International scientific and technical conference «Computer Modeling and Simulation-2015 (COMOD-2015)»

International Scientific and Technical Conference **Computer Modeling -2015 (COMOD-2015)** will be held on **1-3 July, 2015** in the **St. Petersburg State Polytechnical University**.

Chairman of the Conference
Prof. A.I.Rudskoy, corresponding member of the RAS

Co-chairman
Prof. F. Breitenecker, Ph.D. (Austria)
Prof. Yu.B.Senichenkov (Saint Petersburg)

Programm Committee
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International Organizing Committee:
Prof. F.Breitenecker (Austria)
Prof. A.Grebennikov, Dr. (Mexico)

The purpose of the conference

Complex natural, technical and industrial systems require complex mathematical models and sophisticated technology to develop, research and visualization. Modern visual simulation environments are the basis of these technologies and are used in scientific research, industrial design, education.
We invite developers of modern media of visual simulation, specialists in the field of EMC, mathematical modeling in electrical engineering and electric power industry, users creating with help of these systems mathematical models of complex dynamical systems, scientists, offering new models, methods and simulation software, to talk about their advance in this area and share their experiences. We are particularly looking forward to the youth.
Participants can choose the preferred working languages - English or Russian. Sections in English and Russian will work independently, and you can listen to the reports of the parallel section, if interesting. Proceedings of the conference will consist of two parts and include reports of both - national and international sections of the conference.
Reviewing the reports will be of two stages - the first stage - selection of the reports to be presented at the conference. The second stage (after the conference) - the reports will be selected and recommended for publication (after completion) in the following journals:

«A New University Magazine» (NUM, in English)
«Simulation Notes Europe» (SNE, in English)
«Scientific and Technical News of SPbPU» (STN, in Russian)
«Computer Tools in Education» (CTE, in Russian)

Attention! Only papers orally presented at the conference can be accepted for publication in journals.

 The Conference Sections:

Sections of the international and national parts of the conference

1. Mathematical and numerical modeling;
2. Development and application of visual modeling environment of complex dynamic systems;
3. Modeling in electrical engineering and electric power industry;
4. Computer tools in education;
5. Projects of young scientists;

Additional sections of the national part of the conference
6. Author's presentation of new books;
7. Author's presentation of software systems;
8. Presentation of planned and completed dissertations;
9. Author's lectures about the software products.

Computer Modeling 2015 (working language - English)
Section 1. Mathematical and numerical modeling
(Moderator: A. Grebennikov)
Mathematical models of complex dynamical systems. Numerical simulation of complex dynamical systems - methods and software. Tools for computational experiments.

Section 2. Development and application of visual simulation environment of complex dynamical systems
(Moderator: Yu. B. Senichenkov)
Languages of object-orientad modeling. Architecture and capabilities of visual modeling (simulation) environments. Methods of automatic formation and transformation of mathematical models. Numerical libraries of simulation environments. Organization of computational experiment. Debugging and verification of computer models. Applied libraries. Tools for research, testing and optimization of computer models.

Section 3. Modeling in electrical engineering and electric power industry
(Moderator: N. V. Korovkin)
Grounding. Smart Grid Technology & Applications. Stability, Reliability and Security. Power Quality. Control of power systems and related issues. Power Saving Technologies. FACTS Technologies. Optimization Techniques in Power Engineering. Application of Soft Computing Techniques in Power System Design & Management. Future Energy Technologies. Renewable Energy Sources. Superconductivity Application in Power Engineering.

Section 4. Computer Tools in Education
(Moderators: A. I. Grebennikov, N. V. Korovkin, Yu. B. Senichenkov)
Technologies of development and use of computer models in education, training computer models for different areas, new laboratory works, textbooks and lectures on modeling. Propaganda of modeling: competitions, journals, and publishing projects.

Section 5. Projects of young scientists
(Moderator: Yu. B. Senichenkov)
Computer models, new areas and methods for design and research of computer models, simulation software and systems research, created by graduate and PhD students.

Section 6. Author's presentation of new books
Authors of books, textbooks, educational and methodological complex on the conference subjects are invited.

Section 7. Author's presentation of software systems
Authors of the program complexes on the conference subjects are invited.

Section 8. Presentation of planned and completed dissertations
All who are interested to discuss their dissertations on the conference subject are invited.

Section 9. Author's lectures about the software products with subsequent issuance of certificates
Authors of software products capable during 6 lectures and 3 workshops to teach the participants to work with their products and give certificates those who successfully passed the final test are invited. The Rend-service company and Saint-Petersburg State Polytechnical University conduct a course of video-conferences «Using Rand Model Designer in the industry and education». This distance learning course will be completed in computer classes during the conference days. Students who successfully complete the training will receive a certificate from the Rend-service company.

Form of presentation and type of publication

№	Form of presentation	Language	Publication in the Conference Proceedings
1	Sectional paper*⁾	English/Russian	COMOD (English) КОМОД (Russian) Abstract (1/2 page) Paper
2	Invited paper**⁾	English	COMOD (English) КОМОД (Russian) CV (1page + photo) Abstract (1 page) Paper

*⁾ After reviewing all the reports will be divided into two groups: sectional presentations and poster presentations. Only papers of the second group (sectional and invited papers) and all abstracts of the poster presentations will be published in the CONFERENCE PROCEEDINGS.

**⁾ To be invited speaker you have to send to the Organizing Committee: application, brief biography(CV)- (1 page + photo), abstract (1 page). After the official invitation - to send your report for publication (10 page). Invited speakers open the conference, their report lasts 30 minutes, and they are exempt from paying the registration fee.

Sectional papers can be recommended for publication in journals.

Conference Proceedings will be presented on USB flash drave.
Printed copy of the Proceedings will be available upon prior request at the Organizing Committee for an additional fee.

How to submit abstracts and papers at the conference

All abstracts/papers are accepted only via the conference-machine **easychair.org**. To submit abstracts/paper, the author must register on the conference page in the conference-machine at https://easychair.org/conferences/?conf=comod2015 , get **login** and **password**, visit the conference page and upload a **single file** of your abstract and/or paper. **All downloaded materials should be submitted as pdf-file**.

Abstracts/reports sent by e-mail will not be considered.

Rules for abstracts and papers

All abstracts/reports must be submitted in strict accordance with the template and will be checked automatically. Mismatch template can serve as a formal reason for rejection of abstracts/report.

Important dates:

- **1st May, 2015** - deadline for the final version of the report submission **Attention!** Notification of your paper acceptance you will receive two weeks after the upload of the final version of the paper.
- **15 May, 2015** - deadline for the author notification that his abstract/report is accepted. **Attention!** Your paper will be included in the Conference proceedings only after the payment of the registration fee.

Conditions for participation in the Conference

International Scientific and Technical Conference will be held on 1-3 July, 2015 in the St. Petersburg State Polytechnical University (room 118 of Main Education Building). Address: ul. Politekhnicheskaya 29 (Metro station "Politekhnicheskaya").
Registration fee includes: a conference set with the Conference Proceedings on the USB flash drive, coffee-breaks, lunches and boat trip across rivers and canals of St. Petersburg with a gala dinner on the board, transfer to the boat and back.
Excursions to Peterhof and Tsarskoye Selo (Catherine Palace and Park with visiting the amber room) are extra paid.

To participate in the Conference: send the registration form to the e-mail address
COMOD15(at)spbstu.ru
File name with a registration form must include the name and initials of the participant. For example: ivanov_ak_reg.

Registration fee

Foreign participants   - 350 euro.

Postgraduate students and students   - 150 euro.

Payment methods
Bank accounts

Intermediary bank: 0103053393
VTB Bank (Deutschland) AG, Frankfurt am Main
SWIFT: OWHBDEFF

Beneficiary,s bank: JSC VTB BANK (OPERU BRANCH)
30 B. Morskaja str, 190000 St Petersburg, Russia
SWIFT: VTBRRUM2NWR

Beneficiary: account 40503978939040000020
St. Petersburg State Polytechnic University (SPbPU),
29, Polytechnicheskaja str, St Petersburg, Russia

You can pay by bank transfer or by cash at registration (in rubles).

In the payment by bank transfer, please do not forget to write the title of the Conference (COMOD-2015) and your name.
Participants wishing to pay by a bank must cover transaction charges.

Accommodation:
1. **Hotel "Sputnik" ***** (Prosp. Morisa Toreza, 36, Metro station "Ploschad' Muzhestva").
2. **University Hostel****

NB*: Hotel reservation is carried out through the Organizing Committee of the Conference.*

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