

ADVANCED METHODS FOR TOPOLOGY AND SHAPE OPTIMIZATION

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Keywords: topology optimization, shape optimization, computational mechanics, numerical methods, engineering design, sustainability

Abstract of the session

The growing emphasis on sustainability in engineering design, coupled with the rapid development of computational methods in engineering mechanics, has led to a rise in popularity of numerical structural optimization approaches. The optimization of shape and topology, which enable significant improvements in structural performance with respect to a range of predefined criteria, can be considered the most prominent among them. Both methods are accessible through a multitude of approaches and have undergone remarkable development in recent years.

This mini symposium aims to showcase the latest advancements in numerical structural optimization. The scope of the session includes, but is not limited to, innovative optimization methods, unusual application contexts or problem formulations, and novel parametrizations.

Researchers active in this emerging field are cordially invited to participate in a lively exchange of ideas. We look forward to your inspiring presentations and fruitful discussions in Lahti!

Recommended speakers

- 1. Jun Wu (TU Delft), Title to be announced (20 min)**
- 2. Tuan Minh Tran (Vietnamese German University), Title to be announced (20 min)**
- 3. Dustin Jantos (Leibniz University Hannover), Title to be announced (20 min)**

- 4. Florian Zwicke (TU Wien), Title to be announced (20 min)**
- 5. Georgia Kikis (University Duisburg-Essen), Title to be announced (20 min)**
- 6. Daniela Masarczyk (University of Kassel), Simultaneous optimization of shape and topology – applications to civil engineering design (20 min)**