

Sixth International Congress on Advanced Electromagnetic Materials in Microwaves and Optics

St. Petersburg, Russia, 17-22 September 2012

The **Sixth International Congress on Advanced Electromagnetic Materials in Microwaves and Optics – Metamaterials 2012**, will comprise a **4-day Conference** (17-20 September), and a **2-day Doctoral School** (21–22 September). Organized by the Metamorphose Virtual Institute (www.metamorphose-vi.org) and hosted by the National Research University of Information Technologies, Mechanics and Optics, ITMO (www.en.ifmo.ru), and St. Petersburg Electrotechnical University "LETI", ETU (www.eltech.ru), this event continues the successful series of *Metamaterials Congresses 2007 - 2011*. The Congress will provide a unique forum to share the latest results of the metamaterials research in Europe and worldwide and bring together the engineering, physics, and material science communities working in the field of artificial electromagnetic materials and their applications at microwaves, millimeter waves, terahertz, and optical frequencies.

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The Conference

The Conference includes *three plenary presentations* given by eminent researchers in the field. *Keynote talks* will address hot topics in metamaterials research and leading experts will present *invited talks*, which will review the state-of-the-art and address the latest advancements in their respective areas. The technical *oral talks* and interactive *poster sessions* will encompass a broad range of themes, from fundamental electromagnetic theory of metamaterials and complex electromagnetic media to innovative microwave and optical devices.

Submission Deadline: 23 March 2012

Paper Submission

Papers should be in English and **3-pages** long (including figures and references). Each paper should contain an abstract, a brief conclusion, and a main body where the technical content and the novelty of the work are clearly presented. Papers should be submitted by uploading a PDF-file to the Congress website:

<http://congress2012.metamorphose-vi.org>

Authors are requested to use the template provided in the Congress website when preparing their submission. The deadline for the paper submission is **23rd March 2012**; late submissions will not be considered. All papers will be reviewed by the Technical Program Committee and the authors will be notified of the status of their submission by **1st June 2012**. Please, visit the Congress website for details of the submission process and paper template.

Reduced fees. Registration fees are reduced for students and senior participants, over 65 years.

Grants. A few travel grants will be provided for students and delegates from low-income countries. The grant rules and application forms will be available at the Congress website. Applications should be submitted online before **15th June 2012**.



Topics

- Physics of complex electromagnetic materials
- Experimental techniques for characterization of metamaterials
- Analytical and numerical modelling of metamaterials
- Homogenization of metamaterials and effective medium models
- Three-dimensional metamaterials
- Planar metamaterials, meta-surfaces and meta-sheets
- Carbon nanotubes and graphene in metamaterials
- Nonlinear, tunable and reconfigurable metamaterials
- Active and absorption-free metamaterials
- Chiral and bianisotropic composites
- Metamaterials with extreme parameters
- Quantum metamaterials
- Plasmonic metamaterials
- Extraordinary transmission
- Transformational electromagnetics and optics
- Electromagnetic band gap structures, photonic crystals, and their applications
- RF and microwave metamaterials: design, properties, and applications
- Millimeter wave/THz metamaterials and applications
- Optical metamaterials and applications
- Acoustic and mechanical metamaterials
- Antenna and absorber applications of metamaterials
- Metamaterials for nanoelectronics and nanoantennas
- Metamaterials for sensing
- Medical applications of metamaterials
- Super-resolution and near-field imaging: effects and devices
- Advances in cloaking
- Micro- and nano-fabrication of metamaterials
- Novel metamaterial concepts
- Educational aspects of metamaterials

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Previous Editions of the Congress

- 2011 Barcelona, Spain
- 2010 Karlsruhe, Germany
- 2009 London, UK
- 2008 Pamplona, Spain
- 2007 Roma, Italy

Student Paper Competition

The Conference organizers run a competition for the best student paper (oral or poster). All student participants are invited to enter the competition by submitting an online application form at the Conference website before **23rd March 2012** (the paper submission deadline). Students need to be registered on the website to submit a paper and fill in the form. During the submission process, students will be asked to upload: (a) a CV of their scientific activity, (b) the title of the submitted paper, (c) an endorsement letter signed by the student's supervisor/advisor stating that the paper is the result of student's work. The student must be the first author, and the co-authors may be the student's supervisors/advisors. No more than two authors are allowed, unless the student has additional advisors from different institutions or departments that must be explicitly stated in the endorsement letter. The student competition papers will undergo a regular review process and then will be selected by a dedicated Committee. The Committee will evaluate students' applications and invite the finalists to present their papers at a special interactive poster session during the Congress. In addition to judging the regular conference presentation, the competition Committee will also assess the quality of interactive poster presentations and students' mastering their research topic. All the finalists will have the registration fee waived. Only one paper per student will be considered. In case of multiple entries with different papers, the student will not be accepted in the competition.

Doctoral School on Metamaterials

A course of the *European School on Metamaterials* operated by the Metamorphose Virtual Institute will be held in conjunction with the Congress (21-22 September 2012). The theme of the course, which will be co-organized with *St. Petersburg Electrotechnical University "LETI", ETU*, will be "**Tunable and reconfigurable metamaterials**". This event will represent a unique opportunity for students and young researchers to get exposure to the latest advancements in the field of metamaterials and to meet the leading experts in this rapidly developing field. For further information visit the school website <http://school.metamorphose-vi.org/>

Contacts

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<http://congress2012.metamorphose-vi.org>