Joint Workshop on Topology Optimization

June 05–06, 2025

Ruhr University Bochum

jointly organized by

JOINT WORKSHOP ON TOPOLOGY OPTIMIZATION		
THURSDAY, JUNE 05, 2025		
12:30	Registration and Lunch Buffet, in front of Hall 3, Convention Center	
13:30	**Session 1, Room: Hall 3, Convention Center**, Chair: Kikis	
	Hackl, Hung	Welcome
	Hung	Nature-inspired TPMS structures: Optimal design, modeling, and fabrication
	Masarczyk	Special Aspects of Topology Optimization in Civil Engineering
	Kurzeja	Optimization of geo-inspired materials by utilization of the squirt-flow effect for low-frequency attenuation
	Pravda	Macroscopic Porosity Optimization using Thermodynamic Topology Optimization
15:30	Coffee Break, in front of Hall 3, Convention Center	
16:00	**Session 2, Room: Hall 3, Convention Center**, Chair: Hung	
	von Zabiensky	On the effect of different density update schemes in thermodynamic topology optimization for hyperelastic material
	Kikis	Polygonal finite elements with Voronoi tessellations for topology optimization
	Weider	On the numerical calculation of topological derivatives for shells considering crash loadcases
17:30	Organizers	Closing Day 1
19:30	Conference Dinner, Location: Hartmanns Wirtshaus	
FRIDAY, JUNE 06, 2025		
9:00	**Session 3, Room: IC 03/610**, Chair:	
	Li	Isogeometric Topology Optimization of Flexoelectric Metamaterials Based on Perturbation Analysis
	Wolf	Thermodynamic Topology Optimization of Electromagnetism
	Gangl	Multi-physical design optimization of electric machines
10:30	Coffee Break, Room IC 03-717	
11:00	**Session 4, Room: IC 03/610**, Chair: Hackl	
	Fründt	Dehomogenization method for multi-scale topology optimization
	Krischok	Multi-scale phase-field optimization using TPMS micro-structures
	Tran	3D NURBS-based reconstruction of TPMS lattice structures and their structural optimal design
12:30	Organizers	Closing Day 2
12:30	Lunch Buffet, Room IC 03-717	