

Mini-Symposium Title:

Optimized Multi-Scale & Multifunctional Materials and Structures in Engineering - in honor of the NAE Recognition of Prof. Glaucio Paulino

Organizers:

Youn-Sha Chan, ChanY@uhd.edu, University of Houston-Downtown
Alok Sutradhar, sutradhar.1@osu.edu, Ohio State University
Kyoungsoo Park, k-park@yonsei.ac.kr, Yonsei University
Huiming Yin, yin@civil.columbia.edu, Columbia University

Description:

This symposium is dedicated to Professor Glaucio Paulino in honor of his election to the National Academy of Engineering for his contributions to topology optimization and its applications to engineering and medicine. In addition to tributes from colleagues, former students and associates of Professor Paulino are organizing this symposium to welcome contributions in the broadest context of computational and applied mechanics, especially in the area of optimized multi-scale & multifunctional engineering materials and structures.

Modern engineering materials and structures are often subjected to multiple constraints and are required of multiple functions. It is critical to understand the material behavior at multi-scale and engineer materials and structures through optimized and holistic designs to meet the requirements at the lowest inputs. Particularly, considering rapid urbanization and population expansion along with frequent extreme weather events, we need new methods to utilize the resources in a sustainable manner and to predict the material and structural response in a timely and accurate way to avoid further disasters. This mini-symposium provides an excellent platform to exchange the cutting-edge results in theoretical, numerical, and experimental methods from fundamental to applied research.

