

THE WORLD COMES HERE.
TMS2024
153rd Annual Meeting & Exhibition

MARCH 3–7, 2024
HYATT REGENCY ORLANDO
ORLANDO, FLORIDA, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:

MECHANICS OF MATERIALS

Defects and Interfaces: Modeling and Experiments

This symposium will focus on modeling, experimental methods, and their integration to understand atomic structures of defects and planar interfaces in crystalline solids, with a focus on the mechanical and physical behavior dominated by defect-interface interactions, including fundamental understanding of non-linear behavior at dislocation cores, interfaces, and crack tips. Response of materials to extreme conditions of high stress, irradiation, and embrittlement (e.g., due to helium, hydrogen, etc.) driven by defects and interfaces will be highlighted.

The symposium will be partially a tribute to the memory of TMS Fellow Richard (Dick) G. Hoagland who passed away in September 2022 and made seminal contributions to this topical area in his career spanning nearly six decades.

The symposium is planned as 4 sessions (2 days) in Dick's memory and another 4 sessions (2 days) for more general topics. Symposium topics include, but are not limited to:

- Characterization and modeling of atomic structures of dislocations and grain/interphase Boundaries
- Characterization and modeling of dislocation-interface interactions
- Multiscale characterization of interface-dominated deformation and fracture mechanisms
- Multiscale modeling of interface-dominated mechanical behaviors
- Nanomechanics

ORGANIZERS

Jian Wang, University of Nebraska-Lincoln, USA
Amit Misra, University of Michigan, USA
Peter Anderson, Ohio State University, USA
Blas Uberuaga, Los Alamos National Laboratory, USA
Xinghang Zhang, Purdue University, USA

SYMPOSIUM SPONSORS

TMS Materials Processing & Manufacturing Division
TMS Nanomechanical Materials Behavior Committee