

PLATINUM INDUSTRIAL SPONSORS



THE 20TH LEARNING AND INTELLIGENT OPTIMIZATION CONFERENCE

June 15–19, 2026, Milan, Italy



General Information:

- Conference venue: Grand Hotel Villa Torretta
- On Wednesday 17 June, poster session and other Conference activities will take place at University of Milano-Bicocca, Building U6, Floor -1



Grand Hotel Villa Torretta



University of Milano-Bicocca, Building U6 (main entrance)

Monday 15/06

Monday 15/06		
09:00-10:00	60 mins	Registration
10:00-10:15	15 mins	Opening: Istitutional Welcome and General Information
10:15-11:00	45 mins	Special Session 2 "Matheuristics"
		Fore-and-Back for Changepoint Detection (<i>speaker: Vittorio Maniezzo</i>) Feasibility Convex Successive Approximation with Reduced Cost Fixing for 0-1 Mixed-Integer Linear Programming (<i>speaker: Hongzhang Yang</i>) Algorithms and Complexity Results for the 0–1 Knapsack Problem with Group Fairness (<i>speaker: Alberto Santini</i>)
11:00-11:30	30 mins	Coffee break
11:30-12:30	60 mins	General track
		Variable-Length Diverse Planning Monte Carlo Tree Search (<i>speaker: Nathan Amoussou</i>) A Benchmark Generator for Combinatorial Testing (<i>speaker: Eduard Torres Montiel</i>) Optimization algorithms for the price clustering problem (<i>speaker: Giovanni Righini</i>) An Autonomous Navigation Framework for Item Retrieval in Unknown Environments (<i>speaker: Alessio Mezzina</i>)
12:30-14:00	90 mins	Lunch
14:00-15:30	90 mins	Special Session 1 "AI-Driven Optimization: Transforming Optimization with LLMs"
		Starjob: Dataset for LLM-Driven Job Shop Scheduling (<i>speaker: Henrik Abgaryan</i>) ELEVATION: Exploiting LLMs to Improve Efficiency, Scalability, and Flexibility of Heuristics in Solving Optimization Problems (<i>Lorenzo Saccucci</i>) LiFT: Local Search via Linear Programming for Overfitting-Controlled Transformers (<i>speaker: Margrét Vala Þórisdóttir</i>) Budgeted Multi-Objective Feature Engineering via LLM-Guided Program Search (<i>speaker: Kartik Pandey</i>) Combining Symbolic Constraints and LLMs: An Application to the Abstraction and Reasoning Corpus (<i>speaker: Lukas Kinder</i>) CP-SynC: Multi-Agent Zero-Shot Constraint Modeling in MiniZinc with Synthesized Checkers (<i>speaker: Yuliang Song</i>)
15:30-16:00	30 mins	Coffee break
16:00-17:00	60 mins	General track
		Decompositions for Semidefinite Programming with Reinforcement Learning (<i>speaker: Stefan Røpke</i>) Learning-Based Minimization of Packet Loss in Time-Sensitive Networking (<i>speaker: Feyzullah Kara</i>) How forecast errors propagate into Sales and Operations Planning decisions: A controlled study of RL robustness (<i>speaker: Akram Badreddine Laïssaoui</i>) Optimizing Dynamic Replica Placement in in Wide-Area Replicated Systems via Reinforcement Learning (<i>speaker: Kevin Tierney</i>)

Tuesday 16/06

09:00-10:00	60 mins	Special Session 5 "Advances in Data-Driven Optimization and AI-Enhanced Business Process Mining"
		<p>Towards an Explainable Decision Intelligence: Leveraging Predictive ML, SHAP, and Causal Digital Twin for Order-to-Cash Process (<i>speaker: Shruti Kirti Nandan</i>)</p> <p>Multimodal Explainable Wildfire Detection Using YOLOv8 and Transformer Attention (<i>speaker: Vijaya J</i>)</p> <p>OITM: An Object-Type Interaction and Temporal Model for Object-Centric Process Mining (<i>speaker: Anukriti Tripathi</i>)</p> <p>Drift-Aware Process Mining for Loan Processing Systems: A Framework for Detecting and Managing Concept Drift in Digital Lending and Microfinance Operations (<i>speaker: Shruti Kirti Nandan</i>)</p>
10:00-10:30	30 mins	Coffee break
10:30-11:30	60 mins	Industrial talk "The End of Incrementalism: Generative AI is Redefining the Very Fabric of the Edge" (Danilo Pau, STMicroelectronics)
11:30-12:30	60 mins	Industrial talk "Hexaly, Hybrid Optimization Solver" (Julien Darlay, HEXALY)
12:30-14:00	90 mins	Lunch
14:00-16:00	120 mins	Keynote - Mixed-Integer Programming: 65+ years of history and the AI challenge (Andrea Lodi)
16:00-16:30	30 mins	Coffee break
16:30-17:30	60 mins	Special Session 8 "Bayesian optimization: recent achievements and challenges ahead"
		<p>Reduced-Space Multi-Fidelity Bayesian Optimization of Process Simulation Models (<i>speaker: Niki Triantafyllou</i>)</p> <p>Wasserstein-enabled characterization of designs and myopic decisions in Bayesian Optimization (<i>speaker: Antonio Candelieri</i>)</p> <p>Combining GPs and NNs as Surrogate Models in BO (<i>speaker: Omer Ekmekcioglu</i>)</p> <p>BPO: Bayesian Preference Optimization for Multiobjective Discrete Optimization (<i>speaker: Elias Khalil</i>)</p>
17:30-18:30	60 mins	Special Session 5 "Advances in Data-Driven Optimization and AI-Enhanced Business Process Mining"
		<p>AdaptSRNet: Enhancing Image Steganalysis via Adaptive Filter-Attention Fusion (<i>speaker: Lakshya Garg</i>)</p> <p>Physics-Guided Optimization for Learning under Physiological Constraints: A Case Study on Hemoglobin Estimation (<i>speaker: Shashank Mishra</i>)</p> <p>CAL-ATS: Cosine Adaptive Lookahead Optimization for Automated Applicant Tracking Systems (<i>speaker: Abhiram Alla</i>)</p> <p>TuroMiner : An efficient and advanced process discovery algorithm for complex processes (<i>speaker: Pranav Sahu</i>)</p>

Wednesday 17/06 (in University Milano-Bicocca, Building U6)

09:00-09:30	30 mins	1 minute poster trailer!
09:30-10:30	60 mins	Poster session (with coffee break at 10:30)
10:30-11:00	30 mins	Coffee break
11:00-13:00	120 mins	Keynote - Large-Scale and Data-Driven Markov Decision Processes (Wolfram Wiesmann)
13:00-14:00	60 mins	Lunch
14:00-15:00	60 mins	Legacy Lecture - Optimal Transport on Metric Measure Spaces, Graphs and Networked Data (Francesco Archetti)
15:00-18:00	180 mins	Social event (to be announced)
20:00		Social Dinner

Thursday 18/06

09:00-10:30	90 mins	General track
		<p>A Clustering-Based Variable Ordering Framework for Relaxed Decision Diagrams for Maximum Weighted Independent Set Problem (<i>speaker: Mohsen Nafar</i>)</p> <p>Practical Visual Question Answering at the Edge (<i>speaker: Danilo Pau</i>)</p> <p>Leveraging Structural Constraints for Diffusion-based Neural TSP Solvers (<i>speaker: Mickael Basson</i>)</p> <p>Defining Core Problems for Set Covering Instances Using Machine Learning: a Proof of Concept (<i>speaker: Sameh Al Shihabi</i>)</p> <p>Generative Modeling of Approximately Periodic Time Series by a Posterior-Weighted Gaussian Process (<i>speaker: Elias Reich</i>)</p> <p>Adaptive Backbone Selection for Complexity-Aware and Energy-Efficient Visual Inference (<i>speaker: Alexander Jesser</i>)</p>
10:30-11:00	30 mins	Coffee break
11:00-13:00	100 mins	Keynote - AI and the Future of the Universe (Juergen Schmidhuber)
13:00-14:30	90 mins	Lunch
14:30-15:30	60 mins	General track
		<p>Diffusion-enabled Optimal Transport distances for graph matching (<i>speaker: Francesco Archetti</i>)</p> <p>Optimizing persistent surveillance missions for UAVs by column generation (<i>speaker: William Stenberg</i>)</p> <p>A Preliminary Study on GAN-Augmented Column Generation (<i>speaker: Mick Molitor</i>)</p> <p>From Ensembles to One Graph: Consensus DAGs with Minimal Information Loss (<i>speaker: Efthymos Drouiotis</i>)</p>
15:30-16:30	60 mins	General track
		<p>Genetic Branching: An Evolutionary Framework for Interpretable Branching Strategies (<i>speaker: Simon Renard</i>)</p> <p>An Efficient Greedy-Randomized Heuristic for the Minimum Weakly Connected Dominating Set Problem (<i>speaker: Sachchida Nand Chaurasia</i>)</p> <p>Multi-fidelity Optimisation via Hybrid Genetic-Greedy Search (<i>speaker: Mitra Heidari</i>)</p> <p>Integrated Formulation of Sequential Multiobjective Optimization Based on System Surrogate Model Learning Under L_∞-norm Error Constraints (<i>speaker: Kenichi Tamura</i>)</p>
16:30-17:00	30 mins	Coffee break
17:00-18:00	60 mins	General track
		<p>Opening the Black Box: Topologically Guided Latent Steering for Neural Combinatorial Optimization (<i>speaker: Henrik Abgaryan</i>)</p> <p>A Scalable Matheuristic for Routing Capacity-Constrained Groundfish Surveys (<i>speaker: Margrét Vala Þórisdóttir</i>)</p> <p>Vertex Sampling for Backdoor Search in Binary Linear Optimization (<i>speaker: Chang Liu</i>)</p> <p>Heuristic-Based Agent to Solve The Online Three-Dimensional Container Loading Problem (<i>speaker: David Alvarez</i>)</p>

Friday 19/06

09:00-10:00	60 mins	General track
		<p>Quantum-Enhanced Chaotic Particle Swarm Optimization for LSTM-Based Stock Market Forecasting (<i>speaker: Absalom Ezugwu</i>)</p> <p>Learning District Visitation Sequences for Hierarchical Last-Mile Delivery (<i>speaker: Farzam Salimi</i>)</p> <p>Constraint programming for unrelated parallel machine scheduling with unrelated servers (<i>speaker: Nikolaos Liouliakis</i>)</p> <p>A Two-Stage Learning-and-Optimization Framework for Real-Time Train Platforming (<i>speaker: Md Tabish Haque</i>)</p>
10:00-10:30	30 mins	Coffee break
10:30-11:30	60 mins	General track
		<p>Is there a (carbon-) free lunch? Energy/performance tradeoffs in population-based metaheuristics (<i>speaker: Juan Luis Jiménez Laredo</i>)</p> <p>Heuristics for Variable Cost and Size Cluster Vector Bin Packing (<i>speaker: Laura Wolf</i>)</p> <p>COAgents: Multi-Agent Framework to Learn and Navigate Routing Problems Search Space (<i>speaker: Mahdi Mostajabdaveh</i>)</p> <p>Latent Heuristic Search: Continuous Optimization for Automated Algorithm Design (<i>speaker: Mahdi Mostajabdaveh</i>)</p>
11:30-12:00	30 mins	Closing and news about LION21

List of Posters

- [Andrea Taverna](#): "Prime-Times: Applying Metaheuristics and Simulators for Real-World Large-Scale Network Planning"
- [Rodrigo Viana](#): "A Matheuristic Simulated Annealing Framework with a Machine Learning-Based Objective Function"
- [Sanja Stevanovic](#): "A Grasshopper Plugin for Meta-Optimized Parallel Surrogate Building Energy Optimization"
- [Niki Triantafyllou](#): "Learning Feasibility Landscapes for Combinatorial Optimization via Graph Energy-Based Models"
- [Laurens Blik](#): "Beyond Human-centered Automated Machine Learning"
- [Antonio Candelieri](#): "Optimal Transport-based Permutation-Invariant Bayesian Optimization of Offshore Wind Farm Layouts"
- [Francesco Bianchi](#): "Optimization and correlation analysis for the location of services in urban areas using multi-source data"
- [Federico Pavesi](#): "Reaching the Boundary: Bringing astral spaces to Riemannian optimization over the probability simplex"
- [Yu Liu](#): "Input convex neural networks as surrogates in mathematical optimization"
- [Pavel Falta](#): "Expanding Arterial Blood Pressure Dataset with Synthetic Data"
- [Simon Urbak](#): "Graph Neural Network-Based Network Reduction for Large-Scale Column Generation in Liner Shipping"
- [Elisa Savio](#): "A Tabu Search and a Maskable PPO for the Three-Dimensional Block Relocation Problem with Item Families"
- [Michal Soukup](#): "Interpretable Frequency-Based Synthesis of Intracranial Pressure Signals"
- [Albert Olson](#): "Graph Neural Network Enhanced Column Generation"
- [Emma Pajak](#): "Rethinking LLM-in-the-loop-Bayesian Optimisation: Where, How, and When Should LLMs Be Integrated?"
- [Nele Bertling](#): "Quantile-Based Sequential Learning and Optimization"
- [Nayeli Gast Zepeda](#): "LLM-Driven Discovery of Heuristic Operators for Highly Constrained Routing Problems"
- [Thomä Simon](#): "Inventory for Impact: Scalable Inventory Routing for Clean Cooking Access in Developing Economies"
- [Dietl Markus](#): "Operational route planning under uncertainty for Demand Adaptive Systems with Multiple Lines"
- [Jesse van Remmerden](#): "Generalizing Beyond Suboptimality: Offline Reinforcement Learning Learns Effective Scheduling through Random Solutions"
- [Zbysek Posel](#): "Machine Learning Approaches for Imbalanced Intracranial Pressure Analysis"