

EUROMAT 2019 / Area D

SYMPOSIUM: D5

Title: Micro- and nano- mechanics - characterization and modelling		
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Abstract		
<p>Exciting progress in small-scale mechanical testing has been made in recent years and is offering new opportunities 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. Currently is experienced a rapid expansion of available techniques to examine in a new light mechanical properties of materials from the macroscale down to the nanoscale with the development of both in-situ experimental facilities and advanced modeling approaches. This symposium aims to bring together the fast growing small-scale mechanical research community, particularly in the areas of: 1) mechanical characterization, 2) in-situ methods and 3) modeling.</p> <p>Topics to be covered by the symposium:</p> <ul style="list-style-type: none">• Mechanical testing at micro/nano scales• Measurement techniques of strain/stress fields in micro/nano-structures• Advanced micro/nano instrumentation for mechanical testing• Characterization techniques of material properties across the length scales• 3D characterization of micro/nano-structures and damage• Experimental techniques for validation of multi-scale models• Micro/nano-mechanics of interfaces• Micro/nano-mechanics of damage and fracture• Small scale mechanics of nanomaterials• Modeling techniques <p>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.</p>		