
MONDAY June 26

8 - 8:45

Registration

8:45 - 9

Conference opening

9 - 9:50

Keynote

Rigorous homogenization
results leading to
generalized continua

P. Seppecher

9:50 -10:40

Dislocations, plasticity and defects

Minimal gradient-enhancement of
crystal plasticity: computational
aspects and size effects

S. Stupkiewicz

Is there any counterpart of Noether's
theorem in dissipative setting?

P.M. Mariano

10:40 - 11:15

Coffee break

11:15 - 12:30

Composites

Modelling defects during composite
reinforcements and prepreg forming

P. Boisse

Fibrous composite reinforcements
as second gradient materials

G. Barbagallo

Enhancement of multifiber beam elements
in the case of reinforced concrete structures
for taking into account the lateral
confinement of concrete due to stirrups

N. Khoder

12:30 - 14:30

Lunch

14:30 - 16:15	Waves in microstructured solids	
	Non-conventional dynamic behaviour of highly contrasted structured plates	C. Boutin
	Scattering of elastic waves by a shear band	D. Capuani
	Wave propagation in amorphous materials with inclusions	A. Tanguy
	The Waves of Phase Change	X. Markenscoff
16:15 - 16:45	Coffee break	
16:45 - 17:35	Cracks	
	Assessment of Crack Arrays An Engineering Approach	R. Kienzler
	Discontinuous Galerkin method in modeling wave propagation in materials with micro-cracks	Q. Gomez

TUESDAY June 27

9 - 9:50

Keynote

A canonical rate-independent model of geometrically linear isotropic gradient plasticity with isotropic hardening and plastic spin accounting for Burgers vector

P. Neff

9:50 -10:40

Waves in microstructured solids

Dispersion and band-gaps in micromorphic media and metamaterials

A. Madeo

Transparent relaxed micromorphic description of anisotropy in metamaterials

M.V. d'Agostino

10:40 - 11:15

Coffee break

11:15 - 12:30

Porous media

Phase-field modeling of a fluid-driven fracture in a poroelastic medium

A. Mikelic

A rational derivation of Biot's and Terzaghi's paradigms from a constraint-free variational continuum two- phase poroelasticity theory adopting minimal kinematic descriptors

R. Serpieri

The Principle of G-Covariance in modelling biological tissues

S. Di Stefano

12:30 - 14:30

Lunch

14:30 - 16:15 **Dislocations, plasticity and defects**

Dislocation Core/Solute Atom
Interactions from First Principles D.C. Chrzan

Eshelbian dislocation mechanics:
J-, M-, and L-integrals E. Agiasofitou

Non-singular dislocation continuum
theories: Strain gradient elasticity
versus Peierls-Nabarro model M. Lazar

Modeling and characterization
of long-term hydrogen
interactions with defects
in palladium nanoparticles P. Ariza

16:15 - 16:45 **Coffee break**

Guided tour of the city

WEDNESDAY June 28

9 - 9:50

Keynote

Internal Length Gradient (ILG)
coupled mechanics: Formulation,
questions and applications

E. Aifantis

9:50 -10:40

Composites

Strength analysis of composite
materials based on damage
parameters

E. Lomakin

Design of anisotropic heterogeneous
materials with desired physical
properties using statistical
continuum theory

A. Makradi

10:40 - 11:15

Coffee break

11:15 - 12:30

Waves in microstructured solids

A homogenization framework based
on Floquet-Bloch transform towards
a generalized micromorphic continuum

A. Sridhar

Enriched continuum emerging from
the homogenization of materials
with micro-inertia effects

V. Kouznetsova

Propagation and scattering in a
Riemann-Cartan material
manifold

L. Le Marrec

12:30 - 14:30

Lunch

14:30 - 15:45 **Materials with heterogeneous microstructure**

Ultralight Structural Metamaterials:
Finite Element Analysis and
Mechanical Optimization

B. Eidel

On weak solutions for linear
pantographic beam lattices

V. Eremeyev

Multi-scale analysis of the
impact resistance of microstructured
solids - a new project proposal

G. Molnar

15:45 - 16:15

Coffee break

16:15 - 17:05

2nd gradient continua

An ortho-fiber theory for second
gradient materials

F. Froiio

Contribution to continuum physics
within gradient continuum :
Interaction of electromagnetism
with mechanics

L. Rakotomanana

THURSDAY June 29

9 - 9:50

Keynote

 Configurational forces in
elastic structures

D. Bigoni

9:50 -10:40

Waves in microstructured solids

 Micromorphic model for modeling
adaptive piezocomposite gradient
materials

M. Collet

 Modeling of nonlinear waves
in solids with slow dynamics

B. Lombard

10:40 - 11:15

Coffee break

11:15 - 12:30

Configurational forces and existence results

 Understanding enhanced fracture
toughness of twisted plywood
structures by configurational forces

F.D. Fischer

 Configurational Forces on
Various Elastic Singularities

Y.E. Pak

 A non-rank-one convexity result
involving geodesically motivated
logarithmic strain measures

I.D. Ghiba

12:30 - 14:30

Lunch

14:30 - 15:45	Dislocations, plasticity and defects	
	A Gradient Crystal Plasticity Model that Accounts for Size Effects by a Discontinuous Accumulated Plastic Slip	H. Erdle
	Kink pair production and dislocation motion	S. Fitzgeranld
	On some approaches of graded damage modelling	C. Stolz
15:45 - 16:15	Coffee break	
16:15 - 17:05	Dislocations, plasticity and defects	
	Nonlinear defects kinetics and structured wave propagation in second-gradient materials (experimental and theoretical study)	O. Naimark
	3D Origami with Semiconductors	A. Danescu
