Workshop SOML 2026

Stochastic Optimization meets Machine Learning

University of Bergamo (Italy) | 4-6 May 2026 | Room 1 - Via Salvecchio 19, Bergamo

Stochastic Optimization and Machine Learning are becoming increasingly interconnected fields, creating new opportunities for methodological and applied research. This three-day workshop is designed to foster collaboration between research groups from the Department of Information, Production, and Management Engineering of the University of Bergamo and the Decision Science Section at DTU Management Technical University of Denmark, including the DECIDE group, with a focus on topics at the intersection of Operations Research, Machine Learning, and Stochastic Optimization. The program will include invited talks and interactive discussion sessions aimed at sharing recent advances, exploring common challenges, and strengthening joint research initiatives across these areas.

DAY 1 | 4th MAY 2026

STOCHASTIC OPTIMIZATION MEETS MACHINE LEARNING: SOLUTION METHODS

9.00-9:15 **Opening & Welcome**

9.15-9:55 ***Stochastic Adaptive Large Neighborhood Search***
David Pisinger (DTU Management, Technical University of Denmark)

9.55-10.35 ***Sequential Reoptimization over Near-Optimal Integer Programming Solutions***
Lorenzo Bonasera (DTU Management Technical University of Denmark)

10.35-11.00 **Coffee Break**

11.00-11.40 ***A novel L-Shaped refinement cut method for two stage stochastic programs***
Andrea Spinelli (University of Bergamo)

11.40-12.20 ***Diversifying Stochastic Candidates Objective (DiSCO): Exploring Near-Optimal Solutions to Two-Stage Stochastic Problems***
Mikkel Lassen Johansen (DTU Management Technical University of Denmark)

12.20-13.00 ***Bundling methods and integer consensus for heuristic scenario decomposition of integer stochastic problems***
Kristine Børsting (DTU Management Technical University of Denmark)

13.00-14.30 **Lunch**

14.30-15.10 ***Objective-Driven Latent Scenario Search for Stochastic Optimization with an Autoencoder-Based Generator***
Atefeh Hemmati Golsefidi (DTU Management Technical University of Denmark)

15.10-15.50 ***ICNN-enhanced 2SP: Leveraging input convex neural networks for solving two-stage stochastic programming***
Fabricio Oliveira (DTU Management Technical University of Denmark)

15.50-16.30 ***Decision trees for two-stage stochastic***
Asta Susan Rustad (DTU Management Technical University of Denmark)

16.30-17.00 **Coffee Break**

17.00-17.40 ***Distributionally Robust Chance-constrained Markov Decision Process***
Abdel Lisser (University of Paris Sud)

17.40-18.20 ***Neural networks for multi-horizon stochastic programming***
Francesca Maggioni (University of Bergamo)

20.00 **Social Event** | Dinner in Bergamo Upper City, at restaurant "Il Pianone"

DAY 2 | 5th MAY 2026

STOCHASTIC OPTIMIZATION IN ENERGY SYSTEMS AND FINANCE

9.00-9.40 ***Equilibrium Models to Assess the Vulnerability of Electricity Markets to Market Powe***r
Maria Teresa Vespucci (University of Bergamo)

9.40-10.20 ***A Rolling Horizon Multi-Stage OptimizationFramework for Local Flexibility Procurement***
Gianluca Sabbatini (University of Bergamo)

10.20-11.00 ***Multi-horizon optimization for domestic renewableenergy system design under uncertainty***
Giovanni Micheli (University of Bergamo)

11.00-11.30 **Coffee Break**

11.30-12.10 ***Dynamic Goal Programming Policies for a Stochastic Energy Storage Problem***
Jonathan Koffi (University of Bergamo)

12.10-12.50 ***Stochastic Portfolio Optimisation***
Kathe Hedegaard Schmidt (DTU Management Technical University of Denmark)

12.50-14.00 **Lunch**

14.00 **Excursion to Iseo Lake and Monte Isola**

DAY 3 | 6th MAY 2026

STOCHASTIC OPTIMIZATION MEETS MACHINE LEARNING IN TRANSPORTATION AND LOGISTICS

9.00-9.40 **The context-aware Traveling Salesman Problem**
Maria Grazia Speranza (University of Brescia)

9.40-10.20 **Multi-path Traveling Salesman Problem via Neural Networks**
Ludovica Di Marco (University of Bergamo)

10.20-11.00 **A Benders decomposition approach for a green bi-objective stochastic fleet size and mix vehicle routing problem**
Paolo Beatrici (University of Bergamo)

11.00-11.30 **Coffee Break**

11.30-12.10 **Reinforcement Learning Approaches for the Orienteering Problem with Stochastic and Dynamic Release Dates**
Claudia Archetti (University of Brescia)

12.10-12.50 **Recent attempts to solve stochastic large-scale MIPs: a case study from green shipping**
Alberto Tamburini (DTU Management Technical University of Denmark)

12.50-13.00 **Closing Session**

13.00 **Lunch**

Scientific Committee

Francesca Maggioni (University of Bergamo)
David Pisinger (DTU Management Technical University of Denmark)

For further information, contact: soml2026workshop@unibg.it

SOML2026 site: https://soml2026.unibg.it/

Event co-organized by: UNIVERSITÀ DEGLI STUDI DI BERGAMO | Dipartimento di Ingegneria Gestionale, dell'Informazione e della Produzione — DTU Denmark Technical University