

INTERNATIONAL CONFERENCES ON ADVANCED MATERIALS

3rd International Conference & 7th International Workshop on
Auxetics & Related Systems, Malta & Gozo, 19 – 23 July 2010.

7th International Workshop on Functional and Nanostructured
Materials (FNMA'2010), Malta, 16 – 20 July 2010.

5th International Symposium on Trends in Continuum Physics
(TRECOP'2010) Malta, 16 – 20 July 2010.



Conference Programme

- 12.30 – 16.30 Registration (Victoria Hotel)
- 16.30 – 17.00 Transport to University of Malta Valletta Campus
- 17.00 – 17.30 Opening Ceremony
- 17.30 – 18.10 Key-Note Lecture FNMA
F17 Thermo-Mechanical Metamaterials
Joseph N. Grima
University of Malta, Malta
joseph.grima@um.edu.mt
- 18.10 – 18.50 Key-Note Lecture FNMA
F70 The Road Ahead for Nanophotonics
Nikolay Zheludev
University of Southampton, UK
niz@orc.soton.ac.uk
- 18.50 – 19.20 Coffee Break
- 19.20 – 20.00 Key-Note Lecture FNMA
F31 Electrovariable Nanoplasmonics and Self-Assembling Smart Mirrors
Alexei A. Kornyshev
Imperial College, London, UK
a.kornyshev@imperial.ac.uk
- 20.00 – 20.40 Key-Note Lecture TRECOP
T17 Hybrid Quantum/Classical Approach for Atomistic Simulation of Metallic Systems
Jaroslav Rybicki
Gdansk University of Technology, Poland
ryba@pg.gda.pl
- 21.00 – 22.30 Dinner - Casino Maltese
- 23.00 – 23.30 Transport to Hotel

Saturday, 17th July 2010 (The Palace Hotel, Sliema)

- 9.00 – 9.40 Key-Note Lecture TRECOP
T15 Waves in Finite Extent Superconductors
Bogdan T. Maruszewski
Poznan University of Technology, Poland
bogdan.maruszewski@put.poznan.pl
- 9.40 – 10.10 Invited Lecture TRECOP
T13 Local state thermodynamics of porous media
Mieczysław Cieszko
Kazimierz Wielki University, Poland
cieszko@ukw.edu.pl
- 10.10 – 10.40 Invited Lecture TRECOP
T06 Equilibrium condition in the quotient space
Janusz Jankowski
Poznan University of Technology, Poland
janusz.jankowski@put.poznan.pl
- 10.40 – 11.00 Coffee Break
- 11.00 – 11.30 Invited Lecture TRECOP
T07 Impact of discretization of a rope on solution quality
Henryk Kamiński
Poznan University of Technology, Poland
henryk.kaminski@put.poznan.pl
- 11.30 – 12.00 Invited Lecture TRECOP
T08 An approach to electromagnetic wave propagation in the superlattices
Jerzy Kapelewski
Military University of Technology, Poland
Jerzy.Kapelewski@wel.wat.edu.pl
- 12.00 – 12.30 Invited Lecture TRECOP
T16 Solving Inverse Unsteady Heat Conduction Problem with Unknown Strength of Continuous Heat Sources
Jan Kołodziej
Poznan University of Technology, Poland
jan.kolodziej@put.poznan.pl
- 12.30 – 13.00 Invited Lecture TRECOP
T20 Kinematically excited dynamical systems near resonances - asymptotic analysis
Roman Starosta
Poznan University of Technology, Poland
roman.starosta@put.poznan.pl
- 13.00 – 13.30 Invited Lecture TRECOP
T04 Semi-Analytical Method to Solve an Inverse Problem for Heat Conduction Equation
Michał Ciałkowski
Poznan University of Technology, Poland
michal.cialkowski@put.poznan.pl
- 13.30 – 14.30 Lunch

- 14.30 – 15.10 Key-Note Lecture FNMA
F02 High-Field Quantum Transport in Carbon Nanotubes
Vijay Arora
Universiti Teknologi Malaysia / Wilkes University, USA
vijay.arora@wilkes.edu
- 15.10 – 15.40 Invited Lecture FNMA
F34 Spectroscopy and Low-Dimensionality in Carbon Nanotubes
Christian Kramberger
University of Vienna
christian.kramberger-kaplan@univie.ac.at
- 15.40 – 16.10 Invited Lecture FNMA
F65 Implementation of the method of fundamental solutions for solving a torsion problem of a rod made of functionally graded material
Anita Uściłowska
Poznan University of Technology, Poland
anita.uscilowska@put.poznan.pl
- 16.10 – 16.40 Invited Lecture FNMA
TBA
Nikos Gouskos
University of Athens, Greece / West Pomeranian University of Technology
ngouskos@phys.uoa.gr
- 16.40 – 17.00 Coffee Break
- 17.00 – 17.30 Invited Lecture FNMA
F18 Nanocomposites Based on PCL/MWCNT for Application in Nanosensors
Anita V. Grozdanov
UKIM, Macedonia
anita@tmf.ukim.edu.mk
- 17.30 – 18.00 Invited Lecture FNMA
F29 Quantum size effect, energy transfer and tunability in luminescent materials: semiconductor nanoparticles and Tb(III) ions immobilized on silica xerogel
Andrzej Klonkowski
University of Gdansk, Poland
jarek.rybicki@unicam.it
- 18.00 – 18.30 Invited Lecture FNMA
FXX Nanoparticles array integrated inside semiconducting materials for power dependent spectral reflectance
Zeev Zalevsky and Asaf Shahmoon
Bar Ilan University, Israel
asaf.sh11@gmail.com
- 18.30 – 19.00 Invited Lecture
F46 A General Formula for the Transmission Coefficient Through Any Barrier
George Papadopoulos
University of Athens, Greece
jarek.rybicki@unicam.it
- 19.30 – 20.30 Dinner, Victoria Hotel
- 21.30 – 00.30 Optional Tour - Msida Festa (including Fireworks display)

Sunday, 18th July 2010 (The Palace Hotel, Sliema)

- 09.00 – 09.30 **Invited Lecture FNMA**
F10 Topographic control of neuronal polarity: shaping adhesions into stable polarity states
Marco Cecchini
NEST, Istituto Nanoscienze-CNR / Scuola Normale Superiore, Italy
m.cecchini@sns.it
- 09.30 – 10.00 **Invited Lecture FNMA**
F11 Nano-Plasmonic for Single Molecule Detection and Nanomapping
Francesco De Angelis
NanoBioScience Laboratory, Italian Institute of Technology, Italy
f.deangelis@unicz.it
- 10.00 – 10.20 **Invited Lecture FNMA**
F03 Ballistic Transport and Nano-CMOS Circuit Design
Vijay Arora
Universiti Teknologi Malaysia / Wilkes University, USA
vijay.arora@wilkes.edu
- 10.20 – 10.40 **Coffee Break**
- 10.40 – 11.00 **Invited Lecture FNMA**
F04 Transit, L/R, and RC Time Delay for Reactive Elements in series with a Micro/Nano-Resistor
Vijay Arora
Universiti Teknologi Malaysia / Wilkes University, USA
vijay.arora@wilkes.edu
- 11.00 – 11.30 **Invited Lecture FNMA**
F27 Femtonewton force sensing using SiC nanoelectromechanical resonance at room temperature in moderate condition
Seong Jun
Yonsei University, Seoul, Korea
scj@yonsei.ac.kr
- 12.00 – 12.30 **(Optional - Holy Mass)**
- 12.30 – 14.30 **Lunch**
- 14.30 – 15.10 **Key-Note Lecture TRECOP**
T01 Modeling and Control of Timing and Spatial-Timing Chaos Using Ordinary and Partial Differential Equations
Jan Awrejcewicz
University of Łódź, Poland
awrejcew@p.lodz.pl
- 15.10 – 15.30 **Invited Lecture TRECOP**
Modelling of two phase flow in porous materials
Mieczysław Cieszko
Kazimierz Wielki University, Poland
cieszko@ukw.edu.pl
- 15.30 – 16.00 **Invited Lecture TRECOP**
T24 Application of mechanical model of cervical spine assesing changes caused by degenerative disease
Tomasz Walczak
Poznan University of Technology, Poland
tomasz.walczak@put.poznan.pl

- 16.00 – 16.30 **Invited Lecture TRECOP**
T22 Mesh-Free Method Based Numerical Experiment for Estimation of Torsional Stiffness of Long Bone
Anita Uściłowska
Poznan University of Technology, Poland
anita.uscilowska@put.poznan.pl
- 16.30 – 17.00 **Invited Lecture TRECOP**
T25 Application of mesh free methods in cervical spine
Tomasz Walczak
Poznan University of Technology, Poland
tomasz.walczak@put.poznan.pl
- 17.00 – 17.20 **Invited Lecture TRECOP**
T02 Forces Across Sternotomy Closures After Cardiac Surgery
Aaron Casha
University of Malta, Malta
auxetic@um.edu.mt
- 17.20 – 17.40 **Coffee Break**
- 17.45 – 18.15 **Invited Lecture FNMA**
F52 Nanomaterials interactions with biological systems
Pier P. Pompa
Italian Institute of Technology, Italy
piro.pompa@unile.it
- 18.15 – 18.45 **Invited Lecture FNMA**
F16 Nanostructure-Based Biosensors
Zhiqiang Gao
Institute of Bioengineering and Nanotechnology, Singapore
zqgao@ibn.a-star.edu.sg
- 18.45 – 19.15 **Invited Lecture FNMA**
F40 Applications of nanomaterials in nanoelectronics and biosensing
Giuseppe Maruccio
University of Salento, CNR-Institute of Nanoscience, Italy
giuseppe.maruccio@unisalento.it
- 20.30 – 22.30 **Gala Dinner**

Monday, 19th July 2010 (The Palace Hotel, Sliema)

- 08.50 - 9.30 Key-Note Lecture FNMA
F66 From MEMS to Smart Sensors
Benedetto Vigna
STMicroelectronics
patrick.camilleri-mercieca@st.com
- 9.30 - 10.10 Key-Note Lecture FNMA
F41 Scaled Silicon Nanoelectromechanical Functional Systems
Hioshi Mizuta
University of Southampton, UK
hm2@ecs.soton.ac.uk
- 10.10 – 10.40 Invited Lecture FNMA
F14 Multiphoton Nanolithography of Functional Materials towards Applications of MEMS/NEMS
Xuan-Ming Duan
Chinese Academy of Sciences, China
xmduan@mail.ipc.ac.cn
- 10.40 – 11.00 Coffee Break
- 11.00 - 11.30 Invited Lecture FNMA
F35 RF MEMS and MMIC process integration on GaAs and GaN substrates
Claudio Lanzieri
SELEX-SI s.p.A., Italy
clanzieri@selex-si.com
- 11.30 - 12.00 Invited Lecture FNMA
F06 New MEMS technology based on nano-structured materials
Marco Balucani
University of Rome, Italy
balucani@die.uniroma1.it
- 12.00 - 12.30 Invited Lecture FNMA
F54 Binary Alloy Thin Films for MEMS/NEMS Applications
Velimir Radmilovic
Lawrence Berkeley National Laboratory, University of California, Berkeley, USA
VRRadmilovic@lbl.gov
- 12.30 - 14.00 Lunch
- 14.00 - 18.00 Conference Tour - Valletta & Departure to University of Malta Msida Campus

Monday, 19th July 2010 (University of Malta, Msida Campus)

- 17:30 Departure to University of Malta Msida Campus
- 18.00 - 18.10 Opening Ceremony - Auxetics 2010
- 18.10 – 18.50 Key-Note Lecture AUXETICS
A02 Developments in Auxetic Foams
Andy Alderson
University of Bolton, UK.
a.alderson@bolton.ac.uk
- 18.50 – 19.30 Key-Note Lecture AUXETICS
F57 A Thermomechanical Model for the Thickness, Stiffness and Poisson's Ratio of Carbon Nanotubes and Graphene
Fabrizio Scarpa
University of Bristol, UK
f.scarpa@bristol.ac.uk
- 19.30 – 20.10 Key-Note Lecture AUXETICS
A13 Anomalous Anelasticity in Some Liquid Crystalline Networks: Mechanically Induced Strains Ratio as a Mechanistic Probe
Anselm C. Griffin
Georgia Tech, USA
anselm.griffin@ptfe.gatech.edu
- 20.10 – 22.30 Poster Session & BBQ
- 22.30 – 23.00 Transport from University of Malta Msida Campus to Hotel

Tuesday, 20th July 2010 (The Palace Hotel, Sliema)

- 9.00 – 09.40 Key-Note Lecture AUXETICS
A24 Complete characterization and synthesis of the response function of elastodynamic networks
Graeme W. Milton
University of Utah, USA
milton2505@yahoo.com
- 9.40 – 10.10 Invited Lecture AUXETICS
T18 Bilayer and Multilayer Graphene: Mechanical Static and Vibration Properties
Fabrizio Scarpa
University of Bristol, UK
f.scarpa@bristol.ac.uk
- 10.10 – 10.40 Invited Lecture AUXETICS
A15 Auxetic foams and models
Joseph N. Grima
University of Malta
joseph.grima@um.edu.mt
- 10.40 – 11.10 Invited Lecture FNMA
F24 The Effect of Surface Nano-Architecture of Polyterpenol Thin Films on Bacterial Retention
Elena Ivanova
Swinburne University of Technology, Australia
Issfinance@swin.edu.au

- 11.10 – 11.40 Coffee Break
- 11.40 – 12.10 Invited Lecture FNMA
F15 Elastic Response of Magnetic Viscous Materials Subjected to Resonance Magnetic Field
Mirosław R. Dudek
University of Zielona Góra, Poland
M.Dudek@if.uz.zgora.pl
- 12.10 – 12.40 Invited Lecture FNMA
F32 XAS Investigations of Nitrided NbN-SiO₂ Sol-Gel Derived Films
Agnieszka Witkowska
Gdansk University of Technology, Poland
jarek.rybicki@unicam.it
- 12.40 – 13.10 Invited Lecture FNMA
F23 Magnetic, Elastomagnetic and Elastoresistive behavior of nanoparticles –assembled films by fs-PLD
Vincenzo Iannotti
Università Federico II Napoli, Italy
iannotti@na.infn.it
- 13.10 – 13.40 Invited Lecture FNMA
F12 Soft magnetic thick films electroless deposited on insulator materials
Elena Dimitriu
Macedonia
edimit945@yahoo.com
- 13.10 – 13.40 Invited Lecture FNMA
F45 Magnetic Properties and FMR Spectra of Ni/C Nanoparticles in Sodium Borosilicate Porous Glass
Bohdan V. Padlyak
University of Zielona Góra, Poland
B.Padlyak@proton.if.uz.zgora.pl
- 13.40 – 13.45 Closing Ceremony - FNMA & TRECOP
- 13.45 – 15.00 Lunch
- 16.00 – 22.30 Conference Tour - Rabat and Mdina & Departure to Gozo

Wednesday, 20th July 2010 (Victoria7, Gozo)

- 08.45 – 09.00 Transport from Hotel to Conference Hall, Minsitry for Gozo, Victoria
- 09.00 – 09.15 Opening Ceremony
- 09.15 – 10.00 Key-Note Lecture AUXETICS
A37 Searching for auxetic phases of high symmetry
Krzysztof W. Wojciechowski
Polish Academy of Sciences, Poland
kww@rose.man.poznan.pl
- 10.00 – 10.30 Invited Lecture AUXETICS
A12 Further Modelling Studies on the Negative Poisson's Ratio in Cristobalite
Ruben Gatt
University of Malta, Malta
ruben.gatt@um.edu.mt
- 11.00 – 11.30 Invited Lecture AUXETICS
A11 Auxetic properties of iron-gallium alloys
Alison B. Flatau
University of Maryland, USA
aflatau@umd.edu
- 11.30 – 12.00 Invited Lecture AUXETICS
A19 Development of Auxetic Fabrics using Knitting Technology
Hu Hong
The Hong Kong Polytechnic University, China
tchuhong@polyu.edu.hk
- 12.00 – 12.30 Invited Lecture AUXETICS
A30 Mechanical Characterisation of Auxetic Cellular Metals Produced by Selective Electron Beam Melting (SEBM)
Jan Schwerdtfeger
ZMP, Germany
jan.schwerdtfeger@zmp.uni-erlangen.de
- 12.30 – 13.00 Invited Lecture AUXETICS
A34 Method of Fundamental Solutions for Solving Wave Propagation Problem in Auxetic Material Plate
Anita Uściłowska
Poznan University of Technology, Poland
anita.uscilowska@put.poznan.pl
- 15:30 - 16:10 Key-Note Lecture AUXETICS
A01 Negative thermal expansion induced by cold deformation of beta-type Ti-alloys
Salem M. Abdel-Hady
Tohoku University, IMR, Japan
geprell@yahoo.com
- 16:10 - 16:40 Invited Lecture AUXETICS
A08 Composites with Needle and Coin Shaped Inclusions Exhibiting Negative Thermal Expansion
Brian Ellul
University of Malta, Malta
ellulbrian@gmail.com
- 16:40 - 17:10 Invited Lecture AUXETICS
A28 Gradient Auxetic Cellular Structures
Fabrizio Scarpa
University of Bristol, UK
f.scarpa@bristol.ac.uk

Thursday, 21st July 2010 (Victoria, Gozo)

- 9.15 – 10.00 **Key-Note Lecture AUXETICS**
A22 Composite Materials with Negative-Stiffness Inclusions: Recent Advances in Theory and Experiment
Dennis Kochmann and Rod Lakes
University of Wisconsin-Madison, USA
ray.baughman@utdallas.edu
- 10.00 - 10.30 **Invited Lecture AUXETICS**
A04 Modelling of Honeycombs Exhibiting Zero Poisson's Ratio
Daphne Attard
University of Malta
daphneattard@gmail.com
- 11.00 - 11.30 **Invited Lecture AUXETICS**
A29 Resonant Multimeander-Metasurfaces: a Model System for Superlenses and Communication Devices
Heinz K. Schweizer
Universität Stuttgart, Germany
h.schweizer@physik.uni.stuttgart.de
- 11.30 - 12.00 **Invited Lecture AUXETICS**
A21 Dispersion, causality, and negative materials
Paul Kinsler
Imperial College London
p.kinsler@imperial.ac.uk
- 12.00 - 12.30 **Invited Lecture AUXETICS**
A35 "Negative" diamagnetism of three dimensional arrays of semiconductor nano-rings
Oleksandr Voskoboynikov
National Chiao Tung University, Taiwan
vam@faculty.nctu.edu.tw
- 12.30 - 13.00 **Invited Lecture AUXETICS**
A36 Stability of viscoelastic continuum with negative-stiffness inclusions in low frequency range
Yunche Wang
National Cheng Kung University, Taiwan
yunche@email.ncku.edu.tw
- 15:30 - 16:00 **Invited Lecture AUXETICS**
A23 On the Mechanical Properties of Connected Rigid Rectangles: a Comprehensive Study
Elaine Manicaro
University of Malta, Malta
e_manicaro24@hotmail.com
- 16:00 - 16:30 **Invited Lecture AUXETICS**
A06 On the Mechanical Properties of 2D Models Made from Rigid Rotating Triangles
Elaine Chetcuti
University of Malta, Malta
elejnet@hotmail.com
- 16:30 - 17:00 **Invited Lecture AUXETICS**
A38 Modelling of LCP-Type Systems Exhibiting Negative Poisson's Ratios
Christine Zerafa
University of Malta, Malta
crizeff@yahoo.com

Friday, 22nd July 2010 (Victoria, Gozo)

Return to Malta