

ESMC Minisymposium: Computational microstructures

Prof. Simone Morganti, University of Pavia, Italy, **email:** simone.morganti@unipv.it

Prof. Karam Sab, Ecole Nationale des Ponts et Chaussées, France, **email:** karam.sab@enpc.fr

The minisymposium is mainly focused on the development and application of advanced numerical approaches for modeling and simulation of microstructured materials.

The recent possibilities to design and architecture novel microstructures has in fact paved the way to materials and structures with unprecedented mechanical and physical properties.

Possible applications and topics may include (but are not limited to): auxetic materials, architected metamaterials, metasurfaces, multi-physics analyses, multi-scale material modeling, microstructure-based modeling of biomechanical systems, modeling of evolving microstructures, unit-cell problems and homogenization techniques, advanced constitutive modeling.

In the minisymposium we aim to bring together researchers from mechanics, physics, mathematics, materials science,... to discuss the state of art in advanced materials and structure with mainly a computational perspective including new designs, numerical models but also analytical and experimental results.