

Games of Light with Meta-Molecules: Communicating, sensing and imaging GLEAM'15



INTERNATIONAL
YEAR OF LIGHT
2015

*Tribute to Joseph Zyss for his action in the domain,
at the occasion of his 65th birthday*



Monday, June 1, 2015

8h30 – 8h 50 : Coffee

8h 50 – 9h 00 : Welcome address

Session 1 : Nano-imaging, nano NLO and nanoplasmonics

Chairs :

9h 00 – 9h35	Chuck Shank <i>Howard Hughes Medical Institute, Janelia Farm, Ashburn, USA</i>	Bioimaging and Excitation with Sculpted Light
9h 35 – 10h 00	Sophie Brasselet <i>Fresnel Institute, Marseille, France</i>	Probing molecular organization down to super-resolution imaging with polarized microscopy
10h 00 – 10h 25	Sébastien Bidault <i>ESPCI, France</i>	Building optical antennas with DNA »
<u>10h 25 – 10h 50 : Coffee break</u>		
10 h 50 – 11 h 15	Marc Guillon <i>University Paris 5, France</i>	Optical phase singularities for super-resolution imaging
11h 15 – 11h 40	Clément Lafargue <i>LPQM, IdA, ENS Cachan, France</i>	CARS imaging with comb lasers
11h 40 – 12h 15	Lucia Petti <i>Institute of Cybernetics "E. Caianiello" of CNR, Pozzuoli, Italy</i>	2D photonic quasi-crystals for nanobiosensing
12h 15 – 12h 50	Eli Kapon <i>EPFL, Switzerland</i>	Tailored Quantum Dots and integration with cavities
<u>12h 50 – 13 h 50 : Lunch</u>		
13h 50 – 14 h 15	Bruno Palpant <i>LPQM, IdA, Ecole Centrale de Paris, Châtenay-Malabry, France</i>	Ultrafast transient plasmonic-photonic coupling
14h 15 – 14 h 40	Timothée Toury <i>UTT, Troyes, France</i>	Irreducible formalism for nanoparticles optical properties description
14h 40 – 15h 05	Bianca Sclavi <i>LBPA, IDA, ENS-Cachan, France</i>	Fluorescent nano-objects for the study of bacterial physiology

Session 2 : Microcavities

Chair :

15h 05 – 15h 40	Misha Sumetsky <i>Aston University, UK</i>	Microresonator structures at the surface of an optical fibre
15h 40 – 16h 15	David Andrews <i>University of East Anglia, Norwich (UK)</i>	Finding the Photon in Photonics
16h 15 – 16h 40	Mélanie Lebental <i>LPQM, IdA, ENS Cachan, France</i>	Non-linear dynamics : from quantum chaos to micro-lasers

16h 40 – 17h 00 : 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

17h 00-18h 00	Maurice Bernard, Bernard Decomps, Claire Dupas, Jean-Yves Mérindol, Hervé Biausser, Jacques Biot, Muriel Touati, Keitaro Nakatani, Pierre-Paul Zalio	
18h 00 – 18h 45	GLEAM lecture by Joseph Zyss <i>LPQM, ENS Cachan, France</i>	From Molecules to Meta-Molecules for Photonics and biophotonics : Symmetry, confinement, geodesics and scale considerations

Sciences and food for present and future

18h 45 - 19h 45	Hervé This <i>Agro Paris Tech, Paris, France</i>	Interactive cooking
-----------------	--	---------------------

Dinner cocktail, music

Tuesday, June 2, 2015

Session 3 : Devices for Photonics and Sensing

Chair :

8h 00 – 8h 30

Coffee

8h 30 – 9h 05

Ady Arie
Tel Aviv University, Israël

Studying nonlinear optics using the tools of atomic physics

9h 05 – 9h 40

Francesco Michelotti,
Universita di Roma « La Sapienza », Rome, Italy

Bloch electro-magnetic surface waves for early cancer diagnosis

9h 40 – 10h 05

Bruno Le Pioufle
SATIE, ENS Cachan, France

Microfluidic devices for the electrical treatment of cells

10h 05 – 10h 30 : *Coffee break*

10h 30 – 10h 55

Chi Thanh Nguyen
LPQM, ENS Cachan, France

High detection limit optofluidic sensors for chemical and biological applications

10h 55 – 11h 20

Abdel El Abed
LPQM, ENS Cachan, France

Producing microdroplets for NLO and biological applications

Session 4 : Molecular Engineering for Photonics and Biophotonics

Chair :

11h 20 – 11h55

David Yaron
Carnegie Mellon University, USA

Modeling the Role of Torsional Motions in the Photophysics of Organic Dyes and Semiconductors

11h 55 – 12h 20

Isabelle Ledoux-Rak
LPQM, IdA ENS Cachan, France

Beyond Molecular Engineering for nonlinear optics : from molecules to nanoparticles

12h 20 – 14 h 00 : *Lunch and Poster Session*

14h 00 – 14 h 35

Antoni Mitus, M. Jarema, G. Pawlik and J. Zyss, *Wroclaw University of Technology, Poland and LPQM, ENS Cachan, France*

From EFISH to multipolar orientation: a statistical physics approach

14h 35 – 15h 00

Marie-Paule Teulade-Fichou
Curie Institute, Paris, France

15h 00 – 15h 25

Chantal Andraud
ENS Lyon, France

Biphotonic probes for Near-IR biophotonics applications

15h 25 – 15h 50

Frédéric Bolze
Strasbourg University, France

From materials to biology: a journey inside molecular engineering of two-photon dyes and harmonophores

15h 50 – 16h 20 : *Coffee break*

16h 20 – 16h 45

Rémi Métivier
PPSM, IDA, ENS-Cachan, France

Design of molecular and hybrid nanoparticles with photo-switchable optical properties

16 h 45 – 17 h 10

Hubert le Bozec
Rennes 1 University, France

Metal-based NLO chromophores: from tuning to switching the quadratic nonlinearities

17h 10 – 17h30

Closing ceremony