EUROMAT 2017/ Symposia Structure/Area D

Title: Small scale mechanical mechanics, fracture, interface, experiments and modeling

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Summary

The past decade has seen exciting progress in small scale mechanical testing which is becoming extremely important for the development of nanomaterials, for the understanding of physical phenomena at micro/nano-scales, especially at interfaces, and for the development and validation of multi-scale models. There has been a rapid expansion of available techniques in recent years to examine mechanical properties of materials from the macroscale down to the nanoscale with expansion of in-situ experimental facilities as well as modeling approaches. This symposium aims to bring together the rapidly growing small-scale mechanical research community, particularly in the areas of: 1) mechanical testing of interface & fracture 2) In-situ methods 3) modeling.

Topics to be covered by the symposium:

- Mechanical testing at micro/nano scales
- Measurement techniques of strain/stress fields in micro/nano-structures
- Characterization techniques of material properties across the length scales
- Validation techniques for multi-scale models
- Micro/nano-mechanics of interfaces
- Micro/nano-mechanics of damage and fracture
- Small scale mechanics of nanomaterials

KEYNOTE SPEAKER

Dr. Mohsen Asle Zaeem

Roberta and G. Robert Couch Assistant Professor , Department of Materials Science and Engineering, Missouri University of Science and Technology (Rolla)

2016 TMS Young Leaders International Scholar Award recipient

"Competing Mechanisms between Dislocation and Phase Transformation in Plastic Deformation of Yttria-Stabilized Tetragonal Zirconia Nanopillars"

PUBLICATION

A selection of papers will be published in a special issue of the journal "**Materials Science and Technology**" after the journal's standard peer review process and acceptance.