

International School on Nanophotonics and Photovoltaics

15 – 23 September 2015, Cefalù, Sicily

Program

Tue 15.09.2015	Arrival of the participants to Cefalu
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Wed 16.09.2015		Chair: Misha Portnoi	Title of lecture
09:00	10:00	Alexey Kavokin	<i>Opening of the School.</i> Bosonic cascade terahertz lasers
10:00	11:00	Aldo Di Carlo	Hybrid perovskites for solar cells and other optoelectronic devices
11:00	11:30	Chair: Alexey Kavokin	Coffee break
11:30	12:30	David Citrin	Optically coupled metal nanoparticle chains and arrays
12:30	13:30	Eros Mariani	The many flavours of real and artificial graphene
13:30	15:00	Lunch	
16:00	17:00	Zhanghai Chen	Cavity QED effects of some "new" materials

Thu 17.09.2015		Chair: Sven Hoefling	Title of lecture
09:00	10:00	Peristera Andreakou	Excitonic devices based on indirect excitons
10:00	11:00	Masha Vladimirova	Indirect excitons in wide band gap semiconductors
11:00	11:30	Chair: Aldo Di Carlo	Coffee break
11:30	12:30	Mark Fox	Quantum dots nanophotonic circuits
12:30	13:30	Giuseppe Eramo	Organised crime: The world's largest social network
13:30	15:00	Lunch	
16:00 — 19:00		Short student presentations followed by the Poster session	

Fri 18.09.2015	Sightseeing Day — Monreale, Corleone etc... Bus leaving at 8:30
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Sat 19.09.2015		Chair: Marek Potemski	Title of lecture
09:00	10:00	Sven Hoefling	Light-matter interaction in quantum dot microcavities: From fundamentals to applications
10:00	11:00	Luis Viña	Dynamics of all-optical polariton devices
11:00	11:30	Chair: Luis Viña	Coffee break
11:30	12:30	Olivia Pulci	Computational first-principles approaches in solid state physics
12:30	13:30	Marek Potemski	The effects of electron-electron and electron-phonon interactions on inter Landau level excitations in graphene
13:30	15:00	Lunch	
20:00		Social Dinner	

Sun 20.09.2015		Chair: Galia Pozina	Title of lecture
09:00	09:30	Anton Nalitov	Polariton topological insulator
09:30	10:00	Huechu Shen	Infrared photonics
10:00	11:00	Jerome Tignon	THz quantum cascade lasers
11:00	11:30	Chair: Feo Kusmartsev	Coffee break
11:30	12:30	Andrew Gallant	Near and sub-wavelength engineering for THz devices
12:30	13:30	Euan Hendry	Photocurrent dynamics in semiconductors probed with THz time domain spectroscopy
13:30	15:00	Lunch	

Mon 21.09.2015		Chair: Egor Muljarov	Title of lecture
09:00	10:00	Elena Del Valle	Light-matter coupling in open quantum systems
10:00	11:00	Fabrice Laussy	Engineering quantum light sources through frequency filtering
11:00	11:30	Chair: Euan Hendry	Coffee break
11:30	12:30	Galia Pozina	Recent advances in III-nitride nanostructures
12:30	13:30	Levon Asryan	Double tunneling-injection quantum dot laser: Temperature-stable and high-power operation
13:30	15:00	Lunch	

Tue 22.09.2015		Chair: Fabrice Laussy	Title of lecture
09:00	10:00	Dmitry Kryzhanovskii	Nonlinear polaritons in semiconductor microcavities and waveguides
10:00	11:00	Egor Muljarov	Exact theory of Purcell effect and new advances in resonant-state expansion
11:00	11:30	Chair: Levon Asryan	Coffee break
11:30	12:30	Feodor Kusmartsev	Topological insulators and Majorana fermions
12:30	13:30	Misha Portnoi	Zero-energy states in graphene Closing of the School.
13:30	15:00	Lunch	

Wed 23.09.2015	Last day of the School — departure of the participants
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Program of Pre-Poster Presentations

Thursday 17.09.2015

Chair: Andrew Gallant

16:00	16:05	Vasil Saroka	Terahertz emission from narrow-gap carbon nanotubes and graphene nanoribbons
16:05	16:10	Su-Hyun Gong	Giant vacuum Rabi splitting of whispering gallery mode polariton in semiconductor core-shell microwire
16:10	16:15	Sejeong Kim	High-Q and high-sensitivity single nanobeam optical sensors
16:15	16:20	Ia Trapaidze	Processing of concentrated solar radiation PV modules on the basis of AlGaAs-GaAs heterostructures
16:20	16:25	Nina Voronova	Internal nonlinear oscillations of an exciton-polariton Bose condensate
16:25	16:30	Maryam Hajji	Enhanced photoconductive terahertz emitters using nanogrooves
16:30	16:35	Mark Portnoi	Customised modelling of luminescent solar concentrators
16:35	16:40	Robin Churchill	Absorption in dielectric models
16:40	16:45	Alexandra Sheremet	Stochastic conversion processes in bosonic condensate of exciton-polaritons
16:45	16:50	Peter Karlsen	Terahertz photo-response of single-walled carbon nanotube films
16:50	16:55	Charles Witthaker	Optical spin Hall effect and pattern formation in semiconductor microcavities
16:55	17:05	Nils Lundt	Excitonic features and unique light matter interaction in MoSe ₂ monolayers
17:05	17:10	Vladimir Pushkarev	Terahertz photoconductivity in nanoscale systems
17:10	17:15	Evgenia Chertochenko	Dynamics of energy relaxation in parabolic quantum well lasers
17:15	17:20	Maksym Sich	Next generation THz computing with polariton solitons
17:20	17:25	Stella Skiadopolou	Magnetoelectric excitations in multiferroic Ni ₃ TeO ₆
17:25	17:30	Liming Liao	t.b.c.
17:30	17:35	Song Luo	t.b.c.
17:35	17:40	Zhe Zhang	t.b.c.

17:40 — 19:00

Poster Session