

Venue

The International Conference on Computational Modelling of Nanostructured Materials organized together with the 4th General Meeting of EU FP7 ViNaT Project will be held at the Goethe University, Frankfurt am Main, Germany.



Registration fees:



Participants: 280 EUR
Students: 110 EUR
VINAT members: 90 EUR
After May 15, 2013 the fee will be increased by 75 EUR;
after June 30, 2013 the fee will be increased by further 75 EUR.

Chairmen:

Prof. Dr. Andrey Solov'yov (FIAS, GU, Germany)
Dr. habil. Leon Mishnaevsky Jr. (DTU, Denmark)
Prof. Dr. Evgeny Levashov (MISIS, Russia)

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 SEVENTH FRAMEWORK PROGRAMME	Project funded by the European Commission under the 7 th 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 CONFERENCE ON COMPUTATIONAL MODELLING OF NANOSTRUCTURED MATERIALS

September 4-6, 2013
Frankfurt am Main, Germany



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 much higher service properties, reliability and lifetime of devices and systems.

Having nanostructuring and nanoengineering technologies as 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 to in order to ensure the required service properties? In order to make the development and optimization of nanostructured materials practically realizable 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 Conference is organized in the framework of this project, and will cover the following topics:

- Computational models of mechanical behavior and physical properties of nanomaterials, linking their nanostructural and service properties,
- Nanoscale physics reflected by continuum or force fields models: assumptions and limitations;
- Continuum mechanics, molecular dynamics and quantum ab-initio methods as tools for the virtual testing of nanomaterials
- Multiscale modeling and coupling of scales
- Thin films (including a special session organized by the Virtual Institute of Nano Films),
- Nanocrystalline metals, metal nanoparticle assemblies, nanostructured shape memory alloys, carbon nanomaterials, biocompatible materials and peculiarities of their modeling
- Experimental validation and practical applications of computational models of nanomaterials

International Scientific Committee:

- Prof. Alexander Hartmaier, Ruhr U Bochum (Germany)
- Prof. Andrey Solov'yov, Goethe U Frankfurt am Main, Germany (Chairman)
- Prof. Bent F. Sørensen, DTU, Denmark
- Dr. Eberhard Seitz, TU Clausthal, Germany
- Prof. Elazar Gutmanas, Technion, Israel
- Prof. Evgeny Levashov, MISIS, Russia (Chairman)
- Prof. Javier Llorca, IMDEA, Spain
- Dr. habil. Leon Mishnaevsky Jr., DTU, Denmark (Chairman)
- Prof. Markus J. Buehler, M.I.T., USA
- Prof. Robert Berger, TU Darmstadt, Germany
- Prof. Roser Valenti, Goethe U Frankfurt am Main, Germany
- Prof. Ruslan Valiev, USATU, Russia
- Prof. Siegfried Schmauder, U Stuttgart, Germany

Abstract Submission

Please submit an abstract (200-300 words, in MS Word format) by e-mail to lemi@dtu.dk no later than April 1, 2013. Authors will be notified of the Scientific Committee's decisions shortly thereafter.

Keynote and invited speakers :

- Prof. Marc Seefeldt, Katholieke Universiteit Leuven, Belgium
- Prof. Sergey Prokoshkin, MISIS, Russia
- Prof. Javier Segurado, IMDEA, Spain
- Prof. Ruslan Valiev, USATU, Russia
- Prof. Wolfgang Pantleon, DTU, Denmark