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### **MOLD-ERA PROJECT IN NUMBERS**

30 months – project duration 498.888,5 Euro – EU contribution

2 training courses in Nano-bioengineering 250 hours of lectures 52 students – attending training courses 2 Summer Schools on Nano-bioengineering 60 participants at Summer Schools

7 workshops on FP7 topics 180 participants at workshops 2 major pieces of nanotechnology equipment purchased

## **PROJECT EVENTS** The second round of the Training Courses in nano-bioengineering, biomaterials and biocompatibility 2012-2013

### Chisinau, Republic of Moldova September 12, 2012 – April 16, 2013

Advanced Training Course on Nano-Bioengineering 2012 has started on September 12 at the premises of the Technical University of Moldova, department of Microelectronics and Biomedical engineering.

This Training Course of 250 hours is addressed to PhD and MSc students, young researchers who study solid state physics and electronics, microelectronics and nanoelectronics, biomedical engineering, biology, medicine and related fields, coming both from the academic laboratories and from the SMEs and industrial companies. The course is being attended by 32 students, who will be awarded graduation certificates and diplomas, that will enable graduates to work in the areas of nanotechnologies and bio-medical engineering. The course will finish in April 2013 and is part of the MOLD-ERA activities.

The course was opened by MOLD-ERA project manager, prof. Ion Tiginyanu, courses director prof. Victor Sontea and academician Mircea Bologa. They encouraged students to benefit from the lectures, that are delivered by local professors as well as professors from abroad (Germany, UK).

The subjects delivered during the course included:

- Introduction to Biomedical Engineering
- Basics of Human Physiology
- Tissues and Molecular Engineering
- Medical Bioinstrumentation
- Biomedical Signal and Image Processing
- Biomaterials, Biocompatibility and Biosensors
- Methods of Functionalising Biological Objects
  with Nanomaterials
- Nanotechnologies in Medicine
- Investigating Interaction of Nanoparticles and Biological Objects via Optical Methods
- Contemporary Methods of Study of Biological
  Objects and Nanomaterials
- Methods of Preparing Biological Samples for Microscopy Investigations
- Methods of Nanomaterials Fabricaton for Bioengineering Applications

For more information on the courses, please visit http://mold-era.eu/17-09-12/advanced-training-course-nano-bioengineering-2012-started





### FP7 Marie Curie Workshop – theory meets practice

### Chisinau, Republic of Moldova

#### October 24-26, 2012

FP7 Marie Curie Workshop was delivered between October 24-26, 2012 by Michael Remes, representing the EFP Consulting LTD, partner of the MOLD-ERA consortium with vast experience in Framework Programs.

The participants were greeted by prof. m.c. lon Tiginyanu, manager of the MOLD-ERA project, who encouraged them to acquire new skills in proposal writing and benefit fully from the many opportunities offered by FP7.

This 3 day event was attended by 25 participants from various research institutions, such as Institute of Electronic Engineering and Nanotechnologies, Information Society Development Institute, Institute of Applied Physics, Moldova State University, State Agrarian University of Moldova, University of ASM,Institute of Chemistry, Institute of Power Engineering, Institute of Pedology, Agrochemistry and Soil Protection etc.

The workshop aimed to provide participants with a thorough overview of the Marie Curie program, including various types of Marie Curie individual actions, details on funding and eligibility, financials and ap-



plication procedure, as well as other useful resources, such as EURAXESS and hands-on support. The practical exercises included in the agenda were extremely useful, as usual. The feedback of participants was very positive and proved there is much interest towards the mobility of researchers.

The event took place at the Central Scientific Library of the ASM (5A, Academiei str., Chisinau).

For more information, please visit http://mold-era.eu/29-10-12/ marie-curie-workshop-25-participants

# International Conference "10 years of Nanotehnology development in the Republic of Moldova"

### Balti, Republic of Moldova

#### October 22-23, 2012

The conference was dedicated to the anniversary of 10 years of nanotechnology development in the Republic of Moldova. The event took place in Balti, Republic of Moldova, at the State University "A.Russo", on October 22-23, 2012.

The main goal of the International Conference was to consolidate researchers, experts, and company leaders of different countries to promote further development of nanotechnology for the benefit of the global economy.

The Conference was organized under partial financial support of the FP7 project MOLD-NANONET "Enhancing the capacities of the ELIRI Research Institute in applied research to enable the integration of Moldova in the European Research Area on the basis of scientific excellence" (www.mold-nanonet.eu).

The following sections were addressed at the conference:

- 1. Nanostructures and nanoparticles
- 2. Nanotechnology in fine mechanics
- 3. Technology of nanofilms and nanowires
- 4. Nanotechnologies in bio-medicine
- 5. Nanotechnologies and robotics
- 6. Nano-sensors



Over 50 research papers were presented by participants from Romania, Ukraine, Poland, Germany and Republic of Moldova. Papers submitted and accepted for presentation at the conference were published in the journal "Physics and Technics: Processes, models, experiments".

For more information about the conference, please visit http://mold-nanonet.eu/19-06-12/international-scientific-conference-%C2%AB10-years-nano-tehnologies-development-republic-moldova

# **PROJECT NEWS**





# Journal of Nanoelectronics and Optoelectronics special issue featuring prof. I.Tiginyanu as guest editor

December 2012

A Special Issue on Nanotechnologies and Nanomaterials for Electronic, Phononic and Photonic Applications of the Journal of Nanoelectronics and Optoelectronics featured

prof. Ion Tiginyanu as Guest Editor in December 2012.

The Special issue presented 19 articles of researchers from Moldova, highlighting advances of the national nanotechnology and nanomaterials research.

Journal of Nanoelectronics and Optoelectronics (JNO) is an international and cross-disciplinary peer reviewed journal to consolidate emerging experimental and theoretical research activities in the areas of nanoscale electronic and optoelectronic materials and devices into a single and unique reference source. JNO aims to facilitate the dissemination of interdisciplinary research results in the inter-related and converging fields of nanoelectronics and optoelectronics.

To view the Special issue of JNO Volume 7, Number 7 (December 2012), please visit http://www.aspbs.com/jno.htm

# **UPCOMING EVENTS**

### The last round of MOLD-ERA Training Workshops

### Chisinau, Republic of Moldova

4-6 March, 2013



The last round of training workshops on FP7 is entitled "Proposers Workshop". The 3-day event will focus on the subjects of project implementation and impact. It will also cover issues such as, how to maximize your funding, project best practice, typical errors and advice as well as the current status on Horizon 2020. The workshop concerns the participation of PhD students and young researchers from research institutions, universities, and SMEs performing research and development activities.

The training will be presented by Myer Morron, author of several Framework Program publications and CEO of EFPC, MOLD-ERA Israel partner with vast experience in Framework Programs.

The workshop will take place at the 2nd floor Conference Hall of the Central Scientific Library "A.Lupan", 5A Academiei str. Chisinau.

For more information, please visit http://mold-era.eu/04-03-13/ call-participation-fp7-proposers-workshop-march-4-6-2013





### Webinars on FP7 issues

13, 19 February, 2013

MOLD-ERA is organizing 3 more rounds of webinars targeting researchers preparing FP7 project proposals, project

managers and financial managers from Moldova.

The webinar focusing on Calculating personnel costs will be organized on February 19, 2013, starting at 10:30 AM.

Participants will gain a better understanding on the following issues:

- Time recording
- Dealing with In-house Consultants
- Working out Staff Cost of Employment
- Calculating staff hourly rates
- Use of average Personnel Costs
- SME Owners Personnel Costs Claims
- Overtime costs
- Form C input

Two other rounds of webinars focus on Marie Curie within Horizon 2020. One of these will be delivered on Wednesday, February 13 starting at 2:00 PM, the timing for the second is to be announced.

This module gives an overview of how Marie Curie fits into Horizon 2020 and information regarding Marie Curie Grants and funding in Horizon 2020. It includes time for discussion and questions. Participants will gain a better understanding so that they can start preparing for the new Marie Curie Grants which will be launched later this year.

The modules are interactive, their duration is between 1 and 1.5 hours.

The webinars are provided by the EFPC Ltd – MOLD-ERA project partner with considerable Framework Program experience covering the technical, financial and project management aspects.

For more information please visit

http://mold-era.eu/13-02-13/upcoming-webinar-marie-curiewithin-horizon

http://mold-era.eu/19-02-13/upcoming-webinar-calculating-personnel-costs

### 2nd International Conference on Nanotechnologies and Biomedical Engineering

### Chisinau, Republic of Moldova

#### April 18-20, 2013

The 2nd International Conference on Nanotechnologies and Biomedical Engineering (ICNBME-2013) will be held in Chisinau, Republic of Moldova on 18-20 April 2013. The event is organised by the Academy of Sciences of Moldova, Technical University of Moldova, State Medical and Pharmaceutical University "N.Testemitanu" from Moldova, Moldavian Society of Biomedical Engineering. The conference is organised under the auspices of the German Ambassador to Moldova and supported by European Federation for Medical Informatics, Swiss Agency for Development and Cooperation and Moldavian Association of Medical Informatics.

During this period the related German-Moldovan Workshop on Novel Nanomaterials for Electronic, Photonic and Biomedical Applications will also take place, supported by Alexander von Humboldt Foundation.

ICNBME-2013 aims at bringing together scientists and engineers dealing with fundamental and applied research in the fields of nanotechnologies and biomedical engineering for



reporting on the latest theoretical developments and applications.

Paper submission is extended up to February 15th, 2013. Program Committee selected works will be published in a special issue of the international "Journal of Nanoelectronics and Optoelectronics".

The first edition of the conference generated a significant impact in the media, being covered by major TV channels and newspapers. It brought together 150 participants from 17 countries, including Germany, France, Great Britain, Spain, Switzerland, USA, Japan, Israel, Romania, Russia, Ukraine, Moldova etc.

For more information, please visit http://www.icnbme.sibm.md/



# **MOLD-ERA partners**



#### Institute of Electronic Engineering and Nanotechnologies, Republic of Moldova www.ijeti.asm.md

The Institute of Electronic Engineering and Nanotechnologies (IEEN) is a leading research institution of the Republic of Moldova in the fields of nanotechnologies and electronics for medicine. It edits two scientific journals, namely Moldavian Journal of the Physical Sciences (in English) and Physics and Modern Technologies (in Romanian). The Institute collaborates closely with universities and research centres from Germany, UK, France, Poland, Romania, USA, Russia, Ukraine etc., and currently is involved in 5 international and 12 national projects.



Technical University of

Moldova, Republic of Moldova www.utm.md

The Technical University of Moldova is the only higher technical educational institution in the Republic of Moldova. At present, the University comprises 10 faculties, the teaching-didactic and engineering staff which adds up to over 1000 lecturers. The six research centres of TUM successfully apply into practice the University's research strategy, within numerous grants and research programmes.

The National Centre of Material Study and Testing (NCMST) within the Technical University of Moldova is a leading research centre in the fields of material science and nanotechnologies. The Centre's activity is focused on the development of novel nanomaterials and nanodevices for various applications, including electronics, photonics, plasmonics, bio-medicine etc. The centre plays a major role in education of a new generation of young specialists in materials science and nanotechnologies.



#### *EFPC Ltd, Israel* www.efpconsulting.com

EFPC staff has strong technical backgrounds and is involved in projects that train and assist the participation of organisations in the Framework Program. They have considerable Framework Program experience covering the technical, financial and project management aspects, and in particular are experienced in introducing the Framework Program to countries and organisations outside the older established Member States by advising and assisting on how best to become successfully involved. EFPC coordinated the IST project Finance-NMS-IST which setup the Finance Helpdesk. They are partners in the Idealist7FP project responsible for Quality Management and are also key players in several ongoing and recent projects such as LOGSEC, BOOST-IT, EPISTEP, CEEC-IST-NET and EPIST.



The University of Bristol has a declared commitment to excellence in teaching and learning within an environment of internationally recognised research. The University has become a major force in the region's knowledge economy and is a key player in Bristol being announced a "Science City" in the Chancellor's 2005 Budget statement.

The Applied Spectroscopy Group and Centre for Device Thermography and Reliability (CDTR) in Bristol is leading research on properties of semiconductor materials and devices on the mesoscopic and nano scale. This work has led to a number of successful collaborations with industrial and university partners and resulted in many scientific publications and conference contributions. Research in the CDTR is supported by grants from EC FP7, UK EPSRC, EC EDA, ONR Global, DARPA and others, also by various UK, German, French and US companies.



Academy of Sciences of Moldova, Republic of Moldova www.asm.md

The Academy of Sciences of Moldova (ASM) is authorised with the Government's competence in the RDI field. ASM collaborates on the basis of bilateral scientific agreements with various research institutions from all over the world, as well as develops relations with international organizations as ALLEA, NATO, BSEC, CEI, U.S. CRDF, STCU, COST and others. During FP6, and now in FP7, ASM acts as NCP hosting institution, thus having the responsibility for coordination and promotion of Moldovan participation in the Framework Programs, for a gradual integration into the European Research Area. ASM is presently involved in several FP7 projects. Medizinische Hochschule Hannover Medizinische Hochschule Hannover, Germany www.mh-hannover.de

The Hannover Medical School (Medizinische Hochschule Hannover, MHH), founded in 1965, is one of the world's leading university medical centres. Due to its interdisciplinary research MHH has strong collaborative links with many academic and industrial research organizations worldwide.

MHH concentrates its research activities to unravel basic mechanisms which will be, in close collaboration with clinical facilities, translated into clinical research. The main research activities focus on Transplantation and Stem Cell Research, Infection Biology and Immunology as well as Biomedical Technology.

Research from the Department of Cardio-Thoracic, Transplantation and Vascular Surgery, Hannover Medical School has been awarded multiple prizes for achievements and innovations, thus representing one of the leading institutions in the field of cardiovascular tissue engineering and regeneration worldwide.