Venue

The International Workshop on Modeling and development of nanostructured materials for biomedical applications organized together with the 5th General Meeting of EU FP7 ViNaT Project will be held at the IMDEA Spain.

Registration fees:

Participants:	280 EUR
Students:	120 EUR
VINAT members:	120 EUR

After December 20, 2013 the fee will be increased by 80 EUR;
after January 30, 2013 the fee will be increased by further 80 EUR.

Chairmen:

Prof. Javier Segurado (IMDEA, Spain)
Dr. habil. Leon Mishnaevsky Jr. (DTU, Denmark)
Prof. Dr. Evgeny Levashov (MISIS, Russia)
Dr. Ilchat Sabirov (IMDEA, Spain)

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SEVENTH FRAMEWORK PROGRAMME

Project funded by the European Commission under the 7th Framework Programme for Research and Technological Development in the framework of Theme 4 NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies – as a Coordinated call EU-Russia 2011

Project ViNaT
Contract No.:
295322

VIRTUAL NANOTITANIUM: **THEORETICAL ANALYSIS, DESIGN AND VIRTUAL TESTING OF BIOCOMPATIBILITY AND MECHANICAL PROPERTIES OF TITANIUM-BASED NANOMATERIALS**

INTERNATIONAL WORKSHOP

ON

Modeling and development of nanostructured materials for biomedical applications

6-7 February 2014
Madrid, Spain

Objectives and topics:

Development of nanoengineering technologies and creation of nanomaterials opened new perspectives for a number of areas of industry and everyday life. These materials demonstrate increased strength, toughness, biocompatibility, and can ensure higher service properties, reliability and lifetime of devices and systems.

Having nanostructuring and nanoengineering technologies as the tools to enhance the service properties of devices and machines, we are faced with the question – which structures of nano-enhanced materials should we aim at in order to ensure the requirements? To make the development and optimization of nanostructured materials realizable in practice and efficient computational models and software codes for the virtual, numerical testing of these materials are necessary.

In order to develop computational modeling tools for the analysis of nanostructured metals, a European FP7 research project "Virtual Nanotitanium" (VINAT) has been started in 2011. This project is carried out in collaboration with the State Contract № 16.523.12.3002 funded by the Russian Ministry of Education and Science. The International Workshop is organized in the framework of this project, and will cover the following topics:

- Computation models at several length scales (Continuum Mechanics, Dislocation Dynamics, Molecular Dynamics and Ab-initio methods) for the simulation of the mechanical behavior or functional performance of nano-structured materials
- Integrated multiscale models for the simulation of the processing (microstructure evolution) or final properties of nano-structured materials
- Nanostructured and ultrafine-grained metals, thin films, multiphase materials and their modelling
- Experimental validation, software development and practical applications of computational models of nanomaterials.

International Scientific Committee:

- Prof. Andrey Solov'yov, Goethe U Frankfurt am Main, Germany
- Prof. Bent F. Sørensen, DTU, Denmark
- Dr. Eberhard Seitz, TU Clausthal, Germany
- Prof. Evgeny Levashov, MISIS, Russia (Chairman)
- Prof. Irene Gotman, Technion, Israel
- Prof. Javier Llorca, IMDEA, Spain
- Dr. habil. Leon Mishnaevsky Jr., DTU, Denmark (Chairman)
- Dr. Ilchat Sabirov, IMDEA, Spain (Chairman)
- Prof. Javier Segurado, IMDEA, Spain (Chairman)
- Prof. Ruslan Valiev, USATU, Russia
- Prof. Javier Gil-Sevillano, CEIT, Spain
- Dr. Jaime Marian, Lawrence Livermore, USA

Abstract Submission

Please submit an abstract (200-300 words, in MS Word format) by e-mail to lemi@dtu.dk before December 1, 2013. Authors will be notified of the Scientific Committee's decisions shortly thereafter.

Keynote and invited speakers :

- Prof. Javier Llorca, IMDEA, Spain
- Prof. Ruslan Valiev, USATU, Russia
- Prof. Javier Gil Sevillano, CEIT, Spain
- Prof. Otmar Kolednik, ESI, Austria
- Prof. Anna Serra, UPC, Spain