

# EngOpt2026

7<sup>th</sup> INTERNATIONAL CONFERENCE ON ENGINEERING OPTIMIZATION

16 > 18 September 2026

INSTITUTO SUPERIOR TÉCNICO | LISBOA | PORTUGAL

Wednesday | 16 SEPTEMBER | 10:35 – 12:35

Room A	Topic ODS 1	Optimal Design Structures		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	392	Scalable Bayesian Optimization for Aerodynamic Design Optimization via Multi-Model Strategies	<i>Emre Özkaya, Nicolas R. Gauger</i>	<i>Emre Özkaya</i>
10:55 - 11:15	396	Structural Optimization Investigations of the Open-Source Gurit98m Wind Turbine Blade Model	<i>Sebastian M. Hermansen, Gregor Borstnar, Erik Lund</i>	<i>Erik Lund</i>
11:15 - 11:35	420	Material Composition Optimization in Aircraft Wing Design for Reduced Lifecycle Environmental Impact	<i>Álvaro Caridade, Almudena Urios, Joseph Morlier, Shantanu Sapre</i>	<i>Joseph Morlier</i>
11:35 - 11:55	438	Aeroelastic Optimization of Stick Models for Parametric Flutter Analysis in Blended-Wing-Body Aircraft	<i>Diogo Bravo, Mário Brás, Afzal Suleman</i>	<i>Diogo Bravo</i>
11:55 - 12:15	476	Physics-Informed Neural Networks For Synthetic Air Data Estimation	<i>Álvaro Ribeiro Gomes de Oliveira, Roberto Dias Pereira, Luiz Carlos S. Góes</i>	<i>Álvaro Oliveira</i>
12:15 - 12:35	382	Improving Data Transfer Quality in Laser Satellite Communication through Thermo-mechanical Topology Optimization	<i>Joran van der Zwet, Mario Badas Aldecocea, Can Ayas, Matthijs Langelaar</i>	<i>Matthijs Langelaar</i>

Room B	Topic IA 1	Industrial Applications		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	331	Gradient-Based Optimization of a Steel Footbridge Under Static and Dynamic Loading Considering Design Code Requirements	<i>Nele Uyttebroeck, Geert Lombaert, Mattias Schevenels</i>	<i>Nele Uyttebroeck</i>
10:55 - 11:15	338	Adjoint Tube Shape Optimization of an Air-to-Refrigerant Heat Exchanger Subject to Flow Maldistribution	<i>Brian O'Malley, James Tancabel, Vikrant Aute</i>	<i>Vikrant Aute</i>
11:15 - 11:35	347	Stress-Constrained Shape and Fibre Orientation Optimization for Lightweight Hydrogen Pressure Vessels	<i>Guzmán Domínguez-Domínguez, Xabier Justo, Luis M. Matey</i>	<i>Guzmán Domínguez-Domínguez</i>
11:35 - 11:55	356	Application of a Machine Learning-Based Topology Optimization Method on an Automotive B-Pillar for Crashworthy Lightweight Design	<i>Jirair Aroyan, Johannes Sperber, Christopher Ortman, Axel Schumacher</i>	<i>Jirair Aroyan</i>
11:55 - 12:15	402	Robust Design of Vibratory Rammers with Maximized Environmental Operating Range	<i>Andela Babaja, Tobias Wanninger, Florian Nießl, Bharath Venkatesh, Daniela Zierer, Martin Käser, Edith Kramp, Rudolf Berger, Stylianos Chrisopoulos, Roberto Cudmani, Markus Zimmermann</i>	<i>Andela Babaja</i>
12:15 - 12:35	414	Topology Optimization of Hydrogen Heat Exchangers	<i>Jose I. Rothkegel Ide, Pierre Duysinx</i>	<i>Jose Ide</i>

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Room C	Topic INVI	Inverse Problems and Sensitivity Analysis		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	291	Adjoint Sensitivity Analysis for Topology Optimization Under Time-Harmonic Prescribed Displacements	<i>Olavo M Silva, Arcanjo Lenzi, Eduardo Lenz Cardoso</i>	<i>Olavo M Silva</i>
10:55 - 11:15	308	Inverse Determination of the First Two Natural Frequencies of a Simplified Beam-Tendon Dynamic Model	<i>Reyolando Brasil, Marcelo Araujo da Silva, Jean Vasco</i>	<i>Reyolando Brasil</i>
11:15 - 11:35	318	Reconstructing Rock Temperature Profiles from Field Measurements Using Finite Element Modeling and Inverse Analysis	<i>Jaka Dujc</i>	<i>Jaka Dujc</i>
11:35 - 11:55	394	Conditional Flow Matching for ML-Based Inverse Design Problems	<i>Juliana Felder, Soheyl Massoudi, Milad Habibi, Mark Fuge</i>	<i>Juliana Felder</i>
11:55 - 12:15	405	Fast Probabilistic Material Characterization: Amortized Simulation-Based Inference for Phenomenological Models with BayesFlow	<i>Tom Hoppe, Glenn Inga Klose, Oliver Völkerink, Thomas Vietor</i>	<i>Tom Hoppe</i>
12:15 - 12:35	463	Adjoint-Based Sensitivity Analysis in the Modeling and Optimization of Meta-Plates	<i>Rangel Moura Barbosa, Alberto Luiz Serpa</i>	<i>Alberto Serpa</i>

Room D	Topic TOI	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	410	Topology Optimization of Micro-flows under Uncertainty Using a Stochastic Gradient Approach	<i>Mathis Jonathan Hörmann, Casper Schousboe Andreasen, Ole Sigmund</i>	<i>Mathis Hörmann</i>
10:55 - 11:15	413	One-Shot Topology Optimization for Large-Scale Design of Fluid Manifolds	<i>Esteban Foronda, Alessia Arteconi, Maarten Blommaert</i>	<i>Esteban Foronda</i>
11:15 - 11:35	421	Topology Optimization Of Actuatable Porous Lattices for Programmable Permeability	<i>Nicola Ferro, Giacomo Speroni, Federico Ferrari, Simona Perotto, Ole Sigmund</i>	<i>Nicola Ferro</i>
11:35 - 11:55	424	Contact Mechanism Design in Topology Optimization Using the Third Medium Contact Method	<i>Takahiro Nishio, Velasco Medina Iván Felipe, Takayuki Yamada</i>	<i>Takayuki Yamada</i>
11:55 - 12:15	426	Development of a Multi-Layered Micropolar Elastic Model for Topology Optimization of Link Mechanisms	<i>Yurika Sayo, Takayuki Yamada</i>	<i>Yurika Sayo</i>
12:15 - 12:35	439	A Multi-Material Topology Optimization Framework based on Unconstrained Material Volume Fractions	<i>Bernardo Leite, Mário Brás, Afzal Suleman</i>	<i>Mário Brás</i>



Wednesday | 16 SEPTEMBER | 14:00 – 16:00

Room A	Topic ODS2	Optimal Design Structures		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	298	Efficient Conversion of Lamination Parameters to Production-friendly Blended Stacking Sequences	Rakshith Manikandan, David Zerbst, Christian Ückert, Christian Hühne	Rakshith Manikandan
14:20 - 14:40	300	Fatigue Aware Design Optimization	Andréas Andersson, Mathias Wallin, Matti Ristinmaa, Vilmer Dahlberg	Andréas Andersson
14:40 - 15:00	319	Simple Parametrizations for Extremal Elastic Microstructures	Markus Gūmoes Holm, Ole Sigmund	Markus Holm
15:00 - 15:20	349	How Design Code-Based Admissibility Reshapes Attainable Pareto Fronts in Nozzle Design	Stéphane Côté, Sudip Ganguly	Stéphane Côté
15:20 - 15:40	360	Disordered Network Metamaterials with Optimally-Tailored Mechanics	Lucien Tsai, Glaucio H. Paulino	Lucien Tsai
15:40 - 16:00	376	Optimization of Resonant Supports for Simultaneous Plate Vibration and Force Transmission Reduction	Line Mardini, Claus Claeys, Elke Deckers, Bart Van Damme	Line Mardini

Room B	Topic IA2	Industrial Applications		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	275	Transmission and Generation Expansion Planning with Flexibility Metrics, Virtual Power Plants, Virtual Transmission Lines, Energy Storage, Distributed Resources Integration, and Net Demand Ramping Constraints	Flavio Arthur Leal Ferreira	Flavio Ferreira
14:20 - 14:40	312	Explainable Fuzzy Control for Adaptive Cruise Control and Lane Change in Autonomous Highway Driving	Amur S. ALYahmedi, Meriam Gaied, Riadh Zaier, Hussein Obeid, Hakan Gultekin	Amur ALYahmedi
14:40 - 15:00	335	Interpretable Predictive Rule-Based Energy Management for Residential Balcony PV Systems with Heterogeneous Storage	David Gögelein, Marianne von Schwerin	David Gögelein
15:00 - 15:20	359	Multi-Objective Optimization in the Management of Waste-Derived Fuel Supply Chains: A Comprehensive Approach for Colombia	Simón Herrera, Juan D. Parra, Laura A. Carmona, Raúl A.Valencia, Carlos A. Bustamante, Whady F. Flórez Escobar, Vladimir M. Tejada, Oscar Vasco-Echeverri	Simón Herrera
15:20 - 15:40	404	From Natural Language to Executable Optimization Workflows, A Knowledge Graph Driven Framework for Multi Disciplinary Optimization	Aref Aghaee Hakkak, Anton Wiberg, Mehdi Tarkian	Aref Hakkak
15:40 - 16:00	477	Enhancing Online Control and Optimization of Oil Reservoirs Using Machine Learning	Rodolfo S.M. Freitas, Gabriel F. Barros, Amanda C. N. de Oliveira, Rômulo M. Silva, Ezequiel S. Santos, Fernando A. Rochinha, Alvaro L.G.A. Coutinho	Fernando Rochinha



Wednesday | 16 SEPTEMBER | 14:00 – 16:00

Room C	Topic T02	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	278	External Compressible Flow Designs Optimised by Topology Optimisation	<i>Icaro Amorim Carvalho, Diego Hayashi Alonso, Luis Fernando Garcia Rodriguez, Felipe Silva Maffei, Emílio Carlos Nelli Silva</i>	<i>Emilio Silva</i>
14:20 - 14:40	288	Topology Optimization Including Weld Line Control	<i>Vanessa Cool, Frank Naets, Elke Deckers</i>	<i>Vanessa Cool</i>
14:40 - 15:00	290	Topology Optimization of Elasto Plastic Structures with Permanent Response	<i>Mathias Wallin, Gunnar Granlund</i>	<i>Mathias Wallin</i>
15:00 - 15:20	293	Development of Particle-Added Element Connectivity Method for Topology Optimization with Internal Contact	<i>Young Hun Choi, Gil Ho Yoon</i>	<i>Gil Ho Yoon</i>
15:20 - 15:40	304	NVH-oriented Topology Optimization of a Permanent Magnet Synchronous Motor for Automotive Traction	<i>Laura Fenoglio, Giacomo Guidotti, Federico Maria Ballo, Massimiliano Gobbi, Giampiero Mastinu</i>	<i>Federico Ballo</i>
15:40 - 16:00	432	Continuous Optimization of Functionally Graded Auxetic Beams Using Metaheuristic Algorithms	<i>N.M.C.S. Leite, M.A.R. Loja, J.I. Barbosa</i>	<i>N.M.C.S. Leite</i>

Room D	Topic NM1	Numerical and Computational Technique		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	284	Identification of Ordinary Differential Equation Surrogates from Numerical Integration with Adaptive Time-Step Schemes	<i>Timo Bielitz, Dieter Bestle</i>	<i>Timo Bielitz</i>
14:20 - 14:40	423	A Hybrid Approach to Mesh Optimization with Neural Warm-Starts	<i>Olivier R. Gouveia, José M. Guedes, Rui B. Ruben</i>	<i>Olivier R. Gouveia</i>
14:40 - 15:00	429	New Algorithm for Maximizing Difference of Convex Functions	<i>Aharon Ben-Tal, Luba Tetraushviliy</i>	<i>Aharon Ben-Tal</i>
15:00 - 15:20	471	SCD Semismooth* Newton Method For Solving Stokes Problem With Stick-Slip Boundary Condition	<i>Vladimir Arzt, Petr Beremlijski</i>	<i>Vladimir Arzt</i>
15:20 - 15:40	479	Identifying the Transition Solution of Moving Inertial Objects by Optimization Techniques	<i>Zuzana Dimitrovova</i>	<i>Zuzana Dimitrovova</i>
15:40 - 16:00	489	Derivative-Free Optimization for Mixed-Variable Engineering Design	<i>J. F. A. Madeira</i>	<i>J. F. A. Madeira</i>

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Room A	Topic T03	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
16:15 - 16:35	332	Topology Optimization of Industrial Origami Structures: A Sequential Design Approach with Prototype Fabrication and Testing	<i>Atsushi Kawamoto, Hiroki Kobayashi, Shoko Arita, Sunao Tomita, Jonas Nyvang, Tue Bejjer, Masato Tanaka, Tsuyoshi Nomura</i>	<i>Atsushi Kawamoto</i>
16:35 - 16:55	344	Cut-element Based Topology Optimization Of Speakerphone Sound Radiation	<i>Peter Risby Andersen, Laurits Theil Nicolaisen</i>	<i>Peter Andersen</i>
16:55 - 17:15	350	Level Set Topology Optimization of Hyperelastic Structures via the Cut Element Method	<i>Haruo Luigi Sato, Gustavo Assis da Silva, Hélio Emmendoerfer Junior</i>	<i>Hélio Junior</i>
17:15 - 17:35	352	Fail-safe Topology Optimization Analysis In Geometrically Nonlinear Structures Composed Of Hyperelastic Materials	<i>Gabriel Neves Queiroz, Edson Denner Leonel</i>	<i>Gabriel Queiroz</i>

Room B	Topic NM2	Numerial and Computational Technique		
TIME	ID	TITLE	AUTHORS	SPEAKER
16:15 - 16:35	301	A Rotation-Based Regularization for Third Medium Contact With Applications to Gradient-Based Optimization	<i>Vilmer Dahlberg, Filip Sjövall, Anna Dalkint, Mathias Wallin</i>	<i>Vilmer Dahlberg</i>
16:35 - 16:55	307	Deep Gaussian Processes for Probabilistic Prediction of UAV Propeller Aerodynamics	<i>Heine Havneraas Røstum, Frederico Afonso, Joseph Morlier</i>	<i>Heine Røstum</i>
16:55 - 17:15	482	Time Integration Algorithms for Structural Optimization	<i>Pedro Areia , Hélder Rodrigues, José Miranda Guedes</i>	<i>Pedro Areias</i>
17:15 - 17:35	486	Automatic Generation of Microstructure Models with Inclusions for Composite Material Modelling	<i>João A.A. Pinheiro, J. M. Guedes, H. C. Rodrigues</i>	<i>João Pinheiro</i>

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Room C	Topic SH1	Shape Optimization		
TIME	ID	TITLE	AUTHORS	SPEAKER
16:15 - 16:35	328	Shape Optimization of Structures in Contact	<i>Kenneth E. Swartz, Eric B. Chin, Michael Tupek</i>	<i>Kenneth Swartz</i>
16:35 - 16:55	388	Learning Admissible Shape Manifolds for Simulation Based Design Optimization	<i>Andrea Serani, Matteo Diez</i>	<i>Andrea Serani</i>
16:55 - 17:15	343	Neural Implicit Geometry Representation for Gradient-Based Shape Optimization	<i>Lukas Freinberger, Michael Kofler, Stefanie Elgeti</i>	<i>Lukas Freinberger</i>
17:15 - 17:35	374	Shape Optimization of Integrated Wind Turbine Towers and its Connections	<i>Pedro José de Freitas, Niels Leergaard Pedersen, Konstantinos Poullos, Erik Lund, Niels Aage</i>	<i>Pedro Freitas</i>

Room D	Topic ODS3	Optimal Design Structures		
TIME	ID	TITLE	AUTHORS	SPEAKER
16:15 - 16:35	334	Multidisciplinary Optimization of Lattice Structures for a Morphing Wing Using Neural Implicit Geometry	<i>Michael Kofler, Stefanie Elgeti</i>	<i>Michael Kofler</i>
16:35 - 16:55	365	Multiobjective Reliability-Based Design Optimization of Stochastic Structural Systems using a Compromise Programming Strategy	<i>Danko Jerez, Hector Jensen, Antonia Schiaffino</i>	<i>Danko Jerez</i>
16:55 - 17:15	442	A Continuation Method for Regularized Contact Mechanics Constrained Optimization	<i>Tucker Hartland, Brandon Talamini, Michael Tupek</i>	<i>Tucker Hartland</i>
17:15 - 17:35	460	Sensor Placement Optimization Considering Model Uncertainty and Sensor Clustering in Variable-Stiffness Composite Structures	<i>Haichao An</i>	<i>Haichao An</i>

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Thursday | 17 SEPTEMBER | 09:00 – 10:20

Room A	Topic ODS4	Optimal Design Structures		
TIME	ID	TITLE	AUTHORS	SPEAKER
09:00 - 09:20	348	Algorithmic Development of Time-Dependent Pinch Analysis based Methodology for Transient Thermodynamic Optimization in Fast Hydrogen Refuelling	<i>Manex Lopez</i>	<i>Manex Lopez</i>
09:20-09:40	313	Heteroscedastic Gaussian Process Regression for The Robust Design of Imperfection-Sensitive Precast Beams	<i>James Whiteley, Jurgen Becque</i>	<i>James Whiteley</i>
09:40-10:00	408	Optimization of Mechanical Logic Systems	<i>Brianna MacNider, Kenny Swartz, Mike Tupek, Katie Riley, Dan Tortorelli, Brandon Talamini</i>	<i>Brianna MacNider</i>
10:00-10:20	444	On Optimizing the Topography of Flat Heat Pipes	<i>Casper Schousboe Andreasen, Asger Bjerregaard Petersen, Martine Baelmans, Maarten Blommaert</i>	<i>Casper Andreasen</i>

Room B	Topic TS1	Topology/Shape Optimization		
TIME	ID	TITLE	AUTHORS	SPEAKER
09:00 - 09:20	309	Exploring One-Shot Multigrid Preconditioning in Topology Optimization	<i>Oded Amir</i>	<i>Oded Amir</i>
09:20-09:40	363	Efficient Robust Topology Optimization for Large-Scale 3D Structures	<i>Junpeng Wang, Niels Aage, Ole Sigmund</i>	<i>Junpeng Wang</i>
09:40-10:00	345	Model Order Reduction Techniques for Fast Topology Optimization Of Broadband Vibroacoustic Systems	<i>Laurits Bachmann Theil, Peter Risby Andersen, Allan Peter Engsig-Karup, Niels Aage</i>	<i>Laurits Theil</i>
10:00-10:20	395	Extending the SERA Method to Auxetic Material Design	<i>Alain Garaigordobil</i>	<i>Alain Garaigordobil</i>

Room C	Topic T04	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
09:00 - 09:20	446	Topology Optimization of a High-Precision Machine Tool Structure Considering High-Frequency Dynamic Rigidity and Thermoelastic Loads	<i>Takehito Osuga, Ryota Shindo, Naoki Tsunekawa, Jike Han, Kozo Furuta, Shinji Nishiwaki</i>	<i>Takehito Osuga</i>
09:20-09:40	450	A Hybrid Density-Geometry Projection Method for the Topology Optimization of Multi-component Composite Structures	<i>Nicolás Cuevas-Carvajal, Ole Sigmund, Julian Norato</i>	<i>Julian Norato</i>
09:40-10:00	452	A Mixed-Integer Topology Optimization Framework for Powder Metallurgy Processes Leveraging Sensitivity-Guided Stochastic Search	<i>Kazuki Kominami, Naoyuki Ishida, Kazuhiro Izui, Shinji Nishiwaki</i>	<i>Naoyuki Ishida</i>
10:00-10:20	456	Multiobjective Topology Optimization: Novel Insights and a Comparison of Scalarization Strategies	<i>Tom De Weer, Ole Sigmund, Gabrielle Eichfelder</i>	<i>Tom De Weer</i>

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Room A	Topic ODSS	Optimal Design Structures		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	287	Dimensionality Reduction-Based Affinity Learning for Categorical Variables in Surrogate-Based Optimization - Application to Structural and Mechanical Design	<i>Charlotte Beauthier, Christophe Dumeunier, Rajan Filomeno Coelho, Rémy Nigro, Caroline Sainvitu, Annick Sartenauer</i>	<i>Charlotte Beauthier</i>
10:55 - 11:15	368	Stochastic Optimal Control under Parametric Uncertainty using a PDD-NARX Surrogate model	<i>Kyubeen Lim, Dongjin Lee</i>	<i>Kyubeen Lim</i>
11:15 - 11:35	369	Multi-agent Reinforcement Learning With Surrogate Models for High-Dimensional Design Optimization	<i>Hyunho Jang, Dongjin Lee</i>	<i>Hyunho Jang</i>
11:35 - 11:55	419	Optimization-Based Comparison of the Mass Efficiency of Stringer-Stiffened and Sandwich Composite Panels	<i>David Zerbst, Edgar Werthen, Rakshith Manikandan, Sascha Dähne, Christian Hühne</i>	<i>David Zerbst</i>
11:55 - 12:15	428	A Numerical Framework for Form Finding of Gridshells Considering Fabrication Uncertainties	<i>Matteo Bruggi, Bálint Tóth, Janos Lógó</i>	<i>Tóth Bálint</i>
12:15 - 12:35	430	Integrated Stiffness and Strength Optimization of Manufacturable Variable Stiffness Composite Laminates	<i>Felipe Fernández</i>	<i>Felipe Fernández</i>

Room B	Topic IA3	Industrial Applications		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	322	Multi-Objective CFD-Based Design Optimisation of Top Blowing Argon Stirred Molten Steel Ladle	<i>Zinedine Khatir, James Bolus</i>	<i>Zinedine Khatir</i>
10:55 - 11:15	364	Manufacturing Cells Design in Job Shop Production Systems Using a p-Median Model and a Genetic Algorithm	<i>José Ribeiro</i>	<i>José Ribeiro</i>
11:15 - 11:35	457	Solving a Real World Supply Chain Problem by Matheuristics: Challenges and Practical Solutions	<i>Alexandre Checoli Choueiri, Leandro Magatão</i>	<i>Leandro Magatão</i>
11:35 - 11:55	488	Optimization of Parallel Ship Block Assembly with Flexible Resource Allocation	<i>Javier Pernas-Álvarez, Hyungjoo Cha, Jeong Hoon Kim</i>	<i>Javier Pernas-Álvarez</i>
11:55 - 12:15	324	Optimal Design of Seaweed Collection Conveyors Using a Multi-Objective Genetic Algorithm	<i>Jaein Kim, Charmi Kim, SuJin Han, ShinYoung Park, Huiju Yu, Jaehyun Yoon</i>	<i>Jaein Kim</i>
12:15 - 12:35	389	High-Dimensional Bayesian Optimization Applied to a Ship Energy System	<i>Florian Dugast, Stéphane Bénac, Pierre Marty, Pascal Chessé</i>	<i>Florian Dugast</i>

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Room C	Topic T05	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	306	Constrained Topology Optimization of Closed NURBS Curves for Continuous Fiber 3D Printing	<i>Joaquin Castro, Eduardo Fernández, José Rothkegel, Pierre Duysinx</i>	<i>Joaquin Castro</i>
10:55 - 11:15	310	Minimization of The Dynamic Response of Induction Motors Using The Topology Optimization Method	<i>Alex Ludero, Eduardo Lenz Cardoso</i>	<i>Alex Ludero</i>
11:15 - 11:35	320	Topology Optimization of Quantum Opto-Mechanical Systems	<i>Victor Pisinger, Ole Sigmund, Niels Aage</i>	<i>Victor Pisinger</i>
11:35 - 11:55	323	Topology Optimization and Design Robustness	<i>Ole Sigmund</i>	<i>Ole Sigmund</i>
11:55 - 12:15	321	Tailoring Robust Photonic Components using Stochastic Topology Optimization	<i>Philip Elbek, Rasmus Ellebæk Christiansen, Niels Aage, Ole Sigmund</i>	<i>Philip Elbek</i>
12:15 - 12:35	326	Topology Optimization of RF Electromagnetic Devices Using DG-FEM	<i>Niels Aage</i>	<i>Niels Aage</i>

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Room A	Topic T06	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	354	Topology Optimization of Bolted Components Considering Assembly Constraints and Tool Accessibility	<i>Sergi Pagès, Markus Zimmermann</i>	<i>Sergi Pagès</i>
14:20 - 14:40	358	Broadband Optimization and Robustness to Geometric Imperfections of nanophotonic designs	<i>Johannes Gedeon, Philip Elbek, Rasmus Ellebæk Christiansen, Ole Sigmund</i>	<i>Johannes Gedeon</i>
14:40 - 15:00	362	Simultaneous Topology and Joint Position Optimization Considering Joint Load Limits	<i>Johannes Soika, Jakob Schenk, Markus Zimmermann</i>	<i>Johannes Soika</i>
15:00 - 15:20	366	Isogeometric topology optimization of plane fiber-reinforced structures using boundary techniques	<i>Mário Sérgio Oliveira César Filho, Hugo Luiz Oliveira, Edson Denner Leonel</i>	<i>Mário Filho</i>
15:20 - 15:40	375	Topology Optimized Junctions of a Strut-Braced Wing in a Concurrent Composite Optimization for a Hydrogen Aircraft	<i>Lander Vertonghen, Charly Mollet, Cédric Julien, François-Xavier Irisarri</i>	<i>Cédric Julien</i>
15:40 - 16:00	379	Manufacturability-Aware Anisotropic Topology Optimization for Concurrent Design of Fiber Orientation and Layup Surfaces	<i>Tsuyoshi Nomura, Hiroki Kobayashi, Yuqing Zhou, Atsushi Kawamoto</i>	<i>Tsuyoshi Nomura</i>

Room B	Topic IA4	Industrial Applications		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	333	A Genetic Algorithm Approach to Optimal Sensor Placement in Liquid Hydrogen Fuel Tanks	<i>Adrian Winter, Ali Alijev, Kay Kochan</i>	<i>Adrian Winter</i>
14:20 - 14:40	351	A Practical Optimization Framework for High-Dimensional Aerodynamic Design Using Single- and Multi-Fidelity Bayesian Methods	<i>Pavel Eremeev, Ruben Sevenois, Frank Naets</i>	<i>Frank Naets</i>
14:40 - 15:00	411	Computational Assessment of Aerodynamic Shape Optimization for Aeroelastic Scaling: 2D Airfoil vs. 3D Wing Optimization	<i>Duarte Brito, Afzal Suleman, Fernando Lau, Frederico Afonso</i>	<i>Duarte Brito</i>
15:00 - 15:20	416	Optimization of Stiffener Concepts for High Aspect Ratio Wings: Structural Weight, Load Reduction, and Aeroelastic Performance	<i>Sascha Dähne, Thomas Klimmek, Matthias Schulze, David Zerbst, Rakshith Manikandan, Christian Hühne</i>	<i>Sascha Dähne</i>
15:20 - 15:40	475	System Modelling and Design Optimization of Wind Sails and Route for Wind Assisted Ship	<i>Cem Guzelbulut, Shun Ogawa, Katsuyuki Suzuki</i>	<i>Katsuyuki Suzuki</i>
15:40 - 16:00	462	Multi-Objective Optimization Framework for Simultaneous Design Optimization & Requirements Engineering of Electric Powertrains	<i>Martin Hofstetter, Dominik Lechleitner</i>	<i>Martin Hofstetter</i>



Thursday | 17 SEPTEMBER | 14:00 - 16:00

Room C	Topic EI	Emerging and Multidisciplinary		
TIME	ID	TITLE	AUTHORS	SPEAKER
14:00 - 14:20	491	From Waste to Worth: Contract Design for Green Investment in Circular Supply Chains	Seyed Mohammad Sina Mirabdolbaghi, Adel Aazami, Sebastian Kummer	Adel Aazami
14:20 - 14:40	282	Contribution of Ai and Machine learning in optimization of ultrasensitive Bio-sensors: Review	David Bassir, Muhammad Awais, Ata Jahangir Moshayedi	David Bassir
14:40 - 15:00	325	LLM-enhanced Dynamic Fleet Planning with Hierarchical Multi-agent Reinforcement Learning Framework	Lijing LIU, James M Shihua, Qiyu Yan, Rhea P. Liem	Lijing LIU
15:00 - 15:20	417	EV Focused Energy-Optimal Driving Behavior Across Urban and Highway Cycles in Different Driving Conditions	Prasad Sonavan , Ujjwal Belwariar	Prasad Sonavane
15:20 - 15:40	378	Training-Free Data-Centric Preprocessing for Robust Open Set Fault Diagnosis	Youngjae Jeon, Dongjin Lee	Youngjae Jeon
15:40 - 16:00	494	Multi-Objective Optimization of Aerospace Micro-Structures using a Direct-Search Method Implemented in Python	Madalena Cunha, José M. Guedes, José Madeira	Madalena Cunha



Thursday | 17 SEPTEMBER | 16:00 – 16:30

Room X	Poster Session		
ID	TITLE	AUTHORS	SPEAKER
314	Global Optimization of Antennas Using CNN-Based Inverse Surrogates and Expedited Fine-Tuning	Slawomir Koziel, Anna Pietrenko-Dabrowska	Slawomir Koziel
327	Optimization of Active Sleep Assistance Devices for Sudden Infant Death Syndrome(SIDS) Prevention	Jaein Kim , Nayoung Shin, Seoyeon Kim, Yuni Park, Huiju Yu, Jaehyun Yoon	Jaein Kim
346	An Optimization-Based Approach to Determining DC Motor and Drive Parameters from Measured Quantities	Marko Jesenik, Jakob Vizjak, Mislav Trbušić	Marko Jesenik
406	Topology Optimization of 316LSi Stainless Steel Structures Produced by CMT-WAAM	Frane Vlák, Dulce Maria Rodrigues, David Gomes Andrade, Vedrana Cvitanic	Frane Vlák
415	Level-set topology optimization for heat exchangers operating in the turbulent regime	Niels Horsten, Anatole De Becker, Yann Bartosiewicz, Maarten Blommaert	Niels Horsten
427	Climate-Driven Variability in Sugarcane Productivity: A Data-Driven Assessment for São Paulo State (Brazil)	Giulia Cruz Lamas, Normando Perazzo Barbosa Sout, Igor F. Mendonça, Marcela Rodrigues Machado, Ana Filipa Ferreira, Edgar Amaral Silveira	Giulia Lamas
431	Gradient based optimization of discrete structural members using continuous selection variables	Felipe Fernández	Felipe Fernández
458	Newton-type methods for Detecting Robotic Arm Position Using Camera	Michaela Bailova, Petr Beremlijski, Michal Beres	Michaela Bailova
469	Comparison of epsilon-constraint algorithms for a bi-objective CVRP	Margarida Aires de Abreu, José Rui Figueira, Daniel Rebelo dos Santos	Margarida Abreu
484	Topology Optimization of Binary Structures for Acoustic Problem	Gil Ho Yoon, Chang Wan Kim, Heung Soo Kim	Gil Ho Yoon
485	Optimal Design of Indirect Liquid Cooling Systems for Electric Vehicle Battery Pack	Jun Hur, Jeonghwan Yun, Chang-Wan Kim	Chang-Wan Kim

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INSTITUTO SUPERIOR TÉCNICO | LISBOA | PORTUGAL

Friday | 18 SEPTEMBER | 09:00 – 10:20

Room A	Topic TS2	Topology/Shape Optimization		
TIME	ID	TITLE	AUTHORS	SPEAKER
09:00 - 09:20	340	Thermomechanical Properties Optimization of L-PBF Support Structures Via Asymptotic Homogenization and Response Surfaces	<i>Ariangelo Hauer Dias Filho, Felipe Mariano Brandão, Rafael Thiago Luiz Ferreira, José Miranda Guedes</i>	<i>Ariangelo Filho</i>
09:20-09:40	372	Explicit Dynamic Topology Optimization Under Time Dependent Displacement Constraints	<i>Gustavo Assis da Silva</i>	<i>Gustavo Silva</i>
09:40-10:00	380	Shape Optimization of Nonlinear Resonant Response in 3D MEMS Structures Using Second-Order Normal Form Theory	<i>Marian Hörsting, Tobias Marx, Matthias Wenzel, Simon Pfingstl, Peter Degenfeld-Schonburg</i>	<i>Marian Hörsting</i>
10:00-10:20	443	Scaling Topology Optimization for Time Harmonic Dynamic Problems	<i>Boyan Lazarov, Mathias Schmidt</i>	<i>Boyan Lazarov</i>

Room B	Topic T07	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
09:00 - 09:20	390	Bi-level Optimization of Structural Topology and Actuation Layout using Multidisciplinary Design Optimization	<i>Marek Slebioda, Hassan Hossein Nia, Matthijs Langelaar, Gianfranco la Rocca</i>	<i>Marek Slebioda</i>
09:20-09:40	425	Aperiodic Lattice Metamaterials with Improved Resilience to Impact	<i>Andrej Cherkaev, Tyler Evans, Debdeep Bhattacharya</i>	<i>Andrej Cherkaev</i>
09:40-10:00	470	Multi-Material Topology Optimization of Electric Machines under Maximum Temperature, Stress and Demagnetization Constraints	<i>Peter Gangl, Nepomuk Krenn</i>	<i>Peter Gangl</i>
10:00-10:20	487	Context-Aware Deep Reinforcement Learning for Multi-Objective Topology Optimization: From Global Compliance to Local Stress Constraints	<i>Valentin Würz, Christian Weißenfels</i>	<i>Valentin Würz</i>

Room C	Topic SH2	Shape Optimization		
TIME	ID	TITLE	AUTHORS	SPEAKER
09:00 - 09:20	283	Practical Optimum Shape Design of Thin-Walled Open Cross Sections Subjected to Bi-Axial Moment and Torsion Using Soft Computing Techniques	<i>Mehmet Polat Saka</i>	<i>Mehmet Saka</i>
09:20-09:40	448	Shape Optimization in Stokes Problems With Stick-Slip Boundary Conditions	<i>Petr Beremlijski, Vladimír Arzt</i>	<i>Petr Beremlijski</i>
09:40-10:00	478	Distributionally Robust Shape and Topology Optimization	<i>Charles Dapogny, Franck Iutzeler, Julien Prando, Boris Thibert</i>	<i>Charles Dapogny</i>

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Friday | 18 SEPTEMBER | 10:35 – 12:35

Room A	Topic IA5	Industrial Applications		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	292	Optimizing the Capacitated Electric Vehicle Routing Problem using Chaotic Discrete Chimp Optimization Algorithm	Donald Davendra	Donald Davendra
10:55 - 11:15	311	Design of Rigid-Flexible Satellite Control using the Sdre Method	Luiz Carlos Gadelha de Souza	Luiz Souza
11:15 - 11:35	373	Systematic Evaluation of Multi-Objective Evolutionary Algorithms for Combinatorial Electric Drivetrain Design	Helena Käppeler, Stefan C. Schlanderer, Edmund Marth, Gerd Bramerdorfer, Alexandru-Ciprian Zavoianu	Helena Käppeler
11:35 - 11:55	381	On Optimal Wave Spring	Niels L. Pedersen	Niels L. Pedersen
11:55 - 12:15	401	Optimization Approaches for Battery Pack Layout and Integration: A Review of Methods, Tools, and Research Gaps	Mohammad Shariati Sharifi, Johan Persson	Mohammad Sharifi
12:15 - 12:35	447	Gradient-Based Optimization of Sustainable Rotor Blade Designs for Large-Scale Wind Turbines	Edgar Werthen, David Zerbst, Lennart Tönjes, Christian Hühne	Edgar Werthen

Room B	Topic T08	Optimal Design Topology		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	384	Topology Optimization of Surgical Suture Distribution	Brandon Parks, Markus Gümöes Holm, Niels Aage	Brandon Parks
10:55 - 11:15	386	Topology Optimization of Nonperiodic Lattices by Inverse Homogenization	Federico Ferrari, Ole Sigmund	Federico Ferrari
11:15 - 11:35	337	Truss Topology Optimization Considering Chain Effects in Local Buckling	Fábio Conde, Cláudia Almeida, Pedro Coelho, Guilherme Rodrigues, Hugo Biscaia	Fábio Conde
11:35 - 11:55	400	On Pressure-Loaded Multi-Material Structures Using Topology Optimization	Swagatam Islam Sarkar, Prabhat Kumar	Swagatam Sarkar
11:55 - 12:15	403	A Density-Based Framework for Simultaneous Topology and Joint Location Optimization of Assemblies	Mohammad Aligholizadeh, Ronald Bartz, Julian Redeker, Thilo Franke, Thomas Vietor	Mohammad Aligholizadeh
12:15 - 12:35	409	Topology and Orientation Optimization of Short-Fiber Reinforced Structures With Microstructure Control	Jonathan Taulo Pedersen-Bjergaard, Berin Šeta, Federico Ferrari, Jon Spangenberg, Ole Sigmund, Casper Schousboe Andreasen	Jonathan Pedersen-Bjergaard

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Friday | 18 SEPTEMBER | 10:35 – 12:35

Room C	Topic NM3	Numerical and Computational Technique		
TIME	ID	TITLE	AUTHORS	SPEAKER
10:35 - 10:55	341	Thermomechanical simulation and optimization of L-PBF support structures for mitigating distortion	<i>Ariangelo Hauer Dias Filho, Felipe Mariano Brandão, Rafael Thiago Luiz Ferreira</i>	<i>Rafael Ferreira</i>
10:55 - 11:15	385	Derivative-Free Optimization Approach for Structured Symmetric Matrices With Fixed Eigenvalues	<i>Carmo P. Brás, Evelin H. M. Krulikovski, Marcos Raydan</i>	<i>Marcos Raydan</i>
11:15 - 11:35	393	Direct Sensitivity Analysis in a Mixed Lagrangian Time Stepping Framework	<i>Nicolò Pollini</i>	<i>Nicolò Pollini</i>
11:35 - 11:55	422	Recent Progresses in Direct Multisearch (DMS)	<i>Ana Luísa Custódio</i>	<i>Ana Custódio</i>
11:55 - 12:15	353	Towards frugal Bayesian optimization for engineering design	<i>Gaston Plat, Paul Saves, Nathalie Bartoli, Thierry Lefebvre, Joseph Morlier</i>	<i>Gaston Plat</i>
12:35 - 12:50	<b>Closing Ceremony</b>			
12:50	<i>LUNCH</i>			