



# RECENT ADVANCES IN MECHANICS AND MATHEMATICS OF MATERIALS

A young researchers' meeting

Rome, 22-24 November 2017

## DESCRIPTION

Owing to the recent advances in experimental mechanics novel materials, with **unique mechanical properties** and the ability to respond to **external stimuli**, are constantly being developed. Such a fecund experimental framework continuously demands **new models** that account for features such as *multi-physics coupling, material instabilities, growth and remodelling* as well as *extreme slenderness or thickness*.

Within this framework, the Workshop will offer a broad overview of novel findings in solid mechanics from both theoretical and experimental perspectives. The final goal of the meeting is to foster new ideas and promote genuinely new collaborations by gathering together young researchers from all over Europe.

## TOPICS

Topics of the workshop are research in solid mechanics including **linear and nonlinear elasticity, wave propagation** problems, **phase-fields** modelling with applications in *material science, biomechanics, engineering* and *industry*. The topics include but are not limited to:

- Materials
  - (electro-, magneto-, ...) active
  - innovative composite
  - micro- and nano-structured
  - shape memory
  - soft
- Advanced experimental techniques
- Advanced numerical methods
- Growth and remodelling
- Instabilities
- Multiscale modeling
- Variational methods

## VENUE

Faculty of Engineering, SAPIENZA University of Rome  
Via Eudossiana 18, 00184, Rome

## DATE

22-24 November 2017

## PRELIMINARY LIST OF SPEAKERS

- Fadi ALDAKHEEL, Institute of Applied Mechanics, Stuttgart University, *Germany*
- Pietro CARRARA, Institute of Applied Mechanics, TU-Braunschweig, *Germany*
- Isaac CHENCHIAH, School of Mathematics, University of Bristol, *UK*
- Kostas DANAS, École Polytechnique, Paris, *France*
- Marcelo A. DIAS, Aarhus University, *Denmark*
- Giulio GIUSTERI, Okinawa Institute of Science and Technology, *Japan*
- Giuliano LAZZARONI, Faculty of Mathematics, University of Vienna, *Austria*
- Alessandro LUCANTONIO, International School for Advanced Studies, Trieste, *Italy*
- Diego MISSERONI, University of Trento, *Italy*
- Lorenzo MORINI, Cardiff University, *UK*
- Kim PHAM, École nationale supérieure de techniques avancées, Paris, *France*
- Alberto PIRRERA, University of Bristol, *UK*
- Stephan RUDYKH, Technion, Israel Institute of Technology, Haifa, *Israel*
- Dimitris SFYRIS, National Technical University of Athens, Athens, *Greece*
- Luigi VERGORI, University of Perugia, Perugia, *Italy*
- Thomas WICK, École Polytechnique, Paris, *France*
- Giuseppe ZURLO, National University of Ireland, Galway, *Ireland*

## KEYNOTE LECTURES

- Eliot FRIED, Okinawa Institute of Science and Technology, *Japan*
- Giuseppe SACCOMANDI, University of Perugia, Perugia, *Italy*
- Lev TRUSKINOVSKY, PMMH, CNRS, ESPCI ParisTech, Paris, *France*

## ORGANIZERS

- Roberto ALESSI
- Jacopo CIAMBELLA
- Antonino FAVATA

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DIPARTIMENTO  
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E GEOTECNICA



GNFM Gruppo Nazionale per la Fisica Matematica