50 in *Ergebnisse der Mathematik und ihrer Grenzgebiete*. Springer, 2006.
- ne05-2** [1526] Y. Nesterov. Smooth minimization of non-smooth functions. *Math. Program.*, 103(1, Ser. A):127–152, 2005.

- nene94** [1527] Y. Nesterov and A. Nemirovskii. *Interior Point Polynomial Algorithms in Convex Programming*. SIAM Studies Appl. Math., Philadelphia, PA, 1994.
- nescstXX** [1528] V. Nestoridis, S. Schmutzhard, and V. Stefanopoulos. Universal series induced by approximate identities and some relevant applications. *J. Approx. Theory*, 163(12), 2011.
- bahene10** [1529] G. Newstadt, E. Bashan, and A. Hero. Adaptive search for sparse targets with informative priors. In *IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP)*, pages 3542–3545, Dallas, TX, March 2010.
- ng11** [1530] H. Nguyen. Inverse Littlewood-Offord problems and the singularity of random symmetric matrices. *preprint*, 2011.
- gongva10** [1531] H. Nguyen, V. K. Goyal, and L. Varshney. Frame permutation quantization. *Appl. Comput. Harmon. Anal.*, In Press, Corrected Proof, 2010.
- ni08** [1532] B. Nica. Relatively spectral morphisms and applications to K-theory. *J. Funct. Anal.*, 255(12):3303–3328, 2008.
- ni10-2** [1533] B. Nica. On the degree of rapid decay. *AMERICAN MATHEMATICAL SOCIETY*, 138(7):2341–2347, 2010.
- ni11** [1534] B. Nica. Homotopical stable ranks for Banach algebras. *J. Funct. Anal.*, 2011.
- ni10** [1535] M. Nielsen. Orthonormal bases for  $\alpha$ -modulation spaces. *Collect. Math.*, 61(2):173–190, 2010.
- ni10-1** [1536] M. Nielsen. Trigonometric bases for matrix weighted  $l_p$ -spaces. *J. Math. Anal. Appl.*, 371:784–792, 2010.
- ni91** [1537] T. Nielsen. *Bose algebras: the complex and real wave representations*. Lecture Notes in Mathematics 1472. Springer-Verlag, 1991.
- ni89** [1538] R. Niland. Optimum oversampling. *The Journal of the Acoustical Society of America*, 86:1805, 1989.

- ni82-2** [1539] P. Nilsson. Iteration theorems for real interpolation and approximation spaces. *Ann. Mat. Pura Appl. (4)*, 132(1):291–330, 1982.
- ni83** [1540] P. Nilsson. Interpolation of Calderon and Ovchinnikov pairs. *Ann. Mat. Pura Appl. (4)*, 134(1):201–232, 1983.
- nisuya09** [1541] M. Nishio, N. Suzuki, and M. Yamada. Weighted Berezin transformations with application to Toeplitz operators of Schatten class on parabolic Bergman spaces. *Kodai Math. J.*, 32(3):501–520, 2009.
- niol11** [1542] S. Nitzan and J.-F. Olsen. From exact systems to Riesz bases in the Balian-Low theorem. *J. Fourier Anal. Appl.*, 17(4):567–603, 2011.
- nowr06** [1543] J. Nocedal and S. Wright. *Numerical optimization*. Springer Series in Operations Research and Financial Engineering. Springer, New York, Second edition, 2006.
- no12** [1544] T. Noi. Duality of variable exponent Triebel-Lizorkin and Besov spaces. 2012.
- nosjzw11** [1545] S. Nonnenmacher, J. Sjöstrand, and M. Zworski. From open quantum systems to open quantum maps. *Comm. Math. Phys.*, 304(1):1–48, 2011.
- dono09** [1546] C. Nothegger and P. Dorninger. 3D filtering of high-resolution terrestrial laser scanner point clouds for cultural heritage documentation. *PFG Photogrammetrie, Fernerkundung, Geoinformation*, 2009(1):53–63, March 2009.
- ny28** [1547] H. Nyquist. Certain Topics in Telegraph Transmission Theory. *Trans. Am. Inst. El. Eng. (AIEE)*, 47:617–644, April 1928.
- od98** [1548] A. Odziejewicz. Quantum algebras and  $q$ -special functions related to coherent states maps of the disc. *Comm. Math. Phys.*, 192(1):183–215, 1998.
- oe00** [1549] S. Oeztop. Multipliers of Banach valued weighted function spaces. *Int. J. Math. Math. Sci.*, 24(8):511–517, 2000.
- oz00-1** [1550] S. Oeztop. Multipliers on some weighted  $L^p$ -spaces. *Int. J. Math. Math. Sci.*, 23(9):651–656, 2000.

- [oe03] [1551] S. Oeztop. A note on multipliers of  $L^p(G, A)$ . *J. Aust. Math. Soc.*, 74(1):25–34, 2003.
- [oh09] [1552] T. Ohta. Hilbertian matrix cross normed spaces arising from normed ideals. *Illinois Journal of Mathematics*, 53(1):1–24, 2009.
- [ohpe04] [1553] M. Ohya and D. Petz. *Quantum entropy and its use*. Texts and monographs in physics. Springer, 2004.
- [ok06] [1554] R. Okayasu. Gromov hyperbolic groups and the Macaev norm. *Pacific J. Math.*, 223(1):141–157, 2006.
- [ok66] [1555] E. Oklander.  $L_{pq}$  interpolators and the theorem of Marcinkiewicz. *Bull. Amer. Math. Soc.*, 72:49–53, 1966.
- [ngokra09] [1556] U. Okonkwo, R. Ngah, and T. Rahman. Affine group linear operator-based channel characterization for mobile radio systems. *WSEAS TRANSACTIONS on SYSTEMS*, 8(2):288–301, 2009.
- [okoz09] [1557] F. Oktem and H. Ozaktas. Exact relation between continuous and discrete linear canonical transforms. *IEEE Signal Processing Letters*, 16(8):727–730, August 2009.
- [okoz10] [1558] F. S. Oktem and H. M. Ozaktas. Equivalence of linear canonical transform domains to fractional Fourier domains and the bicanonical width product: a generalization of the space–bandwidth product. *JOSA A*, 27(8):1885–1895, 2010.
- [ol11-2] [1559] G. Olafsson. Coorbit spaces for dual pairs. *Appl. Comput. Harmon. Anal.*, 31(2):303–324, 2011.
- [ol11] [1560] G. Olafsson. *The Segal-Bargmann transform on Euclidean space and generalizations. An introduction to harmonic analysis and Hilbert spaces of holomorphic functions (to appear)*. Hackensack, NJ: World Scientific. 300 p. \$ 65.00 and sterling 45.00, 2011.
- [leolsc83] [1561] D. Oldenburg, T. Scheuer, and S. Levy. Recovery of the acoustic impedance from reflection seismograms. *Geophys. J. Internat.*, 48:1318–1337, Oct. 1983.
- [ol09] [1562] R. Oliveira. Concentration of the adjacency matrix and of the Laplacian in random graphs with independent edges. *preprint*, 2009.

- [o110] [1563] R. Oliveira. Sums of random Hermitian matrices and an inequality by Rudelson. *preprint*, 2010.
- [o110-1] [1564] J.-F. Olsen. Modified zeta functions as kernels of integral operators. *J. Funct. Anal.*, 259(2):359–383, 2010.
- [o111-1] [1565] J.-F. Olsen. Local properties of Hilbert spaces of Dirichlet series. *J. Funct. Anal.*, 261(9):2669–2696, 2011.
- [olse08] [1566] J.-F. Olsen and K. Seip. Local interpolation in Hilbert spaces of Dirichlet series. *Proc. Amer. Math. Soc.*, 136(1):203–212, 2008.
- [olsh05] [1567] P. Olver and C. Shakiban. *Applied Linear Algebra: Student Solutions Manual*. Pearson Education Inc., 2005.
- [olsh06] [1568] P. Olver and C. Shakiban. *Applied Linear Algebra*. Pearson Education Inc., 2006.
- [milekaonsa08] [1569] N. Ono, K. Miyamoto, J. Le Roux, H. Kameoka, and S. Sagayama. Separation of a monaural audio signal into harmonic/percussive components by complementary diffusion on spectrogram. In *16th European Signal Processing Conference (EUSIPCO 2008)*, Lausanne, Switzerland, August 25-29, 2008.
- [on75] [1570] E. Onofri. A note on coherent state representations of Lie groups. *J. Math. Phys.*, 16:1087–1089, 1975.
- [on80] [1571] E. Onofri. Path integrals over coherent states. Functional integration, Theory Appl., Proc. Colloq., Louvain-la-Neuve/Belgium 1979, 121-124 (1980)., 1980.
- [orpe02] [1572] J. Orobítg and C. Pérez.  $a_p$  weights for nondoubling measures in  $\setminus^n$  and applications. *Trans. Amer. Math. Soc.*, 354(5):2013–2033, 2002.
- [orsa07] [1573] J. Ortega Cerdà and J. Saludes. Marcinkiewicz-Zygmund inequalities. *J. Approx. Theory*, 145(2):237 – 252, April 2007.
- [orscva06] [1574] J. Ortega Cerda, A. Schuster, and D. Varolin. Interpolation and sampling hypersurfaces for the Bargmann-Fock space in higher dimensions. *Math. Ann.*, 335(1):79–107, 2006.

- os85** [1575] M. Osborne. *Finite Algorithms in Optimization and Data Analysis*. John Wiley & Sons., 1985.
- bomeo'10** [1576] J. O'Toole, M. Mesbah, and B. Boashash. Improved discrete definition of quadratic time-frequency distributions. *IEEE Trans. Signal Process.*, 58(2):906–911, 2010.
- ot95** [1577] J. Ottesen. Projective representations of the loop group and the boson-fermion correspondence. *Rep. Math. Phys.*, 35(1):39–61, 1995.
- ouso11** [1578] S. Ouaro and S. Soma. Weak and entropy solutions to nonlinear Neumann boundary-value problems with variable exponents. *Complex Variables and Elliptic Equations*, 56(7-9):829–851, 2011.
- ou05** [1579] E. Ouhabaz. *Analysis of Heat Equations on Domains*. London Mathematical Society Monographs Series 31. Princeton, NJ: Princeton University Press. xi, 2005.
- ov76** [1580] V. Ovchinnikov. Interpolation theorems resulting from an inequality of Grothendieck. *Funct. Anal. Appl.*, 10(4):287–294, 1976.
- ow06** [1581] B. Owen. Detectability of periodic gravitational waves by initial interferometers. 2006.
- oy10** [1582] O. Oyerinde. *Channel Estimation for SISO and MIMO OFDM Communication Systems*. PhD thesis, 2010.
- fahamooy11** [1583] S. Oymak, K. Mohan, M. Fazel, and B. Hassibi. A simplified approach to recovery conditions for low-rank matrices. *preprint*, 2011.
- oz96** [1584] H. Ozaktas. Repeated fractional Fourier domain filtering is equivalent to repeated time and frequency domain filtering. *Signal Process.*, 54(1):81–84, 1996.
- ayoz95** [1585] H. Ozaktas and O. Aytür. Fractional Fourier domains. *Signal Processing*, 46(1):119–124, 1995.
- ozsu06** [1586] H. Ozatkas and U. Sumbul. Interpolating between periodicity and discreteness through the fractional Fourier transform. *IEEE Trans. Signal Process.*, 54(11):4233–4243, nov. 2006.

- [oz06] [1587] N. Ozawa. Boundary amenability of relatively hyperbolic groups. *Topology Appl.*, 153(14):2624–2630, 2006.
- [ozri05] [1588] N. Ozawa and M. A. Rieffel. Hyperbolic group  $C^*$ -algebras and free-product  $C^*$ -algebras as compact quantum metric spaces. *Canad. J. Math.*, 57(5):1056–1079, 2005.
- [cofopasa05] [1589] J. Pages, J. Salvi, C. Collewet, and J. Forest. Optimised De Bruijn patterns for one-shot shape acquisition. *Image and Vision Computing*, 23(8):707 – 720, 2005.
- [pa09–8] [1590] V. Palamodov. Quantum shape of compact domains in phase plane. Aytuna, Aydin (ed.) et al., Functional analysis and complex analysis. International conference, Istanbul, Turkey, September 17–21, 2007. Providence, RI: American Mathematical Society (AMS). Contemporary Mathematics 481, 117-136 (2009)., 2009.
- [cilapa03] [1591] D. Palomar, J. Cioffi, and M. Lagunas. Joint Tx-Rx beamforming design for multicarrier MIMO channels: A unified framework for convex optimization. *IEEE Trans. Signal Process.*, 51:2381–2401, Sep. 2003.
- [pasiwexi01] [1592] M. Paluszynski, H. Sikic, G. Weiss, and S. Xiao. Generalized low pass filters and MRA frame wavelets. *J. Geom. Anal.*, 11(2):311–342, 2001.
- [pasiwexi03] [1593] M. Paluszynski, H. Sikic, G. Weiss, and S. Xiao. Tight frame wavelets, their dimension functions, MRA tight frame wavelets and connectivity properties. *Adv. Comput. Math.*, 18(2-4):297–327, 2003.
- [pa91-1] [1594] Y. Pan. Uniform estimates for oscillatory integral operators. *J. Funct. Anal.*, 100(1):207–220, 1991.
- [pa97-4] [1595] M. Pap. Properties of certain integral operators. *Mathematica*, 39(62)(1):83–94, 1997.
- [pa97-5] [1596] M. Pap. Some criteria for starlikeness and convexity of a given order. 39(2):299–303, 1997.
- [pa98-1] [1597] M. Pap. Integral operators which preserve the subordination. *Math. Pannon.*, 9(2):235–242, 1998.

- [pa98] [1598] M. Pap. On certain subclasses of meromorphic  $m$ -valent close-to-convex functions. *P.U.M.A., Pure Math. Appl.*, 9(1-2):155–163, 1998.
- [pa99-2] [1599] M. Pap. Starlikeness properties of meromorphic  $m$ -valent functions. *Publ. Math.*, 54(3-4):281–294, 1999.
- [pa03-3] [1600] M. Pap. Properties of discrete rational orthonormal systems. pages 374–379, 2003.
- [pa03-4] [1601] M. Pap. Some simple conditions of strongly-starlikeness and spiral-likeness of a given order. *Mathematica*, 45(68)(2):161–166, 2003.
- [pa04-8] [1602] M. Pap. Discrete approximation of the solution of the Dirichlet problem by discrete means. *Acta Mathematica Academiae Paedagogicae Nyiregyhaziensis. New Series*, 20(2), 2004.
- [pa11-1] [1603] M. Pap. Frame and wavelet system on the sphere. *Int. J. of Mathematical Sciences and Application*, 1(1):26, January 2011.
- [pa11-2] [1604] M. Pap. Hyperbolic Wavelets and Multiresolution in  $H^2(T)$ . *J. Fourier Anal. Appl.*, to appear, published online first:1–22, 2011.
- [pa11] [1605] M. Pap. Multiresolution in the Bergman space, 2011.
- [pa12] [1606] M. Pap. Properties of the voice transform of the Blaschke group and connections with atomic decomposition results in the weighted Bergman spaces. *J. Math. Anal. Appl.*, 389(1):340–350, 2012.
- [paXX-2] [1607] M. Pap. Frame and wavelet systems on the sphere. to appear.
- [pasc01] [1608] M. Pap and F. Schipp. Malmquist-Takenaka systems and equilibrium conditions. *Math. Pannon.*, 12(2):185–194, 2001.
- [pasc03] [1609] M. Pap and F. Schipp. Discrete approximation on the sphere. *Ann. Univ. Sci. Budapest. Sect. Comput.*, 22:299–315, 2003.
- [pasc04-1] [1610] M. Pap and F. Schipp. Interpolation by rational functions. *Ann. Univ. Sci. Budapest. Sect. Comput.*, 24:223–237, 2004.
- [pasiwe99] [1611] M. Papadakis, H. Sikić, and G. Weiss. The characterization of low pass filters and some basic properties of wavelets, scaling functions and related concepts. *J. Fourier Anal. Appl.*, 5(5):495–521, 1999.

- capape07 [1612] G. Papari, N. Petkov, and P. Campisi. Artistic edge and corner enhancing smoothing. *IEEE Trans. Image Process.*, 16(10):2449–2462, 2007.
- chpa79 [1613] A. Papoulis and C. Chamzas. Improvement of range resolution by spectral extrapolation. *Ultrasonic Images*, 1:121–135, Feb. 1979.
- arpawa07 [1614] J. Paredes, G. Arce, and Z. Wang. Ultra-Wideband Compressed Sensing: Channel Estimation. *IEEE J. Sel. Topics Sign. Process.*, 1(3):383–395, Oct. 2007.
- pa88-4 [1615] O. G. Parfenov. Estimates of the singular numbers of the Carleson imbedding operator. *Math. USSR-Sb.*, 59(2):497–514, 1988.
- chleparo09 [1616] W. Park, G. Leibon, D. N. Rockmore, and G. Chirikjian. Accurate image rotation using Hermite expansions. *IEEE Trans. Image Process.*, 18(9):1988–2003, 2009.
- pa10-2 [1617] A. Parmeggiani. *Spectral theory of non-commutative harmonic oscillators: an introduction*. Lecture notes in mathematics. Springer, 2010.
- pa97-3 [1618] J. R. Partington. *Interpolation, Identification, and Sampling*. London Mathematical Society Monographs. New Series. 17. Oxford: Clarendon Press. xii, 1997.
- hamipavi08 [1619] F. Parvaresh, H. Vikalo, S. Misra, and B. Hassibi. Recovering sparse signals using sparse measurement matrices in compressed DNA microarrays. *IEEE J. Sel. Topics Sign. Process.*, 2:275–285, Jun. 2008.
- pa11-5 [1620] S. Pastukhova. Zhikov’s hydromechanical lemma on compensated compactness: its extension and application to generalized stationary NavierStokes equations. *Complex Variables and Elliptic Equations*, 56(7-9):697–714, 2011.
- pa99-3 [1621] A. L. Paterson. *Groupoids, inverse semigroups, and their operator algebras*. Progress in mathematics. Birkhäuser, 1999.
- kupapr11 [1622] R. Pathak, A. Prasad, and M. Kumar.  $n$ -dimensional Sobolev type spaces involving Hankel transformation. *Appl. Math. Comput.*, 218(3):899–905, 2011.

- [pa06] [1623] Y. Pati. Frames Generated By subspace Addition. Technical report, 2006.
- [mcpa78] [1624] R. Patterson and J. McClellan. Fixed-point error analysis of Winograd Fourier transform algorithms. *IEEE Trans. Acoustics, Speech and Signal Processing*, 26:447–455, 1978.
- [pa08-1] [1625] J. Pau. Bounded Möbius invariant  $\Pi_k$  spaces. *J. Math. Anal. Appl.*, 338(2):1029–1042, 2008.
- [pa09-7] [1626] J. Pau. Composition operators between Bloch-type spaces and Möbius invariant  $Q_k$  spaces. *Rocky Mountain J. Math.*, 39(6):2051–2065, 2009.
- [pape09] [1627] J. Pau and J. A. Pelaez. Multipliers of Möbius invariant  $q_s$  spaces. *Math. Z.*, 261(3):545–555, 2009.
- [pa07-2] [1628] T. Paul. Discrete-continuous and classical-quantum. *Math. Structures Comput. Sci.*, 17(2):177–183, 2007.
- [kapa93] [1629] A. Paulraj and T. Kailath. Increasing capacity in wireless broadcast Systems using distributed transmission/directional reception (DTDR), Feb. 1993.
- [gonapa03] [1630] A. Paulraj, R. Nabar, and D. Gore. *Introduction to Space-Time Wireless Communications*. Cambridge Univ. Press, Cambridge (UK), 2003.
- [pa11-3] [1631] V. I. Paulsen. Syndetic sets, paving and the Feichtinger conjecture. *Proc. Amer. Math. Soc.*, 139(3):1115–1120, 2011.
- [pa11-4] [1632] E. Pauwels. *Pseudodifferential Operators, Wireless Communications and Sampling Theorems*. PhD thesis, December 2011.
- [pasc11] [1633] M. Pazouki and R. Schaback. Bases for kernel-based spaces. *Journal of Computational and Applied Mathematics*, 236(4):575 – 588, 2011.
- [pe05-1] [1634] R. Pearson. *Mining imperfect data: Dealing with contamination and incomplete records*. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, PA, 2005.
- [pe68] [1635] J. Peetre. On the value of a distribution at a point. *Port. Math.*, 27:149–159, 1968.

- pe73-1 [1636] J. Peetre. The Weyl transform and Laguerre polynomials. pages 301–323, 1973.
- pe83-1 [1637] J. Peetre. Recent progress in real interpolation spaces. In *Methods of functional analysis and theory of elliptic equations, Proc. Int. Meet. dedic. mem. C. Miranda, Naples/Italy 1982*, pages 231–263, 1983.
- pe84-3 [1638] J. Peetre. The theory of interpolation spaces -its origin, prospects for the future. In *Interpolation spaces and allied topics in analysis (Lund, 1983)*, volume 1070 of *Lecture Notes in Math.*, pages 1–9. Springer, 1984.
- pe90 [1639] J. Peetre. Fourier analysis of a space of Hilbert-Schmidt operators — new Ha-plitz type operators. *Publ. Mat., Barc.*, 34(1):181–197, 1990.
- dipe02 [1640] S. Pei and J. Ding. Eigenfunctions of linear canonical transform. *IEEE Trans. Signal Process.*, 50(1):11–26, 2002.
- dipe02-1 [1641] S. Pei and J. Ding. Relations between fractional operations and time-frequency distributions, and their applications. *IEEE Trans. Signal Process.*, 49(8):1638–1655, 2002.
- dipewave10 [1642] S.-C. Pei, P.-W. Wang, J.-J. Ding, and C.-C. Wen. Elimination of the discretization side-effect in the S transform using folded windows. *Signal Processing*, In Press, Corrected Proof:–, 2010.
- peye98 [1643] S.-C. Pei and M.-H. Yeh. Two dimensional discrete fractional Fourier transform. *Signal Processing*, 67(1):99 – 108, May 1998.
- peru80 [1644] A. Peled and A. Ruiz. Frequency domain data transmission using reduced computational complexity algorithms. volume 5, pages 964–967, Denver, CO, April 1980.
- petavi11 [1645] A. Perälä, J. Taskinen, and J. Virtanen. New results and open problems on Toeplitz operators in Bergman spaces. *New York J. Math.*, 17a:147–164, 2011.
- petavi11-1 [1646] A. Perälä, J. Taskinen, and J. Virtanen. Toeplitz operators with distributional symbols on Bergman spaces. *Proc. Edinburgh Math. Soc. (2)*, 54(2):505–514, 2011.

- pe08-3** [1647] D. Percival. Analysis of geophysical time series using discrete wavelet transforms: an overview, 2008.
- pe95-2** [1648] A. Perelomov. On the completeness of some subsystems of  $q$ -deformed coherent states. *Helv. Phys. Acta*, 68(6):554–576, 1995.
- pe08-4** [1649] L. Perez. Embeddings for anisotropic Besov spaces. *Acta Math. Hungar.*, 119(1-2):25–40, 2008.
- pe83-2** [1650] I. Z. Pesenson. Nikol’skij-Besov spaces connected with representations of Lie groups. *Soviet Math. Dokl.*, 28:577–581, 1983.
- mcpero08** [1651] M. Pesenson, W. Roby, and B. McCollum. Multiscale astronomical image processing based on nonlinear partial differential equations. *The Astrophysical Journal*, 683(1):566–576, 2008.
- pe11** [1652] S. Peszat. Lévy-Ornstein-Uhlenbeck transition semigroup as second quantized operator. *J. Funct. Anal.*, 260(12):3457 – 3473, 2011.
- bokapevo01** [1653] T. Petermann, S. Vogeler, K.-D. Kammeyer, and D. Boss. Blind Turbo Channel Estimation in OFDM Receivers. volume 2, pages 1489–1493, Nov. 2001.
- krlope93** [1654] N. Petkov, T. Lourens, and P. Kruzinga. Lateral inhibition in cortical filters. In C. Pattichis, A. Constantinides, V. Cappellini, and C. N. Schizas, editors, *Proc. of Int. Conf. on Digital Signal Processing and Int. Conf. on Computer Applications to Engineering Systems*, page 9, Nicosia, Cyprus, July 14-16.
- pexu08** [1655] P. Petrushev and Y. Xu. Decomposition of spaces of distributions induced by Hermite expansions. *J. Fourier Anal. Appl.*, 14(3):372–414, 2008.
- pe94** [1656] D. Petz. A survey of certain trace inequalities. In *Functional analysis and operator theory (Warsaw, 1992)*, volume 30 of *Banach Center Publ.*, pages 287–298. Polish Acad. Sci., Warsaw, 1994.
- pe08-5** [1657] D. Petz. *Quantum information theory and quantum statistics*. Theoretical and mathematical physics. Springer, 2008.

- pesa10** [1658] N. Peyerimhoff and E. Samiou. Spherical spectral synthesis and two-radius theorems on Damek-Ricci spaces. *Ark. Mat.*, 48(1):131–147, 2010.
- fapest10** [1659] G. Peyre, J. Fadili, and J.-L. Starck. Learning the morphological diversity. *SIAM J. Imaging Sci.*, 3(3):646–669, 2010.
- pfratr11** [1660] G. E. Pfander, H. Rauhut, and J. A. Tropp. The restricted isometry property for time-frequency structured random matrices. *preprint*, 2011.
- piru01** [1661] L. Pick and M. Ruzicka. An example of a space of  $l^{p(x)}$  on which the Hardy-Littlewood maximal operator is not bounded. *Exposition. Math.*, 19(4):369–371, 2001.
- pi08** [1662] V. Pierfelice. Weighted Strichartz estimates for the Schrödinger and wave equations on Damek-Ricci spaces. *Math. Z.*, 260(2):377–392, 2008.
- pi06** [1663] W. Pietruszka. *MATLAB und Simulink in der Ingenieurpraxis: Modellbildung, Berechnung und Simulation, 2. Auflage*. B. G. Teubner Verlag, 2006.
- piravi11** [1664] S. Pilipovic, D. Rakic, and J. Vindas. Tauberian theorems for the wavelet transform. *J. Fourier Anal. Appl.*, 17(1):65–95, 2011.
- pist93** [1665] S. Pilipovic and B. Stankovic. Wiener Tauberian theorems for distributions. *J. Lond. Math. Soc. (2)*, 47(3):507–515, 1993.
- pistvi11** [1666] S. Pilipovic, B. Stankovic, and J. Vindas. *Asymptotic Behavior of Generalized Functions*. Series on Analysis, Applications and Computation 5. Hackensack, 2011.
- piteto10** [1667] S. Pilipovic, N. Teofanov, and J. Toft. Micro-local analysis in Fourier Lebesgue and modulation spaces. II. *J. Pseudo-Differ. Oper. Appl.*, 1(3):341–376, 2010.
- piur09** [1668] E. Pineda and W. Urbina. Some results on Gaussian Besov-Lipschitz spaces and Gaussian Triebel-Lizorkin spaces. *J. Approx. Theory*, 161(2):529–564, 2009.

- mapi04 [1669] C. Pinnegar and L. Mansinha. Time-frequency localization with the Hartley S-transform. *Signal Processing*, 84(12):2437 – 2442, 2004.
- pi83-2 [1670] G. Pisier. Some applications of the metric entropy condition to harmonic analysis. In *Banach spaces, harmonic analysis, and probability theory (Storrs, Conn., 1980/1981)*, volume 995 of *Lecture Notes in Math.*, pages 123–154. Springer, Berlin, 1983.
- plve11 [1671] Y. Plan and R. Vershynin. One-bit compressed sensing by linear programming. *preprint*, 2011.
- plve12 [1672] Y. Plan and R. Vershynin. Robust 1-bit compressed sensing and sparse logistic regression: a convex programming approach. *preprint*, 2012.
- k1p107 [1673] J. Plasberg and W. Kleijn. The sensitivity matrix: Using advanced auditory models in speech and audio processing. *Audio, Speech, and Language Processing, IEEE Transactions on*, 15(1):310–319, 2007.
- gep109 [1674] R. Platte and A. Gelb. A hybrid Fourier-Chebyshev method for partial differential equations. *J. Sci. Comput.*, 39(2):244–264, 2009.
- plscta08 [1675] G. Plonka, H. Schumacher, and M. Tasche. Numerical stability of biorthogonal wavelet transforms. *Adv. Comput. Math.*, 29(1):1–25, 2008.
- plta92 [1676] G. Plonka and M. Tasche. Efficient algorithms for periodic Hermite spline interpolation. *Math. Commun.*, 58(198):693–703, 1992.
- plta94 [1677] G. Plonka and M. Tasche. A unified approach to periodic wavelets. pages 137–151, 1994.
- plta94-1 [1678] G. Plonka and M. Tasche. Cardinal Hermite spline interpolation with shifted nodes. *Math. Commun.*, 63(208):645–659, 1994.
- plta95 [1679] G. Plonka and M. Tasche. On the computation of periodic spline wavelets. *Appl. Comput. Harmon. Anal.*, 2(1):1–14, 1995.
- plta05 [1680] G. Plonka and M. Tasche. Fast and numerically stable algorithms for discrete cosine transforms. *Linear Algebra Appl.*, 394:309–345, 2005.

- isplrote10 [1681] G. Plonka, S. Tenorth, A. Iske, and D. Rosca. Adaptive methods for the efficient approximation of images. page 20, 2010.
- plrote09 [1682] G. Plonka, S. Tenorth, and D. Rosca. Image approximation by a hybrid method based on the Easy Path Wavelet Transform. In *Signals, Systems and Computers, 2009 Conference Record of the Forty-Third Asilomar Conference on*, pages 442–446, nov. 2009.
- pl07 [1683] P. Pluch. Quantum mechanics: Bell and quantum entropy for the classroom. *Submitted on 10 Jan 2007*, page 10, 2007.
- abldap106 [1684] M. Plumbley, S. A. Abdallah, T. Blumensath, and M. Davies. Sparse representations of polyphonic music. *Signal Processing*, 86(3):417–431, 2006.
- bichcrpo09 [1685] T. Pock, D. Cremers, H. Bischof, and A. Chambolle. An algorithm for minimizing the Mumford-Shah functional. In *ICCV Proceedings*. Springer, 2009.
- po92-1 [1686] D. Poguntke. Rigidly symmetric  $L^1$ -group algebras. *Sem. Sophus Lie*, 2(2):189–197, 1992.
- po94-3 [1687] D. Poguntke. Unitary representations of Lie groups and operators of finite rank. *Ann. of Math. (2)*, 140(3):503–556, 1994.
- mapo10 [1688] K.-K. Poh and P. Marzillano. Compressive sampling of EEG signals with finite rate of innovation. *EURASIP J. Adv. Signal Process.*, 2010:1–12, 2010.
- brdahujapo09 [1689] G. Polatkan, S. Jafarpour, A. Brasoveanu, S. Hughes, and I. Daubechies. Detection of forgery in paintings using supervised learning. In *Image Processing (ICIP), 2009 16th IEEE International Conference on*, pages 2921–2924, Cairo, 7-10 Nov. 2009, nov. 2009.
- po53-1 [1690] H. Pollard. The harmonic analysis of bounded functions. *Duke Math. J.*, 20:499–512, 1953.
- po27 [1691] S. Pollard. On the approximation of an arbitrary bounded function. *Journal L. M. S.*, 2:222–227, 1927.

- [po01-2] [1692] L. Polterovich. *The Geometry of the Group of Symplectic Diffeomorphisms*. r Lectures in Mathematics, ETH Zürich. Basel: Birkhäuser. xii, 2001.
- [po83-1] [1693] S. Poornima. An embedding theorem for the Sobolev space  $w^{(1,1)}$ . *Bull. Sci. Math. (2)*, 107:253–259, 1983.
- [porasi98] [1694] Z. Pop Stojanovic, M. Rao, and H. Sikic. Brownian potentials and Besov spaces. *J. Math. Soc. Japan*, 50(2):331–337, 1998.
- [po03-3] [1695] D. Popov. Gazeau-Klauder quasi-coherent states for the Morse oscillator. *Phys. Lett. A*, 316(6):369–381, 2003.
- [ceerpapo10] [1696] L. Potter, E. Ertin, J. Parker, and M. Cetin. Sparsity and compressed sensing in radar imaging,. *Proc. IEEE*, 98(6):1006 –1020, 2010.
- [pota10] [1697] D. Potts and M. Tasche. Parameter estimation for exponential sums by approximate prony method. *Signal Process.*, 90(5):1631–1642, 2010.
- [kupr10] [1698] A. Prasad and M. Kumar. Continuity of pseudo-differential operator  $h_{\mu,a}$  involving Hankel translation and Hankel convolution on some Gevrey spaces. *Integral Transforms Spec. Funct.*, 21(5-6):465–477, 2010.
- [kupr11] [1699] A. Prasad and M. Kumar. Product of two generalized pseudo-differential operators involving fractional Fourier transform. *J. Pseudo-Differ. Oper. Appl.*, 2(3):355–365, 2011.
- [prrasp12] [1700] D. Pravica, N. Randriampiry, and M. Spurr. Reproducing kernel bounds for an advanced wavelet frame via the theta function. *Appl. Comput. Harmon. Anal.*, 33(1):79 – 108, 2012.
- [puwo77] [1701] W. Pusz and S. Woronowicz. Form convex functions and the WYDL and other inequalities. *Lett. Math. Phys.*, 2(6):505–512, 1977/78.
- [py74] [1702] T. Pytlik. Nuclear spaces on a locally compact group. *Studia Math.*, 50:225–243, 1974.
- [py82] [1703] T. Pytlik. Symbolic calculus on weighted group algebras. *Studia Math.*, 73(2):169–176, 1982.

- [py84] [1704] T. Pytlik. A construction of convolution operators on free groups. *Studia Math.*, 79(1):73–76, 1984.
- [chdoqi02] [1705] B. Qi, H. Chen, and N. Dong. Wavefront fitting of interferograms with Zernike polynomials. *Opt. Eng.*, 41(7):1565–1569, 2002.
- [chdomaqi04] [1706] B. Qi, H. Chen, J. Ma, and N. Dong. Regression analysis for wavefront fitting with Zernike polynomials. In B. Qi, H. Chen, J. Ma, and H. P. Stahl, editors, *Proc. SPIE, Optical Manufacturing and Testing V*, volume 5180 of *Optical Testing VII: Algorithms and Interferometers*, pages 429–436, San Diego, CA, USA, 2004. SPIE.
- [qi05] [1707] T. Qian. Characterization of boundary values of functions in Hardy spaces with applications in signal analysis. *J. Integral Equations Appl.*, 17(2):159–198, 2005.
- [qi06] [1708] T. Qian. Analytic signals and harmonic measures. *J. Math. Anal. Appl.*, 314(2):526–536, 2006.
- [qixuyayayu09] [1709] T. Qian, Y. Xu, D. Yan, L. Yan, and B. Yu. Fourier spectrum characterization of Hardy spaces and applications. *Proc. Amer. Math. Soc.*, 137(3):971–980, 2009.
- [qisu07-1] [1710] X. Qin and Y. Su. Approximation of a zero point of accretive operator in Banach spaces. *J. Math. Anal. Appl.*, 329(1):415–424, 2007.
- [qu02] [1711] C. Quesne. New  $q$ -deformed coherent states with an explicitly known resolution of unity. *J. Phys. A, Math. Gen.*, 35(43):9213–9226, 2002.
- [moqu71-1] [1712] C. Quesne and M. Moshinsky. Canonical transformations and matrix elements. *Journal of Mathematical Physics*, 12:1780, 1971.
- [qu95] [1713] B. Quinn. Doppler speed and range estimation using frequency and amplitude estimates. *The Journal of the Acoustical Society of America*, 98(5):2560–2566, 1995.
- [quXX] [1714] F. Quinn. Contributions to a science of contemporary mathematics. *preprint*.
- [qura05] [1715] J. Quinonero Candela and C. Rasmussen. A Unifying View of Sparse Approximate Gaussian Process Regression. *J. Machine Learn. Res.*, 6:1939–1959, Dec. 2005.

- ratr03** [1716] L. Rachdi and K. Trimèche. Weyl transforms associated with the spherical mean operator. *Anal. Appl. (Singap.)*, 1(2):141–164, 2003.
- ra07-5** [1717] G. Rancher. Some remarks on a paper by Liu and van Rooij. *Indag. Math., New Ser.*, 18(4):601–609, 2007.
- rasc46** [1718] H. Rademacher and I. Schoenberg. An iteration method for calculation with Laurent series. *Q. Appl. Math.*, 4:142–159, 1946.
- nara10** [1719] R. Radha and D. Naidu. Frames in generalized Fock spaces. *J. Math. Anal. Appl.*, In Press, Corrected Proof:–, 2010.
- nara11** [1720] R. Radha and D. Naidu. Frames in generalized Fock spaces. *J. Math. Anal. Appl.*, 378(1):140–150, 2011.
- rave11** [1721] R. Radha and D. Venku Naidu. Generalized Bargmann transform and a group representation. *Bull. Sci. Math.*, 135(2):206–214, 2011.
- ra94-1** [1722] C. Radin. The pinwheel tilings of the plane. *Ann. of Math. (2)*, 139(3):661–702, 1994.
- ra77** [1723] I. Raeburn. The relationship between a commutative Banach algebra and its maximal ideal space. *J. Funct. Anal.*, 25(4):366–390, 1977.
- harasa07** [1724] V. Raghavan, G. Hariharan, and A. Sayeed. Capacity of sparse multipath channels in the ultra-wideband regime. *IEEE J. Sel. Areas Comm.*, 1:357–371, Oct. 2007.
- ra00** [1725] R. Raimondo. Toeplitz operators on the Bergman space of the unit ball. *Bull. Austral. Math. Soc.*, 62(2):273–285, 2000.
- cira98** [1726] G. Raleigh and J. Cioffi. Spatio-temporal coding for wireless communication. *IEEE Trans. Comm.*, 46:357–366, Mar. 1998.
- heorraxi97** [1727] K. Ramchandran, Z. Xiong, C. Herley, and M. Orchard. Flexible Tree-structured Signal Expansions Using Time-varying Wavelet Packets. *IEEE Trans. Signal Process.*, 45:233–245, 1997.
- ra10-1** [1728] R. Ramlau. An SVD based wavefront reconstruction for adaptive optics. In T. E. Simos, G. Psihoyios, and C. Tsitouras, editors, *AIP Conference Proceedings, ICNAAM 2010: International Conference of Numerical Analysis and Applied Mathematics 2010, 1925 September 2010, Rhodes (Greece)*, volume 1281, pages 1982–1982. AIP, 2010.

- rate10** [1729] R. Ramlau and G. Teschke. Sparse recovery in inverse problems. In *Theoretical foundations and numerical methods for sparse recovery*, volume 9 of *Radon Ser. Comput. Appl. Math.*, pages 201–262. Walter de Gruyter, Berlin, 2010.
- anravi11** [1730] E. P. R. G. Ramos, R. Vio, and P. Andreani. Detection of new point sources in WMAP cosmic microwave background maps at high Galactic latitude. A new technique to extract point sources from CMB maps. *aap*, 528:A75, apr 2011.
- rashzhzh09** [1731] Q. Ran, H. Zhang, Z. Zhang, and X. Sha. The analysis of the discrete fractional Fourier transform algorithms. In *Electrical and Computer Engineering, 2009. CCECE'09. Canadian Conference on*, pages 979–982, 2009.
- راسي06** [1732] M. Rao and H. Sikic. Potential-theoretic nature of Hardy’s inequality for Dirichlet forms. *J. Math. Anal. Appl.*, 318(2):781–786, 2006.
- راسوسي94** [1733] M. Rao, H. Šikic, and R. Song. Application of Carleson’s theorem to wavelet inversion. *Control Cybern.*, 23(4):761–771, 1994.
- راسيسو94** [1734] M. Rao, H. Sikic, and R. Song. Application of Carleson’s theorem to wavelet inversion. *Control Cybern.*, 23(4):761–771, 1994.
- را01** [1735] C. Raphael. Automated rhythm transcription. In *Proceedings of the International Symposium on Music Information Retrieval*, pages 99–107, 2001.
- را11** [1736] K. N. Rasmussen. Orthonormal bases for anisotropic  $\alpha$ -modulation spaces. page 15, 2011.
- nira10-1** [1737] K. N. Rasmussen and M. Nielsen. Compactly supported curvelet type systems. page 18, 2010.
- nira11** [1738] K. N. Rasmussen and M. Nielsen. Compactly supported frames for decomposition spaces. page 32, 2011.
- rawa11** [1739] H. Rauhut and R. Ward. Sparse recovery for spherical harmonic expansions. In *Proc. SampTA 2011, Singapore*, 2011.
- راسا10** [1740] S. K. Ray and R. P. Sarkar. A theorem of Beurling and Hörmander on Damek-Ricci spaces. *Adv. Pure Appl. Math.*, 1(1):65–79, 2010.

- dura06** [1741] V. Raykar and R. Duraiswami. Fast optimal bandwidth selection for kernel density estimation. In *Proceedings of the Sixth SIAM International Conference on Data Mining*, pages 524–528, Philadelphia, PA, 2006. SIAM.
- re85-1** [1742] J. Reade. On the sharpness of Weyl’s estimate for eigenvalues of smooth kernels. *SIAM J. Math. Anal.*, 16(3):548–550, May 1985.
- re09-1** [1743] L. Rebollo Neira. Measurements design and phenomena discrimination. *Journal of Physics A: Mathematical and Theoretical*, 42:165210, 2009.
- biboreti06** [1744] F. Reichenbach, A. Born, D. Timmermann, and R. Bill. A distributed linear least squares method for precise localization with low complexity in wireless sensor networks. In F. Reichenbach, A. Born, D. Timmermann, R. Bill, P. Gibbons, T. Abdelzaher, J. Aspnes, and R. Rao, editors, *Distributed Computing in Sensor Systems*, volume 4026 of *Lecture Notes in Computer Science*, pages 514–528. Springer Berlin / Heidelberg, 2006.
- re70** [1745] C. Reid. *Hilbert*. Springer, 1970.
- re96-1** [1746] C. Reid. *Hilbert. 2nd ed.* New York, NY: Copernicus, 1996.
- re09** [1747] H. Reimann. Uncertainty principles for the affine group. *Funct. Approx. Comment. Math.*, 40(part 1):45–67, 2009.
- mare09-1** [1748] G. Reise and G. Matz. Distributed sampling and reconstruction of non-bandlimited fields in sensor networks based on shift-invariant spaces. In *IEEE Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 2061–2064, Taipei, Taiwan, April 2009.
- mare10** [1749] G. Reise and G. Matz. Reconstruction of time-varying fields in wireless sensor networks using shift-invariant spaces: Iterative algorithms and impact of sensor localization errors. In *IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, Marrakech, Morocco, June 2010.
- re87** [1750] H. Reiter. Sur le groupe metaplectique et l’algebre de Segal associee. (On the metaplectic group and the associated Segal algebra). *C. R. Acad. Sci., Paris, Sér. I*, 305:241–243, 1987.

- digimorete03** [1751] S. Restaino, S. Teare, M. DiVittorio, G. Gilbreath, and D. Mozurkewich. Analysis of the Naval Observatory Flagstaff Station 1-m telescope using annular Zernike polynomials. *Opt. Eng.*, 42(9):2491–2495, 2003.
- re75** [1752] J. Retherford. Applications of Banach ideals of operators. *Bull. Amer. Math. Soc.*, 81:978–1012, 1975.
- resa08** [1753] S. G. Révész and A. San Antolin. Equivalence of  $A$ -approximate continuity for self-adjoint expansive linear maps. *Linear Algebra and Appl.*, 429(7):1504–1521, October 2008.
- bagogrrerhtyvo02** [1754] T. Rhoadarmer, J. Barchers, J. Gonglewski, M. Vorontsov, M. Gruneisen, S. Restaino, and R. Tyson. Noise analysis for complex field estimation using a self-referencing interferometer wave front sensor. In T. A. Rhoadarmer, J. D. Barchers, M. A. Vorontsov, M. T. Gruneisen, S. R. Restaino, and R. K. Tyson, editors, *Proc. SPIE, High-Resolution Wavefront Control: Methods, Devices, and Applications IV; Wavefront Sensing*, volume 4825, pages 215–227, Seattle, WA, USA, July 2002. SPIE.
- herhsh09** [1755] W. T. Rhodes, J. J. Healy, and J. Sheridan. Wigner cross-terms in sampled and other periodic signals. In *Frontiers in Optics*, page FWW1, 2009.
- herhsh10** [1756] W. T. Rhodes, J. J. Healy, and J. Sheridan. Cross terms of the Wigner distribution function and aliasing in numerical simulations of paraxial optical systems. *Opt. Lett.*, 35(8):1142–1144, 2010.
- ri90-2** [1757] M. Richards. A functional minimization interpretation of fast iterative reconstruction algorithms. In *Proc. of the ICASSP-90 - 1990 International Conference on Acoustics, Speech, and Signal Processing*, volume 3, pages 1543–1546. IEEE, apr 1990.
- bakrriwa11** [1758] G. Rieckh, W. Kreuzer, H. Waubke, and P. Balazs. A 2.5D-Fourier-BEM-model for vibrations in a tunnel running through layered anisotropic soil. *Engineering Analysis with Boundary Elements*, to appear:–, 2011.
- pori11** [1759] E. Rieffel and W. Polak. *Quantum Computing: A Gentle Introduction*. MIT Press, 2011.

- ri76-1** [1760] M. A. Rieffel. Commutation theorems and generalized commutation relations. *Bull. Soc. Math. France*, 104(2):205–224, 1976.
- ri99** [1761] M. A. Rieffel. Metrics on state spaces. *Doc. Math.*, 4:559–600 (electronic), 1999.
- ri01-1** [1762] M. A. Rieffel. Matrix algebras converge to the sphere for quantum Gromov–Hausdorff distance. *Arxiv preprint math/0108005*, 2001.
- ri04-3** [1763] M. A. Rieffel. *Gromov-Hausdorff Distance for Quantum Metric Spaces Matrix algebras Converge to the Sphere for Quantum Gromov-Hausdorff Distance*. American Mathematical Society, Providence, RI, 2004.
- ri10-1** [1764] M. A. Rieffel. Distances between matrix algebras that converge to coadjoint orbits. In *Superstrings, geometry, topology, and  $C^*$ -algebras*, volume 81 of *Proc. Sympos. Pure Math.*, pages 173–180. Amer. Math. Soc., Providence, RI, 2010.
- ri10-2** [1765] M. A. Rieffel. Vector bundles and Gromov Hausdorff distance. *J. K-Theory*, 5(1):39–103, 2010.
- ri03** [1766] P. Riera. Computation of the circle polynomials of Zernike. In P. R. Riera, J. D. Gonglewski, M. A. Vorontsov, and M. T. Gruneisen, editors, *Proc. SPIE, Advanced Wavefront Control: Methods, Devices, and Applications*, volume 5162 of *Wavefront Sensing and Analysis II*, pages 120–128, San Diego, CA, USA, 2003. SPIE.
- parito02** [1767] P. Riera, G. Pankretz, and D. M. Topa. Efficient computation with special functions like the circle polynomials of Zernike. In P. R. Riera, G. S. Pankretz, D. M. Topa, and R. C. Juergens, editors, *Proc. SPIE, Optical Design and Analysis Software II*, volume 4769, pages 130–144, Seattle, WA, USA, 2002. SPIE.
- ri95** [1768] E. Rio. A maximal inequality and dependent Marcinkiewicz-Zygmund strong laws. *The Annals of Probability*, 23(2):918–937, 1995.
- brrri03** [1769] C. Rivero Moreno and S. Bres. Conditions of similarity between Hermite and Gabor filters as models of the human visual system. In Nicolai Petkov and Michel A. Westenberg, editors, *CAIP 2003, Proc.*

*Computer analysis of images and patterns, 10th International Conference*, volume 2756 of *Lecture Notes in Comput. Sci.*, pages 762–769, Groningen, The Netherlands, August 25-27, 2003. Springer.

- brrri04** [1770] C. Rivero Moreno and S. Bres. Texture feature extraction and indexing by Hermite filters. In *Pattern Recognition, 2004. ICPR 2004. Proceedings of the 17th International Conference on*, volume 1, pages 684 – 687, aug. 2004.
- evro01** [1771] S. Roberts and R. Everson. *Independent Component Analysis Principles and Practice*. Cambridge University Press, 2001.
- famiro09** [1772] D. Robinson, S. Farsiu, and P. Milanfar. Optimal registration of aliased images using variable projection with applications to super-resolution. *The Computer Journal*, 52(1):31–42, 2009.
- rosasi11** [1773] S. Roch, P. Santos, and B. Silbermann. *Non-commutative Gelfand Theories. A Tool-kit for Operator Theorists and Numerical Analysts*. Springer, 2011.
- rosiwawawe11** [1774] L. Rockstroh, S. Wahl, Z. Wang, P. Werner, and S. Simon. AN IMAGE FILTER TECHNIQUE TO RELAX PARTICLE IMAGE VELOCIMETRY. 2011.
- alcaro09** [1775] J. Rodrigo, T. Alieva, and M. Calvo. Programmable two-dimensional optical fractional Fourier processor. *Opt. Express*, 17(7):4976–4983, Mar 2009.
- rote11** [1776] J. Rodrigues and R. Teymurazyan. On the two obstacles problem in OrliczSobolev spaces and applications. *Complex Variables and Elliptic Equations*, 56(7-9):769–787, 2011.
- krroruwe10** [1777] M. Rodriguez Florido, K. Krissian, J. Ruiz Alzola, and C. Westin. Comparison of two restoration techniques in the context of 3D medical imaging. In *Medical Image Computing and Computer-Assisted Intervention–MICCAI 2001*, pages 1031–1039, 2010.
- rozu10BB** [1778] J. Rodriguez Vega and W. Zuniga Galindo. Elliptic pseudodifferential equations and Sobolev spaces over  $p$ -adic fields. *Pacific J. Math.*, 246(2):407–420, 2010.

- [ro07-1] [1779] F. Rodriguez Villegas. *Experimental number theory*. Oxford University Press, 2007.
- [ro05-2] [1780] J. Roe. Band-dominated Fredholm operators on discrete groups. *Integr. Equ. Oper. Theory*, 51(3):411–416, 2005.
- [bebrdiro10] [1781] Y. Rogovchenko, L. Berezansky, E. Braverman, and J. Diblik. Recent advances in oscillation theory. 2010:634238(3), 2010.
- [ro00-1] [1782] J. Rohn. Computing the norm  $\|A\|_{\infty,1}$  is NP-hard. *Linear and Multilinear Algebra*, 47(3):195–204, 2000.
- [haro06] [1783] P. Rojo and J. Harrington. A method to remove fringes from images using wavelets. *The Astrophysical Journal*, 649(1):553, 2006.
- [rosusz08] [1784] A. Rokob, A. Szabados, and P. Surjan. A Note on the Symmetry Properties of Löwdin’s Orthogonalization Schemes. *Collection of Czechoslovak Chemical Communications*, 73(6-7):937–944, 2008.
- [duroth10] [1785] J. Rolland, C. Dunn, and K. Thompson. An analytic expression for the field dependence of FRINGE Zernike polynomial coefficients in rotationally symmetric optical systems. In J. P. Rolland, C. Dunn, K. P. Thompson, C. E. Towers, J. Schmit, and K. Creath, editors, *Proc. SPIE, Interferometry XV: Techniques and Analysis*, volume 7790 of *Optical Surface Testing*, page 77900M(11), San Diego, California, USA, 2010. SPIE.
- [jalememuparoth08] [1786] J. Rolland, P. Meemon, S. Murali, A. Jain, N. Papp, K. Thompson, and K.-S. Lee. Gabor domain optical coherence microscopy. In *Proc. SPIE, 1st Canterbury Workshop on Optical Coherence Tomography and Adaptive Optics*, volume 7139 of *OCT Microscopy*, page 9, 2008.
- [kalememuparoth09] [1787] J. Rolland, P. Meemon, S. Murali, I. Kaya, N. Papp, K. Thompson, and K.-S. Lee. Gabor domain optical coherence microscopy. In *Optical Coherence Tomography and Coherence Techniques IV*, volume 7372 of *Novel OCT Technology*, page 7, Munich, Germany, 2009.
- [ro08-2] [1788] S. Roman. *Advanced Linear Algebra 3rd ed.* Graduate Texts in Mathematics 135. New York, NY: Springer. xviii, 2008.

- [ro03-2] [1789] G. Rombouts. *Adaptive filtering algorithms for acoustic echo and noise cancellation*. PhD thesis, 2003.
- [ro12] [1790] J. L. Romero. Characterization of coorbit spaces with phase-space covers. *J. Funct. Anal.*, 262(1):59–93, 2012.
- [ro97-2] [1791] S. Rosenberg. *The Laplacian on a Riemannian manifold: an introduction to analysis on manifolds*. London Mathematical Society student texts. Cambridge University Press, 1997.
- [bero98-1] [1792] J. Rosenblatt and S. Bell. *Mathematical Analysis for Modeling*. CRC Mathematical Modeling Series. Boca Raton, FL: CRC Press. 860 p., 1998.
- [roro97] [1793] M. Rosenblum and J. Rovnyak. *Hardy Classes and Operator theory*. Dover Publications Inc., Mineola, NY, 1997.
- [ro98-1] [1794] M. Rossini. 2D-discontinuity detection from scattered data. *Computing*, 61(3):215–234, 1998.
- [firo08] [1795] V. Roth and B. Fischer. The group-lasso for generalized linear models: uniqueness of solutions and efficient algorithms. In *Proceedings of the 25th international conference on Machine learning*, pages 848–855, 2008.
- [chnyro02] [1796] E. Rothwell, K. Chen, and D. Nyquist. An adaptive-window-width short-time Fourier transform for visualization of radar target substructure resonances. *Antennas and Propagation, IEEE Transactions on*, 46(9):1393–1395, 2002.
- [rova99] [1797] P. Rousseeuw and D. Van. A fast algorithm for the minimum covariance determinant estimator. *Technometrics*, 41(3):212–223, 1999.
- [ro03-3] [1798] F. Rouviere. Damek-Ricci spaces: Geometry and analysis (Espaces de Damek-Ricci, geometrie et analyse). In *Analysis on Lie groups and representation theory. Proceedings of the summer school. Kenitra, France, 1999*, volume 7, pages 45–100. Paris: Société Mathématique de France, 2003.
- [rosa00] [1799] S. Roweis and L. Saul. Nonlinear dimensionality reduction by locally linear embedding. *Science*, 290(5500):2323, 2000.

- rusi83** [1800] L. A. Rubel and A. Siskakis. A net of exponentials converging to a nonmeasurable function. *Amer. Math. Monthly*, 90:394–396, 1983.
- ruti79** [1801] L. A. Rubel and R. M. Timoney. An extremal property of the Bloch space. *Proc. Amer. Math. Soc.*, 75(1):45–49, 1979.
- klru95** [1802] A. Rubin and J. R. Klauder. The comparative roles of connected and disconnected trajectories in the evaluation of the semiclassical coherent-state propagator. *Annals of Physics*, 241(1):212–234, 1995.
- elruzi10** [1803] R. Rubinstein, M. Zibulevsky, and M. Elad. Double sparsity: learning sparse dictionaries for sparse signal approximation. *IEEE Trans. Signal Process.*, 58(3, part 2):1553–1564, 2010.
- guruto00** [1804] Y. Rubner, C. Tomasi, and L. Guibas. The Earth mover’s distance as a metric for image retrieval. *Int. J. Comput. Vis.*, 40(2):99–121, 2000.
- ruve06** [1805] M. Rudelson and R. Vershynin. Analysis of orthogonal matching pursuit using the restricted isometry property. pages 207–212, Princeton, NJ, Mar. 2006.
- ruve10-1** [1806] M. Rudelson and R. Vershynin. Non-asymptotic theory of random matrices: extreme singular values. In *Proceedings of the International Congress of Mathematicians*, volume III, pages 1576–1602. Hindustan Book Agency, 2010.
- ru88** [1807] K. Rudol. Atomic-type decompositions in the Segal-Bargmann space. *Proc. Roy. Irish Acad. Sect. A*, 88:85–90, 1988.
- ru11** [1808] K. Rudol. Matrices related to some Fock space operators. *Opuscula Math.*, 31(2):289–296, 2011.
- ru11-1** [1809] M. Rumin. An entropic uncertainty principle for positive operator valued measures. *Letters in Mathematical Physics*, pages 1–18, 2011.
- ruto10** [1810] J. Ruoff and M. Totzeck. Using orientation Zernike polynomials to predict the imaging performance of optical systems with birefringent and partly polarizing components. In J. Ruoff, M. Totzeck, J. Bentley, A. Gupta, and R. N. Youngworth, editors, *Proc. SPIE, International Optical Design Conference 2010*, volume 7652 of *Polarization in Optical Design*, page 76521T(14), Jackson Hole, WY, USA, 2010. SPIE.

- ru02-1** [1811] M. Ruskai. Inequalities for quantum entropy: a review with conditions for equality. *J. Math. Phys.*, 43(9):4358–4375, 2002.
- ru05-1** [1812] M. Ruskai. Erratum: “Inequalities for quantum entropy: a review with conditions for equality”. *J. Math. Phys.*, 46(1):019901, 1, 2005.
- rusm10** [1813] M. Ruzhansky and J. Smith. *Dispersive and Strichartz Estimates for Hyperbolic Equations with Constant Coefficients*. Mathematical Society of Japan, Volume 22 edition, 2010.
- rusu06-2** [1814] M. Ruzhansky and M. Sugimoto. Global boundedness theorems for Fourier integral operators associated with canonical transformations. Miyachi, Akihiko (ed.) et al., Harmonic analysis and its applications. Proceedings of the international conference on harmonic analysis and its applications, Osaka, Japan, November 15–17, 2004. Yokohama: Yokohama Publishers. 65-75 (2006)., 2006.
- rusutoto11** [1815] M. Ruzhansky, M. Sugimoto, J. Toft, and N. Tomita. Changes of variables in modulation and Wiener amalgam spaces. *Math. Nachr.*, 284(16):2078–2092, 2011.
- ruwi11** [1816] M. Ruzhansky and J. Wirth. *Modern Aspects of The Theory of Partial Differential Equations (to Appear)*. Operator Theory: Advances and Applications 216. Basel: Birkhäuser. 400 p., 2011.
- ry80** [1817] C. Ryavec. The Poisson summation formula. *Aequationes Math.*, 21:246–250, 1980.
- klparyvi08** [1818] M. Ryyanen, T. Virtanen, J. Paulus, and A. Klapuri. Accompaniment separation and karaoke application based on automatic melody transcription. In *Proc. Multimedia and Expo, 2008 IEEE International Conference on*, pages 1417 –1420, Hannover, 23 2008-april 26 2008.
- abdeelhasa08** [1819] E. Saad, M. Hadhoud, M. Dessouky, M. Elhalawany, and A. Abbas. Fusion of Zernike moments and Fourier-Mellin transform for invariant image resolution. *Opt. Eng.*, 47(1):017002 (12 pages), January 2008.
- sava00** [1820] Y. Saad and d. van. Iterative solution of linear systems in the 20th century. *J. Comput. Appl. Math.*, 123(1-2):1–33, 2000.

- [saul96] [1821] M. Sacchi and T. Ulrych. Estimation of the discrete Fourier transform—A linear inversion approach. *Geophys. J. Internat.*, 61(4):1128–1136, 1996.
- [kasa04-1] [1822] A. Safapur and R. Kamyabigol. A NECESSARY CONDITION FOR WEYL-HEISENBERG FRAMES. *Bull. Iranian Math. Soc.*, 30(2):13, 2004.
- [sa03-3] [1823] B. Sagir. Multipliers and tensor products of vector valued  $L^p(G, A)$  spaces. *Taiwanese J. Math.*, 7(3):493–501, 2003.
- [sasowo88] [1824] P. Sahoo, S. Soltani, and A. Wong. A survey of thresholding techniques\* 1. *Computer vision, graphics, and image processing*, 41(2):233–260, 1988.
- [sa88] [1825] K. Saka. Besov spaces on Riemannian manifolds and its application to  $l_p - l_q$  estimates for wave equations. *Mem. Coll. Educ., Akita Univ., Nat. Sci.*, 39:81–86, 1988.
- [sa95] [1826] K. Saka. The trace theorem for Triebel-Lizorkin spaces and Besov spaces on certain fractal sets. I: The restriction theorem. *Mem. Coll. Educ., Akita Univ., Nat. Sci.*, 48:1–17, 1995.
- [sa96-1] [1827] K. Saka. The trace theorem for Triebel-Lizorkin spaces and Besov spaces on certain fractal sets. II: The extension theorem. *Mem. Coll. Educ., Akita Univ., Nat. Sci.*, 49:1–27, 1996.
- [sa11] [1828] K. Saka. A new generalization of Besov-type and Triebel-Lizorkin-type spaces and wavelets. *Hokkaido Math. J.*, 40(1):111–147, 2011.
- [sa94-1] [1829] H. Sakai. Recursive least-squares algorithms of modified Gram-Schmidt type for parallel weight extraction. *IEEE Trans. Signal Process.*, 42(2):429–433, 1994.
- [sase09] [1830] E. Saksman and K. Seip. Integral means and boundary limits of Dirichlet series. *Bull. Lond. Math. Soc.*, 41(3):411–422, 2009.
- [armisa09] [1831] R. Sakuma, T. Miyake, and F. Aryasetiawan. Effective quasiparticle Hamiltonian based on Löwdins orthogonalization. *Physical Review B*, 80(23):235128, 2009.

- [sa63] [1832] R. Salem. *Algebraic Numbers and Fourier Analysis*. Boston: D. C. Heath and Company. 66 p., 1963.
- [sa11-1] [1833] S. Samko. Weighted estimates of truncated potential kernels in the variable exponent setting. *Complex Variables and Elliptic Equations*, 56(7-9):813–828, 2011.
- [sa93] [1834] C. Samuel. Bounded approximate identities in the algebra of compact operators on a Banach space. *Proceedings of the American Mathematical Society*, 117(4):1093–1096, 1993.
- [sa09-2] [1835] A. San Antolin. Characterization of low pass filters in a multiresolution analysis. 190(2):99–116, 2009.
- [sasa05] [1836] C. Sanchez Avila and R. Sanchez Reillo. Two different approaches for iris recognition using Gabor filters and multiscale zero-crossing representation. *Pattern Recognition*, 38(2):231 – 240, 2005.
- [ackosa11-1] [1837] K. Saneva, R. Aceska, and S. Kostadinova. Quasi-asymptotic analysis in modulation spaces. 2011.
- [acsa11] [1838] K. Saneva, R. Aceska, and S. Kostadinova. Quasi-asymptotic analysis in modulation spacesES. 2011.
- [ackosa12] [1839] K. Saneva, R. Aceska, and S. Kostadinova. S-asymptotic behavior of ultradistributions and the STFT. 2012.
- [deghsa04] [1840] S. Sanyal, A. Ghosh, and K. Dey. Fractional Fourier transform in optics - a new perspective. *Optik - International Journal for Light and Electron Optics*, 115(2):77 – 85, 2004.
- [sa75-1] [1841] D. Sarason. Functions of vanishing mean oscillation. *Trans. Amer. Math. Soc.*, 207:391–405, 1975.
- [duecsasaye07] [1842] Z. Sara, S. Yerdelen, A. Dursun, H. Sara, and F. N. Ecevit. Processing of thermal lens fringes by S-transform. *Optics Communications*, 271(2):349 – 352, 2007.
- [depusa06] [1843] C. Sastry, A. Pujari, and B. Deekshatulu. A Fourier-radial descriptor algorithm for invariant feature extraction. *Int. J. Wavelets Multiresolut. Inf. Process.*, 4(1):197–212, 2006.

- alsas87** [1844] K. Sauer and J. P. Allebach. Iterative reconstruction of bandlimited images from nonuniformly spaced samples. *Circuits and Systems, IEEE Transactions on*, 34(12):1497–1506, 1987.
- rosa04** [1845] L. Saul and S. Roweis. Think globally, fit locally: unsupervised learning of low dimensional manifolds. *J. Mach. Learn. Res.*, 4(2):119–155, 2004.
- sata09** [1846] Y. Sawano and H. Tanaka. Besov-Morrey spaces and Triebel-Lizorkin-Morrey spaces for nondoubling measures. *Math. Nachr.*, 282(12):1788–1810, 2009.
- sata09-1** [1847] Y. Sawano and H. Tanaka. Predual spaces of Morrey spaces with non-doubling measures. *Tokyo J. Math.*, 32(2):471–486, 2009.
- sasi05** [1848] R. Saxena and K. Singh. Fractional Fourier transform: A novel tool for signal processing. *J. Indian Inst. Sci.*, 85:11–26, 2005.
- sbvave08** [1849] L. Sbaiz, P. Vandewalle, and M. Vetterli. Groebner basis methods for multichannel sampling with unknown offsets. *Appl. Comput. Harmon. Anal.*, 25(3):277–294, November 2008.
- bagisc99** [1850] A. Scaglione, G. Giannakis, and S. Barbarossa. Redundant filterbank precoders and equalizers, Parts I and II. *IEEE Trans. Signal Process.*, pages 1988–2006, and 2007–2022, Jul. 1999.
- hlmasc03** [1851] D. Schafhuber, G. Matz, and F. Hlawatsch. Kalman tracking of time-varying channels in wireless MIMO-OFDM systems. volume 2, pages 1261–1265, Pacific Grove, CA, Nov. 2003.
- sc11-3** [1852] O. Scherzer. *Image Restoration and Analysis*. Springer, 2011.
- sc11-2** [1853] O. Scherzer. *Inverse Problems - Case Examples*. Springer, 2011.
- anchdiscwa07** [1854] J. Schiff, D. Antonelli, A. Dimakis, D. Chu, and M. Wainwright. Robust message-passing for statistical inference in sensor networks. In *Proceedings of the 6th international conference on Information processing in sensor networks*, pages 109–118, 2007.
- scsovo10** [1855] R. Schilling, R. Song, and Z. Vondracek. *Bernstein Functions. Theory and Applications*. de Gruyter Studies in Mathematics 37. Berlin: Walter de Gruyter. xii, 313 p., 2010.

- [scwe09] [1856] F. Schipp and F. Weisz. Multi-dimensional discrete summability. *Acta Math. Sci.*, 75(1-2):219–231, 2009.
- [sc11-1] [1857] L. Schlaffer. PISA-Studie versus Realität Schule. Master’s thesis, University of Vienna, 2011.
- [sc90-2] [1858] J. Schmeelk. A guided tour of new tempered distributions. *Foundations of Physics Letters*, 3(5):403–423, 1990.
- [mosc09] [1859] A. Schmidt and J. Moura. Field inversion by consensus and compressed sensing. In *Acoustics, Speech and Signal Processing, 2009. ICASSP 2009. IEEE International Conference on*, pages 2417–2420, 2009.
- [mosc10] [1860] A. Schmidt and J. Moura. A distributed sensor fusion algorithm for the inversion of sparse fields. In *Signals, Systems and Computers, 2009 Conference Record of the Forty-Third Asilomar Conference on*, pages 1332–1336, 2010.
- [sc10-4] [1861] J. Schmidt. *Numerical Simulation of Optical Wave Propagation with Examples in MATLAB*. SPIE, 2010.
- [sc09-5] [1862] K. Schmidt. *Maß und Wahrscheinlichkeit*. Springer Berlin, 2009.
- [hljusc11] [1863] S. Schmutzhard, A. Jung, and F. Hlawatsch. Minimum Variance Estimation for the Sparse Signal in Noise Model. *Proc. ISIT 2011*, 2011.
- [grsc10] [1864] K. Schnass and R. Gribonval. Dictionary identification - sparse matrix-factorisation via  $l_1$ -minimisation. *IEEE Trans. Inform. Theory*, 56(7):3523–3539, 2010.
- [sc09-4] [1865] C. Schneider. On dilation operators in Besov spaces. *Rev. Mat. Complut.*, 22(1):111–128, 2009.
- [sc10-3] [1866] C. Schneider. Trace operators in Besov and Triebel-Lizorkin spaces. *Z. Anal. Anwend.*, 29(3):275–302, 2010.
- [scsc09] [1867] G. Schneider and K. Schneider. Generalized Hankel operators on the Fock space. *Math. Nachr.*, 282(12):1811–1826, 2009.

- scwh53** [1868] I. Schoenberg and A. Whitney. On Polya frequency functions. III. The positivity of translation determinants with an application to the interpolation problem by spline curves. *Trans. Amer. Math. Soc.*, 74:246–259, 1953.
- mosc03** [1869] D. Schuch and M. Moshinsky. Coherent states and dissipation for the motion of a charged particle in a constant magnetic field. *J. Phys. A, Math. Gen.*, 36(23):6571–6585, 2003.
- mosc08-1** [1870] D. Schuch and M. Moshinsky. Wigner distribution functions and the representation of canonical transformations in time-dependent quantum mechanics. 4(Paper 54 (electronic only)):12, 2008.
- scst96** [1871] R. Schultz and R. Stevenson. Extraction of high-resolution frames from video sequences. *IEEE Trans. Image Process.*, 5(6):996–1011, jun 1996.
- scta99** [1872] E. Schulz and K. F. Taylor. Extensions of the Heisenberg group and wavelet analysis in the plane. Dubuc, Serge (ed.) et al., Spline functions and the theory of wavelets. Providence, RI: AMS, American Mathematical Society. CRM Proc. Lect. Notes 18, 217-225 (1999)., 1999.
- scta04** [1873] E. Schulz and K. F. Taylor. Projections in  $L^1$ -algebras and tight frames. Lau, Anthony To-Ming (ed.) et al., Banach algebras and their applications. Proceedings of the 16th international conference, University of Alberta, Edmonton, Canada, July 27–August 9, 2003. Providence, RI: American Mathematical Society (AMS). Contemporary, 2004.
- scto03** [1874] C. Schwab and R. Todor. Sparse finite elements for stochastic elliptic problems—higher order moments. *Computing*, 71(1):43–63, 2003.
- sc10-1** [1875] S. Scott. *Traces and determinants of pseudodifferential operators*. Oxford University Press, USA, 2010.
- se05-1** [1876] S. Searle. Efficient matched processing for localisation of a moving acoustic source. *Signal Process.*, 85(9):1787–1804, September 2005.
- iwse12** [1877] I. Segal and M. Iwen. Improved sparse Fourier approximation results: Faster implementations and stronger guarantees. *preprint*, 2012.

- sewi99** [1878] N. Seiberg and E. Witten. String theory and noncommutative geometry. *Journal of High Energy Physics*, 1999(9):93, September 1999.
- dolasestta06** [1879] B. Seifert, H. Stolz, M. Donatelli, D. Langemann, and M. Tasche. Multilevel Gauss-Newton methods for phase retrieval problems. *J. Phys. A, Math. Gen.*, 39(16):4191–4206, 2006.
- se91** [1880] K. Seip. Reproducing formulas and double orthogonality in Bargmann and Bergman spaces. *SIAM J. Math. Anal.*, 22(3):856–876, 1991.
- se11** [1881] K. Seip. Interpolation and sampling in small Bergman spaces, 2011.
- seyo11** [1882] K. Seip and E. Youssfi. Hankel operators on Fock spaces and related Bergman kernel estimates. *Journal of Geometric Analysis*, to appear:1–32, 2011.
- djjise09** [1883] E. Sejdic, I. Djurovic, and J. Jiang. Time-frequency feature representation using energy concentration: An overview of recent advances. *Digital Signal Processing*, 19(1):153–183, 2009.
- djsest10** [1884] E. Sejdic, I. Djurovic, and L. Stankovic. Fractional Fourier transform as a signal processing tool: An overview of recent developments. *Signal Processing*, In Press, Corrected Proof:–, 2010.
- base09** [1885] I. Selesnick and I. Bayram. Frequency-domain design of overcomplete rational-dilation wavelet transforms. *IEEE Trans. Signal Process.*, 57(8):2957–2972, 2009.
- seXX-1** [1886] A. Semyon. A characterization of the Fourier transform and related topics.
- sh87** [1887] V. Shakhmurov. Theorems on the embedding of abstract function spaces and their applications. *Mat. Sb. (N.S.)*, 134(176)(2):260–273, 288, 1987.
- sh85-1** [1888] T. Shaposhnikova Olegovna. On the spectrum of multipliers in Bessel potential spaces. *Chas. pro pestovany matematiky*, 110, 1985.
- agchsh08** [1889] A. Sharma, D. Chhachhia, and A. Aggarwal. Moire pattern encoded extended fractional Fourier transform security hologram. *J. Modern Opt.*, 55(3):351–359, 2008.

- [sh10] [1890] K. Sharma. New inequalities for signal spreads in linear canonical transform domains. *Signal Processing*, 90(3):880–884, 2010.
- [josh08] [1891] K. Sharma and S. Joshi. Uncertainty principle for real signals in the linear canonical transform domains. *IEEE Trans. Signal Process.*, 56(7):2677–2683, 2008.
- [rashzhXX] [1892] I. Shatokhina, M. Zhariy, and R. Ramlau. Wavefront reconstruction for XAO.
- [bash08] [1893] L. Shen and L. Bai. 3D Gabor wavelets for evaluating SPM normalization algorithm. *Medical Image Analysis*, 12(3):375 – 383, 2008.
- [chshwa94] [1894] W. Shen, M.-W. Chang, and D.-S. Wan. Wavefront estimate from wavefront slope measurement by comparing their Zernike polynomials fitting coefficients. In W. Shen, M.-W. Chang, D.-S. Wan, R. E. Fischer, and W. J. Smith, editors, *Proc. SPIE, Current Developments in Optical Design and Optical Engineering IV*, volume 2263 of *Optical System Fabrication and Testing I*, pages 186–197, San Diego, CA, USA, 1994. SPIE.
- [digrmeposh08] [1895] X. Shen, C. Dietlein, E. Grossman, Z. Popovic, and F. Meyer. Detection and segmentation of concealed objects in terahertz images. *IEEE trans. on IP*, 17:12, 2008.
- [mash06] [1896] Y. Shen and E. Martinez. Channel estimation in OFDM systems, Feb. 2006.
- [sh04] [1897] C. Sheppard. Three topics in Zernike polynomials. In C. Sheppard and F. Wyrowski, editors, *Proc. SPIE, Photon Management*, volume 5456 of *Modeling II*, pages 68–74. SPIE, 2004.
- [sh99] [1898] B. E. Shi. Real-time Gabor-type filtering using analog focal plane image processors. In *Computer Vision and Pattern Recognition, 1999. IEEE Computer Society Conference on.*, volume 1, pages 507–513, Fort Collins, CO , USA, 1999.
- [sh10-1] [1899] F. Shih. *Image Processing and Pattern Recognition: Fundamentals and Techniques*. Wiley-IEEE Press, 2010.

- anposh07** [1900] C. Shin, J. Andrews, and E. Powers. An efficient design of doubly selective channel estimation for OFDM systems. *IEEE Trans. Wireless Comm.*, 6:3790–3802, Oct. 2007.
- jush03** [1901] B. Shizgal and J.-H. Jung. Towards the resolution of the Gibbs phenomena. *J. Comput. Appl. Math.*, 161(1):41–65, 2003.
- frsh11** [1902] Y. Shrot and L. Frydman. Compressed sensing and the reconstruction of ultrafast 2D NMR data: Principles and biomolecular applications. *J. Magn. Reson.*, 209(2):352–358, 2011.
- sh94-3** [1903] A. Shustorovich. A subspace projection approach to feature extraction: The two-dimensional Gabor transform for character recognition. *Neural Networks*, 7(8):1295 – 1301, 1994.
- asbrbumopish11** [1904] A. M. Shuvavev, G. V. Astakhov, A. Pimenov, C. Brüne, H. Buhmann, and L. W. Molenkamp. Giant magneto-optical Faraday effect in HgTe thin films in the terahertz spectral range. *Phys. Rev. Lett.*, 106-107404(10):4, 2011.
- si11-2** [1905] W. Sickel. Radial subspaces of Besov-Lizorkin-Triebel spaces. 9:169–215, 2011.
- si11-1** [1906] A. Sidi. Asymptotic expansions of Legendre series coefficients for functions with interior and endpoint singularities. *Math. Commun.*, 80(275):1663–1684, 2011.
- si11-3** [1907] K. Siedenburg. Structured Sparsity in Time-Frequency Analysis. Master’s thesis, Humboldt University Berlin, 2011.
- dosi11** [1908] K. Siedenburg and M. Dörfler. Structured sparsity for audio signals. *Proceedings of DAFX11*, Paris, 2011.
- dsi12** [1909] K. Siedenburg and M. Dörfler. Audio denoising by generalized time-frequency thresholding. *Proceedings of the AES 45th Conference on Applications of Time-Frequency Processing*, Helsinki, Finland, 2012.
- si67** [1910] C. Siegel. *Transzendente Zahlen*. Übersetzung aus dem Englischen von B. Fuchssteiner und D. Laugwitz. B. I. Hochschultaschenbücher, Band 137\*. Bibliographisches Institut, Mannheim, 1967.

- si52-1** [1911] W. Sierpinski. *General Topology*. Mathematical Expositions, No. 7. University of Toronto Press, Toronto, 1952.
- sito11** [1912] M. Signahl and J. Toft. Remarks on mapping properties for the Bargmann transform on modulation spaces. *Integral Transforms Spec. Funct.*, 22(4-5):359–366, 2011.
- si96-2** [1913] H. Šikic. Wavelets: convergence almost everywhere. *Math. Commun.*, 1(2):143–145, 1996.
- si00** [1914] H. Sikic. Zero-one law for some Brownian functionals. *J. Theor. Probab.*, 13(2):571–574, 2000.
- sis101** [1915] H. Sikic and T. Sikic. A note on Ostrowski’s inequality. *Math. Inequal. Appl.*, 4(2):297–299, 2001.
- sisovo06** [1916] H. Sikic, R. Song, and Z. Vondracek. Potential theory of geometric stable processes. *Probab. Theory Relat. Fields*, 135(4):547–575, 2006.
- sisp07** [1917] H. Sikic and D. Speegle. Dyadic PFW’s and  $w_o$ -bases. In J. H.-J. G. Muic, editor, *Functional analysis IX (Proceedings of the postgraduate school and conference, Dubrovnik, Croatia, June 15-23, 2005)*, volume 48 of *Various Publications Series*, pages 85–90. University of Aarhus, Department of Mathematical Sciences, 2007.
- sispwe08** [1918] H. Sikic, D. Speegle, and G. Weiss. Structure of the set of dyadic PFW’s. In David Royal Larson, editor, *Frames and operator theory in analysis and signal processing (AMS-SIAM special session, San Antonio, TX, USA, January 12-15, 2006)*, volume 451 of *Contemporary Mathematics*, pages 263–291. American Mathematical Society (AMS), 2008.
- sita02** [1919] H. Sikic and M. H. Taibleson. Elementary proof of the non-tangential characterization of Lipschitz spaces. In D. Bakic, editor, *Functional analysis VII (Proceedings of the postgraduate school and conference, Dubrovnik, Croatia, September 17-26, 2001)*, volume 46 of *Various Publications Series*, pages 181–186. University of Aarhus, Department of Mathematical Sciences, 2002.

- sita05** [1920] H. Sikic and M. H. Taibleson. Brownian motion characterization of some Besov-Lipschitz spaces on domains. *J. Geom. Anal.*, 15(1):137–180, 2005.
- siwi01** [1921] H. Sikic and M. V. Wickerhauser. Information cost functions. *Appl. Comput. Harmon. Anal.*, 11(2):147–166, 2001.
- siwi11** [1922] H. Sikic and E. Wilson. Lattice invariant subspaces and sampling. *Appl. Comput. Harmon. Anal.*, 31(1):26 – 43, 2011.
- si86** [1923] B. Silverman. *Density estimation for statistics and data analysis*. Monographs on Statistics and Applied Probability. Chapman & Hall, London, 1986.
- basisp04** [1924] O. Simeone, Y. Bar Ness, and U. Spagnolini. Pilot-based channel estimation for OFDM systems by tracking the delay-subspace. *IEEE Trans. Wireless Comm.*, 3:315–325, Jan. 2004.
- si05** [1925] B. Simon. *Functional Integration and Quantum Physics 2nd ed.* Providence, RI: AMS Chelsea Publishing. xiv, 2005.
- si11** [1926] B. Simon. *Convexity: An Analytic Viewpoint*, volume 187. Cambridge Univ Pr, 2011.
- siwo00** [1927] R. Simon and K. Wolf. Fractional Fourier transforms in two dimensions. *JOSA A*, 17(12):2368–2381, 2000.
- si12-1** [1928] D. Simovici. *Linear algebra tools for data mining*. Hackensack, NJ: World Scientific, 2012.
- cosi08** [1929] A. Singer and R. R. Coifman. Non-linear independent component analysis with diffusion maps. *Appl. Comput. Harmon. Anal.*, 25(2):226–239, 2008.
- hashsizh11** [1930] A. Singer, Z. Zhao, Y. Shkolnisky, and R. Hadani. Viewing angle classification of cryo-electron microscopy images using eigenvectors. *SIAM J. Imaging Sci.*, 4(2):723–759, 2011.
- si12** [1931] A. Singh. *TIME ENCODED COMPRESSION AND CLASSIFICATION USING THE INTEGRATE AND FIRE SAMPLER*. PhD thesis, University of Florida, 2012.

- kusivi10** [1932] G. Singh, Virender, and U. Kumar. On atomic decompositions in Banach spaces. *Int. J. Math. Anal., Ruse*, 4(9-12):481–488, 2010.
- siXX** [1933] R. Singh. Invertible Composition Operators on  $l^2(\lambda)$ . *Proc. Amer. Math. Soc.*
- sj97-1** [1934] P. Sjögren. Operators associated with the Hermite semigroup - a survey. 1997.
- sjva08** [1935] P. Sjögren and M. Vallarino. Boundedness from  $h^1$  to  $l^1$  of Riesz transforms on a Lie group of exponential growth. *Ann. Inst. Fourier (Grenoble)*, 58(4):1117–1151, 2008.
- sjva11** [1936] P. Sjögren and M. Vallarino. Heat maximal function on a Lie group of exponential growth. to be published, 2011.
- sk85** [1937] B.-S. Skagerstam. Quasi-coherent states for unitary groups. *J. Phys. A*, 18(1):1–13, 1985.
- sk01-1** [1938] B. Sklar. *Digital Communications: Fundamentals and Applications*. Prentice Hall PTR, 2 edition, 2001.
- sk93** [1939] L. Skrzypczak. Besov spaces and function series on Lie groups. *Commentat. Math. Univ. Carol.*, 34(1):139–147, 1993.
- sk93-1** [1940] L. Skrzypczak. Besov spaces and function series on Lie groups II. *Collect. Math.*, 44(1-3):269–277, 1993.
- sk97** [1941] L. Skrzypczak. Besov spaces on symmetric manifolds – the atomic decomposition. *Studia Math.*, 124(3):215–238, 1997.
- sk98** [1942] L. Skrzypczak. Atomic decompositions on manifolds with bounded geometry. *Forum Math.*, 10(1):19–38, 1998.
- sk98-1** [1943] L. Skrzypczak. Spherical transform and Besov spaces on semisimple Lie groups. *Funct. Approx. Comment. Math.*, 26:181–187, 1998.
- sk99** [1944] L. Skrzypczak. Heat and harmonic extensions for function spaces of Hardy-Sobolev-Besov type on symmetric spaces and Lie groups. *J. Approx. Theory*, 96(1):149–170, 1999.

- sk03** [1945] L. Skrzypczak. Heat extensions, optimal atomic decompositions and Sobolev embeddings in presence of symmetries on manifolds. *Math. Z.*, 243(4):745–773, 2003.
- kos154** [1946] J. Slater and G. Koster. Simplified LCAO method for the periodic potential problem. *Physical Review*, 94(6):1498, 1954.
- s162** [1947] D. Slepian. The one-sided barrier problem for Gaussian noise. *Bell System Tech. J.*, 41:463–501, 1962.
- sm97-1** [1948] D. Smalley. Spectromorphology: explaining sound-shapes. *Organised Sound*, 2(2), August 1997.
- sm98-1** [1949] H. F. Smith. A parametrix construction for wave equations with  $C^{1,1}$  coefficients. *Ann. Inst. Fourier (Grenoble)*, 48(3):797–835, 1998.
- sm08** [1950] J. Smith. *Mathematics of the Discrete Fourier Transform (DFT) with Audio Applications*. W3K, 2008.
- smtotr02** [1951] O. Smolyanov, A. Tokarev, and A. Truman. Hamiltonian Feynman path integrals via the Chernoff formula. *J. Math. Phys.*, 43(10):5161–5171, 2002.
- sn08** [1952] J. Sniatycki. Geometric quantization, reduction and decomposition of group representations. *J. Fixed Point Theory Appl.*, 3(2):307–315, 2008.
- sowe98** [1953] P. Soardi and D. Weiland. Single wavelets in  $n$ -dimensions. *J. Fourier Anal. Appl.*, 4(3):299–315, 1998.
- so12-1** [1954] M. Soltys. *An introduction to the analysis of algorithms. (to appear in june 2012). 2nd ed.* World Scientific, Hackensack, NJ, 2012.
- so12** [1955] P. Sondergaard. Efficient algorithms for the discrete Gabor transform with a long Fir window. *J. Fourier Anal. Appl.*, 18(3):456–470, 2012.
- basoto11** [1956] P. Sondergaard, B. Torr sani, and P. Balazs. The Linear Time Frequency Analysis Toolbox. *International Journal of Wavelets, Multiresolution and Information Processing*, to appear:accepted, 2011.
- basoto10** [1957] P. L. Sondergaard, B. Torr sani, and P. Balazs. The Linear Time Frequency Toolbox. 2010.

- geso12** [1958] G. Song and A. Gelb. Approximating the inverse frame operator from localized frames. *Submitted on 29 Mar 2012*, page 23, 2012.
- elkas01** [1959] B. Soon, P. Eloë, and D. Kammler. The fast Fourier transform method and ill-conditioned matrices. *Appl. Math. Comput.*, 117(2-3):117–129, 2001.
- so92-2** [1960] D. C. Sorensen. Implicit application of polynomial filters in a k-step Arnoldi method. *SIAM J. Matrix Anal. Appl.*, 13(1):357–385, 1992.
- chso89** [1961] M. Soumekh and J.-H. Choi. Reconstruction in diffraction imaging. *Ultrasonics, Ferroelectrics and Frequency Control, IEEE Transactions on*, 36(1):93–100, jan. 1989.
- fapascso10-1** [1962] A. Soumelidis, Z. Fazekas, M. Pap, and F. Schipp. Discrete orthogonality of Zernike functions and its relevance to corneal topography. In L. Szirmay Kalos, G. Renner, L. Szirmay Kalos, and G. Renner, editors, *5th Hungarian Conference on Computer Graphics and Geometry*, pages 125–132, Budapest, Hungary, 2010.
- fapascso10** [1963] A. Soumelidis, Z. Fazekas, F. Schipp, and M. Pap. Discrete orthogonality of Zernike functions and its application to corneal measurements. In A. Soumelidis, Z. Fazekas, M. Pap, F. Schipp, S.-I. Ao, and L. Gelman, editors, *Electronic Engineering and Computing Technology*, volume 60 of *Lecture Notes in Electrical Engineering*, pages 455–469. Springer Netherlands, 2010.
- bopascso02** [1964] A. Soumelidis, M. Pap, F. Schipp, and J. Bokor. Frequency domain identification of partial fraction models. In *15th Triennial World Congress of the International Federation of Automatic Control*, page 6, Barcelona, Spain, July 2002.
- so46** [1965] R. Southwell. *Relaxation methods in Theoretical physics*. Oxford: At the Clarendon Press. VII, 248 p., 1946.
- sp62** [1966] H. Spang. A review of minimization techniques for nonlinear functions. *SIAM Rev.*, 4(4):343–365, 1962.
- sp72** [1967] E. Spence. m-symplectic matrices. *Trans. Amer. Math. Soc.*, 170:447–457, 1972.

- `spsrXX` [1968] D. Spielman and N. Srivastava. An elementary proof of the restricted invertibility theorem. *Israel J. Math.*, to appear.
- `jaklnsr10` [1969] S. Srinivasan, K. Janse, M. Nilsson, and W. Kleijn. Two-channel speech denoising through minimum tracking. *Electronics letters*, 46(2):177–179, 2010.
- `bhonsr93` [1970] V. Srinivasan, P. Bhatia, and S. Ong. A fast implementation of the discrete 2-D Gabor transform. *Signal Processing*, 31(2):229 – 233, 1993.
- `rasr06` [1971] V. Srivastava and N. Ramesh. New classes of orthogonal polynomials. *International journal of quantum chemistry*, 106(5):1258–1266, 2006.
- `st70-2` [1972] J. Stafney. Analytic interpolation of certain multiplier spaces. *Pacific J. Math.*, 32:241–248, 1970.
- `famust10` [1973] J.-L. Starck, F. Murtagh, and J. Fadili. *Sparse image and signal processing Wavelets, Curvelets, Morphological Diversity*. Cambridge: Cambridge University Press. xvii, 316 p., 2010.
- `sost11` [1974] H.-G. Stark and N. Sochen. Square Integrable Group Representations and the Uncertainty Principle. *J. Fourier Anal. Appl.*, 17:916–931, 2011.
- `hast10` [1975] W.-H. Steeb and Y. Hardy. *Quantum Mechanics Using Computer algebra Includes Sample Programs In t C++, Symbolic C++, Maxima, Maple, and Mathematica 2nd Ed*. Hackensack, NJ: World Scientific. x, 2010.
- `hast11` [1976] W.-H. Steeb and Y. Hardy. *Matrix Calculus And Kronecker Product A Practical Approach To Linear And Multilinear algebra (to Appear) 2nd Ed*. Hackensack, NJ: World Scientific. 320 p., 2011.
- `gerest10` [1977] W. Stefan, R. Renaut, and A. Gelb. Improved total variation-type regularization using higher order edge detectors. *SIAM J. Imaging Sci.*, 3(2):232–251, 2010.
- `brmrstwewe04` [1978] G. Steidl, J. Weickert, T. Brox, P. Mrazek, and M. Welk. On the equivalence of soft wavelet shrinkage, total variation diffusion, total variation regularization, and SIDes. *SIAM J. Numer. Anal.*, 42(2):686–713, 2004.

- shst11** [1979] E. M. Stein and R. Shakarchi. *Functional Analysis: Introduction to further Topics in Analysis*. 2011.
- st93-3** [1980] F. Stenger. *Numerical methods based on Sinc and analytic functions*. Springer New York, 1993.
- st81** [1981] V. Stepanov. On multipliers of Fourier integrals. *Sov. Math., Dokl.*, 23:645–647, 1981.
- st82-2** [1982] V. Stepanov. On a criterion of approximation of the identity in  $L^p(E_n)$  by convolution transforms of dilation type. *Anal. Math.*, 8:233–238, 1982.
- st82-1** [1983] V. Stepanov. On periodic multipliers of Fourier integrals. *Mat. Zametki*, 32:141–150, 1982.
- st92-3** [1984] V. Stepanov. Weighted inequalities for a class of Volterra convolution operators. *J. London Math. Soc. (2)*, 45(2):232–242, 1992.
- st07-3** [1985] A. Stern. Sampling of compact signals in offset linear canonical transform domains. *Signal, Image and Video Processing*, 1(4):359–367, 2007.
- st08-1** [1986] A. Stern. Uncertainty principles in linear canonical transform domains and some of their implications in optics. *JOSA A*, 25(3):647–652, 2008.
- st55** [1987] W. Stinespring. Positive functions on  $C^*$ -algebras. *Proc. Amer. Math. Soc.*, 6:211–216, 1955.
- stto10** [1988] P. Stinga and J.-L. Torrea. Extension problem and Harnack’s inequality for some fractional operators. *Comm. Partial Differential Equations*, 35(10-12):2092–2122, 2010.
- stto11** [1989] P. Stinga and J.-L. Torrea. Regularity theory for the fractional harmonic oscillator. *J. Funct. Anal.*, 260(10):3097 – 3131, 2011.
- st07-4** [1990] R. Stockwell. A basis for efficient representation of the S-transform. *Digital Signal Processing*, 17(1):371 – 393, 2007.
- bastXX** [1991] D. Stoeva and P. Balazs. Invertibility of multipliers. *Appl. Comput. Harmon. Anal.*, accepted:–, in press.

- st99-6** [1992] M. Stojanovic. Underwater Acoustic Communications. In M. Stojanovic and J. G. Webster, editors, *Encyclopedia of Electrical and Electronics Engineering*, volume 22, pages 688–698. John Wiley & Sons, 1999.
- hapast09** [1993] M. Stojnic, F. Parvaresh, and B. Hassibi. On the reconstruction of block-sparse signals with an optimal number of measurements. *IEEE Trans. Signal Process.*, 57:3075–3085, Aug. 2009.
- st11** [1994] R. Stokke. Homomorphisms of convolution algebras. *J. Funct. Anal.*, 261(12):3665 – 3695, 2011.
- st10** [1995] P. Stollmann. A dual characterization of length spaces with application to Dirichlet metric spaces. *Studia Math.*, 198(3):221–233, 2010.
- st93-2** [1996] G. Strang. The fundamental theorem of linear algebra. *Amer. Math. Monthly*, 100(9):848–855, 1993.
- st10-3** [1997] G. Strang. Banded matrices with banded inverses and  $A = LPU$ . In *Proceedings of ICCM2010 (International Congress of Chinese Mathematicians, Beijing, 2010)*.
- st10-2** [1998] G. Strang. Fast transforms: Banded matrices with banded inverses. *Proceedings of the National Academy of Sciences*, 107(28):12413, 2010.
- st11-1** [1999] G. Strang. Groups of banded matrices with banded inverses. 139:4255–4264, 2011.
- st00-6** [2000] T. Strohmer. OFDM, Laurent operators, and time-frequency localization. In *Proc. SPIE 4119*, 48, 2000.
- frst12** [2001] T. Strohmer and B. Friedlander. Analysis of sparse MIMO radar. *preprint*, 2012.
- st11-2** [2002] J. Strom. *Modern classical homotopy theory*. Graduate Studies in Mathematics 127. Providence, RI: American Mathematical Society (AMS). xxi, 2011.
- st74** [2003] R. Struble. Representations of Fourier transforms for distributions. *Bull. Inst. Math. Acad. Sinica*, 2:191–206, 1974.

- st08-2** [2004] M. Struwe. *Variational Methods*, volume 34 of *Ergebnisse der Mathematik und ihrer Grenzgebiete. 3. Folge. A Series of Modern Surveys in Mathematics [Results in Mathematics and Related Areas. 3rd Series. A Series of Modern Surveys in Mathematics]*. Springer-Verlag, Berlin, Fourth edition, 2008.
- bainlimcprst04** [2005] G. Stuber, J. Barry, S. McLaughlin, Y. Li, M. Ingram, and T. Pratt. Broadband mimo-ofdm wireless communications. *Proc. IEEE*, 92:271–294, Feb. 2004.
- blst00** [2006] H. Stüer and S. Blaser. Interpolation of scattered 3D PTV data to a regular grid. *Flow, turbulence and combustion*, 64(3):215–232, 2000.
- chsu01** [2007] X. Su and W. Chen. Fourier transform profilometry: a review. *Optics and Lasers in Engineering*, 35(5):263 – 284, 2001.
- su08-1** [2008] K. Subramanian. Higher-order Gabor spectra a mathematical model for signal processing, 2008.
- bhchsu95** [2009] E. Sudarshan, C. Chiu, and G. Bhamathi. Generalized uncertainty relations and characteristic invariants for the multimode states. *Phys. Rev. A (3)*, 52(1):43–54, 1995.
- hasu09** [2010] H. Sugiura and T. Hasegawa. Quadrature rule for Abel’s equations: Uniformly approximating fractional derivatives. *J. Comput. Appl. Math.*, 223(1):459–468, 2009.
- gosu09** [2011] J. Sun and V. K. Goyal. Optimal quantization of random measurements in compressed sensing. In *Information Theory, 2009. ISIT 2009. IEEE International Symposium on*, pages 6–10, 2009.
- su11** [2012] Q. Sun. Localized nonlinear functional equations and two sampling problems in signal processing. *preprint*, 2011.
- suXX** [2013] W. Sun. Inversion Formula for the Windowed Fourier Transform. *Math. Nachr.*
- suya11** [2014] W. Sun and X. Yang. Nonrigid image registration based on control point matching and shifting. *Opt. Eng.*, 50(2, Article 027006):10, February 2011.

- suza11** [2015] W. Sun and L. Zang. Invertible sequences of bounded linear operators. *Acta Mathematica Scientia*, 31(5):1939 – 1944, 2011.
- sw62** [2016] R. Swan. Vector bundles and projective modules. *Transactions of the American Mathematical Society*, 105(2):264–277, 1962.
- sw77** [2017] R. Swan. Topological examples of projective modules. *Trans. Amer. Math. Soc.*, 230, 1977.
- sw04** [2018] C. Sweezy. Subspaces of  $L^1(\mathbb{R}^d)$ . *Proc. Amer. Math. Soc.*, 132(12):3599–3606, 2004.
- pisw09** [2019] E. Swiercz and A. Pieniezny. Detection-recognition algorithm based on the Gabor transform for unknown signals embedded in unknown noise. *Math. Comput. Simul.*, 80(2):270–293, 2009.
- sy71** [2020] J. Synge. Geometrical approach to the Heisenberg uncertainty relation and its generalization. *Proc. Roy. Soc. London Ser. A*, 325:151–156, 1971.
- sz79** [2021] A. Szaz. Discrete Fourier analysis for quotient multipliers. *Math. Nachr.*, 93:233–238, 1979.
- sz06** [2022] R. Szeliski. Image alignment and stitching: a tutorial. *Found. Trends Comput. Graph. Vis.*, 2(1):109 p., 2006.
- casz84** [2023] H. Szu and H. Caulfield. The mutual time-frequency content of two signals. *Proceedings of the IEEE*, 72(7):902 – 908, July 1984.
- hehejeta11** [2024] C. Taal, R. Hendriks, R. Heusdens, and J. Jensen. An Evaluation of Objective Measures for Intelligibility Prediction of Time-Frequency Weighted Noisy Speech (In Press). *Journal of the Acoustical Society of America*, 2011.
- hoosta07** [2025] X.-C. Tai, S. Osher, and R. Holm. Image inpainting using a TV-Stokes equation. In K.-A. L. Xue-Cheng Tai, editor, *Image processing based on partial differential equations. Part I: Digital image inpainting, image de jittering, and optical flow estimation*, Mathematics and Visualization, pages 3–22, CMA, Oslo, 2007. Springer.
- mita10** [2026] H. Takeda and P. Milanfar. Locally Adaptive Kernel Regression for Space-Time Super-Resolution. *Super-Resolution Imaging*, 1:63, 2010.

- mita11** [2027] H. Takeda and P. Milanfar. *Locally adaptive Kernel regression for space-time super-resolution*. from the book: Super-Resolution Imaging (edited by Peyman Milanfar). CRC Press (Taylor & Francis Group), 2011.
- ta69-1** [2028] M. Takesaki. A characterization of group algebras as a converse of Tannaka-Stinespring-Tatsuuma duality theorem. *Amer. J. Math.*, 91:529–564, 1969.
- ta87** [2029] M. Talagrand. Regularity of Gaussian processes. *Acta Math.*, 159(1-2):99–149, 1987.
- ta96-4** [2030] M. Talagrand. A new look at independence. *Ann. Probab.*, 24(1):1–34, 1996.
- ta96-3** [2031] M. Talagrand. Majorizing measures: the generic chaining. *Ann. Probab.*, 24(3):1049–1103, 1996.
- ta01-2** [2032] M. Talagrand. Majorizing measures without measures. *Ann. Probab.*, 29(1):411–417, 2001.
- ta10** [2033] M. Talagrand. *Mean Field Models for Spin Glasses. Volume I: Basic Examples*. Springer, 2010.
- cata98** [2034] A. Talukder and D. Casasent. Multiscale Gabor wavelet fusion for edge detection in microscopy images. In *Proc. SPIE: Wavelet Applications V*, volume 3391 of *Pattern Recognition*, page 12, Orlando, FL, USA, 1998.
- ta09-1** [2035] E. Tamási. Eigenvalue distribution of semi-elliptic operators in anisotropic Sobolev spaces. *Z. Anal. Anwend.*, 28(2):233–248, 2009.
- kwta01** [2036] L. Tao and H. K. Kwan. Real-valued discrete Gabor transform for image representation. In *Circuits and Systems, 2001. ISCAS 2001. The 2001 IEEE International Symposium on*, volume 2, pages 589–592, 2001.
- kwta08-1** [2037] L. Tao and H. K. Kwan. Novel DCT-based real-valued discrete Gabor transform. In *Circuits and Systems, 2008. ISCAS 2008. IEEE International Symposium on*, pages 1164 –1167, Seattle, WA, may 2008.

- [kwt09] [2038] L. Tao and H. K. Kwan. Fast parallel approach for 2-D DHT-based real-valued discrete Gabor transform. *IEEE Trans. Image Process.*, 18(12):2790–2796, 2009.
- [kwt09-1] [2039] L. Tao and H. K. Kwan. Novel DCT-based real-valued discrete Gabor transform and its fast algorithms. *IEEE Trans. Signal Process.*, 57(6):2151–2164, 2009.
- [gukwt10] [2040] L. Tao, H. K. Kwan, and J.-j. Gu. Filterbank-based fast parallel algorithms for real-valued discrete Gabor expansion and transform. In *Circuits and Systems (ISCAS), Proceedings of 2010 IEEE International Symposium on*, pages 2674–2677, 30 2010-june 2 2010.
- [det06-1] [2041] R. Tao, B. Deng, and Y. Wang. Research progress of the fractional Fourier transform in signal processing. *Science in China Series F: Information Sciences*, 49(1):1–25, 2006.
- [ta10-1] [2042] T. Tao. *An Epsilon of Room, I: Real analysis Pages from Year Three of a mathematical Blog*. Graduate Studies in Mathematics 117. Providence, RI: American Mathematical Society (AMS). xi, 2010.
- [ta11-3] [2043] T. Tao. *An Introduction to Measure Theory*, volume 126. AMS, 2011.
- [caset98] [2044] V. Tarokh, N. Seshadri, and R. Calderbank. Space-time Codes for High Data Rate Wireless Communications: Performance Criterion and Code Construction. *IEEE Trans. Inform. Theory*, 44:744–765, Mar. 1998.
- [ta11-4] [2045] A. Tarrida. *Affine Maps, Euclidean Motions and Quadrics*. Springer, 2011.
- [ta07-1] [2046] L. Tartar. *An Introduction to Sobolev Spaces and Interpolation Spaces*. Lecture Notes of the Unione Matematica Italiana 3. Berlin: Springer. xxvi, 218 p., 2007.
- [tavi08] [2047] J. Taskinen and J. Virtanen. Spectral theory of Toeplitz and Hankel operators on the Bergman space  $a^1$ . *New York J. Math.*, 14:305–323, 2008.
- [tavi10] [2048] J. Taskinen and J. Virtanen. Toeplitz operators on Bergman spaces with locally integrable symbols. *Rev. Mat. Iberoam.*, 26(2):693–706, 2010.

- ta11-5 [2049] C. Taubes. *Differential Geometry: Bundles, Connections, Metrics and Curvature*, volume 23. Oxford University Press, USA, 2011.
- grhahlmasvta11 [2050] G. Taubock, M. Hampejs, P. Svac, G. Matz, F. Hlawatsch, and K. Grochenig. *Signal Processing, IEEE Transactions on*, title=*Low-Complexity ICI/ISI Equalization in Doubly Dispersive Multicarrier Systems Using a Decision-Feedback LSQR Algorithm*, 59(5):2432 – 2436, may 2011.
- ta10-2 [2051] D. Tausk. A locally compact non divisible abelian group whose character group is torsion free and divisible. *Arxiv preprint arXiv:1002.4164*, 2010.
- gotawo07 [2052] J. Taylor, K. Worsley, and F. Gosselin. Maxima of discretely sampled random fields, with an application to ‘bubbles’. *Biometrika*, 94(1):1–18, 2007.
- ta08-1 [2053] K. F. Taylor. Groups with atomic regular representation. Jorgensen, Palle E.T. (ed.) et al., *Representations, wavelets, and frames. A celebration of the mathematical work of Lawrence W. Baggett*. Basel: Birkhäuser. Applied and Numerical Harmonic Analysis, 33-45 (2008)., 2008.
- ta11 [2054] M. Taylor. *Partial differential equations. I: Basic theory. 2nd ed.* Applied Mathematical Sciences. Volume 115. New York, NY: Springer, 2011.
- ta11-1 [2055] M. Taylor. *Partial differential equations. II: Qualitative studies of linear equations. 2nd ed.* Applied Mathematical Sciences. Volume 116. New York, NY: Springer, 2011.
- ta11-2 [2056] M. Taylor. *Partial differential equations. III: Nonlinear equations. 2nd ed.* Applied Mathematical Sciences. Volume 117. New York, NY: Springer, 2011.
- te08-2 [2057] V. Temlyakov. Greedy approximation. *Acta Numerica*, 17:235–409, 2008.
- te11 [2058] V. Temlyakov. *Greedy approximation*. Cambridge Monographs on Applied and Computational Mathematics (No. 20). Cambridge University Press, 2011.

- te03-2** [2059] V. N. Temlyakov. Nonlinear methods of approximation. *Found. Comput. Math.*, 3(1):33–107, 2003.
- andemate11** [2060] L. Tenorio, F. Andersson, H. De, and P. Ma. Data analysis tools for uncertainty quantification of inverse problems. 2011.
- oote02** [2061] M. ter and P. Oonincx. On the integral representations for metaplectic operators. *J. Fourier Anal. Appl.*, 8(3):245–258, 2002.
- te90** [2062] J. Tervo. On realizations related to Weyl operators. *Aequationes Math.*, 40(2-3):201–234, 1990.
- te09-1** [2063] D. Terzopoulos. Regularization of inverse visual problems involving discontinuities. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, (4):413–424, 2009.
- lete10** [2064] G. Teschke and V. Lehmann. Statistical significance of Gabor frames expansions: simple filtering principles for radar wind profiler data. In J. N. Alistair D. Fitt, editor, *Progress in industrial mathematics at ECMI 2008. Proceedings of the 15th European conference on mathematics for industry*, volume 15 of *Mathematics in Industry*, pages 311–316. Berlin: Springer, London, UK, June 30 - July 4, 2008, 2010.
- tete06** [2065] G. Teschl and S. Teschl. *Mathematik für Informatiker Band 1 Diskrete Mathematik und Lineare Algebra*. Springer Berlin Heidelberg, 2 edition, 2006.
- te04** [2066] U. B. Tewari. Vector-valued multipliers. *J. Anal.*, 12:99–105, 2004.
- duteva81** [2067] U. B. Tewari, M. Dutta, and D. Vaidya. Multipliers of group algebras of vector-valued functions. *Proc. Amer. Math. Soc.*, 81:223–229, 1981.
- thwu10** [2068] G. Thakur and H. Wu. Synchrosqueezing-based recovery of instantaneous frequency from nonuniform samples. *Arxiv preprint arXiv:1006.2533*, 2010.
- th09** [2069] S. Thangavelu. Hermite-Sobolev spaces and the Feichtinger’s algebra. *J. Anal.*, 17:101–106, 2009.
- th99** [2070] D. Theret. A Lagrangian camel. *Comment. Math. Helv.*, 74(4):591–614, 1999.

- riscth10** [2071] R. Theunissen, F. Scarano, and M. Riethmuller. Spatially adaptive PIV interrogation based on data ensemble. *Experiments in fluids*, 48(5):875–887, 2010.
- blthun00** [2072] P. Thévenaz, T. Blu, and M. Unser. *Image interpolation and resampling*, pages 393–420. Academic Press, 2000.
- furoth10** [2073] K. Thompson, K. Fuerschbach, and J. Rolland. An analytic expression for the field dependence of FRINGE Zernike polynomial coefficients in optical systems that are rotationally nonsymmetric. In K. P. Thompson, K. Fuerschbach, J. P. Rolland, Y. Wang, J. Bentley, C. Du, K. Tatsuno, and H. P. Urbach, editors, *Proc. SPIE, Optical Design and Testing IV*, volume 7849 of *Fabrication and Testing*, page 784906(11), Beijing, China, 2010. SPIE.
- mati11** [2074] J. Tian and K. Ma. A survey on super-resolution imaging. *Signal, Image and Video Processing*, pages 1–14, 2011.
- tiwo09** [2075] J. Tie and M. Wong. The heat kernel and Green functions of sub-Laplacians on the quaternion Heisenberg group. *J. Geom. Anal.*, 19(1):191–210, 2009.
- scto07** [2076] R. Todor and C. Schwab. Convergence rates for sparse chaos approximations of elliptic problems with stochastic coefficients. *IMA J. Numer. Anal.*, 27(2):232–261, 2007.
- to06-6** [2077] J. Toft. Positivity in twisted convolution algebra and Fourier modulation spaces. *Bull., Cl. Sci. Math. Nat., Sci. Math.*, 133(31):75–86, 2006.
- to10** [2078] J. Toft. Pseudo-differential operators with symbols in modulation spaces, 2010.
- cogato10** [2079] J. Toft, F. Concetti, and G. Garello. Schatten-von Neumann properties for Fourier integral operators with non-smooth symbols. II. *Osaka J. Math.*, 47(3):739–786, 2010.
- toyu10** [2080] K. Toh and S. Yun. An accelerated proximal gradient algorithm for nuclear norm regularized least squares problems. *Pac. J. Optim.*, 6:615–640, 2010.

- torosm10** [2081] V. Tomas, J. Rosenthal, and R. Smarandache. Decoding of convolutional codes over the erasure channel. *Information Theory-Submitted on 16 Jun 2010*, page 27, 2010.
- to11** [2082] J.-C. Tomasi. Haar measure and continuous representations of locally compact Abelian groups. *Studia Math.*, 206(1):25–35, 2011.
- motozu98** [2083] G. Torres Vega, J. Morales Guzman, and A. Zuniga Segundo. Special functions in phase space: Mathieu functions. *J. Phys. A*, 31(31):6725–6739, 1998.
- motoz96** [2084] G. Torres Vega, A. Zuniga Segundo, and J. Morales Guzman. Special functions and quantum mechanics in phase space: Airy functions. *Phys. Rev. A (3)*, 53(6):3792–3797, 1996.
- boto96** [2085] A. Toukmaji and J. Board. Ewald summation techniques in perspective: A survey. *Comput. Phys. Commun.*, 95(2-3):73–92, 1996.
- tr03-1** [2086] W. Trench. *Introduction to Real Analysis*. Upper Saddle River, NJ: Prentice Hall/Pearson Education and San Antonio, TX: Selbstverlag (free online-version 2010). xi, 2003.
- tr93-1** [2087] D. Trifonov. Completeness and geometry of Schrödinger minimum uncertainty states. *J. Math. Phys.*, 34(1):100–110, 1993.
- tr94-2** [2088] D. Trifonov. Generalized intelligent states and squeezing. *J. Math. Phys.*, 35(5):2297–2308, 1994.
- tr97-3** [2089] D. Trifonov. Robertson intelligent states. *J. Phys. A*, 30(17):5941–5957, 1997.
- tr00-2** [2090] D. Trifonov. Generalized uncertainty relations and coherent and squeezed states. *J. Opt. Soc. Amer. A*, 17(12):2486–2495, 2000.
- tr01-2** [2091] D. Trifonov. Remarks on the extended characteristic uncertainty relations. *J. Phys. A*, 34(9):L75–L78, 2001.
- tr03-2** [2092] D. Trifonov. On the position uncertainty measure on the circle. *J. Phys. A*, 36(47):11873–11879, 2003.

- tr04-3** [2093] D. Trifonov. Position uncertainty measures on the sphere. In *Geometry, integrability and quantization*, pages 211–224. Softex, Sofia, 2004.
- tr81-5** [2094] K. Trimèche. Transformation integrale de Weyl et theoreme de Paley-Wiener associes a un operateur differentiel singulier sur  $(0, \infty)$ . *J. Math. Pures Appl. (9)*, 60(1):51–98, 1981.
- tr11** [2095] K. Trimeche. Harmonic analysis associated with the Cherednik operators and the Heckman-Opdam theory. *Adv. Pure Appl. Math.*, 2(1):23–46, 2011.
- tr08-5** [2096] J. A. Tropp. Norms of random submatrices and sparse approximation. *C. R., Math., Acad. Sci. Paris*, 346(23-24):1271–1274, 2008.
- tr08-7** [2097] J. A. Tropp. On the linear independence of spikes and sines. *J. Fourier Anal. Appl.*, 14(5-6):838–858, 2008.
- tr08-6** [2098] J. A. Tropp. The random paving property for uniformly bounded matrices. *Studia Math.*, 185(1):67–82, 2008.
- tr09-1** [2099] J. A. Tropp. Column subset selection, matrix factorization, and eigenvalue optimization. In *ACM-SIAM Symp. Discrete Algorithms (SODA)*, pages 978–986, 2009.
- trXX-1** [2100] J. A. Tropp. From the joint convexity of quantum relative entropy to a concavity theorem of Lieb. *Proc. Amer. Math. Soc.*, to appear.
- tr99-3** [2101] J. Trout. Asymptotic Morphisms and Elliptic Operators over  $C^*$ -Algebras. *K-theory*, 18(3):277–314, 1999.
- tr09-2** [2102] A. Trynin. A generalization of the Whittaker-Kotel'nikov-Shannon sampling theorem for continuous functions on a closed interval. *Sb. Math.*, 200(11):1633–1679, 2009.
- chtswu01** [2103] D.-M. Tsai, S.-K. Wu, and M.-C. Chen. Optimal Gabor filter design for texture segmentation using stochastic optimization. *Image and Vision Computing*, 19(5):299 – 316, 2001.
- dots06-1** [2104] Y. Tsaig and D. L. Donoho. Extensions of compressed sensing. *Signal Process.*, 86(3):549–571, 2006.

- dets05** [2105] D. Tschumperle and R. Deriche. Vector-valued image regularization with PDEs: A common framework for different applications. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, 27(4):506–517, 2005.
- ts59** [2106] M. Tsuji. *Potential theory in modern function theory*. Maruzen, 1959.
- tu04** [2107] L. Tu. A partial order on partitions and the generalized Vandermonde determinant. *Journal of Algebra*, 278(1):127–133, 2004.
- hutu11** [2108] N. Tuan and N. Huyen. The application of generalized convolutions associated with Fourier and Hartley transforms. *to appear in J. Integral Equations Appl.*, 2011.
- actu04** [2109] N. Tuneski and R. Aceska. On the linear combination of the representations of starlikeness and convexity. *Glasnik Mat. Ser. III*, 39(59):265–272, 2004.
- uh77** [2110] A. Uhlmann. Relative entropy and the Wigner-Yanase-Dyson-Lieb concavity in an interpolation theory. *Comm. Math. Phys.*, 54(1):21–32, 1977.
- unun03** [2111] A. Unterberger. *Automorphic Pseudodifferential Analysis and Higher Level Weyl Calculi*. Progress in Mathematics (Boston, Mass.). 209. Basel: Birkhäuser. vii, 2003.
- un08-1** [2112] A. Unterberger. *Alternative Pseudodifferential Analysis With An Application to Modular Forms*. Lecture Notes in Mathematics 1935. Berlin: Springer. ix, 118 p., 2008.
- un11** [2113] A. Unterberger. *Pseudodifferential Analysis, Automorphic Distributions in the Plane and Modular Forms*. Pseudo-Differential Operators. Theory and Applications 8. Basel: Birkhäuser. viii, 300 p., 2011.
- boun65** [2114] A. Unterberger and J. Bokobza. Les opérateurs pseudo-différentiels d’ordre variable. *C. R. Acad. Sci., Paris*, 261:2271–2273, 1965.
- rourwi04** [2115] E. Urbach, J. Roerdink, and M. Wilkinson. Connected rotation-invariant size-shape granulometries. In *Pattern Recognition, 2004. ICPR 2004. Proceedings of the 17th International Conference on*, volume 1, pages 688 – 691, aug. 2004.

- [us26] [2116] J. Uspensky. On the development of arbitrary functions in series of Hermite's and Laguerre's polynomials. *Ann. of Math. (2)*, 28(1-4):593–619, 1926.
- [edskuy01] [2117] M. Uyttendaele, A. Eden, and R. Skeliski. Eliminating ghosting and exposure artifacts in image mosaics. In *Computer Vision and Pattern Recognition, 2001. CVPR 2001. Proceedings of the 2001 IEEE Computer Society Conference on*, volume 2, pages II–509, 2001.
- [va93] [2118] P. P. Vaidyanathan. *Multirate Systems and Filter Banks*. Prentice - Hall, 1993.
- [va06-1] [2119] M. Vallarino. A maximal function on harmonic extensions of  $h$ -type groups. *Ann. Math. Blaise Pascal*, 13(1):87–101, 2006.
- [va07-3] [2120] M. Vallarino. Spectral multipliers on Damek-Ricci spaces. *J. Lie Theory*, 17(1):163–189, 2007.
- [va09-1] [2121] M. Vallarino. Spaces  $h^1$  and BMO on  $ax + b$ -groups. *Collect. Math.*, 60(3):277–295, 2009.
- [rova09] [2122] A. Van and P. Rousseeuw. Minimum volume ellipsoid. *Wiley Interdisciplinary Reviews: Computational Statistics*, 1(1):71–82, 2009.
- [frmuscv08] [2123] d. van, M. Schmidt, M. Friedlander, and K. Murphy. Group sparsity via linear-time projection. Technical report, Dep. o. Comp. Sc., Univ. o. British Columbia, 2008.
- [frva07] [2124] E. van den Berg and M. Friedlander. SPGL1: A solver for large-scale sparse reconstruction, Jun. 2007.
- [frva08] [2125] E. van den Berg and M. Friedlander. Probing the Pareto frontier for basis pursuit solutions. *SIAM J. Sci. Comput.*, 31(2):890–912, 2008.
- [naseva05] [2126] C. V. van der Mee, M. Nashed, and S. Seatzu. A method for generating infinite positive self-adjoint test matrices and Riesz bases. *SIAM J. Matrix Anal. Appl.*, 26(4):1132–1149, 2005.
- [va01-2] [2127] A. J. van Leest. *Non-separable Gabor schemes. Their Design and Implementation*. PhD thesis, Tech. Univ. Eindhoven, 2001.

- [2128] nova11 T. van Waterschoot and M. Moonen. *Proceedings of the IEEE, title=Fifty Years of Acoustic Feedback Control: State of the Art and Future Challenges*, 99(2):288–327, feb. 2011.
- [2129] suvave06 P. Vandewalle, S. Süsstrunk, and M. Vetterli. A frequency domain approach to registration of aliased images with application to super-resolution. *EURASIP Journal on applied signal processing*, 2006:233–233, 2006.
- [2130] va88 S. Varadhan. Large deviations and applications. In *École d’Été de Probabilités de Saint-Flour XV–XVII, 1985–87*, volume 1362 of *Lecture Notes in Math.*, pages 1–49. Springer, Berlin, 1988.
- [2131] va09-2 R. Varga. *Matrix iterative analysis. 1st softcover printing of the 2nd revised and expanded ed. 2000*. Springer Series in Computational Mathematics 27. Dordrecht: Springer. x, 358 p. EUR 96.25, 2009.
- [2132] cosava92 N. Varopoulos, L. Saloff Coste, and T. Coulhon. *Analysis and geometry on groups*. Number 100. Cambridge Univ Pr, 1992.
- [2133] cosava08 N. Varopoulos, L. Saloff Coste, and T. Coulhon. *Analysis and Geometry on Groups Paperback Reprint of the 1992 Original*. Cambridge Tracts in Mathematics 100. Cambridge: Cambridge University Press. xii, 156 p., 2008.
- [2134] albahalupava10 S. Vasanawala, M. Alley, B. Hargreaves, R. Barth, J. Pauly, and M. Lustig. Improved pediatric MR imaging with compressed sensing. *Radiology*, 256(2):607–616, 2010.
- [2135] brva11 S. Vashishth and M. Broe. *The Foundations of Statistics: A Simulation-based Approach*. Springer Berlin / Heidelberg, 2011.
- [2136] luva10 N. Vaswani and W. Lu. Modified-CS: Modifying compressive sensing for problems with partially known support. *IEEE Trans. Signal Process.*, 58:4595–4607, Sep. 2010.
- [2137] dukova00 C. Vazquez, J. Konrad, and E. Dubois. Wavelet-based reconstruction of irregularly-sampled images: application to stereo imaging. In *Image Processing, 2000. Proc. of International Conference on,* volume 2, pages 319–322. IEEE, sept. 2000.

- dohove11** [2138] G. A. Velasco, N. Holighaus, M. Dörfler, and T. Grill. Constructing an invertible constant-Q transform with non-stationary Gabor frames. *Proceedings of DAFX11*, Paris, 2011.
- ve93** [2139] R. N. J. Veldhuis. A vector-filter notation for analysis/synthesis systems and its relation to frames. Technical report, PO Box 513, 5600 MB, Eindhoven, 1993.
- spve92** [2140] A. Vershik and P. Sporyshev. Asymptotic behavior of the number of faces of random polyhedra and the neighborliness problem. *Sel. Math. Sov.*, 11(2):181–201, 1992.
- ve01-2** [2141] R. Vershynin. John’s decompositions: selecting a large part. *Israel J. Math.*, 122:253–277, 2001.
- ve11** [2142] R. Vershynin. Invertibility of symmetric random matrices. *preprint*, 2011.
- veXX-1** [2143] R. Vershynin. Introduction to the non-asymptotic analysis of random matrices. In Y. Eldar and G. Kutyniok, editors, *Compressed Sensing: Theory and Applications*. Cambridge Univ Press, to appear.
- gokoveXX** [2144] M. Vetterli, J. Kovacevic, and V. K. Goyal. *The World of Fourier and Wavelets: Theory, Algorithms and Applications*.
- vi09-2** [2145] C. Villani. *Optimal transport: old and new*. Grundlehren der mathematischen Wissenschaften. Springer, 2009.
- vi11** [2146] P. Villarroya. On boundedness of discrete multilinear singular integral operators. *J. Math. Anal. Appl.*, 382(2):534 – 548, 2011.
- vi93-1** [2147] A. Vince. Replicating tessellations. *SIAM J. Discrete Math.*, 6(3):501–521, 1993.
- vian06** [2148] R. Vio and P. Andreani. Comments on the paper The Mexican Hat Wavelet Family. Application to point source detection in CMB maps by J. Gonzalez-Nuevo et al. (astro-ph/0604376), 2006.
- vi09-1** [2149] T. Virtanen. Spectral covariance in prior distributions of nonnegative matrix factorization based speech separation. In *17th European Signal Processing Conference (EUSIPCO 2009)*, pages 1933–1937, Glasgow, Scotland, UK, August 24-28, 2009.

- cevi09** [2150] T. Virtanen and A. Cemgil. Mixtures of gamma priors for non-negative matrix factorization based speech separation. In T. Virtanen, A. Cemgil, T. Adali, C. Jutten, J. Romano, and A. Barros, editors, *Independent Component Analysis and Signal Separation*, volume 5441 of *Lecture Notes in Computer Science*, pages 646–653. Springer Berlin / Heidelberg, 2009.
- cevi08** [2151] T. Virtanen and A. T. Cemgil. Prior structures for non-negative matrix factorization based audio source separation. *The Journal of the Acoustical Society of America*, 124(4):1p.(2571), 2008.
- meryvi08** [2152] T. Virtanen, A. Mesaros, and M. Ryyanen. Combining pitch-based inference and non-negative spectrogram factorization in separating vocals from polyphonic music. In *Proc. ISCA Tutorial and Research Workshop on Statistical and Perceptual Audition (SAPA2008)*, pages 17–22, Brisbane, Australia, September 21, 2008.
- vide11** [2153] T. Viscondi and A. de. Semiclassical propagator for SU (n) coherent states. *Journal of Mathematical Physics*, 52:052104, 2011.
- cogerevi10** [2154] A. Viswanathan, A. Gelb, D. Cochran, and R. Renaut. On reconstruction from non-uniform spectral data. *J. Sci. Comput.*, 45(1-3):487–513, 2010.
- bovi99** [2155] E. Viterbo and J. Boutros. A universal lattice code decoder for fading channels. *IEEE Trans. Inform. Theory*, 45(5):1639–1642, 1999.
- vo11** [2156] D. Voelz. *Computational Fourier Optics. A MATLAB Tutorial*. SPIE, 2011.
- kovo87** [2157] A. Vol’berg and S. Konyagin. On measures with duplication condition. *Izv. Akad. Nauk SSSR, Ser. Mat.*, 51(3):666–675, 1987.
- prrovy10** [2158] A. Vyas, M. Roopashree, and B. Prasad. Optimizing the modal index of Zernike polynomials for regulated phase screen simulation. In A. Vyas, M. B. Roopashree, B. R. Prasad, B. L. Ellerbroek, M. Hart, N. Hubin, and P. L. Wizinowich, editors, *Proc. SPIE, Adaptive Optics Systems II*, volume 7736 of *Poster Sessions*, page 773640(7), San Diego, California, USA, 2010. SPIE.

- [vy09] [2159] J. Vybíral. Sobolev and Jawerth embeddings for spaces with variable smoothness and integrability. *Ann. Acad. Sci. Fenn., Math.*, 34(2):529–544, 2009.
- [wa95-4] [2160] H. Wackernagel. *Multivariate Geostatistics: An Introduction with Applications*. Springer, 1995.
- [wa03-3] [2161] H. Wackernagel. *Multivariate Geostatistics An introduction with Applications 3rd Completely Revised ed.* Berlin: Springer. xv, 387 p., 2003.
- [wa06-3] [2162] M. Wakin. *The Geometry of Low-dimensional Signal Models*. PhD thesis, 2006.
- [wa07-1] [2163] S. Waldmann. *Poisson-Geometrie und Deformationsquantisierung: Eine Einführung*. Springer, 2007.
- [wa04] [2164] C. A. e. Walker. *Handbook of moire measurement*. Optics and Optoelectronics. IoP, Institute of Physics Publishing, 2004.
- [chwa00] [2165] J. Walker and Y. Chen. Image denoising using tree-based wavelet subband correlations and shrinkage. *Opt. Eng.*, 39:2900, 2000.
- [wa65-2] [2166] J. Walsh. *Interpolation and approximation by rational functions in the complex domain*. Fourth edition. American Mathematical Society Colloquium Publications, Vol. XX. American Mathematical Society, Providence, R.I., 1965.
- [wa77-2] [2167] G. G. Walter. Properties of Hermite series estimation of probability density. *Ann. Statist.*, 5(6):1258–1264, 1977.
- [wa11-2] [2168] Z.-X. Wan. *Finite Fields and Galois Rings*. Hackensack, NJ: World Scientific. 400 p., 2011.
- [carewaya10] [2169] A. Wang, J. Yao, D. Cai, and H. Ren. Design and fabrication of a pyramid wavefront sensor. *Opt. Eng.*, 49:073401, 2010.
- [wayu09] [2170] C. Wang and Y. Yu. Aronsson’s equations on Carnot-Carathéodory spaces. *Ill. J. Math.*, 52(3):757–772, 2009.
- [huwazh04] [2171] D. Wang, G. Zhu, and Z. Hu. Optimal Pilots in Frequency Domain for Channel. volume 2, pages 608–612, May 2004.

- kewa09** [2172] H. Wang and Q. Kema. Frequency guided methods for demodulation of a single fringe pattern. *Opt. Express*, 17(17):15118–15127, Aug 2009.
- wawa07** [2173] H. Wang and J. Wang. Optimal pilot design for MIMO-OFDM system channel estimation in time domain. pages 307–312, Sep. 2007.
- wa11-1** [2174] H.-Y. Wang. Concentration estimates for the moving least-square method in learning theory. *J. Approx. Theory*, 163(9):1125 – 1133, 2011.
- dikolishwayi11** [2175] J. Wang, Y. Shi, D. Kong, W. Ding, C. Li, and B. Yin. Sparse representation based down-sampling image compression. *J. Comput. Appl. Math.*, 236(5):675–683, 2011.
- wa11** [2176] J.-R. Wang. Shannon wavelet regularization methods for a backward heat equation. *Journal of Computational and Applied Mathematics*, 235(9):3079 – 3085, 2011.
- wawa09** [2177] T. Wang and Q. Wan. Sparse Signal Recovery via Multi-Residual Based Greedy Method. In *Image and Signal Processing, 2009. CISP'09. 2nd International Congress on*, pages 1–4, 2009.
- chwa97** [2178] W.-H. Wang and Y.-C. Chen. New approach for scale, rotation, and translation invariant pattern recognition. *Opt. Eng.*, 36(4):1113–1122, 1997.
- huliwa09** [2179] X. Wang, C. Huang, and J. Liu. Gabor-2DLDA: Face Recognition Using Gabor Features and 2D Linear Discriminant Analysis. In *Intelligent Computation Technology and Automation, 2009. ICICTA'09. Second International Conference on*, volume 1, pages 608–610, 2009.
- orwa09** [2180] Y. Wang and J. Orchard. Fast Discrete Orthonormal Stockwell Transform. *SIAM Journal on Scientific Computing*, 31(5):4000–4012, 2009.
- orwa09-1** [2181] Y. Wang and J. Orchard. On the use of the Stockwell transform for image compression. In Y. Wang, J. Orchard, J. T. Astola, K. O. Egiazarian, N. M. Nasrabadi, and S. A. Rizvi, editors, *Proc. SPIE, Image Processing: Algorithms and Systems VII*, volume 7245 of *Transform Methods*, page 724504, San Jose, CA, USA, 2009. SPIE.

- orwa09-2** [2182] Y. Wang and J. Orchard. The discrete orthonormal Stockwell transform for image restoration. In *Image Processing (ICIP), 2009 16th IEEE International Conference on*, pages 2761 –2764, Cairo, 7-10 Nov. 2009, nov. 2009.
- wa95-5** [2183] Z. Wang. Comments on generalized discrete Hartley transform. *IEEE Trans. Signal Process.*, 43(7):1711 – 1712, jul 1995.
- gowa08** [2184] Z. Wang and G. Gong. New sequences design from Weil representation with low two-dimensional correlation in both time and phase shifts. *Arxiv preprint arXiv:0812.4487*, 2008.
- wa07-2** [2185] D. S. Watkins. *The matrix eigenvalue problem: GR and Krylov subspace methods*. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, PA, 2007.
- we10-3** [2186] E. Weber. Algebraic aspects of the Paving and Feichtinger conjectures. In V. B. Joseph A. Ball, editor, *Topics in operator theory: Operators, matrices and analytic functions (Proceedings of the 19th international workshop on operator theory and applications (IWOTA), College of William and Mary, Williamsburg, VA, USA, July 22–26, 2008)*, volume 1 of *Operator Theory: Advances and Applications (Vol. 202)*, pages 569–578. Basel: Birkhäuser., 2010.
- smwewuxiya07** [2187] L. Wee Chung, J. Xian, S. Wu, D. Smith, and H. Yan. Spectral estimation in unevenly sampled space of periodically expressed microarray time series data. *BMC Bioinformatics*, 8(1):1–19, 2007.
- limaratawe09** [2188] D. Wei, Q. Ran, Y. Li, J. Ma, and L. Tan. A convolution and product theorem for the linear canonical transform. *IEEE Signal Processing Letters*, 16(10):853–856, 2009.
- liwe10** [2189] K. Wei and T. Liang. Gabor Representation for Radar Signals via Real-Valued Discrete Gabor Transform. *Computer*, page 10, 2010.
- chwewu12** [2190] X. Wei, Y.-Z. Wu, and L.-P. Chen. A new sequential optimal sampling method for radial basis functions. *Applied Mathematics and Computation*, 218(19):9635 – 9646, 2012.

- we01-2** [2191] J. Weickert. Efficient image segmentation using partial differential equations and morphology. *Pattern Recognition*, 34(9):1813–1824, September 2001.
- we49-1** [2192] A. Weil. Numbers of solutions of equations in finite fields. *Bull. Amer. Math. Soc.*, 55:497–508, 1949.
- we74-2** [2193] A. Weil. *Basic Number Theory 3rd ed.* Die Grundlehren der mathematischen Wissenschaften. Band 144. Berlin-Heidelberg-New York: Springer-Verlag. XVIII, 325 p., 1974.
- sawe09** [2194] K. Weinberger and L. Saul. Distance metric learning for large margin nearest neighbor classification. *The Journal of Machine Learning Research*, 10:207–244, 2009.
- sashwe04** [2195] K. Weinberger, F. Sha, and L. Saul. Learning a kernel matrix for nonlinear dimensionality reduction. In *Proceedings of the twenty-first international conference on Machine learning*, page 106, 2004.
- we09-1** [2196] F. Weisz. Pointwise summability of Gabor expansions. *J. Fourier Anal. Appl.*, 15(4):463–487, 2009.
- we10-2** [2197] F. Weisz. Local Hardy spaces and summability of Fourier transforms. *J. Math. Anal. Appl.*, 362(2):275–285, 2010.
- we10-1** [2198] F. Weisz. Restricted summability of Fourier transforms and local Hardy spaces. *Acta Math. Sin. (Engl. Ser.)*, 26(9):1627–1640, 2010.
- we11** [2199] F. Weisz.  $\ell_1$ -summability of higher-dimensional Fourier series. *J. Approx. Theory*, 163(2):99 – 116, February 2011.
- we11-1** [2200] F. Weisz. Restricted summability of multi-dimensional Vilenkin-Fourier series. *Ann. Univ. Sci. Budap. Rolando Eötvös, Sect. Comput.*, 35:305–317, 2011.
- we80** [2201] Y. Weit. On closed ideals in the motion group algebra. *Math. Ann.*, 248:279–283, 1980.
- we80-1** [2202] Y. Weit. On Schwartz’s theorem for the motion group. *Ann. Inst. Fourier (Grenoble)*, 30(1):91–107, 1980.

- we80-2** [2203] Y. Weit. On the one-sided Wiener's theorem for the motion group. 1980.
- we81-1** [2204] Y. Weit. On spectral analysis in locally compact motion groups. *J. Funct. Anal.*, 40:45–53, 1981.
- stwewe08** [2205] M. Welk, G. Steidl, and J. Weickert. Locally analytic schemes: a link between diffusion filtering and wavelet shrinkage. *Appl. Comput. Harmon. Anal.*, 24(2):195–224, 2008.
- brthwewe05** [2206] M. Welk, D. Theis, T. Brox, and J. Weickert. PDE-based deconvolution with forward-backward diffusivities and diffusion tensors. Kimmel, Ron (ed.) et al., Scale space and PDE methods in computer vision. 5th international conference, Scale-Space 2005, Hofgeismar, Germany, April 7–9, 2005. Proceedings. Berlin: Springer. Lecture Notes in Computer Science 3459, 585–597 (2005)., 2005.
- gowe10** [2207] D. Weller and V. K. Goyal. On the estimation of nonrandom signal coefficients from jittered samples. *Arxiv preprint arXiv:1007.5034*, 2010.
- we01-3** [2208] H. Wendland. Local polynomial reproduction and moving least squares approximation. *IMA J. Numer. Anal.*, 21(1):285–300, 2001.
- daglmasewe10** [2209] S. Wenger, S. Darabi, P. Sen, K. Glassmeier, and M. Magnor. COMPRESSED SENSING FOR APERTURE SYNTHESIS IMAGING. 2010.
- bhmapirawe10** [2210] S. Wenger, M. Magnor, Y. Pihlström, S. Bhatnagar, and U. Rau. SparseRI: A Compressed Sensing Framework for Aperture Synthesis Imaging in Radio Astronomy. *Publications of the Astronomical Society of the Pacific*, 122(897):118, 2010.
- we83-1** [2211] R. Werner. Physical uniformities on the state space of nonrelativistic quantum mechanics. *Found. Phys.*, 13(8):859–881, 1983.
- we84** [2212] R. Werner. Quantum harmonic analysis on phase space. *J. Math. Phys.*, 25(5):1404–1411, 1984.
- we04-1** [2213] R. Werner. The uncertainty relation for joint measurement of position and momentum. *Quantum Inf. Comput.*, 4(6-7):546–562, 2004.

- wh12** [2214] M. Whiting. Duchamp: a 3D source finder for spectral-line data. *Submitted on 13 Jan 2012*, page 17, 2012.
- wawh96** [2215] E. Whittaker and G. Watson. *A course of modern analysis. An introduction to the general theory of infinite processes and of analytic functions; with an account of the principal transcendental functions. Repr. of the 4th ed. 1927.* Cambridge: Cambridge University Press. 608 p., 1996.
- japuscvawi09** [2216] Y. Wiaux, L. Jacques, G. Puy, A. Scaife, and P. Vandergheynst. Compressed sensing imaging techniques for radio interferometry. *Monthly Notices of the Royal Astronomical Society*, 395(3):1733–1742, 2009.
- bopuvawi09** [2217] Y. Wiaux, G. Puy, Y. Boursier, and P. Vandergheynst. Compressed sensing for radio interferometry: spread spectrum imaging techniques. *Proc. SPIE, Wavelets XIII*, 2009.
- wi76-2** [2218] J. Wichmann. On the symmetry of matrix algebras. *Proc. Amer. Math. Soc.*, 54:237–240, 1976.
- wi60** [2219] E. P. Wigner. The unreasonable effectiveness of mathematics in the natural sciences. *Commun. Pure Appl. Anal.*, 13:1–14, 1960.
- wi53** [2220] R. Wilder. The origin and growth of mathematical concepts. *Bull. Amer. Math. Soc.*, 59:423–448, 1953.
- wi89** [2221] K. Wilson. Grand challenges to computational science. *Future Generation Computer Systems*, 5(2-3):171 – 189, 1989.
- wi10** [2222] M. Wilson. How fast and in what sense(s) does the Calderon reproducing formula converge? *J. Fourier Anal. Appl.*, 16(5):768–785, 2010.
- elemapestsuvawi06** [2223] P. L. Wizinowich, D. Le Mignant, A. Bouchez, R. Campbell, J. C. Chin, A. Contos, M. van Dam, S. Hartman, E. Johansson, R. Lafon, H. Lewis, P. Stomski, D. Summers, C. Brown, and Pennington D. The WM Keck Observatory laser guide star adaptive optics system: overview. *Publications of the Astronomical Society of the Pacific*, 118(840):297–309, February 2006.

- [wo00] [2224] W. Woess. *Random walks on infinite graphs and groups*. Number 138. Cambridge Univ Pr, 2000.
- [wo11-2] [2225] P. Wojdylo. Wilson system for triple redundancy. *Int. J. Wavelets Multiresolut. Inf. Process.*, 9(1):151–167, 2011.
- [wo99-2] [2226] P. Wojtaszczyk. Wavelets as unconditional bases in  $L_p(\mathbb{R})$ . *J. Fourier Anal. Appl.*, 5(1):73–85, 1999.
- [wo12] [2227] P. Wojtaszczyk.  $\ell_1$  minimisation with noisy data. *SIAM J. Numer. Anal.*, 50(2):458–467, 2012.
- [wo92] [2228] J. Wolf. The uncertainty principle for Gelfand pairs. *Nova J. Algebra Geom.*, 1(4):383–396, 1992.
- [wo94-1] [2229] J. Wolf. Uncertainty principles for Gelfand pairs and Cayley complexes. Gindikin, Simon (ed.) et al., 75 years of Radon transform. Proceedings of the conference held at the Erwin Schrödinger International Institute for Mathematical Physics in Vienna, Austria, August 31-September 4, 1992. Cambridge, MA: International Press. Co, 1994.
- [wo74] [2230] K. Wolf. Canonical transforms. I. Complex linear transforms. *Journal of Mathematical Physics*, 15:1295, 1974.
- [cadajamawo11] [2231] J. Wolff, M. Martens, S. Jafarpour, I. Daubechies, and R. Calderbank. Uncovering elements of style. In *Acoustics Speech and Signal Processing (ICASSP), 2011 IEEE International Conference on*, pages 1017–1020, 2011.
- [wo02-2] [2232] S. Wolfram. *A New Kind of Science*. Wolfram Media, Inc., 2002.
- [wo11] [2233] M. Wong. *Discrete Fourier analysis*. Pseudo-Differential Operators. Theory and Applications 5. Basel: Birkhäuser. viii, 176 p., 2011.
- [wo79] [2234] J. Wood. Unbounded multipliers on commutative Banach algebras. *Pacific J. Math.*, 85:479–484, 1979.
- [wo97-1] [2235] N. Woodhouse. *Geometric quantization*. Oxford Mathematical Monographs. Oxford University Press, Second Edition edition, 1997.

- wo80-1** [2236] W. A. Woyczynski. On Marcinkiewicz-Zygmund laws of large numbers in Banach spaces and related rates of convergence. *Probab. Math. Stat.*, 1(2):117–131, 1980.
- wr97** [2237] G. Wright. Magnetic resonance imaging. *IEEE Signal Processing Magazine Magazine*, 14(1):56–66, 1997.
- gamasawrya09** [2238] J. Wright, A. Yang, A. Ganesh, S. Sastry, and Y. Ma. Robust Face Recognition via Sparse Representation. *Pattern Analysis and Machine Intelligence, IEEE Transactions on.*, 31(2):210–227, 2009.
- wu06** [2239] W. Wu. Quantized Gromov-Hausdorff distance. *J. Funct. Anal.*, 238(1):58–98, 2006.
- guhewu05** [2240] Z. Wu, J. He, and G. Gu. Design of Optimal Pilot-tones for Channel Estimation in MIMO-OFDM Systems. volume 1, pages 12–17, Mar. 2005.
- wuzhzo08** [2241] Z. Wu, R. Zhao, and N. Zorboska. Toeplitz operators on analytic Besov spaces. *Integr. Equ. Oper. Theory*, 60(3):435–449, 2008.
- gemamexa11** [2242] F. Xaver, G. Matz, P. Gerstoft, and C. Mecklenbräuker. Localization of acoustic sources using a decentralized particle filter. *EURASIP Journal on Wireless Communications and Networking*, 2011(1):94, 2011.
- xi10-1** [2243] J. Xian. Error estimates from noise samples for iterative algorithm in shift-invariant signal spaces. *Abstr. Appl. Anal.*, Article ID 214213:9, 2010.
- xi12** [2244] J. Xian. Local sampling set conditions in weighted shift-invariant signal spaces. *Applicable Analysis*, 91(3):447–457, 2012.
- lix12** [2245] J. Xian and S. Li. Improved sampling and reconstruction in spline subspaces. *Acta Math. Appl. Sin.*, to appear, 2012.
- suxi10** [2246] J. Xian and W. Sun. Local sampling and reconstruction in shift-invariant spaces and their applications in spline subspaces. *Numer. Funct. Anal. Optim.*, 31(3):366–386, 2010.

- haraxixi09** [2247] Z. Xiang, Y. Xi, U. Hasson, and P. Ramadge. Boosting with spatial regularization. volume 22, pages 2107–2115, British Columbia, Canada, Dec. 2009.
- xi98** [2248] H. Xiao. On anisotropic invariants of a symmetric tensor: Crystal classes, quasi-crystal classes and others. *Proc. R. Soc. Lond., Ser. A, Math. Phys. Eng. Sci.*, 454(1972):1217–1240, 1998.
- xi01** [2249] J. Xiao. *Holomorphic  $Q$  Classes*. Lecture Notes in Mathematics Springer, 2001.
- xi06** [2250] J. Xiao. *Geometric  $Q_p$  Functions*. Frontiers in Mathematics. Birkhäuser, 2006.
- diwaxizh07** [2251] X. Xiao, Y. Zhu, Y. Wang, and M. Ding. Some properties of a bounded linear operator defined by a  $g$ -Bessel sequence. *J. Fuzhou Univ., Nat. Sci.*, 35(3):326–330, 2007.
- chlixi10** [2252] Y. Xiao, H. Chen, and F. Li. *Handbooks On Sensor Networks*. Hackensack, NJ: World Scientific. xxvii, 2010.
- maxi01** [2253] Z. Xiong and H. Malvar. A nonuniform modulated complex lapped transform. *IEEE Signal Processing Letters*, 8(9):257–260, September 2001.
- xu08** [2254] Y. Xu. Compactly supported spline wavelet method of initial value problem. *J. Northwest Norm. Univ., Nat. Sci.*, 44(4):15–20, 2008.
- haraxu99** [2255] Y. Xu, S. Haykin, and R. Racine. Multiple window time-frequency distribution and coherence of EEG using Slepian sequences and Hermite functions. *Biomedical Engineering, IEEE Transactions on*, 46(7):861–866, 1999.
- xu10** [2256] Z. Xu. A remark about orthogonal matching pursuit algorithm, 2010.
- plrexu10** [2257] Z. Xu, L. Rebollo Neira, and A. Plastino. Subspace modelling for structured noise suppression. *Physica A: Statistical Mechanics and its Applications*, 389(10):2030–2035, 2010.
- ya57** [2258] A. Yaglom. Certain types of random fields in  $n$ -dimensional spaces similar to stationary stochastic processes. *Teor. Veroyatn. Primen.*, 2:292–338, 1957.

- [yaya09] [2259] T. Yakovenko and R. Yamnenko. Convergence rate for wavelet expansions of generalized accumulated Ornstein-Uhlenbeck processes. 2009.
- [ya06-2] [2260] S. Yakubovich. On the Plancherel theorem for the Olevskii transform. *Acta Math. Vietnam.*, 31(3):249–260, 2006.
- [luya94] [2261] S. Yakubovich and Y. Luchko. *The Hypergeometric Approach To Integral Transforms and Convolutions*. Mathematics and its Applications (Dordrecht). 287. Dordrecht: Kluwer Academic Publishers. xi, 324 p., 1994.
- [ya94] [2262] K. Yamada. Gabor feature stabilities for basic image transformations. In *BMVC94, Proc. of the 5th British Machine Vision Conference*, page 10. BMVA Press, 1994.
- [yaya11] [2263] D. Yang and S. Yang. New characterizations of weighted Morrey-Campanato spaces. *Taiwanese J. Math.*, 15(1):141–163, 2011.
- [huya11] [2264] J. Yang and T. Huang. *Image super-resolution: historical overview and future challenges*. from the book: Super-Resolution Imaging (edited by Peyman Milanfar). CRC Press (Taylor & Francis Group), 2011.
- [humawrya10] [2265] J. Yang, J. Wright, T. Huang, and Y. Ma. Image super-resolution via sparse representation. *IEEE Trans. Image Process.*, 19(11):2861–2873, nov. 2010.
- [ya99-2] [2266] Q. Yang. *Multiresolution analysis on non-abelian locally compact groups*. PhD thesis, University of Saskatchewan, 1999.
- [bongya07] [2267] A. Yau, N. Bose, and M. K. Ng. An efficient algorithm for super-resolution in medium field imaging. *Multidimensional Syst. Signal Process.*, 18(2-3):173–188, 2007.
- [ys05] [2268] H. Yserentant. Sparse grid spaces for the numerical solution of the electronic Schrödinger equation. *Numer. Math.*, 101(2):381–389, 2005.
- [demotryu11] [2269] S. Yu, L.-C. Tranchevent, M. De, and Y. Moreau. *Kernel-based Data Fusion for Machine Learning*. Springer Berlin Heidelberg, 2011.

- sayayu10** [2270] W. Yuan, Y. Sawano, and D. Yang. Decompositions of Besov-Hausdorff and Triebel-Lizorkin-Hausdorff spaces and their applications. *J. Math. Anal. Appl.*, 369(2):736–757, 2010.
- siyayu10** [2271] W. Yuan, W. Sickel, and D. Yang. *Morrey and Campanato meet Besov, Lizorkin and Triebel*. Lecture Notes in Mathematics 2005. Berlin: Springer. xi, 281 p., 2010.
- za74** [2272] L. Zalcman. Real proofs of complex theorems (and vice versa). *Amer. Math. Monthly*, 81(2):115–137, 1974.
- shza11** [2273] A. Zayed and M. Shubov. Sampling theorem for bandlimited Hardy space functions generated by Regge problem. *Appl. Comput. Harmon. Anal.*, 31(1):125 – 142, 2011.
- ze10** [2274] E. Zehnder. *Lectures on Dynamical Systems Hamiltonian Vector Fields and Symplectic Capacities*. EMS Textbooks in Mathematics. Zürich: European Mathematical Society (EMS). x, 353 p., 2010.
- ze06** [2275] E. Zeidler. *Quantum Field theory I: Basics In mathematics and Physics A Bridge Between Mathematicians And Physicists*. Berlin: Springer. xxiv, 1020 p. EUR 96.26 and SFR 152.50, 2006.
- ze09** [2276] E. Zeidler. *Quantum Field Theory II: Quantum Electrodynamics A Bridge Between Mathematicians and Physicists*. Berlin: Springer. xxxvii, 1101 p., 2009.
- ze11** [2277] E. Zeidler. *Quantum Field theory III: Gauge theory A Bridge Between Mathematicians And Physicists*. Berlin: Springer. xxxii, 1126 p., 2011.
- ze96** [2278] S. Zelditch. Quantum ergodicity of  $C^*$  dynamical systems. *Comm. Math. Phys.*, 177(2):507–528, 1996.
- ze94** [2279] A. Zell. *Simulation of neural nets*. Bonn: Addison-Wesley Publishing Company. 624 p., 1994.
- meze05** [2280] T. Zemen and C. Mecklenbräuker. Time-variant channel estimation using discrete prolate spheroidal sequences. *IEEE Trans. Signal Process.*, 53:3597–3607, Sep. 2005.

- jirazhzh04 [2281] A. Zhang, C. Rao, Y. Zhang, and W. Jiang. Sampling error analysis of Shack-Hartmann wavefront sensor with variable subaperture pixels. *J. Modern Opt.*, 51(15):2267–2278, 2004.
- zh00 [2282] B. Zhang. Commutator estimates, Besov spaces and scattering problems for the acoustic wave propagation in perturbed stratified fluids. *Math. Proc. Cambridge Philos. Soc.*, 128(1):177–192, 2000.
- chlitazh04 [2283] H. Zhang, J. Chen, Y. Tang, and S. Li. Analysis of Pilot-Symbol Aided Channel Estimation for MIMO-OFDM Systems. *Proc. ICCAS-2004*, 1:299–303, Jun. 2004.
- krmozh09 [2284] H. Zhang, J. Moura, and B. Krogh. Dynamic field estimation using wireless sensor networks: tradeoffs between estimation error and communication cost. *IEEE Trans. Signal Process.*, 57(6):2383–2395, 2009.
- pazh08-1 [2285] J. Zhang and A. Papandreou Suppappola. Compressive sensing and waveform design for the identification of linear time-varying systems. pages 3865 – 3868, Las Vegas, NV, April 2008.
- zh11 [2286] K. Zhang. Toeplitz operators with BMO symbols on the weighted Bergman space of the unit ball. *Acta Mathematica Sinica*, 27(11):2129–2142, 2011.
- kazh10 [2287] K. Zhang and J. Kang. Real-time 4D signal processing and visualization using graphics processing unit on a regular nonlinear-k Fourier-domain OCT system. *Optics express*, 18(11):11772–11784, 2010.
- guplzh10 [2288] Q. Zhang, R. Guy, and R. Plemmons. Matrix structures and parallel algorithms for image superresolution reconstruction. *SIAM J. Matrix Anal. Appl.*, 31(4):1873–1893, 2010.
- zh11-2 [2289] T. Zhang. Sparse recovery with orthogonal matching pursuit under RIP. *IEEE Trans. Inform. Theory*, 57:6215–6221, Sep. 2011.
- brbuoszh10 [2290] X. Zhang, M. Burger, X. Bresson, and S. Osher. Bregmanized nonlocal regularization for deconvolution and sparse reconstruction. *SIAM J. Imaging Sci.*, 3(3):253–276, 2010.

- buoszh11** [2291] X. Zhang, M. Burger, and S. Osher. A unified primal-dual algorithm framework based on Bregman iteration. *J. Sci. Comput.*, 46:20–46, 2011.
- dogulireyazhzh97** [2292] Y. Zhang, B. Gu, B. Dong, G. Yang, H. Ren, X. Zhang, and S. Liu. Fractional Gabor transform. *Optics letters*, 22(21):1583–1585, 1997.
- litawazh09** [2293] J. Zhao, R. Tao, Y. Li, and Y. Wang. Uncertainty principles for linear canonical transform. *IEEE Trans. Signal Process.*, 57(7):2856–2858, 2009.
- pezzhzh03** [2294] S. Zhao, P. Zhang, and S. Peng. Wavelet-domain least squares based image superresolution. In J. P. Li, editor, *Proceedings of the third international conference on wavelet analysis and its applications (WAA)*, volume 1-2, pages 269–274, Chongqing, PR China, May 29-31, 2003, 2003. World Sci. Publ., River Edge.
- nerarozh11** [2295] M. Zhariy, A. Neubauer, M. Rosensteiner, and R. Ramlau. Cumulative wavefront reconstructor for the Shack-Hartmann sensor. *Inverse Problems and Imaging (IPI)*, 5(4):893–913, 2011.
- dazh11** [2296] B. Zheng and B. Dai. A meshless local moving Kriging method for two-dimensional solids. *Applied Mathematics and Computation*, 218(2):563 – 573, 2011.
- mcmuzh93** [2297] F.-C. Zheng, S. McLaughlin, and B. Mulgrew. Blind equalization of nonminimum phase channels: higher order cumulant based algorithm. *IEEE Trans. Signal Process.*, 41(2):681–691, Feb. 1993.
- tozh97** [2298] H. Zheng and L. Tong. Blind Channel Estimation Using the Second-Order Statistics: Asymptotic Performance and Limitations. *IEEE Trans. Signal Process.*, 45(8):2060–2071, Aug. 1997.
- zh11-1** [2299] V. V. Zhikov. Homogenization of a NavierStokes-type system for electrorheological fluid. *Complex Variables and Elliptic Equations*, 56(7-9):545–558, 2011.
- chhusozh11** [2300] H. Zhu, Y. Chen, S. Song, and H. Hu. Symplectic and multi-symplectic wavelet collocation methods for two-dimensional Schrödinger equations. *Applied Numerical Mathematics*, 61(3):308 – 321, 2011.

- chzh08 [2301] M. Zhu and T. Chan. An efficient primal-dual hybrid gradient algorithm for total variation image restoration. Technical report, 2008.
- luzhzh07 [2302] Z. Zhu, H. Lu, and Y. Zhao. Scale multiplication in odd Gabor transform domain for edge detection. *Journal of Visual Communication and Image Representation*, 18(1):68 – 80, 2007.
- zezi96 [2303] M. Zibulski and Y. Zeevi. Signal- and image-component separation by a multi-window Gabor-type scheme. In *Pattern Recognition, 1996., Proceedings of the 13th International Conference on.,* volume 2, pages 835 –839, Vienna , Austria, aug 1996. IEEE.
- bacalezi07 [2304] T. Zizian, R. Cannizzaro, G. Leus, and P. Banelli. Pilot-Assisted Time-Varying Channel Estimation for OFDM Systems. *IEEE Trans. Signal Process.*, 55(5):2226–2238, May 2007.
- liwazhzo05 [2305] H. Zou, D. Wang, X. Zhang, and Y. Li. Nonnegative time-frequency distributions for parametric time-frequency representations using semi-affine transformation group. *Signal Process.*, 85(9):1813–1826, 2005.
- slzy98 [2306] K. Zyczkowski and W. Slomczynski. The Monge distance between quantum states. *Journal of Physics A: Mathematical and General*, 31:9095, 1998.
- slzy01 [2307] K. Zyczkowski and W. Slomczynski. The Monge metric on the sphere and geometry of quantum states. *Journal of Physics A: Mathematical and General*, 34:6689, 2001.
- bocazy10 [2308] A. Zymnis, S. Boyd, and E. Candes. Compressed sensing with quantized measurements. *IEEE Signal Process. Letters*, 17(2):149 –152, 2010.