

**International School and Conference on Optics and Optical Materials (ISCOM)  
Belgrade, September 3-7, 2007.**

**General information on the ISCOM**

ISCOM is organized by the following members of Belgrade University: Institute of Physics, Faculty of Physics, Institute of Nuclear Sciences “Vinca” and Faculty of Electrical Engineering.

The meeting held in the Kolarac building, in downtown Belgrade.

Selected papers published in the November 07 issue of Acta Physica Polonica A (<http://przyrbwn.icm.edu.pl/APP/SPIS/a112-5.html>).

**Aim of the ISCOM**

The “school” portion of ISCOM is primarily aimed to young researchers and PhD students as a way to introduce the participants to modern research, starting from a basic level and concluding with the most recent results. The conference portion of ISCOM aims to help researchers listen and discuss the state of the art in several topics of the meeting.

The purpose of the meeting is to disseminate knowledge and information concerning optics, optical materials, lasers, and telecommunications in various fields of quantum optics, solid state physics, bio and medical physics. Through Plenary sessions ISCOM provides students with an opportunity to increase and deepen their insights into these fields. At the Invited Lecture sessions, young researchers will be presented with the latest results and will be able to discuss the state of the art.

**Conference topics**

1. Quantum and Atomic optics
2. Linear and nonlinear optics
3. Optical materials (nanostructures, fibers and waveguides)
4. Meta materials and photonic crystals
5. Holography
6. Optical metrology
7. Bio-optics
8. Optoelectronics and Optical communications

**Plenary and Invited lectures (ISCOM 2007)**

*Biomedical optical applications of liquid crystals devices*, Ibrahim Abdulhalim

*Dark resonances in Quantum Optics*, Ennio Arimondo

*Dancing light: Counterpropagating beams in photorefractive crystals*, Milivoj Belić

*Optical nanomaterials for medical imaging*, Aurelie Bessiere

*Coherent inelastic backscattering of light by cold atoms*, Andreas Buchleitner

*Coherent population trapping in alkali atoms*, Stefka Cartaleva

*Spatial optical solitons, nonlinear waveguides and optically induced lattices in nonlinear refractive index media*, Cornelia Denz

*Luminescence of lanthanides from xerogels embedded in mesoporous matrices*, Nikolay Gaponenko

*High-resolution spectroscopy of cold atoms*, Wojciech Gawlik

*Structural colours in biology*, Ille Gebeshuber

*Attosecond physics: Tools for observing and controlling electrons on an attosecond time scale*, Eleftherios Goulielmakis, M. Schultze, M. Uiberacker, R. Kienberger, U. Kleineberg and F. Krausz

*Atomic nanoscope*, Jules Grucker, J.-C. Karam, V. Bocvarski, F. Perales, G. Dutier, J. Baudon, and M. Ducloy

*Transport in quantum cascade lasers*, Paul Harrison, D. Indjin, I. Savić, Z. Ikonić, C. A. Evans, N. Vukmirović, R. W. Kelsall, J. McTavish and V. Milanovic

*Band structure calculation methods for complex and frequency dependent photonic crystals*, Michael Bergmair and Kurt Hingerl

*Toward p-doped intersubband quantum cascade infrared emitters: SiGe and AlGaAs*, Zoran Ikonc, R. W. Kelsall and P. Harrison

*Measuring the unmeasurable – Atomic clocks and the limits of accuracy*, Steve Jefferts

*Nonlinear optics and light localization in periodic photonic structures*, Yuri Kivshar

*The effect of disorder in 2D photonic crystals*, Ronald Meisels and F. Kuchar

*Entanglement in multipartite Josephson systems*, Rosanna Migliore and A. Messina

*Femtosecond laser frequency comb influence on the atom velocity distribution*, Goran Pichler, Ticijana Ban, Damir Aumiler, Hrvoje Skenderović, Nataša Vujičić and Silvije Vdović

*Optical spectroscopy of the haldane chain compounds  $R_2\text{BaNiO}_5$* , Marina Popova

*Symmetry and transport in a rocking ratchet for cold atoms*, Ferruccio Renzoni

*Bending back light: The science of negative index materials*, Costas Soukoulis

*Spatiotemporal dissipative solitons in optics*, Vladimir Skarka and N. B. Aleksic

*Discrete breathers and solitons in left-handed metamaterials*, Giorgos P. Tsironis

*Recent progress in high-speed optical fiber communications, Sergei Turitsyn*

*Some equations of electrodynamics before and after appearance of negative refraction, Victor Veselago*

*Near infrared ( $\approx 1$  mm) high power and femtosecond lasers, Bruno Viana*

### **Scientific Committee (ISCOM 2007)**

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