



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο



ΕΠΙΧΕΙΡΗΣΙΑΚΟ ΠΡΟΓΡΑΜΜΑ
ΕΚΠΑΙΔΕΥΣΗ ΚΑΙ ΔΙΑ ΒΙΟΥ ΜΑΘΗΣΗ
επένδυση στην κοινωνία της γνώσης
ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
ΕΙΔΙΚΗ ΥΠΗΡΕΣΙΑ ΔΙΑΧΕΙΡΙΣΗΣ

Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



ΕΣΠΑ
2007-2013
Πρόγραμμα για την ανάπτυξη
ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΩΝΙΚΟ ΤΑΜΕΙΟ

ERC/ARISTEIA WORKSHOP

Aristotle University of Thessaloniki, 4-6 August, 2014

MULTISCALE GRADIENT MATERIAL MECHANICS: APPLICATIONS TO ENGINEERING, BIOLOGY, MEDICINE

[SCIENTIFIC RESULTS FROM THE ERC-13 AND SEDEMP PROGRAMS]

Monday, August 4

- 4.45-5.00 pm : E.C. Aifantis, AUT—*Opening Remarks*
- 5.00-6.00 pm : A.K. Chattopadhyay, Aston—*Statistical Physics Considerations in Engineering, Biology & Medicine*
- 6.00-6.30 pm : K.E. Aifantis, U of Arizona—*Micro/Nanomechanics Applications in Renewable Energy and Biomedicine Systems*
- 6.30-7.00 pm : I. Karapanagiotis, Ecclesiastical Academy—*Micro/Nanostructured Water Repellent Functional Siloxanes*
- 7.00-7.30 pm : M. Tsolaki, AUT—*The Pathophysiology of Alzheimer's Disease . From Genetics to Clinical Diagnosis*
- 7.30-8.30 pm : **Break and Round Table—Discussion and Short Presentations**

Tuesday, August 5

- 9.30-10.30 am : E.C. Aifantis, AUT—*Gradient Micro/Nano Mechanics*
- 10.30-11.00 am : I. Tsagarakis, AUT—*Benchmark Problems in Gradient Mechanics*
- 11.00-11.30 am : A. Konstantinidis, AUT—*Combined Gradient- Stochastic Models*
- 11.30-12.00 pm : D. Tragoudaras, Mediterranean U—*Benchmark Problems in Gradient Elasticity*
- 12.00-5.00 pm : **Beach Excursion**
- 5.00-5.30 pm : G. Petsos, AUT—*Nonlinear Deformation Waves*
- 5.30-6.00 pm : K. Spiliotis, AUT—*Dislocation Patterning*
- 6.00-6.30 pm : A. Iliopoulos, AUT—*Statistical Aspects of Deformation Patterning*
- 6.30-7.30 pm : K. Lazopoulos, NTUA—*The Fractional Strain*
- 7.30- 8.30 pm : **Break and Round Table—Discussion and Short Presentations**

Wednesday, August 6

- 9.30-10.00 am : Ch. Polatoglou, AUT—*Theory of Structural, Electronic and Optical Properties of Nanostructures*
- 10.00- 10.30 am : I. Samaras, AUT—*New Electromechanical Scattering Mechanisms in Nanostructures Studied by AC Impedance Measurements*
- 10.30 - 11.00 am : E. Harea, Moldova U—*Using Cyclic Nanoindentation to Examine the Piezoresistivity of Indium–Tin–Oxide Thin Films*
- 11.00- 11.30 am : J. Wu, Beijing U—*Material and Experimental Aspects of Li-ion Anodes*
- 11.30 - 12.00 pm : **Break – Light Lunch**
- 12.00 - 3.00 pm : K. Tolidis, I. Zyganitidis, Th. Birois, K. Michos, A. Sidiropoulos, E. Mitridis, K. Samaras, I. Nikolaidis, A. Tsampali, A. Boboti, S. Mitridis, K. Stefanidis, E. Georgalis—*Recent Progress in the Lab of Mechanics and Materials*

Note 1: Some of the presentations of the Last Section on Wednesday can be given on an ad hoc basis during the Round Table sessions on Monday and Tuesday. Observers can also state briefly during these sessions their interests and summarize their current or intended work.

Note 2: Research discussions and informal talks related to the Workshop have started in mid July (pre-Workshop) period and will continue through mid August (post-Workshop) period. The researchers involved included, among others, K. Aifantis, C. Bagni, J. Wu, I. Tsagarakis, K. Lazopoulos, and others.