Minisymposium Title

Modeling of composite materials, structures or systems

Description

Composite materials, structures or systems are of particular interest for their unique mechanical/physical properties that their single-phase counterparts may not easily achieve. Accurate modeling of such composites or searching for their unique roles in industrial applications may shed light on the developments of future emerging technologies. This minisymposium aims to discuss all computational aspects of composite materials at the continuum or molecular levels for foams, polycrystalline metals, metal matrix composites, and composite structures or systems. Mechanical responses, such as elastic or inelastic properties, of the composites are to be emphasized, as well as their multiphysical responses, such as dielectric, piezoelectric or corrosion properties. In addition, materials with 'negative' characteristics, such as negative Poisson's ratio, negative stiffness or negative index of reflection, are to be dealt with in this minisymposium. Extension to liquids containing multiple phases, such as colloidal particles, is also welcome.

Lead Organizer:

Prof. Yun-Che Wang, Department of Civil Engineering, National Cheng Kung University, TAIWAN

Email: yunche@mail.ncku.edu.tw

Co-organizers:

Prof. Sergei Alexandrov, Beihang University, CHINA and Institute for Problems in Mechanics, Russian Academy of Sciences, RUSSIA

Email: sergei_alexandrov@yahoo.com