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ADVANCED MODELLING AND OPTIMIZATION OF STRAIGHT-FIBRE AND TOW-STEERED COMPOSITE STRUCTURES

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ABSTRACT

Due to their advantageous characteristics, composite materials continue to attract interest from modern Industry. In addition, the availability of new technologies, such as automated fibre placement, open unexplored possibilities for composites, which allow now to tailor the structure according to the design requirements. Nevertheless, many problems related to *design and verification* of composite structures still remain unsolved, primarily because of the lack of appropriate methodologies and analysis tools.

The Minisymposium "Advanced modelling and optimization of straight-fibre and tow-steered composite structures" aims at outlining the state-of-the-art and the perspectives of the research in the field of simulations of modern composite structures.

Scientists are invited to share new research ideas and results pertaining to all aspects of the modelling and design of classical laminates and variable angle tow composite structures. Topics of interest include, but are not limited to, composite beam, plate and shell models, multi-scale methodologies, composite structures failure and damage modelling, delamination, cohesive mechanics, plasticity, impact, vibrations, design and optimization.

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