

Parallel Session 1 **Mon 5th June 2023** **09:00-10:30**
Evolutionary & Heuristic Optimisation/ Digital Twin

Room: Boole 2

Pap #	Title	Author	ID	Institution
345	A Nonparametric Niching Technique using iSOM for Multimodal Optimization	Mr Mahesh Shankar	395	Indian Institute of Technology Madras
154	High Dimensional Constrained Bayesian Optimization of Compressor Blades Assisted by Principal Component Analysis	Ms Lisa Pretsch	30	Technical University of Munich
433	A game theoretic approach for design of advanced non-periodic 3D woven composite preforms at component scale	Dr Zhenpei Wang	495	a*STAR Institute of High Performance Computing (IHPC)
367	Achieving Global Ductility in an MD-Simulated Metallic Glass Composite using a Genetic Algorithm	Mr Mark Potter	319	Rensselaer Polytechnic Institute
509	Time Efficiency Optimization for Unsteady CFD Analysis of Propeller's Noise using Genetic Algorithm Method	Mr Nadhie Juliawan	458	Konkuk University
359	Digital Twin of Rotating Machines for Proactive Maintenance of Plant Facilities	Mr Dongmin Lee	354	Gwangju Institute of Science And Technology (GIST)

Parallel Session 1

Mon 5th June 2023

09:00-10:30

Structural Optimization: Civil & Structural Eng. 1

Room: Boole 3

Pap #	Title	Author	ID	Institution
193	Minimum compliance design with the constraint on material anisotropy	Dr Grzegorz Dzierzanowski	257	Warsaw University of Technology
116	Ensuring connectivity for the topology optimization of vibro-acoustic sandwich structures	Miss Vanessa Cool	48	KU Leuven, LMSD; Flanders Make
42	Broadband optimization of ribbed floors for impact sound insulation	Mr Heitor Nigro Lopes	89	University of Campinas
99	Member adding and adaptive solution techniques: applications in elastic design	Dr Helen Fairclough	199	University of Sheffield
362	Seismic Topology Optimization of High-Rise Buildings using Modal Decomposition and the Adjoint Method	Dr Amory Martin	245	Exponent
410	Design of 50MN Hydraulic Support Test Bench and Optimization of Middle Beam Pin Shaft Nodes	Ms Jie Wang	453	Liaoning Technical University

Parallel Session 1

Mon 5th June 2023

09:00-10:30

Topology Opt: Additive Manufacture 1

Room: Boole 4

Pap #	Title	Author	ID	Institution
297	De-homogenization of topology optimized designs using Stream Surfaces.	Mr Tim Felle Olsen	201	Technical University of Denmark
347	Large-scale level set for topology optimization of cooling channels	Mr Douglas De Aquino Castro	398	University of California San Diego
46	Towards the design of additive-manufacturing-ready conformal cooling channels through topology optimization	Dr Marc-Etienne Lamarche-Gagnon	28	National Research Council Canada
101	An efficient multi-material topology optimization method for thermoelastic structures	Dr Tien Dung Dinh	29	Ghent University
332	Topology optimization with independently bound uncertain loads	Mr Hampus Hederberg	147	Linköping University
148	Concurrent Optimization of Structural Topology and Laser Paths for Additive Manufacturing Considering Thermal Deformation and Residual Stress	Prof Mingdong Zhou	210	Shanghai Jiao Tong University

Parallel Session 1 **Mon 5th June 2023** **09:00-10:30**
Topology Opt: Thermal & Fluid Eng. 1

Room: Cummins G10

Pap #	Title	Author	ID	Institution
153	Topology optimization of fully coupled transient nonlinear thermo-mechanical problems	Mr Gunnar Granlund	263	Lund University
224	A 3D surface smoothing tool for binary topology optimization applied to fluid-structure interaction problems	Mr Rômulo Cortez	101	University of São Paulo
274	Level Set Topology Optimization for Coupling Multiphysics with Automatic Differentiation	Dr Andreas Neofytou	353	University of California San Diego
435	Discrete variable topology optimization of microchannel composite structure under active cooling	Dr Xinyu Yan	503	Dalian University of Technology
402	Topology optimization for steady and unsteady surface flows	Prof Yongbo Deng	62	Chinese Academy of Sciences

Parallel Session 1 **Mon 5th June 2023** **09:00-10:30**
MDO: Aerospace applications 1

Room: Cummins 110

Pap #	Title	Author	ID	Institution
323	Optimizing Component Placement and Temperature Control in Spacecraft Payloads Using Solution-Compensation Spaces	Mr Philipp Radecker	75	Technical University of Munich
9	Design of a Large Aspect Ratio Wing using Equivalent Static Gust Loads and Aeroelastic Constraints	Mr Joshua Deslich	77	University of Dayton
45	Optimization Techniques for Architectural Exploration of Electric Aircraft Propulsion Systems	Mr Benedikt Aigner	121	Collins Aerospace
96	Bayesian optimization formulation for constrained multidisciplinary problems	Miss Inês Cardoso	129	ONERA Toulouse
473	Topology optimization of multimodal local resonators for vibroacoustic metamaterials with improved broadband sound insulation	Dr Daniele Giannini	526	KU Leuven

Parallel Session 2
AI Methods 1

Mon 5th June 2023

11:20-12:50

Room: Boole 1

Pap #	Title	Author	ID	Institution
449	Computational Analysis and Inverse Design of Deformable Origami Metamaterials	Mr Yuheng Yan	509	TU Delft
481	WGAN-based real-time generative design of optimized structures with various diversities and structural complexities	Mr Xinyu Ma	521	Dalian University of Technology
165	Application of Deep Neural Networks with Explainable Attention Mechanisms to Airfoil Aerodynamics	Mr Sunghyun Kim	163	Korea Institute of Industrial Technology
497	Vision-Based Multi-Target Tracking Strategy for UAV Mission with Deep Reinforcement Learning	Ms SuJin Kang	506	Konkuk University
150	Implementation of the density-based acoustic topology optimization by utilizing reinforcement learning	Dr Kee Seung Oh	46	Ulsan National Institute of Science and Technology
404	A Time-dependent Machine learning-based Optimization Design for Promoting Bone Regeneration in Functionally Graded Scaffolds	Dr Chi Wu	446	University of Sydney

Parallel Session 2 **Mon 5th June 2023** **11:20-12:50**
Topology Opt: Aerospace 1

Room: Boole 2

Pap #	Title	Author	ID	Institution
547	Topology optimization considering 5-axis milling manufacturing constraints	Dr Ming Zhou	560	Altair
299	Topology optimization for the distribution of turbulent flows	Mr Lukas C. Høghøj	236	Technical University of Denmark
406	Structural analysis and topology optimization of continua using regular background mesh	Ms Linjuan Ren	371	Beijing Institute of Technology
426	Topology optimization on complex surfaces based on the moving morphable components method and computational conformal mapping	Dr Wendong Huo	485	Ningbo Institute of Dalian University of Technology
218	Level-Set Parameter-Free Topology Optimization with Conformal Analysis Meshes	Dr Mathias Schmidt	303	Lawrence Livermore National Laboratory
275	A regularization strategy for avoiding non-physical modes in buckling topology optimization	Dr Federico Ferrari	355	DTU

Parallel Session 2 **Mon 5th June 2023** **11:20-12:50**
Topology Opt: Automotive 1

Room: Boole 3

Pap #	Title	Author	ID	Institution
68	How mathematical optimization algorithms and heuristics derived from expert knowledge can interact to optimize the topology of crash structures	Prof Axel Schumacher	154	University of Wuppertal
207	Topology optimization of a rotating electric machine by the topological derivative	Mr Nepomuk Krenn	288	RICAM Linz, Austrian Academy Of Sciences
73	Optimizing Inlay Structures for a Thin-Walled Crash Loaded Tube Element by using the Graph and Heuristic Based Topology Optimization	Mr Florian Beyer	159	University of Wuppertal
20	Using the graph and heuristic based topology optimization to design a crash loaded composite structure consisting of several tape winding profiles	Dr Dominik Schneider	92	University of Wuppertal
90	Multi-Material and Multi-Joint Topology Optimization	Prof Il Yong Kim	182	Queen's University
557	Crashworthiness design using Difference-based equivalent static Loads	Jens Triller	638	Altair

Parallel Session 2 **Mon 5th June 2023** **11:20-12:50**
Parallel Computing/Parametric Identification

Room: Boole 4

Pap #	Title	Author	ID	Institution
444	Parallel-computing topology optimization for arbitrary design domains using a Raspberry Pi cluster	Dr Zhidong Zhang	444	Northwestern Polytechnical University
104	Parallel Computing for Space-time Topology Optimization	Mr Kai Wu	138	TU Delft
93	An Optimized, Easy-to-use, Open-source GPU Solver for Large-scale Inverse Homogenization Problems	Dr Xiaoya Zhai	178	University of Science And Technology of China
107	Updating of Complete Joint Properties of FE Model for Complex Structures by Comparing Frequency Response Functions with Metrics	Prof Dooho Lee	57	Dongueui University
496	Proposal of Identification Method for Material Constants of Industrial Equipment based on Hybrid of Surrogate Optimization and Adjoint Variable Method	Mr So Fukuhara	538	Kagawa-university
80	Crack identification of composite beam structure based on mechanism and data fusion	Dr Liangliang Yang	170	Dalian University of Technology

Parallel Session 2

Mon 5th June 2023

11:20-12:50

Topology Opt: MEMS/ Nano-Structures 1

Room: Cummins G10

Pap #	Title	Author	ID	Institution
336	Topology optimization of electrical conduction in busbar systems	Mr Robert Dienemann	344	Altair Engineering
255	Internal Contact in Topology Optimization with the Third Medium Contact Method	Mr Andreas Frederiksen	260	DTU
388	Topology Optimization Driven Inverse Design for Buckling-guided Assembly 3D Structures	Mr Xiaoyu Zhuang	413	Dalian University of Technology
22	Topology optimization of thermo-optical phase shifters	Mr Beñat Martinez De Aguirre Jokisch	49	Technical University of Denmark
438	Discrete Variable Topology Optimization of Vibrating Structures and Phononic Crystals with High Forbidden Frequency Band Constraints	Dr. Yuan Liang	152	Dalian University of Technology
412	Topology Optimization of Superhydrophobic Surfaces to Delay Spatially Developing Laminar–Turbulent Transition	Mr Harrison Nobis	464	KTH

Parallel Session 2 **Mon 5th June 2023** **11:20-12:50**
MDO: Applications 1

Room: Cummins 110

Pap #	Title	Author	ID	Institution
171	Optimizing component solution spaces for arbitrary performance functions	Mr Eduardo Rodrigues Della Noce	97	Technical University of Munich
7	Density-based topology optimization of structural components considering thermo-mechanical loading and temperature-dependent material properties	Mr Ticho Ooms	70	Ghent University
166	Multidisciplinary design optimization of turbine blades using reduced order model (ROM)	Mr Yufan Fang	165	Beihang University
181	A Multidisciplinary Optimization Approach for Resolving the Vicious Cycle of Morphology and Control of Robots	Mr Akhil Sathuluri	239	Technical University of Munich
378	Latent Variable Constrained Bayesian Optimization for Complex Mixed Variable Design	Mr Vispi Karkaria	394	Northwestern University

Parallel Session 3 **Mon 5th June 2023** **14:10-15:30**
Topology Opt: Structural Eng. 1

Room: Boole 1

Pap #	Title	Author	ID	Institution
330	A boundary strip indicator function for material distribution-based topology optimization	Mr Mario Setta	200	Karlstad University
196	Shape and topology optimization of the regions supporting boundary conditions	Mr Carlos BRITO PACHECO	203	Universite Grenoble Alpes
243	Topology optimization of phononic crystal considering destructive interference for elastic wave attenuation.	Ms Tam Yee Ha	256	Hanyang University
381	Machine-learning assisted topology optimization for architectural design with artistic flavor	Prof Weisheng Zhang	408	Dalian University of Technology
250	Applications of Texture Synthesis for Topology Optimization	Mr Yuya Kozuka	237	Kyoto University
253	A structural synthesis scheme for linkage mechanisms by using the topology optimization method with a micropolar elasticity model	Ms Yurika Sayo	315	The University of Tokyo

Parallel Session 3

Mon 5th June 2023

14:10-15:30

Topology Opt: Multiscale/Multiphysics 1

Room: Boole 2

Pap #	Title	Author	ID	Institution
376	Multi-scale Topology Optimization of Reluctance Synchronous Motor considering Multifunctional Materials	Mr Doyun Jeong	329	Hanyang Univ.
17	A Machine Learning Approach to Metastructure Design	Prof Ahmad Najafi	5	Drexel University
205	A Simplified Approach to Perform Topology Optimization of Fluid-Structure Interaction Problems Considering Vortex-Induced Vibration	Mr Lucas Siqueira	205	University of São Paulo
216	Topology optimization of EAP ensuring continuous electrodes by connectivity constraints	Mr Daniel Hård	219	Lund University
211	A Hybrid Topology and Shape Optimization Routine Applied to Multiphysical Vibroacoustic Systems	Mr Jonathan Mirpourian	270	DTU
242	Two-phase fluid simulation and layout optimization	Prof Gil Ho Yoon	333	Hanyang University

Parallel Session 3 **Mon 5th June 2023** **14:10-15:30**
Topology Opt: Additive Manufacture 2

Room: Boole 3

Pap #	Title	Author	ID	Institution
89	Multi-material stress constrained topology optimization with precise evolving boundaries using IGA	Mr Majd Kosta	179	Technion - Israel Institute Of Technology
377	Topology Optimization for Dynamically Responsive Emergent Architected Material Systems (DREAMS)	Prof H Alicia Kim	4	University of California San Diego
125	MULTI-MATERIAL TOPOLOGY OPTIMIZATION OF STRUCTURES FOR IMPROVED MECHANICAL PERFORMANCE	Mr Fábio Conde	223	Nova School Of Science And Technology
119	A basic idea of fictitious physical model approach for geometrical constraints in shape and topology optimization	Prof Takayuki Yamada	216	The University of Tokyo
368	Optimal internal cooling using large-scale 3D multiphysics topology optimization with voxelization	Mr Jonas Lundgren	51	Linköping University
33	Shell-infill design with discrete variables by the sequential element rejection and admission method	Dr Alain Garaigordobil	108	University of The Basque Country

Parallel Session 3
Shape Optimization 1

Mon 5th June 2023

14:10-15:30

Room: Boole 4

Pap #	Title	Author	ID	Institution
199	Yet another parameter-free shape optimization method	Prof Daniel Tortorelli	296	Lawrence Livermore National Laboratory
293	Structural Optimization using an Updated Lagrangian Approach	Prof Niels Aage	230	Technical University of Denmark
12	Parameter-free Shape Optimization with Adaptive Mesh Refinement	Dr Kenneth Swartz	26	Lawrence Livermore National Laboratory
170	Length-Scale Constrained Density-based Shape Optimization Using Tangent Point Energies	Dr Ronald Bartz	50	Volkswagen AG
77	Minimization of the total potential energy of elastic bodies subjected to traction and kinematic loads. Designing the optimum distribution of the elastic moduli	Prof Tomasz Lewiński	168	Warsaw University of Technology
8	On the optimal single key connection	Prof Niels L. Pedersen	52	Technical University of Denmark

Parallel Session 3 **Mon 5th June 2023** **14:10-15:30**
Uncertainty/Robustness/Reliability 1

Room: Cummins G10

Pap #	Title	Author	ID	Institution
94	An efficient and non-intrusive approach for robust design optimization with the first-order second-moment method	Mr Jan Christoph Krüger	41	Hamburg University of Technology (TUHH)
49	Entropy-regularized Wasserstein distributionally robust shape and topology optimization	Dr Charles Dapogny	123	CNRS & Laboratoire Jean Kuntzmann
74	Stochastic dynamic analysis of composite plate structure under random acoustic excitation based on DPIM	Mr Mingxuan Fang	160	Dalian University of Technology
18	Multi-fidelity Cost-aware Bayesian Optimization	Dr Ramin Bostanabad	40	University of California Irvine
394	A unified framework via direct probability integral method for uncertainty propagation and reliability analysis of hybrid systems with aleatory and epistemic uncertainty	Dr JIARAN LIU	74	Dalian University of Technology
220	Simultaneous Optimization of Structure and Closed-Loop Controller for Locomoting Soft Bodies under Environmental Uncertainty	Dr Yuki Sato	94	Toyota Central R&D Labs., Inc.

Parallel Session 3 **Mon 5th June 2023** **14:10-15:30**
Smart Structures and Materials 1

Room: Cummins 110

Pap #	Title	Author	ID	Institution
59	Homogenization of surface contact force of hot press molding by variable lattice density optimization	Mr Kazutaka Yanagihara	137	AGC Inc.
447	Topology optimization of flexures, compliant mechanisms and shape-morphing structures with multiple degrees of freedom	Dr Stijn Koppen	459	TU Delft
257	Optimization of distributed vibration control for Truss Structure	Mr Yong Zhong	162	Beihang University
311	Optimization and experimental verification of actuator control for vibration suppression of space truss structures	Mr Keming Liu	346	Beihang University
424	Design and Analysis of an Adaptive Support Structure for an Aircraft Flexible Trailing Edge	Prof Fengfeng (Jeff) Xi	480	Toronto Metropolitan University
157	Unit-cell design of electromagnetic wave absorbing sandwich core using topology optimization	Mr Dohun Lee	266	Gwangju Institute of Science And Technology (GIST)

Parallel Session 4

Mon 5th June 2023

16:30-18:00

Structural Optimization: Application 1

Room: Boole 1

Pap #	Title	Author	ID	Institution
112	Structural topology optimization of the designed frequency response function using multi-objective dynamic compliance	Mr Seongwon Bae	72	Kyoto University
320	A complex structural topology optimization system based on the finite element software MSC.Patran / Nastran	Dr Jiayi Fu	380	Beihang University
295	Towards an automatized process for ready-to-cast topology optimized designs	Dr Emmanuel Tromme	118	Toyota Motor Europe
31	Crashworthiness Optimization via Improved Hierarchical Kriging-based Multi-fidelity Schemes	Arne Kaps	32	Technical University of Munich
91	Optimal design of reticulated shells accounting for strength, local buckling and overhang angles	Matteo Bruggi	143	Politecnico Di Milano

Parallel Session 4

Mon 5th June 2023

16:30-18:00

Data-driven methods 1

Room: Boole 2

Pap #	Title	Author	ID	Institution
493	Application of data-driven topology design to optimal design of turbulent flow distributors	Ryo Tsumoto	536	Osaka University
237	Optimization of process parameters using multi-fidelity Gaussian process under different operating conditions in laser powder bed fusion	Mr Byeong Uk Song	325	Korea Advanced Institute of Science and Technology(KAIST)
302	A learning-driven Scaled Boundary Finite Element Method for flaw detection	Mr PUGAZHENTHI THANANJAYAN	374	Indian Institute of Technology Madras
453	A structural genome database (SGD) based on deep learning for design of microstructures	Mr Wenyu Hao	484	Ningbo Institute of Dalian University of Technology
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Parallel Session 4 **Mon 5th June 2023** **16:30-18:00**
Topology Opt: Multiphysics/ Biomedical problems

Room: Boole 3

Pap #	Title	Author	ID	Institution
360	Three-Dimensional Multi-Material Topology Optimization Considering Interface Behavior	Mr Robert Renz	388	Karlsruhe Institute of Technology
462	Increasing the Agency of Design Engineers through Human Informed Topology Optimization	Ms Gillian Schiffer	497	Massachusetts Institute of Technology
52	Simultaneous design of the shape and movement of actively moving soft bodies with topology optimization	Dr Changyoung Yuhn	17	Toyota Central R&D Labs., Inc.
387	Explicit topology optimization for flexoelectric shell nanostructures	Mr Xiaoye Yan	410	Dalian University of Technology
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Parallel Session 4

Mon 5th June 2023

16:30-18:00

Optimisation Algorithms 1

Room: Boole 4

Pap #	Title	Author	ID	Institution
325	A fully distributed framework for topology optimization of multiphysics systems using local mesh refinement	Dr Hao Li	253	Kyoto University
306	Neural Network Inspired Transfer Learning for Optimization	Ms Suja Shree Ravichandran	373	Indian Institute of Technology Madras
136	A Constrained Multifidelity Quasi-Newton Optimization Method	Prof Markus Rumpfkeil	241	University of Dayton
305	Box-Wing Shape Optimisation of eVTOL UAM Aircraft Using Multi-Step Hybrid GA-SQP Strategy	Ms Min Ji Kim	294	Konkuk University
146	FFT-based Inverse Strength Homogenization for Cellular Material Design	Ms Cong Wang	47	RMIT University
10	Non-Convex, Mixed Categorical-Continuous variable structural optimization applied to Metallic Stiffened Panel sizing.	Dr Simone Coniglio	36	Airbus Operations

Parallel Session 4 **Mon 5th June 2023** **16:30-18:00**
Novel Methods for Modelling, Simulation, and Design 1

Room: Cummins G10

Pap #	Title	Author	ID	Institution
266	A Two-Step Approach to Computational Design of 4D Printed Shape Morphing Structures	Mr Andreas Walker	59	ETH Zürich
271	A computationally efficient model for the junction stiffness in optimizing heterogeneous lattice structures	Mr Gaurav Deodhare	351	Indian Institute of Science
140	Structural optimization and laser path optimization to reduce residual deformation due to residual stress stacking in metal additive manufacturing	Prof Akihiro Takezawa	125	Waseda University
117	Mechanism Topology Optimization of Self-Aligning Knee Exoskeletons	Ms Jeonghan Yu	164	Seoul National University
483	Wrinkling prediction of membranes via bimodulus thermoelasticity	Mr Xiaoqiang Ren	475	Ningbo Institute of Dalian University of Technology

Parallel Session 4 **Mon 5th June 2023** **16:30-18:00**
Topology Opt: Composites

Room: Cummins 110

Pap #	Title	Author	ID	Institution
366	An approach for a computational generation of optimized rib designs for long fiber reinforced thermoplast structures	Mr Patrick Haberkern	238	Karlsruhe Institute of Technology (KIT)
386	Dehomogenization in stress minimization problems	Dr Alex Ferrer	412	CIMNE
528	Nonlinear topology optimization on ESLM under dynamic plastic deformation	Prof Yongxin Li	443	Yanshan University
291	Correct material interface modelling in DMO-based multi-material topology optimization	Mr Joran Van Der Zwet	370	TU Delft
167	Multiscale Topology Optimization of Spatially-varying Periodic Structures for Heat Flux Manipulation	Mr Yonghwa Ji	86	Gwangju Institute of Science And Technology (GIST)
106	Microstructural topology optimization of viscoelastic composite with tunable relaxation moduli	Prof Kyeongsoo Yun	130	Gangneung-wonju National University

Parallel Session 1 **Tue 6th June 2023** **09:00-10:30**
Approx. & Surrogates / Metamodels: Automotive/Struct

Room: Boole 1

Pap #	Title	Author	ID	Institution
476	ON-THE-FLY MULTIPLE REDUCED-ORDER OPTIMIZATION ALGORITHMS AND ITS APPLICATIONS	Dr Manyu Xiao	500	Northwestern Polytechnical University
440	A New Adaptive Sampling Approach for Surrogate Modelling Based on Voronoi Tessellation and Dynamic Weight Decision Strategy	Prof Weifei Hu	411	Zhejiang University
114	Surrogate-Based Algorithm Selection and Hyperparameter Tuning for Automotive Crashworthiness Optimization	Mr Fu Xing Long	60	BMW Group
133	Bayesian Optimization for High-Dimensional Problems using a Combination of Kriging Surrogate Models	Mr Tanguy Appriou	233	Stellantis
498	IIHS Vehicle Side Impact: Door crossbeam topology optimization using surrogate models enhanced by machine learning techniques emulating engineering expertise	Dr Moritz Frenzel	541	Altair GmbH
175	MS-RP:A model selection strategy based on the modified R2 Prediction	Mr Jinyang Li	280	Hunan University

Parallel Session 1

Tue 6th June 2023

09:00-10:30

Topology Opt: Structural Eng. 2

Room: Boole 2

Pap #	Title	Author	ID	Institution
123	Simultaneous shape and topology optimization of pneumatic soft robots	Mrs Anna Dalklint	225	Lund University
505	A new approach of mechanical cloaking design via the Moving Morphable Voids (MMV) method	Mr Xubing Cheng	476	Ningbo Institute of Dalian University of Technology
128	Topology Optimization using Binary Variables and Geometry Trimming in Stress-Based Designs	Prof Daniel M. De Leon	208	Federal University of Rio Grande do Sul - UFRGS
283	Reliability-based topology optimization for structural volume minimization of structures subjected in the excitation frequency	Prof Zeng Meng	363	Hefei University of Technology
392	A Geometry Projection Method for Topology Optimization with Fat Bézier Curves	Miss Hongye Gu	180	University of Connecticut

Parallel Session 1 **Tue 6th June 2023** **09:00-10:30**
Topology Opt: Aerospace 2

Room: Boole 3

Pap #	Title	Author	ID	Institution
55	A Robust Method for Automatic Reconstruction of CAD Models from Topology Optimization Results	Mr Hongyuan Ren	134	Tsinghua University
131	Topology optimization of active structural systems to minimize environmental impact	Dr Yafeng Wang	235	Technical University of Denmark
203	Topology Optimization method based on a modified Fully Stressed Design algorithm for multi-material structures.	Mr Raul Llamas Sandin	287	Universidad Europea de Madrid, Universidad de Sevilla
499	Explicit layout optimization of complex rib-reinforced thin-walled structures based on the Moving Morphable Components (MMC) method	Dr Chang Liu	454	Dalian University of Technology
344	A research software toolbox for topology optimization with multiple element types for solid and thin-walled designs.	Prof Frank Naets	396	Ku Leuven
58	Level set based optimization method for thin-walled structures using shell elements	Mr Hiroki Kobayashi	24	Toyota Central R&D Labs. Inc.

Parallel Session 1 **Tue 6th June 2023** **09:00-10:30**
Structural Optimization: Civil & Structural Eng. 2

Room: Boole 4

Pap #	Title	Author	ID	Institution
333	Shape and size optimization of Eurocode-compliant reinforced-concrete waffle slabs	Mr Tobias Barbier	119	KU Leuven
349	A convex formulation for optimal design of planar elastic membranes using the Föppl's model	Dr Karol Bołbotowski	300	Warsaw University of Technology
288	Geometry optimization of wave energy converters respective to different shape and size utilizing evolutionary algorithms	Prof Amir H Gandomi	367	University of Technology Sydney
184	Design and Optimization of Functionally-graded Triangular Lattice Structures	Mr Junpeng Wang	33	Technical University of Munich
284	Gradient-based Thickness Optimization of a Wind Turbine Blade Root Part	Mr Sebastian Hermansen	366	Aalborg University
515	Global minimum-weight design of frame structures with polynomial optimization	Dr Marek Tyburec	465	Czech Technical University In Prague

Parallel Session 1 **Tue 6th June 2023** **09:00-10:30**
Topology Opt: Additive Manufacture 3

Room: Cummins G10

Pap #	Title	Author	ID	Institution
484	A Novel Regularization Approach for Topology Optimization of Orientation-Driven Discrete Objects	Dr Julia Carroll	533	Johns Hopkins University
63	Time series moving morphable components based topology optimization with geometrical nonlinearity	Mr Zonghao Li	114	Zhejiang University
158	Multi-material Topology Optimization Considering Dynamic Viscoelastic Properties	Mr Takumi Sugiura	116	Nagoya University
405	Strength-based topology optimization for composite laminates	Dr François-Xavier Irisarri	447	ONERA, DMAS, Université Paris Saclay
411	Efficient spline design via feature-mapping for continuous fiber reinforced structures	Dr Jannis Greifenstein	450	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)
317	Optimizing Infill Structures for Additive Manufacturing by De-Homogenization	Mr Peter Dørffler Ladegaard Jensen	360	Technical University Of Denmark

Parallel Session 1
MDO: Applications 2

Tue 6th June 2023

09:00-10:30

Room: Cummins 110

Pap #	Title	Author	ID	Institution
527	Optimal design of frames considering semi-rigid connections	Dr Hazem Madah	486	Shamoon College of Engineering (SCE)
35	A new method for designing piezo transducers with connected two-phase electrode	Dr David Ruiz	90	University Of Castilla-la Mancha
98	Sampling-based RBDO under multidisciplinary conditions	Mr Seonghyeok Yang	191	Korea Advanced Institute of Science and Technology(KAIST)
256	Design Optimization of Wind Assisted Ship Considering Various Sea and Wind Conditions	Dr Cem Guzelbulut	254	The University of Tokyo
43	Metamodel-based product family design optimization considering individual performance and assemblability	Mr Pavel Eremeev	76	KU Leuven
337	Design of a solar air heater using feature-mapping methods	Dr Fabian Wein	293	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)

Parallel Session 2

Tue 6th June 2023

11:20-12:50

Structural Optimization: Composite/Laminates

Room: Boole 1

Pap #	Title	Author	ID	Institution
375	Multi-scale Design Optimization of Fiber-reinforced Composite Laminates with Minimum Structural Compliance baed on Adapted Normal Distribution Fiber Optimization Method	Prof Zunyi Duan	358	Northwestern Polytechnical University
236	Topology optimization and prototyping of variable axial composite structures by computational fabrication	Dr Tsuyoshi Nomura	55	Toyota Central R&D Labs., Inc.
1	Topology optimization, fiber path optimization and additive manufacturing of CFRP structures	Ms Yanan Xu	3	The University of Sydney
457	Concurrent optimization of structural topology and 3D printing path planning using a feature-driven method preserving the component sequence	Dr Dongsheng Jia	416	Northwestern Polytechnical University
87	A high-cycle fatigue optimization approach for Discrete Material and Thickness Optimization of Laminated Composites	Prof Erik Lund	78	Aalborg University
507	Retrieval of blended composite laminates via a performance-matching approach applied to the pre-sizing of aerospace structures	Dr Florent Savine	19	ONERA

Parallel Session 2 **Tue 6th June 2023** **11:20-12:50**
Topology Opt: Aerospace 3

Room: Boole 2

Pap #	Title	Author	ID	Institution
127	Combined shape and topology optimisation of shell structures using CAD-free parameterisation	Ms Marina Kamper	81	Katholieke Universiteit Leuven
191	Parametric topography optimization of multilayer plate heat exchangers	Prof Casper Andreasen	264	Technical University of Denmark
310	Real gas model influence at the topology optimization of turbulent subsonic compressible flow	Dr Luis Fernando Garcia Rodriguez	381	University of São Paulo
178	Continuous and adaptive material distribution in topology optimization using isogeometric PHT-Splines	Mr Philip Luke Karuthedath	187	Indian Institute of Technology Roorkee
209	Size and topology optimization of stiffened shell structures	Dr Peter Dunning	204	University of Aberdeen
461	OpenPisco: an open-source R&D software platform for shape and topology optimization	Dr David Danan	466	IRT SystemX

Parallel Session 2

Tue 6th June 2023

11:20-12:50

Topology Opt: Structural Eng. 3

Room: Boole 3

Pap #	Title	Author	ID	Institution
212	Multi-material topology optimization for homologous deformation problem in structural design of large telescope	Dr Hiroaki Kawamura	184	Nagoya City University
222	Topology Optimization of Axisymmetric Structures with Design-Dependent Contact Loading	Prof Kai James	308	Georgia Institute of Technology
413	Pure-displacement formulation for topology optimization with pressure loads	Mr Eduardo Moscatelli	243	University of São Paulo
182	Homologous design with structural topology optimization	Dr Shufei Feng	286	Katholieke Universiteit Leuven
533	An efficient optimization method to determine both cross-section type and topology of frames	Prof Hai Huang	498	Beihang University
502	Multi-Material Topology Optimization of Lightweight Truss Structures considering Strength and Stability Design Criteria	Miss Claudia Almeida	439	UNIDEMI, NOVA School of Science and Technology

Parallel Session 2

Tue 6th June 2023

11:20-12:50

Shape Optimization 2

Room: Boole 4

Pap #	Title	Author	ID	Institution
208	A novel hydroforming-specific constraint formulation for node-based shape optimization using Vertex Morphing	Mr David Schmölz	53	Technical University of Munich
469	Including self-weight in optimal design of archgrids	Dr Radosław Czubacki	415	Warsaw University of Technology
541	Feature mapping with general polygonal primitives	Dr Yakov Zelickman	555	Johns Hopkins University
339	Microstructures with extremal stiffness, yield and buckling strength	Prof Ole Sigmund	392	Technical University of Denmark
54	Design Optimization via the Continuous Stochastic Gradient Method	Prof Michael Stingl	133	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)
249	Optimization of transient electromagnetic problems using discontinuous Galerkin methods	Dr Fengwen Wang	339	Technical University of Denmark

Parallel Session 2

Tue 6th June 2023

11:20-12:50

Structural Optimization: Additive Manufacturing

Room: Cummins G10

Pap #	Title	Author	ID	Institution
537	Growth-Driven Optimization of Gyroid Bone Scaffolds	Mr David Cohen	553	University Of Connecticut
261	Development of a rigid pivot joint for compliant mechanism using minimum thickness constraints	Mr Jun Hwan Kim	279	Hanyang University
384	Structural optimisation of a benchmark artifact assessing the quality of additively manufactured aircraft components	Mr Michael Mauersberger	20	Technische Universität Dresden
342	Layout and geometry optimization of truss-like components fabricated via multi-axis additive manufacturing	Dr Linwei He	276	University of Sheffield
202	Optimization and probabilistic analysis of structures optimized for topology and smoothly varying material orientations	Kai Steltner	96	Hamburg University of Technology (TUHH)
464	A novel multi-material topology optimization method based on level set function of fragment interpolation	Mr Yilin Guo	478	Ningbo Institute of Dalian University of Technology

Parallel Session 2 **Tue 6th June 2023** **11:20-12:50**
Topology Opt: MEMS/ Nano-Structures 2

Room: Cummins 110

Pap #	Title	Author	ID	Institution
382	Explicit topology optimization for graded lattice flexoelectric nanostructures via ersatz material model	Mr Yao Meng	406	Dalian University of Technology
201	Homogenization-Based Topology Optimization of Multiscale Structures to Prevent Buckling and Yielding	Mr Christoffer Christensen	272	Technical University of Denmark
32	Topology and Material Optimization of Optical Properties of Particulate Products by Discrete Dipole Approximation and Sequential Global Programming	Mr Nico Nees	100	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)
409	Efficient Design of Helical Higher-Order Topological Insulators in 3D Elastic Medium	Mr Jiachen Luo	456	Ningbo Institute of Dalian University of Technology
97	Simultaneous optimisation of compliant mechanism topology and embedded piezoelectric stack actuator position and size	Mr Breno Vincenzo De Almeida	192	University of Campinas
226	Deep learning based topology optimization method for microstructure design according to mechanical performance	Prof Hongling Ye	311	Beijing University of Technology

Parallel Session 4 **Tue 6th June 2023** **16:30-18:00**
Novel Methods for Modelling, Simulation, and Design 2

Room: Boole 1

Pap #	Title	Author	ID	Institution
517	Virtual element method for topology optimization of contact problems	Prof Andrzej Myslinski	462	Systems Research Institute
168	Study the use of computational fluid dynamics for the purpose of process understanding, development, and optimisation in hydrogel mixing towards achieving uniformity	Mr Pádraig Ó Donnchú	277	Munster Technological University
118	Design Optimization of R-6bar-R Hip Exoskeleton Mechanism	Mr Jongjun Lee	212	Seoul National University
357	Use of numerical layout optimization to model masonry constructions	Prof Matthew Gilbert	372	University of Sheffield
151	Structural Optimization Based on an Algorithmic Design (A Proposal of Algorithm Design Approach)	Prof Kazuyuki Hanahara	215	Iwate University

Parallel Session 4 **Tue 6th June 2023** **16:30-18:00**
Optimisation Algorithms 2

Room: Boole 2

Pap #	Title	Author	ID	Institution
102	Bayesian optimization with Gaussian process regression: a multi-fidelity review	Mr Leo Guo	136	TU Delft
14	A Hilbertian projection method for constrained level set-based microstructure optimisation	Mr Zachary Wegert	69	Queensland University of Technology
48	Trust region based moving asymptotes method for topology optimization problems with global and local stress constraints	Mr Xueyan Hu	21	Zhejiang University
169	Smoothing methods for some eigenvalue optimization problems in topology optimization	Mr Akatsuki Nishioka	189	The University of Tokyo
482	LP/MILP relaxations for the problem of optimal operation of natural gas flow networks	Dr Shriram Srinivasan	517	Los Alamos National Laboratory
540	On generalized diagonal quadratic subproblems and rejection of design iterates in first-order sequential convex programming	Dr Matthijs Langelaar	619	TU Delft

Parallel Session 4 **Tue 6th June 2023** **16:30-18:00**
Sensitivity Analysis Methods and Applications 1

Room: Boole 3

Pap #	Title	Author	ID	Institution
36	Topology optimization using a modified discrete adjoint method in structural dynamics	Mr Timo Schmidt	109	Hamburg University of Technology (TUHH)
197	A Novel Sensitivity Analysis Method Using Self-Organizing Maps (SOM)	Mr Deepanshu Yadav	104	Indian Institute of Technology Madras
86	Polynomial-type Extrapolation-Based Sensitivity Reanalysis: Dealing with Computational Challenges in Engineering Design Optimisation	Dr Shahin Jalili Dargalusani	177	University of Aberdeen
403	Shape, and Topological Derivatives via One-sided Derivative of Parametrized Minima and Minimax	Prof Michel Delfour	445	Université De Montréal
30	On the numerical calculation of topological derivatives for shells considering crash loadcases	Dr Katrin Weider	38	University of Wuppertal

Parallel Session 4

Tue 6th June 2023

16:30-18:00

Structural Optimization: Application 2

Room: Boole 4

Pap #	Title	Author	ID	Institution
289	Optimal Casing Thickness Design of Li-ion Battery in Electric Vehicle	Mr Seyed Sajad Mirjavadi	369	University of Sydney
25	Optimizing interconnected features using moving morphable components	Mr Cecil Armstrong	599	Queens University Belfast
194	Dehomogenization methods for flow-driven topology optimization and a case study for hydrogen fuel cell flow channel design	Yuqing Zhou	292	Toyota
246	Optimum stripe structure designs for heat flow control based on orientation optimization	Mr Kodai Tsuruta	324	Kyoto University
552	Modelling and optimization of a fully compliant piezoelectric actuation system for trailing-edge flaps	Prof Renjing Gao	425	Dalian University of Technology
287	Structural Analysis and Optimization of Micro satellite APSCO SSS-1	Miss Huiyun Pan Shenyan Chen	368	Beihang University

Parallel Session 4

Tue 6th June 2023

16:30-18:00

Data-driven methods 2

Room: Cummins G10

Pap #	Title	Author	ID	Institution
75	Structural Performance Dynamic Prediction with Physics-Informed Hybrid Modeling Method	Dr Xiwang He	166	Dalian University of Technology
436	Multifidelity Topology Design on the Probabilistic Principal Component Analysis	Prof Kentaro Yaji	434	Osaka Univeristy
343	Online Fault Detection in Machine Parts Using Motif Discovery and Dynamic Time Warping	Mr Pranjul Dubey	391	Indian Institute of Technology Madras
522	Data-driven topology optimization of heterogeneous cellular structures	Prof Bin Niu	543	Dalian University of Technology
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Parallel Session 4 **Tue 6th June 2023** **16:30-18:00**
Topology Opt: Thermal & Fluid Eng. 2

Room: Cummins 110

Pap #	Title	Author	ID	Institution
341	Material distribution topology optimization for boundary dominated problems	Prof Eddie Wadbro	359	Karlstad University
402	Topology optimization for steady and unsteady surface flows	Prof Yongbo Deng	62	Chinese Academy of Sciences
338	Topology Optimization of the Downcomers of a Multi-Staged Fluidized Bed System	Dr Diego Silva Prado	244	Polytechnic School of The University Of São Paulo
313	Combining Density and Level Set Methods for Flow Topology Optimization	Dr Kurt Maute	382	University Of Colorado Boulder
267	Topology optimization for the design of temperature rise reduction structures under unsteady-state thermal-fluid field.	Mr Keisuke Takaara	322	Nagoya University

Parallel Session 1 **Wed 7th June 2023** **09:00-10:30**
Approx. & Surrogates / Metamodels: General Applic.

Room: Boole 1

Pap #	Title	Author	ID	Institution
144	Active learning Gaussian Process model under surrogate model uncertainty for efficient variable screening and modelling	Mr Minjik Kim	255	Korea Advanced Institute of Science and Technology(KAIST)
423	An Ensemble-Adaptive Tree-based Chain Framework for Multi-Target Regression Problems	Dr Hechen Wei	479	Hunan University
363	Efficient Multi-Objective Optimization of Additively Manufactured Sandwich Structures with Cellular Lattice Cores	Mr Konstantin Kappe	342	Fraunhofer EMI
278	Multilayer 2D equivalent method of 3D conjugate heat transfer analysis and its application in active phased array antenna	Dr Sihao Qian	356	Xidian University
83	Efficient use of reanalysis-based reduced order models in buckling constrained topology optimization	Mr Vilmer Dahlberg	172	Lund University
432	A Pointwise-Optimal Ensemble of Surrogate Models	Mr Shuai Zhang	535	Dalian University of Technology

Parallel Session 1 **Wed 7th June 2023** **09:00-10:30**
Uncertainty/Robustness/Reliability 2

Room: Boole 2

Pap #	Title	Author	ID	Institution
60	Robust design optimization of structures with multimodal responses using Taylor expansions	Prof Benedikt Kriegesmann	16	Hamburg University of Technology (TUHH)
6	Semi-Probabilistic Codesign Framework for Tolerance bound Optimization complying with Aeronautical Static Strength Requirements	Mr Gabriele Capasso	39	Airbus Operations SAS
185	Product family design for product variants exposed to an uncertain environment	Mrs Nicola Barthelmes	34	LPL, Technical University Munich
64	Dynamic-reliability-based topology optimization of braced frame structures under near-fault ground motions	Dr Luxin Li	146	Dalian University of Technology
370	Random Matrix Theory for Efficient Robust Topology Optimization	Mr Linxi Li	214	University of Toronto Institute for Aerospace Studies

Parallel Session 1

Wed 7th June 2023

09:00-10:30

MDO: Aerospace applications 2

Room: Boole 3

Pap #	Title	Author	ID	Institution
137	Topology optimization for 3d printed hybrid solid rocket motor engine grain design methodology for high mechanical reliance and thrust to weight ratio	Dr Musaddiq Al Ali	107	Toyota Technological Institute
210	Continuous fibre composite optimisation with buckling and additive manufacturing constraints	Mr Yi-rong Luo	218	Imperial College London
180	CFD-CSM-based aerostructural optimization of composite wind turbine rotors with buckling constraints	Marco Mangano	141	University of Michigan
23	Mixed variable structural optimisation applied to a double-double composite panel	Mr Alejandro Garcia Pis	84	Airbus Operations SAS, Université Paul Sabatier, ICA
50	Guided Optimization: A Nested Cost Optimization Technique for Existing Product Family Designs	Dr Emin Oguz Inci	124	KU Leuven
137	Topology optimization for 3d printed hybrid solid rocket motor engine grain design methodology for high mechanical reliance and thrust to weight ratio	Dr Musaddiq Al Ali	107	Toyota Technological Institute

Parallel Session 1 **Wed 7th June 2023** **09:00-10:30**
Topology Opt: Automotive 2

Room: Boole 4

Pap #	Title	Author	ID	Institution
21	Shape- and Topology Optimization of Fluid Film Thrust Bearings	Dr Kristian Jensen	95	COMSOL
27	Development of a new heuristic supporting the Graph and Heuristic based Topology optimization with Reinforcement Learning	Mr Jens Trilling	102	University of Wuppertal
70	Shape Optimization of Topology Optimization Concepts by using Implicit-based Geometry and Ensembles of Metamodels	Prof Niclas Strömberg	150	Örebro University
172	LEOPARD Topology Optimization and CAD Export for Industrial Applications	Dr Thilo Franke	597	Volkswagen AG
213	Challenges in topology optimization for buckling and postbuckling	Mr Sheng Chu	304	University of California San Diego

Parallel Session 1

Wed 7th June 2023

09:00-10:30

Topology Opt: Additive Manufacture 4

Room: Cummins G10

Pap #	Title	Author	ID	Institution
516	Sensitivity clustering-based concurrent topology and microstructure optimization method for metamaterial thermal actuators	Prof Shutian Liu	423	Dalian University of Technology
160	Manufacturing Constraints Based on Local Design Responses	Mr Thorsten Mertins	274	Dassault Systemes
34	A continuous model for connectivity constraints in topology optimization	Dr Alberto Donoso	87	ETSII-CR Universidad de Castilla-La Mancha
78	Design of lattice structures for bone implants considering fatigue performance using PolyStress	Miss Katherine Zheng	151	Deakin University
296	Optimization of Continuous Fiber Explicit Layout for 3D-printing FRP based on Level Set Method	Mr Takahito Moribe	117	Nagoya University

Parallel Session 1 **Wed 7th June 2023** **09:00-10:30**
Shape Optimization 3

Room: Cummins 110

Pap #	Title	Author	ID	Institution
292	The transition of effective frequency by Fourier order in FFT-based optimization of ventilation and sound-absorbing materials	Mr Keigo Kajitani	158	Shimane University
258	Extending the Graphic Statics Method to the Design of Compliant Mechanisms	Mr Deepak Kumar Gupta	331	Indian Institute of Science
303	Simultaneous Optimisation of Shape and Thickness of Shell Structures	Mr Erik A. Träff	375	Technical University of Denmark
57	Richtmyer-Meshkov instability jet growth mitigation using design optimization methods	Dr Dane Sterbentz	139	Lawrence Livermore National Laboratory
244	On the global optimum for heat conduction	Dr Yang Liu	328	Tsinghua University
326	Comparison of Approximation-Assisted and Adjoint Optimization Methods to Design Shape Optimized Air-to-Refrigerant Heat Exchangers	Dr Vikrant Aute	387	University of Maryland

Parallel Session 1 **Thu 8th June 2023** **09:00-10:30**
Uncertainty/Robustness/Reliability 3

Room: Boole 1

Pap #	Title	Author	ID	Institution
115	Reliability-based structural optimization under uncertainty in expected value of external load	Prof Yoshihiro Kanno	18	The University of Tokyo
39	Uncertainty Quantification of Nonlinear Laminated Composite Plates with Multiple Stochastic Sources based on Direct Probability Integral Method	Dr Hui Huo	113	Dalian University of Technology
526	Stochastic Design Optimization of Uncertain Linear Systems Subjected to Random Vibrations	Prof Samy Missoum	246	University of Arizona
544	Fuzzy Optimum Design of Cable Stayed Bridges	Prof Luis Simoes	637	University Of Coimbra, Portugal
62	An Adaptive Sampling Strategy for Interval Bounds Analysis of Structures	Dr Naigang Hu	126	Xidian University
103	Computational framework for fatigue constrained topology optimization	Prof Janos Logo	194	Budapest University of Technology And Economics

Parallel Session 1

Thu 8th June 2023

09:00-10:30

Smart Structures and Materials 2

Room: Boole 2

Pap #	Title	Author	ID	Institution
221	Multi-physics topology optimization for programmable magneto-active materials	Prof Xiaojia Shelly Zhang	307	University of Illinois at Urbana-Champaign
463	Machine learning-assisted optimal design of topological insulators	Dr Zongliang Du	504	Dalian University of Technology
340	3D Piezoelectric Structures Based Topology Optimization	Dr Abbas Homayouni Amlashi	635	FEMTO-ST Institute, Université Bourgogne Franche
514	Model-based Optimization of a compliant zero-force mechanism derived from two bistable mechanisms	Mr Tinghao Liu	421	University College Cork
401	Optimization design for smart structures for flying vehicles	Prof Jihong Zhu	441	Northwestern Polytechnical University

Parallel Session 1 **Thu 8th June 2023** **09:00-10:30**
Topology Opt: Multiscale/Multiphysics 2

Room: Boole 3

Pap #	Title	Author	ID	Institution
189	De-homogenisation using phasor noise	Rebekka Vaarum Woldseth	290	Technical University Of Denmark
304	Basic study on topology optimization of piezoelectric structures with tunable acoustic properties	Mr Nari Nakayama	341	Kyoto University
437	Sequential conservative integer programming method for multi-constrained discrete-continuous variable topology optimization	Dr Kai Sun	493	Dalian University of Technology
487	Investigating Energy-Based Objectives in Thermoelastic Topology Optimization considering Finite strain	Prof Hayoung Chung	531	Ulsan National Institute of Science and Technology
225	Topology optimization for linear oscillatory actuator design with infill structure	Prof Sunghoon Lim	127	Kyoto University
356	Generating focusing waveguide acoustic black holes by topology optimization	Prof Martin Berggren	365	Umeå University

Parallel Session 1

Thu 8th June 2023

09:00-10:30

Topology Opt: Structural Eng. 4

Room: Boole 4

Pap #	Title	Author	ID	Institution
251	A Topology Optimization Method Considering Connectivity Restriction based on Fictitious Physics Approach	Dr Kozo Furuta	186	Kyoto University
491	A Problem Independent Machine Learning (PIML)-based approach for large-scale structural analysis and topology optimization of linear elastic structures	Mr Mengcheng Huang	502	Ningbo Institute of Dalian University of Technology
513	A discrete material optimization approach for oriented finite periodic structures	Prof Qing Li	549	The University of Sydney
234	Topology optimization reducing the dynamic instability of squeal noise	Ms Sol Ji Han	312	Hanyang University
16	Graph and Heuristic Based Topology Optimization for crash-loaded profiles made of joined sheet metals	Mr Simon Link	31	University of Wuppertal

Parallel Session 1 **Thu 8th June 2023** **09:00-10:30**
Topology Opt: Additive Manufacture 5

Room: Cummins G10

Pap #	Title	Author	ID	Institution
92	Single and Multi-Component Topology Optimization for Additive Manufacturing	Mr Luke Crispo	183	Queen's University
183	Improved parameter robustness for fluidic topology optimization	Mr Maarten Theulings	284	TU Delft/NLR
228	Physics-informed convolutional neural network to mitigate structural disconnection in deep learning-based topology optimization.	Mr Geonwoo Lee	321	Korea Advanced Institute of Science and Technology(KAIST)
467	Tailoring Topology Optimization to Anisotropic Extrusion-based Additive Manufacturing Processes	Hajin Kim-Tackowiak	496	Massachusetts Institute of Technology
156	Computational design of metamaterials with self contact	Mr Filip Sjövall	58	Lund University
477	Topological design of negative Poisson's ratio material microstructure under large deformation with a gradient-free method	Prof. GengDong Cheng	622	Dalian University of Technology

Parallel Session 1 **Thu 8th June 2023** **09:00-10:30**
Structural Optimization: Lattice Structures

Room: Cummins 110

Pap #	Title	Author	ID	Institution
121	Multi-scale Topology Optimisation using Pareto-optimal lattice structures	Mr Tom De Weer	222	KU Leuven
56	Multi-scale Analysis and Modeling Method of Lattice Filled Curved Plate	Dr Chenguang Zhang	132	Dalian University of Technology
510	Stress constrained optimisation of lattice structures	Mr Nassim Kesmia	525	Universite Gustave Eiffel
494	PIML-enhanced 3D Graded Lattice Structures Optimization via Moving Morphable Components approach	Mr Wu Xu	472	Ningbo Institute of Dalian University of Technology
416	Two-Scale Buckling Optimization of 3D Graded Lattice Structures using Numerical Homogenization based on Beam Models	Mr Daniel Hübner	463	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)
470	Nonlinear mechanical metamaterial lattice design via optimization	Dr KANDULA ESWARA SAI KUMAR	299	University of California San Diego

Parallel Session 2

Thu 8th June 2023

11:20-12:50

Structural Optimization: Application 3

Room: Boole 1

Pap #	Title	Author	ID	Institution
532	Optimizing effective fracture toughness of heterogeneous materials under mode-I loading using Bayesian methods	Sukhminder Singh	269	FAU Erlangen-Nürnberg
143	Concurrent multiscale topology optimization of coated structures infilled with layer-wise lattice microstructures for dynamic structural performance	Mr Tiannan Hu	167	Kyoto University
524	Approach to validate an initial simulation model for topology optimization of injection molded short-fibre reinforced thermoplastic (frp)-metal-hybrids	Mr Sven Lenhardt	83	Karlsruhe Institute of Technology
479	Topology optimization of fluidic problems using internal interface normal zero-velocity constraint	Ms Zhiqi Wang	482	Chinese Academy of Sciences
414	Topology optimization of dynamic flexoelectric structures by isogeometric analysis	Dr Xing Chen	442	Universite Gustave Eiffel
525	Multi-Objective Design Optimization of a Meta-Interface	Dr. Alejandro Aragón	800	TU Delft

Parallel Session 2 **Thu 8th June 2023** **11:20-12:50**
MDO: Multi Scale/Multi Physics problems

Room: Boole 2

Pap #	Title	Author	ID	Institution
176	Multi-disciplinary design of robot-like systems using solution spaces	Ms Klara Ziegler	229	Technical University of Munich
308	A Sequential Global Programming Approach for Homogenization-based Multiphysics Optimization Problems Applied to Biot Porous Media	Ms Bich Ngoc Vu	295	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)
346	A scalable problem to benchmark robust multidisciplinary design optimization techniques	Mr Amine Aziz Alaoui	376	IRT Saint Exupery
400	Electrochemical Modelling and Optimisation of All Solid-State Battery Parameters Using Finite Element Method	Dr Vibhuti Pandey	437	University of California San Diego
186	Multi-Physics Shape Optimization of an Electric Engine	TBA	44	Dassault Systemes

Parallel Session 2 **Thu 8th June 2023** **11:20-12:50**
Sensitivity Analysis Methods and Applications 2

Room: Boole 3

Pap #	Title	Author	ID	Institution
319	Design exploration of layered composite shells	Dr Jan Liedmann	383	TU Dortmund
286	PCA of shape sensitivity for dynamic structures	Seyed Ali Ghasemi	267	TU Dortmund
161	Geometric and material sensitivity analysis for regularised ductile damaging materials.	Mr Fabian Guhr	275	TU Dortmund
395	Semi-analytical Gradient-based Optimization of Exact CAD Models using Intermediate Field Representations	Dr Martin Pierre Schmidt	422	Lab. of Mathematics INSA & Dassault Systemes Research
11	Fatigue Optimization using Semi-analytic Adjoint Sensitivities	Dr Claus B.W. Pedersen	45	Dassault Systemes \ SIMULIA

Parallel Session 2 **Thu 8th June 2023** **11:20-12:50**
Novel Methods for Modelling, Simulation, and Design 3

Room: Boole 4

Pap #	Title	Author	ID	Institution
26	Reparametrizing boundaries of Bezier-defined features from the moving morphable components framework	Dr Thomas Shannon	99	Queen's University Belfast
235	Development of the pipe density filter for fluid topology optimization	Mr Young Hun Choi	273	Hanyang University
322	A novel multi-objective optimization formulation for strain variance optimization in isothermal forging	Mr Kannan Sekar	378	Indian Institute of Technology Madras
417	Cyber-Physical Models: Delaying Lock-in in Energy System Design	Prof Kenneth Bryden	357	Iowa State University
415	A level set-based interface-enriched topology optimization for problems that mandate for smooth boundaries	Dr Alejandro M. Aragón	467	TU Delft

Parallel Session 2

Thu 8th June 2023

11:20-12:50

Topology Opt: Thermal & Fluid Eng. 3

Room: Cummins G10

Pap #	Title	Author	ID	Institution
192	Topology optimization design of rotor-stator devices modeled by the Multiple Reference Frame approach	Dr Diego Hayashi Alonso	206	Polytechnic School of The University Of São Paulo
206	On the topology optimization of labyrinth fluid diodes via integer linear programming	Prof Renato Picelli	302	University of São Paulo
397	Topology optimization of fluid using Large Eddy Simulation (LES): Labyrinth Seal application	Dr SHAHIN RANJBARZADEH	405	University of São Paulo
445	Topography optimisation for plate-type energy storage heat exchangers	Mr Yupeng Sun	461	Central South University & University of Southern Denmark
315	Topology optimization in a conjugate heat transfer problem with modified Darcy flow, traction boundary conditions and a mass flow constraint.	Dr Carl-Johan Thore	54	Linköping University

Parallel Session 2 **Thu 8th June 2023** **11:20-12:50**
Topology Opt: Methods

Room: Cummins 110

Pap #	Title	Author	ID	Institution
248	An explicit formulation for minimum length scale control in density-based topology optimization	Mr Yongxin Qu	335	Shangdong University
393	Robust Topology Optimization with Taylor Series Approximations for Faster Two-Phase Minimum Length Scale Control	Mr Christiaan Mommeyer	426	KU Leuven
489	Density-based topology optimization using Material Point Method	Mr Sanghyun Park	429	Ulsan National Institute of Science and Technology
466	Automating parameter tuning of topology optimization through surrogate modeling	Prof Josephine Carstensen	524	Massachusetts Institute of Technology
549	Some recent advances in topology optimization with Discrete Object Projection	Prof James Guest	561	Johns Hopkins University

Parallel Session 1 **Fri 9th June 2023** **09:00-10:30**
Topology Opt: Aerospace 4

Room: Boole 1

Pap #	Title	Author	ID	Institution
550	On The Size And Shape Optimization Of Space Telescope Mirrors And Space Antennas	Markus Schatz	612	DHBW Ravensburg
535	Thermomechanical topology optimization of an optical space instrument	Dr Sanne van den Boom	135	TNO
214	Beyond Simple Shapes in Feature-Mapping Topology Optimization	Dr Hollis Smith	35	Air Force Research Laboratory
465	Finite concurrent truss topology optimization of large structures with multiple repeating cells	Mr Enrico Stragiotti	103	ONERA
523	Eigenvector Constrained Topology Optimization for Natural Frequency and Buckling Problems	Prof Graeme Kennedy	530	Georgia Institute of Technology
543	Topology Optimization of Structural Assemblies with Joint Strength Constraints	Prof Julián Norato	557	University Of Connecticut

Parallel Session 1 **Fri 9th June 2023** **09:00-10:30**
Topology Opt: Structural Eng. 5

Room: Boole 2

Pap #	Title	Author	ID	Institution
309	Topology Optimization of fiber-reinforced structures considering the Tsai-Hill criterion as stress constraint	Prof EMILIO CARLOS NELLI SILVA	377	University of São Paulo
4	Singular value decomposition and topology optimization	Prof Paolo Venini	14	University of Pavia
44	Proper generalized decomposition for topology optimization of problems with spatially separable geometry	Mr Tomas Pauwels	120	KU Leuven
365	On the plastic and elastic layout optimization of trusses subjected to multiple load conditions	Dr Tomasz Sokół	161	Warsaw University of Technology
84	Free-form ribbed plates using topology-shape-sizing optimization of a plate-beam model	Prof Oded Amir	173	Technion - Israel Institute Of Technology

Parallel Session 1 **Fri 9th June 2023** **09:00-10:30**
Structural Optimization: Topology Applications

Room: Boole 3

Pap #	Title	Author	ID	Institution
217	XIGA level set-based topology optimization considering damage	Dr Lise Noël	297	TU Delft
82	Topology optimization in systems design: a simple approach to distribute design domains	Mr Felix Endress	15	Technical University of Munich
468	Level set-based topology optimization for coated structures considering variable thickness	Mr Nils Hermann	283	TU Delft
383	Surface Texture Optimization via MMC/MMV-based Explicit Topology Optimization Approach	Mr Honghao Tian	407	Dalian University of Technology
198	Process-Specific Topology Optimization for LPBF-based Additive Manufacturing	Mr Sankalp Patil	202	Fraunhofer EMI

Parallel Session 1
AI Methods 2

Fri 9th June 2023

09:00-10:30

Room: Boole 4

Pap #	Title	Author	ID	Institution
72	Reinforcement learning and graph representations for optimization of plane steel building frames	Dr Kazuki Hayashi	142	Kyoto University
247	Improved latent representation of microstructure for multi-scale topology optimization and its applications	Dr Minsik Seo	211	Hanyang University
259	Optimal design of a silencer using the backpropagation of artificial neural network	Mr Byung Hun An	61	Ajou University
147	Regularized variable three-term conjugate gradient method to improve the generalization performance of neural network training	Mr Sanghyuk Kim	93	Hanyang University
506	Method for Optimizing Product Designs Based on Rough Set Theory and Convolutional Neural Network	Dr Masakazu Kobayashi	340	Toyota Technological Institute
430	Is-PINNs: Physics-informed neural network localization method with the partition of unity	Ziming Wen	492	Hunan University

Parallel Session 1 **Fri 9th June 2023** **09:00-10:30**
Multi Objective Optimization

Room: Cummins G10

Pap #	Title	Author	ID	Institution
174	A generative engineering approach with multimodal topology optimization towards enhanced structural toughness	Dr Klaus Hoschke	224	Fraunhofer EMI
24	Multiobjective mixed variable structural optimization with a fuselage clip application	Dr Stéphane Grihon	13	Airbus Commercial Aircraft
149	Surrogate-Assisted Multi-Objective Particle Swarm Algorithm for Expensive Optimization Problems	Mr Yao Zhang	251	Beijing Institute of Technology
552	Modelling and optimization of a fully compliant piezoelectric actuation system for trailing-edge flaps	Prof Renjing Gao	425	Dalian University of Technology
536	Structural optimization of floor slabs incorporating impact sound insulation	Dr Nathan Brown	440	Penn State University
288	Geometry optimization of wave energy converters respective to different shape and size utilizing evolutionary algorithms	Prof Amir H Gandomi	367	University of Technology Sydney

Parallel Session 1

Fri 9th June 2023

09:00-10:30

Topology Opt: Thermal & Fluid Eng. 4

Room: Cummins 110

Pap #	Title	Author	ID	Institution
334	Topology optimization of porous microstructures in wicked heat pipes	Mr Asger Bjerregaard Petersen	285	DTU
252	Topology Optimization of fluid devices in rotating flow using Finite Volume Method	Mr Takamitsu Sasaki	332	Kyoto University
290	Ensuring jet access in topology optimization for cleanable parts	Mr Reinier Giele	301	TU Delft
281	Topology optimization of thermal initial value problems using a harmonic model	Mr Goktug Isiklar	362	Technical University of Denmark
552	Topology Optimization of High-Fidelity Fluid-Structure Interaction Problems	Mr Mohamed Abelhamid	551	York University



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