

PLASMONICA 2018



July 4-6, 2018 | Florence, Italy

Via G. Capponi 9, Lecture Hall 8

Wednesday, 4th July

9:30 - 10:30	REGISTRATION
10:30 - 10:50	OPENING
10:50 - 12:50	Nanoantennas <i>Chairperson: Paolo Biagioni</i>
10:50 - 11:10	T. Feichtner – Double Modematching for Plasmonic Resonators
11:10 - 11:30	S. D'Agostino – Density Functional Tight Binding as a New Frontier for Quantum Plasmonics
11:30 - 11:50	M. Pascale – Plasmon Hybridization in the Full-Wave Regime
11:50 - 12:10	M. Barelli – Plasmon hybridization engineering in self-organized nanostrip dimers
12:10 - 12:30	M. Khalid – Analysis of Spherical Core-Shell Structures with Sub-nanometer Plasmonic Gaps
12:30 - 14:30	LUNCH
14:30 - 16:10	Nonlinear Effects <i>Chairperson: Michele Ortolani</i>
14:30 - 14:50	A. Paladini – Power Dependent Photoexcited Hot-Electron Dynamics in Plasmonics 2D Gold Nanoparticle Arrays
14:50 - 15:10	F. Lotti – Spectral filtering with linear and nonlinear plasmonic approaches
15:10 - 15:30	M. Clementi – Harmonic Generation in Silicon Rich Nitride Photonic Crystal Cavities
15:30 - 15:50	T. Cesca – Polarization-dependent nonlinear optical response of 2D ordered plasmonic nanoprism arrays
15:50 - 16:30	COFFEE BREAK
16:30 - 18:10	Nanophotonics and Hybrid Plasmonics <i>Chairperson: Costanza Toninelli</i>
16:30 - 16:50	N. Caselli – Fano profiles at exceptional points in photonic molecules
16:50 - 17:10	S. Pazzagli – Photostable single-photon emission from organic nanocrystals
17:10 - 17:30	P. O'Keeffe – Sensitizing Wide Band Gap Oxides to Visible Light using Plasmonic Metal Nanoparticles
17:30 - 17:50	A. De Luca – Extraordinary Effects in Quasi-Periodic Gold Nanocavities: Enhanced Transmission and Polarization Control of Cavity Modes
17:50 - 18:10	L. Ghirardini – Optimization and Control of the Second-Harmonic Generation in AlGaAs Dielectric Nanoantennas

Thursday, 5th July

9:00 - 10:40	Bioplasmonics <i>Chairperson: Silvia Vignolini</i>
9:00 - 9:20	A. Foti – In-liquid SERS detection of biomolecules and toxins by optical printing of gold nanorods
9:20 - 9:40	C. Novara – Porous plasmonic nanostructures for Surface Enhanced Raman Scattering: development of biosensing platforms
9:40 - 10:00	C. Lofrumento – Graphene Oxide-Functionalized SERS Substrates for a Simple Discrimination between Native and Fibrillar Lysozyme
10:00 - 10:20	C. D'Andrea – Tip-Enhanced Raman Spectroscopy Analysis of Amyloid Oligomers
10:20 - 10:40	F. Capolino – Achieving Giant Electric Field Enhancement: Introducing Longitudinal Epsilon-Near Zero and Two-scale Structures for spectroscopy
10:40 - 11:20	COFFEE BREAK
11:20 - 13:00	Quantum Nanophotonics and Metamaterials <i>Chairperson: Francesco Biccari</i>
11:20 - 11:40	P. Lombardi – Photostable Molecules on Chip: Integrated Single Photon Sources for Quantum Technologies
11:40 - 12:00	B. Kalinic – Shortening of Eu ³⁺ Radiative Lifetime by near-field coupling with Hyperbolic Metamaterials
12:00 - 12:20	N. Maccaferri – Hyperbolic Control of the Free-Electron Plasmons Energy Landscape
12:20 - 12:40	S. Checcucci – A SiGe-based metasurface for high-efficiency near-infrared anti-reflection coatings
12:40 - 13:00	M. Felici – Spatially Selective Hydrogen Irradiation of Dilute Nitrides: A Versatile Nanofabrication Tool for Photonic Applications
13:00 - 15:00	LUNCH and GROUP PHOTO
15:00 - 16:40	Thermoplasmonics and Photoacoustic Spectroscopy <i>Chairperson: Cristiana Lofrumento</i>
15:00 - 15:20	F. Ratto – Design of an all-optical photoacoustic platform for the inspection of plasmonic particles
15:20 - 15:40	G. Palermo – Flexible Thermo-plasmonics: mechanically actuated control of the photo-induced heat generation
15:40 - 16:00	S. Centi – Cellular vehicles for delivery of gold nanorods to tumors
16:00 - 16:20	A. Feis – Photoacoustic spectroscopy of plasmonic nanoparticles
16:20 - 16:40	A. Belardini – Photoacoustic absorption reveals extrinsic chirality in self-organised polystyrene spheres partially covered by metal
16:40 - 17:20	COFFEE BREAK
17:20 - 19:30	Poster Session / Round Table
20:00	SOCIAL EVENT: Apericena at THE GROVE (see below for the address)

Friday, 6th July

9:00 - 10:40	Polaritons and Terahertz <i>Chairperson: Marco Felici</i>
9:00 - 9:20	A. Macchi – Extreme strong field plasmonics: MeV electron and XUV harmonic pulses from grating targets
9:20 - 9:40	P. Biagioni – Mid Infrared Nonlinear Plasmonics Using Germanium Nanoantennas
9:40 - 10:00	C. Ciano – Observation of Phonon-Polaritons in thin flakes of hBN on ultraflat gold substrates
10:00 - 10:20	J. Fregoni – Manipulating azobenzene photoisomerization through strong light-molecule coupling
10:20 - 10:40	V. Giliberti – Differential mid-IR tip-enhanced absorption spectroscopy to probe light-induced conformational changes of bacteriorhodopsin at the nanoscale
10:40 - 11:20	COFFEE BREAK
11:20 - 13:00	Magnetoplasmonics and Scattering Phenomena <i>Chairperson: Francesco Pineider</i>
11:20 - 11:40	A. Gabbani – Magnetic modulation of surface plasmons in magnetoplasmonic nanoparticles
11:40 - 12:00	D. Loco – Control of Optical Response of Tb ³⁺ Bis-phthalocyaninato Complex close to Metal Nanoparticles
12:00 - 12:20	E. Fantechi – Magnetic-plasmonic heterostructured nanocrystals for innovative biomedical applications
12:20 - 12:40	L. Pattelli – Optimized density and spatial correlations for TiO ₂ nanoparticle samples
12:40 - 13:00	M. Leonetti – Scattering Assisted single mode Transmission
13:00 - 15:00	LUNCH
15:00 - 16:40	Bioplasmonic and Nanophotonic Devices <i>Chairperson: Leonetta Baldassarre</i>
15:00 - 15:20	S. Vignolini – Bio-inspired Photonics: from nature to applications
15:20 - 15:40	A. Capocéfalo – Bio-plasmonic functional aggregates of protein decorated gold nanoparticles
15:40 - 16:00	G. Bruno – Microfluidic multielectrode arrays for recording and drug delivery
16:00 - 16:20	M. Mousavi – Synthesis of Peroxiredoxin protein-templated plasmonic silver nanorings
16:20 - 16:40	S. Perotto – Flow-through dielectric ring resonators for biosensing
16:40 - 17:00	CLOSING REMARKS

Poster list. Thursday, 5th July

No.	Name	Poster title
1	Dario Balestri	Mechanical and electric control of random photonic modes
2	Martina Banchelli	Plasmonic Membranes as novel Bio-detection Substrates for Surface-Enhanced Raman Spectroscopy
3	Andrea Barucci	Magnetic Resonance Imaging of gold nanorods for hyperthermia therapy
4	Simone Berneschi	Silver ion exchanged soda-lime glasses for SERS platforms
5	Giulia Borile	Nanostructured Lab-on-Chip for Surface Plasmon Resonance biosensing in leukemia: from label-free cell detection toward diagnosis of mutations
6	Francesco Brasili	Synchrotron Radiation SEIRA signaling of a gold nanoprobe in sonicated cells
7	Beatrice Bricchi	Synthesis of Au nanoparticles with tuned plasmonic properties and integration in TiO ₂ hierarchical structures via single-step pulsed laser co-deposition
8	Angela Capocéfalo	SERS active pH-nanosensor
10	Angela Capocéfalo	Surface-Enhanced Raman Scattering of DNA-Nanoparticle assemblies
11	Maja Colautti	Photostable molecules on chip: a scalable approach to photonic quantum technologies
12	Maximilien Cottat	Surface-enhanced Raman detection of biomolecules with silver nanocubes and porous silver nanocubes
13	Stefano Danesi	Photo-Induced Heat Generation in Plasmonic vs Non-Plasmonic Nanoantennas
14	Marco Felici	Laser writing of the electronic activity of N- and H-atoms in InGaAs using near-field illumination
15	César de Julián Fernández	Magneto-Plasmonic Properties of Fe-oxide Capped Au Nanoparticles
16	Luca De Stefano	Gold-decorated biosilica nanodevices for nanomedicine
17	Marzia Ferrera	Temperature dependent optical constants of noble metals Au and Ag
18	Assegid Mengistu Flatae	Towards Ultrafast Single-Photon Sources based on Silicon-Vacancy Color Centers in Diamond
19	Antonino Foti	Low cost TERS tips fabricated by electrochemical etching of 125 μm diameter gold wires.
20	Antonino Foti	Evidences of molecular bending in STM-TERS tip-approach curves on different types of thiol self-assembled monolayers grafted on gold film

21	Lavinia Ghirardini	Plasmon-Enhanced Second-Harmonic Sensing in a Microfluidic Chip
22	Giulia Giannone	Molecular Plasmonic Switches via Density Functional Tight-Binding Theory
23	Nicoletta Granchi	Reconfigurable photonic molecules for sensing application
24	Tommi Isoniemi	Probing plasmon polaritons in hyperbolic metamaterials with electron energy loss spectroscopy
25	Giuseppe Lio	Design and Realization of a Nano-guided Hybrid system to implement a Photonic Transistor
26	Michele Magnozzi	Plasmonic properties of heated self-organized 2D arrays of Au nanoparticles
27	Michele Magnozzi	Plasmonic Properties of Self-Assembled Au/PNIPAM Core-Shell Nanoparticles Studied with Spectroscopic Ellipsometry
28	Maria Raffaella Martina	Development of a Plasmonic Device based on Langmuir-Blodgett films of Ag Nanowires
29	Artur Movsesyan	Plasmonic multi-resonances in simple geometric platforms
30	Alina Muravitskaya	Tunable Surface Plasmon Resonance of Silver Nanoparticles for Plasmon-Enhanced Fluorescence
31	Sara Nocentini	Optically tunable 3D photonic structures in rigid and soft polymers
32	Chiara Novara	Study of aptamer immobilization on plasmonic surfaces by SERS analysis
33	Fatima Omeis	Ultra-thin plasmonic nanopores for single molecule detection
34	Gaia Petrucci	Self-Assembly of Magnetic Nanoparticles over Plasmonic Nanoantennas
35	Francesco Pisani	Near Single Cycle Surface Plasmon Polariton Generation by Rotating Wavefront Pulses
36	Francesco Poggialini	Investigating Silver Nanoparticle Prepared by Pulsed Laser Ablation in Liquid as Simple, Cost-Effective and Reproducible SERS Substrates
37	Stefano Rossi	Grating-coupled Surface Plasmon Resonance (GC-SPR) optimization for phase-interrogation biosensing in a microfluidic lab-on-chip
38	Elisabetta Sepe	1D-Photonic Crystal Biochips for ERBB2 Cancer Biomarker Detection
39	Lorenzo Squillantini	Spin crossover nanostructures bistable behavior on surfaces
40	Roberto Tricarico	Radiative Plasmon Decay Rates in Nanoparticles
41	Cosimo Trono	SPR microfluidic platform based on multimode plastic optical fiber for the detection of sepsis biomarkers

42 Irene Vassalini

“Stainless” Gold Nanorods: Preserving Shape, Optical Properties,
and SERS Activity in Oxidative Environment

Social dinner. Thursday, 5th July

The social dinner will take place in the Florence city center, at **The Grove** restaurant.

Address:

Piazza della Indipendenza 3/R,

50129 Firenze

(Distance from the conference venue about 800 m)