International Conference on Stochastic Optimization: Algorithms and Applications

February 20–22, 2000

Center for Applied Optimization
University of Florida

Partially supported by the College of Engineering of the University of Florida, IBM, and Algorithmics, Inc.
Endorsed by the INFORMS society

Organizers: Stanislav Uryasev (uryasev@ise.ufl.edu) and
Panos Pardalos (pardalos@ufl.edu)

SCHEDULE

Sunday, February 20, 2000

8:30–9:30	Registration
9:00–9:35	Opening Remarks, Stanislav Uryasev and Panos Pardalos, Conference Organizers
9:35–9:45	Welcome from Dr. J. Ohanian, Interim Dean of Engineering

Session S.1 Chairman: Panos Pardalos

9:45 **Plenary Lecture:** Terry Rockafellar
Nonanticipativity and the Role of Multipliers in Stochastic Programming

10:30 Terry Rockafellar and Stan Uryasev
Optimization of Conditional Value-at-Risk

11:00 Georg Pflug
Statistics is (Mostly) Stochastic Optimization Under Constraints: Nonparametric Regression

11:30 Jitka Dupacova
Output Analysis for Approximated Stochastic Programs

12:00-1:30 **Lunch**

Session S.2 Chairman: Georg Pflug

1:30	Larry Nazareth **Multialgorithms for Parallel Computing: A New Paradigm for Optimization**
2:00	William Ziemba **Using Stochastic Programming to Avoid Financial Market Disasters**
2:30	Werner Romisch **Canonical Probability Metrics for Convex Stochastic Programs and Scenario Reduction**
3:00	Michael Dempster **Sampling of Dynamic Stochastic Programmes**
3:30-3:50	**Break**

Session S.3 Chairman: Jitka Dupacova

3:50	Gabriella Salinetti **Consistency of Statistical Functionals:** **the Epigraphical View**
4:20	Alexei Gaivoronski **Risk Management in Finance Using Stochastic Programming**
4:50	Wlodzimierz Ogryczak and Andrzej Ruszczynsk **On Stochastic Dominance and Mean-Semideviation Models**
5:20	Lisa Korf **A Stochastic Programming Duality Perspective** **of the Fundamental Theorem of Asset Pricing**
5:50	**Plenary Lecture:** Roger Wets **Limit Laws and Asymptotics for Stochastic Optimization Problems**
7:30	**Banquet Dinner at the University Centre Hotel**

Monday, February 21, 2000

Session M.1 Chairman: Larry Shepp

8:30 Janos Mayer
On the Numerical Solution of Jointly Chance Constrained Problems

8:55 Thomas F. Coleman
A Newton Method for Option Valuation

9:20 Reuven Rubinstein
Combinatorial Optimization via Random Walks on Graphs Relative Entropy and Rare Events

9:45 Marc Steinbach
Hierarchical Sparsity in Multistage Convex Stochastic Programs

10:10-10:30 **Break**

Session M.2 Chairman: Peter Kall

10:30 Chanaka Edirisinghe and Ike Patterson
Multi-Period Bet-Sizing Models for Futures Trading: Decomposition Methods

10:55 Alexei Chekhlov, Stanislav Uryasev, and Michael Zabarankin
Portfolio Optimization with Drawdown Constraints

11:20 Alexander Shapiro (joint work with T. Homem-de-Mello)
Simulation Based Optimization - Convergence Analysis and Algorithms

11:45 Rudiger Schultz
Stochastic Integer Programming

12:10-1:30 **Lunch**

Session M.3 Chairman: Terry Rockafellar

1:30 **Plenary Lecture:** Dimitri P. Bertsekas (joint work with Angelia Geary)
Incremental Subgradient Methods with Randomization

2:15 John Mulvey
Optimizing Large Financial Organizations

2:40 Darinka Dentcheva
Generalized Steiner Selections of Multifunctions and Asymptotic Behaviour of Random Sets

3:05-3:25 **Break**

Session M.4 Chairman: Reuven Rubinstein

3:25 Victor Korotkich
On Stochastic Aspects of Optimal Algorithms in Emergent Computation

3:50 Tito Homem-de-Mello
Monte Carlo Methods for Discrete Stochastic Otimization

4:15 Karl Frauendorfer and Michael Schrle
The Management of Non-Maturing Deposits

4:40 Larry Shepp
A Model for Stock Price Fluctuations Based on Information

5:05 Alex Kreinin
Simulation of Market Risk using Monte Carlo Method

7:30 **Conference Dinner at the University Centre Hotel**

Session T.1 Chairman: Alexander Shapiro

8:30 Galina Korotkikh
Random Matrix Theory for an Extension of Markowitz's Model

8:55 Maarten Van Der Vlerk
Optimizing Electricity Distribution Using Two-stage Integer Recourse Models

9:20 Robert A. Murphey
Use of Value-at-Risk in Stochastic Programs When A Distribution is Not Well Defined

9:45 Andrew Felt and K. A. Ariyawansa
A parallel Implementation of Interior Cutting Plane Algorithms for Stochastic Programming

10:10-10:30 **Break**

Session T.2 Chairman: Maarten Van Der Vlerk

10:30 Andrey Kibzun and Riho Lepp
Discrete Approximation Algorithm of Overcoming the Stock-Exchange Paradox

10:55 Peter Kall (joint work with Peter Fusek, Janos Mayer, Suvrajeet Sen, and Simon Siegrist)
Multistage Stochastic Linear Programming: Aggregation, Approximation, and Some Open Problems

11:20 Eduardo L Pasiliao
Search Patterns with Multiple Seekers and Uncertain Target Locations

11:45 Alexander Golodnikov & Pavel Knopov
Application of Stochastic Optimization Methods in Bayesian Reliability

12:10-1:30 **Lunch**

Session T.3 Chairman: Stanislav Uryasev

1:30 Dmitrii Silvestrov
Optimal Monte Carlo Pricing for American Type Options

1:55 Helmut Mausser and Dan Rosen
Applying Scenario Optimization to Portfolio Credit Risk

2:20 Pavlos Efraimidis and Paul Spirakis
Combinatorial Randomized Rounding: Boosting Randomized Rounding with Combinatorial Arguments

2:45 Silvia Vogel
Approximation of Stochastic Programming Problems with Applications in Finance

3:10-3:30 **Break**

Session T.4 Chairman: Dan Rosen

3:30 Amy Puelz
Value-at-Risk Based Portfolio Optimization

3:55 Jorgen Hansson and Per Olov Lindberg
Financial Risk Management with Derivative Securities - a Stochastic Programming Application

4:20 Closing Remarks