

## **Monday, August 27, 2007**

### **MS1 (08:30), C1**

Chair: Anton Kleywegt

- Garrett J. Van Ryzin: Stochastic Optimization in Revenue Management

### **MS2 (08:30), C2**

Chair: Ruediger Schultz

- Shabbir Ahmed: Sampling and integer programming for chance-constrained problems

### **MA1 (09:30), A**

Chair: Teemu Pennanen

- Andreas Eichhorn: Stability of multistage stochastic programs incorporating polyhedral risk measures
- David Wozabal: Non-parametric model uncertainty in stochastic programming.
- Jitka Dupacova: Testing the structure of stochastic programs

### **MA2 (09:30), T**

Chair: Sebastien Lleo

- Bogdan Norikin: Solution of actuarial integral equations by a successive approximation method
- Stefano Baccarin: Optimal consumption of a geometric Brownian motion with strictly positive intervention costs

### **MA3 (09:30), S**

Chair: Marida Bertocchi

- Martin Densing: Multiperiod risk measurement and optimal scheduling of electricity generation
- Andres Ramos: Decision support model for weekly operation of hydroelectric reservoirs by stochastic nonlinear opti

### **MA4 (09:30), Aula**

Chair: Michael Dempster

- Cristina Fulga: Optimal Portfolio Selection for Utility Based Models
- Alex Weissensteiner: Cash Management using Stochastic Programming
- Markku Kallio: Incentive Option Valuation under Imperfect Market and Risky Private Endowment

### **MB1 (11:30), A**

Chair: Andrzej Ruszczyński

- Nilay Noyan: Valid Inequalities and Restrictions for Stochastic Programming Problems with First Order Stochastic
- Csaba I. Fabian: Solving Second-Order Stochastic Dominance Models by cutting-plane approach
- Andrzej Ruszczyński: Stochastic dynamic optimization with multivariate stochastic dominance constraints

## **MB2 (11:30), T**

Chair: Lewis Ntaimo

- Abdel Lisser: Stochastic Quadratic Knapsack Problem
- Yeming Gong: Stochastic Multi-knapsack Models for Storage Space Allocation in a Third-party Warehouse
- David Morton: A stochastic integer program for prioritization

## **MB3 (11:30), S**

Chair: Daniel Kuhn

- Yousaf Shad Muhammad: Water Resources Management by Stochastic Optimization: A case study of Indus Basin Irrigation System
- Herman Mawengkang: Stochastic Programming Model in Planning Fish Product of Small Scale Traditional Business at North S
- Wu YunPeng: A stochastic programming model for knowledge asset management under knowledge grid circumstance

## **MB4 (11:30), Aula**

Chair: Yurii Ermoliev

- Alexei Gaivoronski: Managing noncommensurable risks by risk budgeting
- Vladimir Norikin: Decision making under catastrophic risks
- Yurii Ermoliev: On robust solutions for global change processes

## **MP1 (14:30), C1**

Chair: Werner Römisch

- Darinka Dentcheva: Optimization problems with stochastic ordering constraints

## **MC1 (16:00), A**

Chair: Darinka Dentcheva

- Milos Kopa: A FSD portfolio optimality test
- Tito Homem-de-Mello: Optimization Algorithms for Problems with Stochastic Dominance

## **MC2 (16:00), T**

Chair: Andreas Grothey

- Stefan Vigerske: Decomposition of Multistage Stochastic Programs with Recombining Scenario Trees
- Jörgen Blomvall: An efficient primal-dual solver for nonlinear convex 2-stage financial models
- Michael Bielser: Stochastic Extensions for Algebraic Languages (SEAL)
- Ronald Hochreiter: Contemporary modeling of multi-stage stochastic programming problems

## **MC3 (16:00), S**

Chair: Asgeir Tomasgard

- Nikola Broussev: Electricity Swing Options
- Alfred Kalliauer: An efficient Dynamic Programming approach
- Francesca Maggioni: A stochastic optimization model for gas retailer with temperature scenarios and oil prices paramete

## **MC4 (16:00), Aula**

Chair: Giorgio Consigli

- Dmitry Golembiovsky: ON-LINE SYSTEM FOR DERIVATIVE PORTFOLIO MANAGEMENT
- Yin Guo: A Multi-stage Stochastic Programming Model for Chinese Commercial Bank Asset and Liability Management
- Elcin Timur: Portfolio Optimization via Stochastic Programming : An Application on the Istanbul Stock Exchange
- Stefan Hochrainer: Drought Risk Management and Climate Change Uncertainties: A case study on Malawi

## **Tuesday, August 28, 2007**

### **TS1 (08:30), C1**

Chair: Laureano Escudero

- Ruediger Schultz: Risk Aversion in Two-Stage Stochastic Integer Programming via Mean-Risk Models and Dominance Constraints

### **TS2 (08:30), C2**

Chair: Shabbir Ahmed

- Anton Kleywegt: Effects of Modeling Error

### **TA1 (09:30), A**

Chair: Jitka Dupacova

- Teemu Pennanen: Galerkin methods in multistage stochastic programming
- Georg Pflug: Invariance in stochastic optimization
- Birge John: Error Bounds on Dynamic Stochastic Programs with FEM Methods

### **TA2 (09:30), T**

Chair: Gendreau Michel

- Andrew Miller: Polynomial Time Algorithms for Capacitated Stochastic Production Planning Problems
- Kai Huang: Stochastic programming models for Assemble-To-Order system optimization
- Maria L.A.G. Cremers: A Dynamic Day-ahead Paratransit Planning Problem

### **TA3 (09:30), S**

Chair: Andres Ramos

- Lars Hellemo: Natural gas operations with pipelines and LNG
- Nowak Matthias P.: A stochastic optimization model for operational portfolio planning in liberalized natural gas market
- Asgeir Tomasgard: Analysing capacity booking for natural gas transportation in a stochastic complementarity problem

### **TA4 (09:30), Aula**

Chair: Koray Simsek

- Helgard Raubenheimer: A stochastic programming approach to managing liquid asset portfolios
- Sebastien Lleo: Jump-Diffusion Risk Sensitive Asset Management
- Katharina Schwaiger: Mathematical Programming Models for Asset Liability Management

## **TB1 (11:30), A**

Chair: Silvia Vogel

- Raffaello Seri: Generic Approximation of Stochastic Programming Problems
- Guzin Bayraksan: Sequential Stopping Rules for Stochastic Programming
- Fabian Bastin: A non-parametric sampling approach for nonlinear stochastic problems
- Leonidas Sakalauskas: Two-stage Stochastic Linear Programming by a series of Monte-Carlo estimators

## **TB2 (11:30), T**

Chair: David Morton

- Thomas Heinze: A Decomposition Method for Multistage Stochastic Integer Programs with Risk Objectives
- Gloria Perez: A general two-stage algorithm for solving integer programs via Branch-and-Fix Coordination and Bend
- Stein W. Wallace: Optimality structures in stochastic integer programming

## **TB3 (11:30), S**

Chair: Chanaka Edirisinghe

- Harald Held: Shape Optimization under Uncertainty
- Petr Stepanek: Structural Optimization of Concrete Cross-Section by Stochastic Programming
- Martin Pach: A level-set method for shape optimization under uncertainty in 3D
- Kurt Marti: Optimal Structural Design under Stochastic Uncertainty with Quadratic Cost Function

## **TB4 (11:30), Aula**

Chair: Leonard MacLean

- William T. Ziemba: The evaluation of great investors and speculators
- Sid Browne: Dynamic Active Portfolio Management: How to invest if you must
- Klaus Reiner Schenk-Hoppé: Evolutionary Finance

## **TP1 (14:30), C1**

Chair: Teemu Pennanen

- Arkadi Nemirovski: Robust Optimization

## **TC1 (16:00), A**

Chair: Andreas Eichhorn

- Piotr Jaworski: On a subjective approach to risk measurement
- Nancy Wozabal: Asymptotic distribution of coherent risk functionals
- Michael Zabarankin: Deviation Measures: Theory and Application

## **TC2 (16:00), T**

Chair: Stein W. Wallace

- Michal Kaut: Transformation-Based Scenario Generation using Copulas
- Diana Roman: Scenario Generation for the Asset Allocation Problem
- Toscani: Hidden Markov Models for Scenario Generation within a Stochastic Programming Simulation Framework
- Pavel Popela: The Scenario Generation for Incomplete Recourse Programs

### **TC3 (16:00), S**

Chair: Andrew B. Philpott

- Frederike Neise: Stochastic Programming with First Order Dominance Constraints applied to Dispersed Power Generation
- Uwe Gotzes: Algorithmic aspects of decomposition under dominance constraints
- Stein-Erik Fleten: Empirical analysis of hydroelectric scheduling in Norway

### **TC4 (16:00), Aula**

Chair: Ronald Hochreiter

- Sona Kilianova: Pension planning under multi-period risk minimization
- Hildegard Zelle: A modern asset liability management system for Austrian pension funds
- Matthijs Streutker: The Importance of Detailed Indexation Modeling in ALM for Dutch Pension Funds
- Koray Simsek: Improving Investment Performance for Pension Funds

## **Wednesday, August 29, 2007**

### **WS1 (08:30), C1**

Chair: Asgeir Tomasgard

- Walter Gutjahr: Analysis of Stochastic Metaheuristics

### **WS2 (08:30), C2**

Chair: Roger Wets

- Alejandro Jofre: Stochastic Equilibrium Models

### **WA1 (09:30), A**

Chair: Birge John

- Radoslava Mirkov: Tree Approximations of Dynamic Stochastic Programs
- Christian Küchler: On Stability of Multistage Stochastic Programs
- Holger Heitsch: Scenario tree approximation for stochastic optimization problems

### **WA2 (09:30), T**

Chair: Gautam Mitra

- Elena Medova: Institutional Fund Design using STOCHASTICS
- David Gay: Random Variables, an AMPL Extension for Stochastic Programming
- Alan King: Stochastic modeling software in the open-source COIN-OR repository

### **WA3 (09:30), S**

Chair: Gul Gurkan

- Niko Iliadis: Hydroelectric stochastic risk management modeling using CVAR: an SDDP approach
- Trine Krogh Kristoffersen: Short-term hydro-power production planning by stochastic programming
- Eduardo Faria: Spot market bidding for a Nordic hydropower producer: Taking the balancing market into account.

## **WA4 (09:30), Aula**

Chair: Janos Mayer

- Alois Geyer: Life-cycle Asset Allocation and Optimal Consumption Using Stochastic Linear Programming
- Miguel Lejeune: Exact Solution Approach for Stochastic Portfolio Optimization with Trading Constraints
- Roger Wets: Pricing Contingent Claims: A computational compatible approach

## **WB1 (11:30), A**

Chair: Fabian Bastin

- Ebru M. Angün: An asymptotic test of optimality conditions in multiresponse simulation-based optimization
- Vlasta Kankova: Empirical Estimates via Stability in Stochastic Programming
- Silvia Vogel: Universal Confidence Sets for Constrained Optimization Problems

## **WB2 (11:30), T**

Chair: Abdel Lisser

- Walter Rei: Local Branching Cuts for the 0-1 Integer L-Shaped Algorithm
- Lewis Ntamo: A Computational Study of Disjunctive Cuts for Two-Stage Stochastic Mixed 0-1 Programs with Recourse
- Laureano Escudero: On Stochastic Dynamic Programming for solving large-scale tactical production planning problems

## **WB3 (11:30), S**

Chair: Alexei Gaivoronski

- Denis Becker: A Stochastic Equilibrium Problem of Telecommunication Service Providers
- Paolo Pisciella: Risk management of provision of advanced mobile data services using stochastic programming
- Takashi Matsuhisa: Communication consensus yields Nash equilibrium through robust messages

## **WB4 (11:30), Aula**

Chair: William T. Ziemba

- Michael Dempster: Volatility-induced Financial Growth
- Yonggan Zhao: A Dynamic Model of Active Portfolio Management with Benchmark Orientation
- Mark Davis: Risk Sensitive Benchmarked Asset Management

## **WP1 (13:45), C1**

Chair: Georg Pflug

- Suvrajeet Sen: New Directions in Stochastic Decomposition

## **Thursday, August 30, 2007**

## **HS2 (08:30), C2**

Chair: Markku Kallio

- Dimitri Bertsekas: Solution of Large Systems of Equations Using Approximate Dynamic Programming Methods

## **HS1 (08:30), C1**

Chair: Alan King

- Jeff Linderoth: Computational Grids for Stochastic Programming

## **HA1 (09:30), A**

Chair: Andreas Eichhorn

- Gergely Mádi-Nagy: Bounding Expectations of Functions of Random Vectors with Given Marginals and some Moments: Applicat
- Konstantin Siemenikhin: On Optimal Estimation by Minimax Criterion with Generalized Probabilistic Risk Functions
- Romain Apparigliato: Step decision rules for multistage stochastic programming - Application on a hedging problem in elec

## **HA2 (09:30), T**

Chair: Jörgen Blomvall

- Janey Yu: Least Squares Q-Learning Algorithm for Optimal Stopping Problems
- Natasa Krejic: Hybrid stochastic optimization algorithms with line search
- Istvan Deak: Successive regression approximations -- in stochastic programming

## **HA3 (09:30), S**

Chair: Nowak Matthias P.

- Laetitia Andrieu: Stochastic optimization under risk constraints: application to hedging problem in electrical industr
- Lea Bloechlinger: Electricity spot and futures price modelling with regime-switching
- Abbas Seifi: Application of Stochastic Programming to Power Generation Expansion Planning in Iran

## **HA4 (09:30), Aula**

Chair: Leonard MacLean

- Kourosh Marjani Rasmussen: The household mortgage choice problem
- Janos Mayer: Portfolio optimization with value functions from prospect theory
- Giorgio Consigli: A scenario model for credit risky portfolios

## **HB1 (11:30), A**

Chair: Guy Cohen

- Pierre Carpentier: Approximations of stochastic optimization problems
- Jean-Sébastien Roy: Stochastic decomposition of multistage problems using dual linear decision rules
- Guy Cohen: Optimal scenario tree topology and corresponding rate of convergence

## **HB2 (11:30), T**

Chair: Alan King

- Horand "Gus" Gassmann: New Developments in the OSiL/SE Format for Stochastic Programs
- Christian Valente: Software tool for Decision Making under uncertainty: a combined paradigm of SP and simulation
- Gautam Mitra: Computational methods for processing two stage stochastic programming problems
- Bjarni Kristjansson: Stochastic Extensions for the MPL Modeling System and OptML

### **HB3 (11:30), S**

Chair: Michael Schürle

- Alvin Schwendener: On the Goodness of Filtration for the Valuation of Storage Power Plants
- Marc Steinbach: Solving Nonlinear Stochastic Models in Finance and Energy
- Michael Schürle: A multistage stochastic programming model for variable banking products

### **HB4 (11:30), Aula**

Chair: William T. Ziemba

- Leonard MacLean: Process Control in Capital Accumulation
- Michael Stutzer: Expected Return or Growth Rate? Choices in Repeated Gambles That Model Investments

### **HP1 (14:00), C1**

Chair: Henrion Rene

- Werner Römisch: Multi-period risk functionals

### **HC1 (15:15), A**

Chair: Daniel Kuhn

- Kian Ping Chan: Interval-based scenario generation algorithm for multistage stochastic programs
- Panos Parpas: Global optimization of robust chance constrained problems
- Daniel Kuhn: An information-based approximation scheme for stochastic optimization problems in continuous time

### **HC2 (15:15), T**

Chair: Peter Schütz

- Gendreau Michel: A Hybrid Monte Carlo Local Branching Algorithm for the Single Vehicle Routing Problem with Stochastic
- Yu Yu: Solving Stochastic Ship Routing with Inventory Management Problem By Using Column Generation Method
- Celeste Pizarro: On SIP algorithms for minimizing the mean-risk function in the MPSSP under uncertainty

### **HC3 (15:15), S**

Chair: Stein-Erik Fleten

- Sebastian Kuhn: Stochastic power optimization with inclusion of the transmission network
- Carrion Miguel: Forward Contracting and Selling Price Determination for a Retailer: A Stochastic Programming Approach
- Andrew B. Philpott: Estimating the efficiency of the New Zealand electricity market

### **HC4 (15:15), Aula**

Chair: Walter Gutjahr

- Xi Yang: Labour allocation problem in operational risk management
- Gyana Parija: Strategic Headcount Planning of Multi-skilled BPO Back-office Process Agents with Recourse Transitions
- Chanaka Edirisinghe: Short-Term Contingency Allocation in Project Management using Stochastic Programming

## **Friday, August 31, 2007**

### **FS1 (08:30), C1**

Chair: Georg Pflug

- Gilles Pages: Functional Quantization, Scenario Generation and applications to Finance

### **FS2 (08:30), C2**

Chair: Yurii Ermoliev

- Wolfgang Runggaldier: Stochastic control

### **FA1 (09:30), A**

Chair: Vladimir Norkin

- Szántai Tamás: Polyhedral inclusion-exclusion formula for numerical computation of singular multivariate normal pro
- Michal Houda: Convexity and dependence in chance-constrained problems
- Henrion Rene: Eventual convexity and related properties of linear probabilistic constraints

### **FA2 (09:30), T**

Chair: Jeff Linderoth

- Clemens Wiesinger: A Workflow-based Approach for Interchangeable Software Components in Computational Finance
- Marco Colombo: A warm-start approach for large-scale stochastic linear programs
- Andreas Grothey: Solving nonlinear financial planning problems with  $10^9$  decision variables on massively parallel

### **FA3 (09:30), S**

Chair: Francesca Maggioni

- Julia Cristina Caminha Noronha: Electricity Distribution Investment Considering Regulatory Uncertainties
- Oliver Woll: Optimal investment in distributed generation with CHP in liberalized energy markets
- Gul Gurkan: Capacity Investment in Electricity Markets: Perfect Competition

### **FA4 (09:30), Aula**

Chair: Alejandro Jofre

- Adrian S. Werner: Telecom services resale under uncertainty: Profit and consumer surplus implications
- Fernanda A. Ferreira: Reciprocal Dumping under Antidumping Enforcement and Uncertain Technology
- Ali Delavar Khalafi: Nash equilibrium payoffs for stochastic two person zero-sum games

### **FB2 (11:30), T**

Chair: Yu Yu

- Peter Schütz: Supply Chain Design under Uncertainty using Sample Average Approximation and Dual Decomposition
- Selin Soner: Reverse Supply Chain Network Design Problem under Uncertainty
- Nima Zaerpour: Make-To-Order or Make-To-Stock or Hybrid Strategy: A New Approach on Fuzzy TOPSIS

- Amir Hossein Gharehgozli: A Fuzzy Decision Support Structure for Acceptance/Rejection of Incoming Orders in MTO environments

### **FB3 (11:30), S**

Chair: Harald Held

- Thong: A STOCHASTIC ALGORITHM FOR ENGINEERING OPTIMIZATION PROBLEMS
- valeria leggi: Mixed Integer Formulations for the Probabilistic
- Mohammad Saber Fallah Nezhad: Combining traditional (S-R)-based PM method with Bayesian inference

### **FB4 (11:30), Aula**

Chair: Diana Barro

- Diana Barro: Combining stochastic programming and optimal control to solve multistage stochastic optimization pro
- Dora Selesi: Applications of the Fourier transformation to singular SDEs
- Eva Žampachová: The solution of scenario-based reformulations for selected PDE constrained stochastic programs

### **FP1 (13:45), C1**

Chair: Wolfgang Runggaldier

- Walter Schachermayer: Optimal risk sharing for law invariant monetary utility functions