

Mechanical joints of composites

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Research topic is developing a design methodology for mechanical joints in load-bearing structures.

Research Scope:

- Develop experimental methods for the material characterization with relevant load cases including multiaxial loadings, fatigue, effects of temperature, humidity, etc.) ...
- Micromechanical behaviour of the material
- Constitutive modelling to determine the macroscopic behaviour
- Implementation of the constitutive relations of the FEM
- Develop analytical algorithms for strength evaluation and design optimisation of hybrid joints



CFRP/titanium hybrid material for improving composite bolted joints. B. Kolesnikov et al.

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