

MONDAY AND TUESDAY JUNE 1ST AND 2ND 2015



GLEAM'15

GAMES OF LIGHT WITH META-MOLECULES

COMMUNICATING, SENSING AND IMAGING

IN TRIBUTE TO JOSEPH ZYSS FOR HIS CONTRIBUTIONS TO THE FIELD



NANOPLASMONICS



IMAGING



MICROCAVITIES



PHOTONICS



SENSING



PARTIAL LIST OF INVITED SPEAKERS :

CHANTAL ANDRAUD (FRANCE)
DAVID ANDREWS (UK)
ADY ARIE (ISRAËL)
SOPHIE BRASSELET (FRANCE)
FRANCESCO MICHELOTTI (ITALY)
LUCIA PETTI (ITALY)
CHUCK SHANK (US)
MISHA SUMETSKY (UK)
MARIE-PAULE TEULADE-FICHO (FRANCE)
HERVÉ THIS (FRANCE)
DAVID YARON (US)

LOCATION:

ENS CACHAN, AUDITORIUM D.CHEMLA, INSTITUT
D'ALEMBERT AND LPQM

PROGRAMME

Monday, June 1., 2015

Morning

8h30 - 8h50 : Coffee

8h50 - 9h00 : Welcome address

SESSION 1 : Nano-imaging, nano-NLO and nanoplasmonics

Chuck Shank, Howard Hughes Medical Institute, Janelia Farm Research Campus, Ashburn, USA, « Bioimaging and excitation with sculpted light »

Sophie Brasselet, Fresnel Institute, Marseille, France, « Probing molecular organization down to super-resolution imaging with polarized microscopy »

Sébastien Bidault, ESPCI, France, « Building optical antennas with DNA »

10H25 - 10H50 : COFFEE BREAK

Marc Guillon, University Paris 5, France, « Optical Field Singularities for Super-Resolution Imaging »

Clément Lafargue, LPQM, IDA, ENS Cachan, France, « CARS imaging with comb lasers »

Lucia Petti, Institute of Cybernetics "E. Caianiello" of CNR, Pozzuoli, Italy, « 2D photonic quasi-crystals for nanobiosensing »

Eli Kapon, EPFL, Switzerland, « Tailored Quantum Dots for Integrated Quantum Photonics »

12H50 - 13H50 : LUNCH

Afternoon

Bruno Palpant, LPQM, IDA, Ecole Centrale de Paris, Châtenay-Malabry, France, « Ultrafast transient plasmonic-photonic coupling »

Timothée Toury, UTT, Troyes, France, « Irreducible formalism for nanoparticles optical properties description »

Bianca Sclavi, LBPA, IDA, ENS Cachan, France, « Fluorescent nano-objects for the study of bacterial physiology »

SESSION 2 : Microcavities

Misha Sumetsky, Aston University, UK, « Microresonator structures at the surface of an optical fibre »

David Andrews, University of East Anglia, Norwich (UK), « Finding the photon in photonics »

Mélanie Lebental, LPQM, IDA, ENS Cachan, France, « Non-linear wandering, from quantum chaos to micro-lasers »

16H40 - 17H00 : COFFEE BREAK

Special round table on « crossing frontiers and shaking institutions » : Physics and chemistry, technology and science, telecommunications and biology, research and institution.

Moderator : Isabelle Ledoux-Rak

Maurice Bernard, Bernard Decomps, Claire Dupas, Jean-Yves Mérimol, Hervé Biauresser, Jacques Biot, Muriel Touati, Keitaro Nakatani, Pierre-Paul Zalio .

GLEAM lecture by **Joseph Zyss**, LPQM, ENS Cachan, France « From Molecules to Meta-Molecules for Photonics and biophotonics : Symmetry, confinement, geodesics and scale considerations ».

Sciences and food for present and future

18h45-19h45: Hervé This, Agro Paris Tech, Paris, France « Interactive cooking »

DINNER COCKTAIL, MUSIC

Tuesday, June 2., 2015

Morning

8h00 - 8h30 : Coffee

SESSION 3 : Devices for Photonics and Sensing

Ady Arie, Tel Aviv University, Israël, « Studying nonlinear optics using the tools of atomic physics »

Francesco Michelotti, Università di Roma « La Sapienza », Rome, Italy, « Bloch electro-magnetic surface waves for early cancer diagnosis »

Bruno Le Pioufle, SATIE, IDA, ENS Cachan, France, « Microfluidic devices for the cell sensing and treatment »

10H05 - 10H30 : COFFEE BREAK

Chi Thanh Nguyen, LPQM, IDA, ENS Cachan, France, « High detection limit optofluidic sensors for chemical and biological applications »

Abdel El Abed, LPQM, IDA, ENS Cachan, France, « Producing microdroplets for NLO and biological applications »

SESSION 4 : Molecular Engineering for Photonics and Biophotonics

David Yaron, Carnegie Mellon University, USA, « Modeling the role of torsional motions in the photophysics of organic dyes and semiconductors »

Isabelle Ledoux-Rak, LPQM, IDA, ENS Cachan, France, « Beyond Molecular Engineering for nonlinear optics : from molecules to nanoparticles »

12H20 - 14H00 : LUNCH AND POSTER SESSION

Afternoon

Antoni Mitus, M. Jarema, G. Pawlik and J. Zyss, Wrocław University of Technology, Poland and LPQM, IDA, ENS Cachan, France, « From EFISH to Multipolar orientation: a statistical physics approach »

Marie-Paule Teulade-Fichou, Curie Institute, Paris, France, « Triphenylamine dyes: When typical NLO materials meet biology »

Chantal Andraud, ENS Lyon, France, « Biphotonic probes for Near-IR biophotonics applications »

Frédéric Bolze, Strasbourg University, France, « From materials to biology: a journey inside molecular engineering of two-photon dyes and harmonophores »

15H50 - 16H20 : COFFEE BREAK

Rémi Métivier, PPSM, IDA, ENS Cachan, France, « Design of molecular and hybrid nanoparticles with photoswitchable optical properties »

Hubert le Bozec, Rennes 1 University, France, « Metal-based NLO chromophores: from tuning to switching the quadratic nonlinearities »

17H10 - 17H30 : CLOSING CEREMONY

GLEAM'15

Comité d'organisation

David Chauvin (LPQM), Abdel El Abed (LPQM), Clément Lafargue (LPQM), Joseph Lautru (IDA), Bruno Le Pioufle (SATIE), Véronique Mathet (IDA), Hoang Minh Ngo (LPQM), Chi-Thanh Nguyen (LPQM), Aurélia Olivier-Kaiser (LPQM), Bruno Palpant (LPQM), Bianca Sclavi (LBPA), Marjolaine Vernier (IDA), Joseph Zyss (LPQM), Eric Deprez (IDA), Isabelle Ledoux-Rak (LPQM).

Modalités d'inscription

La participation est gratuite mais l'inscription en ligne est obligatoire

Date limite des inscriptions : 24 mai 2015

Date limite de soumission d'un poster : 15 mai 2015

Pour plus d'informations

<http://www.ida.ens-cachan.fr/version-francaise/seminaires-et-colloques/gleam-15-games-of-light-with-meta-molecules-communicating-sensing-and-imaging-288568.kjsp?RH=1193306740215>

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NaBi
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LABORATOIRES DE BIOLOGIE ET DE
PHARMACOLOGIE APPLIQUÉE

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laboratoire de photonique quantique moléculaire



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