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NEW TRENDS IN SHAPE AND TOPOLOGICAL OPTIMIZATION

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ABSTRACT

Shape and topological optimization have become increasingly quantitative as new technologies for designing the optimal shape of a domain that would minimize a given physical criterion under some specified conditions. As a consequence, mathematics and computational science have become crucial tools for the study of direct and inverse models of the calculus of variations.

This mini-symposium will provide a cross-disciplinary forum for catalyzing mathematical research relevant to mathematical techniques based on shape and topological derivatives. It will facilitate rapid diffusion of new mathematical and computational methods, and may stimulate more researchers to work in this important area. Mathematical analysts, computational mechanics researchers and others interested in mathematical and computational analysis of mechanical systems are encouraged to attend.