

ARCHITECTED MATERIALS AND STRUCTURES

*David Restrepo*¹ and Tian Chen² and Christelle Combescure³ and Nilesh Mankame⁴ and Pablo
Zavattieri⁵ and Yunlan Zhang⁶*

¹The University of Texas at San Antonio

²University of Houston

³Académie militaire de Saint-Cyr Coëtquidan

⁴General Motors Global Research & Development

⁵Purdue University

⁶The University of Texas at Austin

MINISYMPOSIUM

Architected materials and structures offer a unique avenue for engineers to achieve customized properties and functionalities from conventional base materials. These innovative materials and structures find applications across a diverse range of fields, including optical, acoustic, and structural domains. The inherent versatility offered by these materials has naturally awakened the interest of both academia and industry as they strive to capitalize on their potential.

This mini-symposium seeks to bring together researchers working on different aspects of architected materials and structures, including topics ranging from theoretical and computational methods of analysis, methods for design and synthesis, to application and methods of fabrication.

Topics of interest include, but are not limited to:

- Architected materials and structures for structural, acoustic, thermal, mechanical, biomechanical, electromagnetic, and other applications.
- Methods for design of architected materials and structures, including data-driven and optimization techniques.
- Nonlinear behavior of architected materials and structures.
- Hierarchical architected materials and structures.
- Bio-inspired architected materials and structures.
- Knitted or woven architected materials and structures.
- Adaptive, active, reconfigurable architected materials and structures.
- Novel fabrication methods for architected materials and structures.