Program of the 1st International Workshop on Explainability and Interpretability in Optimization

Day 1: Wednesday, September 17, 2025

09:00–09:30	**Welcome and Introductions**	
09:30–11:00	**Talk Session 1: Multiobjective Optimization**	Speaker
	Explainable Interactive Multiobjective Optimization: The What, The How, and Why You Should Care	Giovanni Misitano
	An Estimate-and-Optimize Method for Interpretable Inverse Multiobjective Optimization	Nuria Gómez Vargas
	Automatic Explanations of Computation Results with Value Decompositions and Dominating Sets	Prashant Kumar
11:00–11:30	**Coffee Break**	
11:30–13:00	**Talk Session 2: Interpretable Algorithms and Decisions**	Speaker
	Interpretable Policies for Markov Decision Processes	Daniël Vos
	Interpretable Surrogates for Optimization	Sebastian Merten
	Explainability in Hyper-Heuristics	Edward Keedwell
13:00–14:00	**Lunch Break**	
14:00–15:30	**Talk Session 3: XAI and AI for Explainability in Optimization**	Speaker
	Explainability in Credit Risk Modeling using LLMs with Tabular and Network Data	María Óskarsdóttir
	Collective LIME: Enhancing the Explainability of the Explainer	Dolores Romero Morales
	Coherent Local Explanations for Mathematical Optimization	Daan Otto
15:30–16:00	**Coffee Break**	
16:00–17:30	**Working Session 1: Open Problems and New Concept**	
19:00–	**Dinner: Tucher-Bräu am Opernhaus (Am Kartäusertor 1, 90402 Nürnberg)**	

Day 2: Thursday, September 18, 2025		
09:00–10:30	**Talk Session 4: Applications and Case Studies**	Speaker
	Explanations for an Industrial Workforce Allocation Problem	Ignace Bleukx
	Estimating Maintenance Cost of Offshore Substations: A Case Study for Interpretability and Explainability in Optimization	Solène Delannoy-Pavy
	Impactful Optimization by Constraining Oneself to Transparency, Fairness and Explainability	Frans de Ruiter
10:30–11:00	**Coffee Break**	
11:00–12:30	**Talk Session 5: Counterfactual Explanations**	Speaker
	Counterfactual Explanations for Unsatisfiable Producer/Consumer Problems	Helmut Simonis
	Counterfactual Explanations for Integer Linear Optimization	Jannis Kurtz
	Relative Explanations for Contextual Problems with Endogenous Uncertainty: An Application to Competitive Facility Location	Jasone Ramírez-Ayerbe
12:30–13:30	**Lunch Break**	
13:30–15:00	**Talk Session 6: From Data to Decisions**	Speaker
	On a Computationally Ill-Behaved Bilevel Problem with a Continuous and Nonconvex Lower Level	Johannes Thürauf
	Data-driven Explainable Mathematical Optimization Including Feature Selection	Kevin Aigner
	Via Classical Nonlinear Optimization to Machine Learning and Back	Krzysztof Postek
15:00–15:30	**Coffee Break**	
15:30–16:30	**Working Session 2: Consolidation**	
16:30–16:45	**Closing**	