

FOTONICA 2017
Convegno Italiano delle Tecnologie Fotoniche
19a edizione

Padova, May 3-5, 2017

Technical Programme

Wednesday, May 3, 2017

10,45-11,00 Opening

11,00-13,15 Plenary Session
Symposium

Wideband Access: a new Opportunity for Photonics

Broadband Access: An Opportunity For Photonics

11,00 Keynote Speech

Innovation Drivers of Optical Networking

Valey Kamanov - *Google*

11,40 Keynote Speech

La rete di OpEn Fiber per l'Italia

Fabrizio Gradassi - *OpEn Fiber*

12,10 Round Table

Chairman: Prof. Carlo Someda

13,15-14,30 Lunch Break

14,30 A1 Photonic Devices

A1_01 Second Harmonic Generation in Strained Silicon Waveguides

A. Marchesini, A. Trenti, M. Mancinelli, C. Castellan - *University of Trento*, M. Ghulinyan - *Fondazione Bruno Kessler*, L. Pavesi - *University of Trento*

A1_02 Novel Actuator Technologies for Silicon Photonics Waveguides

S. Varotto, M. Asa, R. Bertacco - *Politecnico di Milano*, A. Buchheit, H.-D. Wiemhöfer, M. Muñoz Castro - *University of Münster, Germany*, C. Klitis, M. Sorel - *University of Glasgow, UK*, M. Mishra - *University of Calcutta, India and Politecnico di Milano*, F. Morichetti - *Politecnico di Milano*

A1_03 Low-Loss Integrated Micro-Resonator Filters Fabricated by Standard CMOS-Technology

R. Marchetti, V. Vitali - *Università di Pavia*, C. Lacava - *Università di Pavia and University of Southampton, UK*, I. Cristiani, G. Giuliani, P. Minzioni - *Università di Pavia*

A1_04 Mid-Infrared Photodetector based on pyro-resistive effect of graphene on LiNbO₃

K. Kalavoor Gopalan - *The Barcelona Institute of Science and Technology, Spain*, D. Janner - *Politecnico di Torino*

A1_05 Longitudinal Writing Of Vertical Waveguides In Fused Silica: Toward New Integrated Photonic Technologies

D. Lopes - *Politecnico di Milano and IFN-CNR, Milano*, R. Martinez Vasquez - *IFN-CNR, Milano*, S. Tirelli, L. Tallone - *CNIT*, M. Romagnoli - *Politecnico di Milano*, Roberto Osellame - *Politecnico di Milano and IFN-CNR, Milano*

A1_06 Emitters Interaction with Nanohole Arrays

N.T. Michieli, B. Kalinic, T. Cesca, G. Mattei - *Università degli Studi di Padova*

14,30 B1 Optical Networks

B1_01 invited

Evolution of Software-Defined Networking for Transport Networks

R. Alvizu, G. Maier - *Politecnico di Milano*, R. Morro, A. Capello, C. Cavazzoni - *Telecom Italia*

B1_02 A Novel Adaptive Restoration Algorithm for Cost Minimization Of Translucent Optical Networks

C. Toscano, A. Paparella, A. Morea - *Nokia ION*, M. Tornatore - *Politecnico di Milano*

B1_03 Identification of Internet Traffic Patterns for Dynamic Reconfigurations of Optical Metro-Networks

S. Troia - *Politecnico di Milano*, G. Sheng - *Beijing University of Posts and Telecommunications, China*, R. Alvizu, G. Maier, A. Pattavina - *Politecnico di Milano*

B1_04 Networking Benefits of Advanced DSP Techniques

A. Ferrari, M. Cantono, V. Curri, *Politecnico di Torino*

B1_05 Optical Network Design in Content Centric Network Scenario

F. Matera - *Fondazione Ugo Bordoni, Italy*, E. Nistri - *ISCOM, Rome*

14,30 C1 Special Session SIOF/IEEE Photonics

C1_01 Low Losses Plasmonics with Hybrid Photon Gap-Plasmon States

F. Todisco, M. Esposito - *CNR NANOTEC, Lecce*, A.I. Fernández-Domínguez - *Universidad Autónoma de Madrid, Spain*, M. De Giorgi - *CNR NANOTEC, Lecce*, C. Ciraci - *Istituto Italiano di Tecnologia*, G. Gigli, D. Sanvitto - *CNR NANOTEC, Lecce*

C1_02 Silk Based Nanocomposites for Biophotonic and Plasmonic Devices

E. Colusso - *Università di Padova*, P. Minzioni - *Università di Pavia*, G. Perotto - *Istituto Italiano di Tecnologia*, F. Omenetto - *Tufts University, USA*, A. Martucci - *Università di Padova*

C1_03 Design and Numerical Simulation of a NIR Plasmonic Grating for Silicon Single-Photon Photodetectors Performance Enhancement

A. Filippi - *University of Padua and Fondazione Bruno Kessler*, E. Gazzola - *University of Padua*, G. Paternoster, P. Belluti - *Fondazione Bruno Kessler*, F. Romanato - *University of Padua and CNR-IOM, TASC, Trieste*

C1_04 EIT-Like All-Dielectric Metamaterials with Phase Changing Layers for All-Optical Switching Applications

E. Petronijevic, C. Sibilia - *Sapienza University of Rome*

C1_05 Sub-Wavelength Slit and Plasmonic Grating Integration in Ge-Based Metal- Semiconductor-Metal Photodetectors for Sensing Application

M. Lodari, P. Biagioni, G. Isella - *Politecnico di Milano and Istituto di Fotonica e Nanotecnologie, Consiglio Nazionale delle Ricerche, Milano*, M. Bollani - *Istituto di Fotonica e Nanotecnologie, Consiglio Nazionale delle Ricerche, Milano*

C1_06 Heavily-Doped Ge for Plasmonics and Sensing in the Mid-Infrared

G. Pellegrini - *Politecnico di Milano*, L. Baldassarre, V. Giliberti - *Sapienza Università di Roma and Istituto Italiano di Tecnologia*, J. Frigerio - *Politecnico di Milano*, K. Gallacher, D.J. Paul - *University of Glasgow, UK*, G. Isella - *Politecnico di Milano*, M. Ortolani - *Sapienza Università di Roma*, P. Biagioni - *Politecnico di Milano*

16,00-16,30 Coffee break

16,30 A2 Photonic Devices II

A2_01 invited

Mirrors and Optical Retracing Circuits: a Unified Vision

M. Martinelli, P. Martelli - *Politecnico di Milano*

A2_02 Charge-Exciton Interaction Rate in Organic Field-Effect Transistors by Transient Photoluminescence Electromodulated Spectroscopy

W.W. A. Koopman - *CNR-ISMN, Bologna and Universität Potsdam, Germany*, M. Natali, M. Muccini, S. Toffanin - *CNR-ISMN, Bologna*

A2_03 Active WO₃ Nanostructured Films:Rf-Sputtering Deposition, Optical, Structural and Spectroscopic Assessment

A. Chiasera - *IFN - CNR CSMFO Lab. & FBK CMM, Trento*, F. Scotognella - *Politecnico di Milano, IFN-CNR, Milano and Center for Nano Science and Technology@PoliMi, IIT, Milano*, S. Pietralunga - *IFN - CNR and Politecnico di Milano*, G. Speranza - *FBK CMM FMPS Unit, Trento and IFN - CNR CSMFO Lab. & FBK CMM, Trento*, C. Armellini - *IFN - CNR CSMFO Lab. & FBK CMM, Trento*, L.T. Ngoc Tran - *Trento University*, S. Varas - *IFN - CNR CSMFO Lab. & FBK CMM, Trento*, L. Zur - *Centro di Studi e Ricerche Enrico Fermi and IFN - CNR CSMFO Lab. & FBK CMM, Trento*, G. Righini - *Centro di Studi e Ricerche Enrico Fermi*, S. Taccheo - *Swansea University, Swansea, UK*, D. Zonta - *Trento University and IFN - CNR CSMFO Lab. & FBK CMM, Trento*, R. Ramponi - *IFN - CNR and Politecnico di Milano*

16,30 B2 Optical Networks II

B2_01 Kramers-Kronig Transceiver: a Coherent Transmission Scheme Based On Direct Detection

A. Mecozzi, C. Antonelli - *University of L'Aquila*, M. Shtaif - *Tel Aviv University, Israel*

B2_02 Long-Haul Propagation Experiments using PM-64QAM Constellations with Probabilistic Shaping

L. Bertignono, D. Pileri - *Politecnico di Torino*, A. Nespola - *Istituto Superiore Mario Boella*, F. Forghieri - *Cisco Photonics Italy*, G. Bosco - *Politecnico di Torino*

B2_03 Beneficial Effect of Strong Mode Coupling on the Nonlinear Performance of Space Division Multiplexed Transmission

C. Antonelli, A. Mecozzi - *University of L'Aquila*, M. Shtaif - *University of Tel Aviv, Israel*

B2_04 Low-cost Optical Wireless Communication System for Video Signal Distribution in the LUMENTILE™ Project

M. Simonetta, L. Carraro, G. Benetti, A. Tramonte, G. Capelli - *Università degli studi di Pavia*, M. Benedetti, E. Randone - *Julight*, T. Facchinetti, G. Giuliani - *Università degli studi di Pavia*

16,30 C2 Special Session SIOF/IEEE Photonics 2

C2_01 Slotting Effect on Nano Patch Antenna for MID-IR Application

R. Citroni, A. Leggieri, D. Passi, F. Di Paolo, A. Di Carlo - *University of Rome Tor Vergata*

C2_02 Tin Dioxide based Photonic Systems

L.T. Ngoc Tran - *IFN-CNR CSMFO Lab., and FBK Photonics Unit, Trento and Ho Chi Minh City University of Technical Education, Viet Nam*, M. Meneghetti - *Université de Rennes, France*, L. Zur - *Centro di Studi e Ricerche "Enrico Fermi" and IFN-CNR CSMFO Lab., and FBK Photonics Unit, Trento, Italy*, A. Chiasera, C. Armellini, A. Chiappini, S. Varas - *IFN-CNR CSMFO Lab., and FBK Photonics Unit, Trento, Italy*, T.T. Van Tran - *Vietnam National University, Ho Chi Minh, Viet Nam*, A. Vaccari - *FBK CMM-ARES Unit, Trento*, A. Lukowiak - *Institute of Low Temperature and Structure Research PAS, Poland*, D. Zonta - *University of Trento and University of Strathclyde, UK*, R. Ramponi - *IFN-CNR and Politecnico di Milano*, G.C. Righini - *Centro di Studi e Ricerche "Enrico Fermi" and IFAC - CNR, MiPLab., Fiorentino*, M. Ferrari - *IFN-CNR CSMFO Lab., and FBK Photonics Unit, Trento and Centro di Studi e Ricerche "Enrico Fermi"*

C2_03 IEEE Best PhD Thesis Award 2016

Digital Holography Microscopy at Lab-on-a-Chip scale: novel algorithms and recording strategies

M. Paturzo, V. Bianco - *ISASI-CNR*

17,30-19,30 Poster Session with Cocktail

P1_01 Multilevel Pulse Width Modulation Fibre Optic Transmission for Next-Gen Fronthaul

A. Gatto, P. Parolari, L. Combi, P. Boffi, M. Martinelli - *Politecnico di Milano*, U. Spagnolini

P1_02 Influence of Gate Oxide on Infrared Photoresponse of Graphene Field Effect Transistors

A. Benfante, M.A. Giambra, R. Pernice - *University of Palermo*, W. Pernice - *Karlsruhe Institute of Technology, Germany*, R. Krupke - *Karlsruhe Institute of Technology and Technische Universität Darmstadt, Germany*, R. Danneau - *Karlsruhe Institute of Technology, Germany*, E. Calandra, S. Stivala, A. Busacca - *University of Palermo*

P1_03 Routing Space Size Estimation for Reconfigurable Optical Networks

A. Ferrari, M. Cantono, V. Curri - *Politecnico di Torino*

P1_04 SNAP-Driven Updates of Physical Layer to Improve Performances of Photonic Networks

M. Cantono, V. Curri - *Politecnico di Torino, Torino*

P1_05 Effect of Saturation Velocity in Germanium p-i-n Photodetectors

A. Palmieri, M. Vallone, M. Calciati - *Politecnico di Torino*, F. Bertazzi, M. Goano - *Politecnico di Torino and IEIIT-CNR, Torino*, G. Ghione - *Politecnico di Torino*

P1_06 Statistical Analysis of Differential Group Delay in Few-Mode Spun Optical Fibres

G. Guerra, L. Palmieri, M. Santagiustina, A. Galtarossa - *University of Padova*

P1_07 High-Efficiency Cr²⁺:CdSe Laser at 2.65 μm

T. Fernandez, Y. Wang - *Politecnico di Milano*, M.K. Tarabrin - *Bauman Moscow State Technical University* and P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Russia, A. Lazarev, S.O. Leonov, V.A. Karasik - *Bauman Moscow State Technical University, Russia*, Y.V Korostelin, V.I. Kozlovsky - *P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Russia*, C. Svelto - *Politecnico di Milano*, N. Coluccelli, P. Laporta, G. Galzerano - *Politecnico di Milano and Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche, Milano*

P1_08 Extrinsic Optical Chirality and Resonant Absorption in GaAs-Based Nanowires Investigated by Photo-Acoustic Spectroscopy

E. Petronijevic, G. Leahu, A. Belardini, M. Centini, R. Li Voti, C. Sibilìa - *Sapienza University of Rome*, T. Hakkarainen, E. Koivusalo - *Tampere University of Technology, Finland*, M. Rizzo Piton - *Tampere University of Technology, Tampere, Finland and Universidade Federal de São Carlos, Brazil*, S. Suomalainen, M. Guina - *Tampere University of Technology, Finland*

P1_09 Monitoring and Studying Rock Movements using a tri-axial Fiber Bragg Grating Strain Sensor

U. Giacomelli, N. Beverini Nicolò - *Università di Pisa*, D. Carbone - *INGV - Osservatorio Etneo, Sezione di Catania*, G. Carelli, F. Francesconi - *Università di Pisa and Marwan Technology*, S. Gambino - *INGV - Osservatorio Etneo, Sezione di Catania*, E. Maccioni - *Università di Pisa*, M. Morganti - *Istituto Nazionale di Fisica Nucleare, Sezione di Pisa and Accademia Navale di Livorno*, M. Orazi, R. Peluso - *INGV - Osservatorio Vesuviano, Napoli*, F. Sorrentino - *Istituto Nazionale di Fisica Nucleare, Sezione di Genova and Marwan Technology*

P1_10 Distributed Measurement of Birefringence in Polarization-Maintaining Fibers

R. Veronese, L. Palmieri, M. Santagiustina, A. Galtarossa - *University of Padova, Italy*

P1_11 Versatile Quantum Random Number Generation for Timed Foundation Quantum Mechanics Experiments

A. Stanco, D.G. Marangon, G. Vallone, P. Villoresi - *University of Padova*

P1_12 Single-Molecule Hybrid Devices for Efficient Light-Matter Interaction

M. Colautti, P. Lombardi, S. Checcucci, S. Pazzagli - *European Laboratory for Nonlinear Spectroscopy (LENS), Sesto F.no (FI) and Università degli Studi di Firenze*, G. Kewes, O. Benson - *Humboldt-Universität zu Berlin, Germany* M. Agio - *University of Siegen, Germany*, W.H.P. Pernice - *University of Muenster, Germany*, F.S. Cataliotti, F. Caruso - *European Laboratory for Nonlinear Spectroscopy (LENS), Sesto F.no (FI) and Università degli Studi di Firenze*, C. Toninelli - *European Laboratory for Nonlinear Spectroscopy (LENS), Sesto F.no (FI) and National Institute of Optics (CNR-INO), Florence*

P1_13 FTTH Miniturization of the Materials

M. Tarsi - *Telecom Italia*

P1_14 Turbulence Effects Reduction in high Performance Free-Space Optical Communication

L. Bancallari - *MBDA Italia*, J. Mocci - *University of Verona*, F. De Simio, S. Firpi - *MBDA Italia*, M. Quintavalla, S. Bonora - *CNR-IFN, Padova*, R. Muradore - *University of Verona*

P1_15 Microfluidic-Optical System for Holographic Sensor Realization and Application

G. Bianco, S. Torino, M.A. Ferrara - *National Research Council, Institute for Microelectronics and Microsystems, Naples*, F. Borbone, R. Centore - *University of*

Naples Federico II, V. Striano - OHBITalia , G. Coppola - National Research Council, Institute for Microelectronics and Microsystems, Naples

P1_16 Lighting Technologies and Computer Vision Algorithms Applied to Ovens: a Preliminary Study

K. Tragni, A. Cucinotta, S. Selleri - University of Parma

P1_17 Density Functional Tight Binding Method for Metal-Molecule Interactions

S. D'Agostino - Center for Biomolecular Nanotechnologies@UNILE, Istituto Italiano di Tecnologia and Institute for Materials Science, TU Dresden, Germany, F. Della Sala - Center for Biomolecular Nanotechnologies@UNILE, Istituto Italiano di Tecnologia, Italy and Institute for Microelectronics and Microsystems (IMM-CNR)

P1_18 Design of a Light Management System for Backlighting Applications with large Area and Reduced Thickness

L. Carraro - Università degli studi di Pavia, A. Mayra - Technological Research Centre of Finland, Finland, M. Simonetta, G. Benetti, A. Tramonte - Università degli studi di Pavia, M. Benedetti, E. Randone - Julight, A. Ylisaukko-Oja, K. Keranen - Technological Research Centre of Finland, Finland, T. Facchinetti, G. Giuliani - Università degli studi di Pavia

P1_19 Laser Performance of Yb:LuYAG Ceramics with Different Concentration of Dopands

A. Pirri - IFAC-CNR, Sesto Fiorentino, G. Toci - INO-CNR, Sesto Fiorentino, J. Li , T. Xie, Y. Pan - Chinese Academy of Sciences, China, V. Babin, A. Beitlerova, M. Nikl - Academy of Sciences of the Czech Republic, Czech Republic, M. Vannini - INO-CNR, Sesto Fiorentino, Italy

P1_20 3D EBL Fabrication of High-Quality Spiral Phase Plates and Diffractive Optical Elements

M. Massari, G. Ruffato, M. Gintoli, F. Romanato - University of Padova and LaNN Laboratory for Nanofabrication of Nanodevices, Padova

P1_21 Semi-Classical Nonlocal Effects in the weak and strong Coupling Regimes

R. Jurga - Istituto Italiano di Tecnologia (IIT) and Università del Salento, S. D'Agostino - Istituto Italiano di Tecnologia (IIT), F. Della Sala - Istituto Italiano di Tecnologia (IIT) and Institute for Microelectronics and Microsystems (IMM-CNR), Lecce, C. Ciraci - Istituto Italiano di Tecnologia (IIT)

P1_22 BST Characterization for High-Speed Electro-Optic Devices

P. Martelli, P. Boffi - Politecnico di Milano

P1_23 Spectroscopic Characterization and Laser Emission of 2at.% Yb:GaGG Crystal

G. Toci - INO-CNR, Sesto Fiorentino (FI), A. Pirri - IFAC-CNR, Sesto Fiorentino (FI), W. Ryba-Romanowski, M. Berkowski - Polish Academy of Sciences, Poland

P1_24 Multipath Interference in Passive Optical Networks Components

J. Gutierrez, M. Olivero, R. Orta, G. Perrone - Politecnico di Torino

P1_25 Development of a Multiphoton-Multicolor and Super-Resolution STED Microscope for In Vivo Experiments

M. Gintoli - University of Padua, A. Filippi - University of Padua and Fondazione Bruno Kessler, M. Carli - University of Padua, V. Scattolini - Venetian Institute of Molecular Medicine and University of Padua, C.D. Ciobotaru - Venetian Institute of Molecular Medicine and CNR Institute of Neurosciences, Padova, C. Nardin - University of Roma Tre and CNR Institute of Cell Biology and Neurobiology International Campus A. Buzzati-Traverso, Monterotondo, Roma, Italy, A. Leparulo - University of Padua, N. Kaludercic - CNR Institute of Neurosciences, Padova, A. Avogaro, G.P. Fadini - Venetian Institute of Molecular Medicine and CNR Institute of Neurosciences, Padova, M. Bortolozzi - University of Padua and Venetian Institute of Molecular Medicine, F.

Mammano - *University of Padua and CNR Institute of Cell Biology and Neurobiology International Campus A. Buzzati-Traverso, Monterotondo, Roma*, F. Romanato - *University of Padua and LaNN, Laboratory for Nanofabrication of Nanodevices, Padova*

P1_26 One Diode Circuitual Model of Light Soaking Phenomena in Dye-Sensitized Solar Cells

A. Laudani, F. Riganti Fulginei, A. Salvini - *Università degli Studi Roma Tre*, A. Parisi, R. Pernice - *Università di Palermo*, F. Ricco Galluzzo, A.C. Cino, A.C. Busacca - *Università di Palermo*

P1_27 TIP Enhanced Raman Spectroscopy of HYPF-N Oligomers

C. D'Andrea - *Institute of Applied Physics "Nello Carrara", CNR, Sesto Fiorentino (FI)*, A. Foti - *Institute for Chemical and Physical Processes, CNR, Messina*, M. Cottat - *Institute of Applied Physics "Nello Carrara", CNR, Sesto Fiorentino (FI)*, F. Chiti, R. Pini - *Institute of Applied Physics "Nello Carrara", CNR, Sesto Fiorentino (FI)*, P.G. Gucciardi - *Institute for Chemical and Physical Processes, CNR, Messina*, P. Matteini - *Institute of Applied Physics "Nello Carrara", CNR, Sesto Fiorentino (FI)*

P1_28 Direct Laser Writing of PEGda Scaffolds for Tissue Engineering

F. Mochi, F. De Matteis, P. Proposito, R. Francini, M. Lucci, P. Di Nardo, F. Carotenuto, M. Casalboni - *University of Rome Tor Vergata, Rome*

P1_29 Novel Approaches to Photon Detection and Timing for 7-Wavelength Time Domain Optical Mammography

E. Ferocino, E. Martinenghi, A. Dalla Mora - *Politecnico di Milano*, A. Pifferi, R. Cubeddu, P. Taroni - *Politecnico di Milano and National Research Council - Institute for Photonics and Nanotechnologies, Milano*

P1_30 Photonics in Agriculture: the FOSS4I Project in Lebanon

G. Breglio - *University of Naples Federico II and Optosmart*, S. Buontempo - *European Organization for Nuclear Research (CERN), Switzerland and Istituto Nazionale di Fisica Nucleare (INFN) - Sezione di Napoli*, M. Consales, A. Cusano, A. Cutolo - *University of Sannio*, M. Gastal - *European Organization for Nuclear Research (CERN), Switzerland*, I. Jomah - *Lebanese Agriculture Research Institute (LARI), Lebanon*, A. Laudati - *Optosmart*, A. Youssef, A. Zaraket, H. Zaraket - *Lebanese University, Lebanon*

P1_31 TDLAS as a Method for the Diagnosis of Helicobacter Pylori

L. Cocola, A. Ghetti - *CNR IFN UOS Padova*, G. Tondello - *CNR IFN UOS Padova and LPRO*, G. Galzerano - *CNR IFN Milano*, L. Poletto - *CNR IFN UOS Padova*

P1_32 Compatibility Analysis Between AGL Systems and Night Vision Googles

A. Facchinetti Forlani - *Sapienza University of Rome*, D. Roncati - *Progettazione Ottica Roncati*, M. Mazzotti - *OCEM Airfield Technology*, U. Grasselli - *Sapienza University of Rome*

P1_33 Blade-Coated Large Area Perovskite Solar Cells Fully Processed at Ambient Condition

L. Vesce, F. Matteocci, A.L. Palma, A. Di Carlo - *University of Rome "Tor Vergata"*

P1_34 Optical Modelling of Hybrid Nanoparticles for Theranostic Applications

C. Forestiere - *UniNa Federico II*, I. Rea - *IMM-CNR, Napoli*, R. Moretta - *IMM-CNR, Napoli and UniNa Federico II*, M. Terracciano *IMM-CNR, Napoli*, J. Spadavecchia - *CNRS, Parigi, France*, L. De Stefano - *IMM-CNR, Napoli*

P1_35 Optical Manipulation of the Cardiac Conduction Pathway Using a Digital Micro-Mirror Device

E. Margoni - *European Laboratory for Non-Linear Spectroscopy (LENS), Florence*, S. Cannizzaro - *National Institute of Optics (INO) - National Research Council (CNR), Florence*, C. Crocini - *European Laboratory for Non-Linear Spectroscopy (LENS), Florence*, E. Cerbai, C. Poggesi - *University of Florence*, F.S. Pavone - *European Laboratory for Non-Linear Spectroscopy (LENS), Florence and University of Florence*,

L. Sacconi - *European Laboratory for Non-Linear Spectroscopy (LENS), Florence and National Institute of Optics (INO)-National Research Council (CNR), Florence, Italy*

P1_36 Back Grating Optimization for Light Trapping in thin-Film Quantum Dot Solar Cells

F. Elsehrawy, F. Cappelluti - *Politecnico di Torino*, T. Aho, T. Niemi, V. Polojärvi, M. Guina - *Tampere University of Technology, Finland*

P1_37 Functionalization of Macroporous Silicon for Optical Detection of Bacteria

R. Moretta, M. Terracciano, I. Rea, M. Casalino, P. Dardano, L. De Stefano - *IMM-CNR, Napoli*

P1_38 Silicon Quantum Dot for Multispectral In Vivo Nanoimaging

R. Moretta, M. Terracciano, I. Rea - *IMM-CNR, Napoli*, T. Defforge - *CNRS, Tours, France*, S. Vijayakumar - *CNRS, Tours, France and McGill University, Canada*, G. Gautier - *CNRS, Tours, France*, L. De Stefano - *IMM-CNR, Napoli*

P1_39 Photovoltaic Parameters of Perovskite Solar Cells in high Humidity Environment

V. La Ferrara, A. De Maria, G. Rametta, L.V. Mercaldo, A. Bruno, P. Delli Veneri - *ENEA, Portici*

P1_40 Combined Fluorescence and Raman Spectroscopy for the Detection of Focal Cortical Dysplasia in Pediatric Subjects

S. Anand, R. Cicchi - *National Institute of Optics-National Research Council (INO-CNR), Sesto Fiorentino*, and *European Laboratory for Non-Linear Spectroscopy (LENS), Sesto Fiorentino*, F. Giordano, V. Conti - *A. Meyer Children's Hospital, Florence*, A.-M. Buccoliero - *University of Florence*, R. Guerrini - *A. Meyer Children's Hospital, Florence*, F.S. Pavone - *European Laboratory for Non-Linear Spectroscopy (LENS), Sesto Fiorentino and University of Florence*

P1_41 Analysis of Biological Microstructures by Stimulated Raman Microscopy

A. D'Arco, M.A. Ferrara - *National Research Council (CNR), Institute for Microelectronics and Microsystems, Naples*, A. Filograna - *National Research Council (CNR), Institute of Protein Biochemistry, Naples*, M. Indolfi, D. Passaro, V. Tufano - *National Research Council (CNR), Institute for Microelectronics and Microsystems, Naples*, C. Valente - *National Research Council (CNR), Institute of Protein Biochemistry, Naples*, L. Sirleto - *National Research Council (CNR), Institute for Microelectronics and Microsystems, Naples*

P1_42 Characterization of the Metabolic Conditions of Zebrafish Embryos by Two-Photon Excited Fluorescence Microscopy

C. Giubani, G. Marchetto - *European Laboratory for Non-Linear Spectroscopy, Sesto Fiorentino*, F. Vanzi - *National Institute of Optics, National Research Council, Sesto Fiorentino and University of Florence*, R. Cicchi, F.S. Pavone - *European Laboratory for Non-Linear Spectroscopy, Sesto Fiorentino, Italy (1)* *National Institute of Optics, National Research Council, Sesto Fiorentino, Italy*

P1_43 Picosecond Laser Scribing of CIGS Solar Cells

F. Bissoli - *Consiglio Nazionale delle Ricerche IMEM, Parma*, F. Poli, A. Cucinotta, S. Selleri - *University of Parma*, E. Gilioli - *Consiglio Nazionale delle Ricerche IMEM, Parma*

P1_44 How to Extend the Flight Time and Range of Nano-Drones

R. Citroni, A. Leggieri, D. Passi, F. Di Paolo, A. Di Carlo - *University of Rome Tor Vergata*

P1_45 Melanoma Cell Lines Discrimination Through Raman Spectroscopy

E. Baria - *European Laboratory for Non-Linear Spectroscopy, Sesto Fiorentino*, R. Cicchi - *European Laboratory for Non-Linear Spectroscopy, Sesto Fiorentino and National Institute of Optics, Florence*, F. Malentacchi, I. Mancini, P. Pinzani, M.

Pazzagli - *University of Florence*, F.S. Pavone - *European Laboratory for Non-Linear Spectroscopy, Sesto Fiorentino and University of Florence*

P1_46 Evaluation via ESPI of Delamination on GFRP Laminates Impacted at Room and Lower Temperatures

V. Pagliarulo - *CNR-ISASI, Pozzuoli*, V. Lopresto, I. Papa - *University of Naples Federico II*, P. Ferraro - *CNR-ISASI, Pozzuoli*

P1_47 Analysis of Wavelength Multiplexing Approaches for high Power Multi-Emitter Semiconductor Laser Modules

M. Azzena, H. Yu - *Politecnico di Torino*, G. Rossi, A. Braglia - *OPI Photonics*, R. Orta, G. Perrone - *Politecnico di Torino*

P1_48 Photonic Sensing System for the Mitigation Risk Associated with Landslides: the Optofer Project

F.A. Bruno, M. Leone, S. Principe, A. Catalano, P. Mattera, R. Parente, M. Pisco, M. Consales, A. Cutolo, A. Cusano - *University of Sannio*

P1_49 Plasmonic Crystals onto Photo-mobile Polymer Films: towards Tunable nano-Sensing

R. Castagna, M. Rippa - *Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*, G. Nenna - *ENEA, SSPT-PROMAS-NANO, Portici and Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*, F. Simoni - *Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*, L. Petti - *Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*

P1_50 Characterization of Silica Fibers for dual-Wavelength Brillouin Sensors

A. Minardo, E. Catalano, A. Coscetta - *Università della Campania Luigi Vanvitelli*, R. Bernini - *IREA - CNR, Napoli*, L. Zeni - *Università della Campania Luigi Vanvitelli*

P1_51 Testing of Innovative Geometry for SiN Waveguides

I. López García - *Ist. Nazionale di Ottica (INO -CNR) & European Laboratory for Non-linear Spectroscopy (LENS), Sesto Fiorentino FI*, M. Siciliani de Cumis - *Ist. Nazionale di Ottica (INO -CNR) & European Laboratory for Non-linear Spectroscopy (LENS), Sesto Fiorentino FI and Agenzia Spaziale Italiana (ASI)*, D. Mazzotti, P. Cancio Pastor, I. Galli, P. De Natale - *Ist. Nazionale di Ottica (INO -CNR) & European Laboratory for Non-linear Spectroscopy (LENS), Sesto Fiorentino FI*, M. Ghulinyan - *Fondazione Bruno Kessler*, F. Turri, S. Biasi, F. Ramiro Manzano, L. Pavesi - *Università di Trento*, G. Pucker - *Fondazione Bruno Kessler*

P1_52 Novel Computer Generated Holograms for high-Security Anti-Counterfeiting Applications

R. Rossi, G. Ruffato, M. Massari - *University of Padova and Laboratory for Nanofabrication of Nanodevices, Padova*, F. Romanato - *University of Padova*

P1_53 A Novel Configuration for Bio-Chemical Sensors Based on Surface Plasmon Resonance

N. Cennamo - *University of Campania Luigi Vanvitelli*, M. Pesavento - *University of Pavia*, L. De Maria - *RSE*, P. Zuppella - *CNR-IFN UOS, Padova*, F. Mattiello, L. Zeni - *University of Campania Luigi Vanvitelli*

P1_54 Portable SPR Refractometer for Contamination Analysis in a Flowing Liquid

A. Bano, M. Olivero, A. Vallan, G. Perrone - *Politecnico di Torino*

P1_55 CdTe QDs Growth within PMMA Film

F. Antolini - *ENEA C.R. Frascati, Rome*

P1_56 PDMS Treated by Dichloromethane: Swollen Weight without Underestimation Due to the Solvent Volatility and Thermal Aging to Reduce Swelling and Morphology Damage

R. Rella - *IMM-CNR, Lecce*

P1_57 A Machine Learning Approach to the Identification of Chemical Substances for Lidar Measurements

M. Gelfusa - *University of Rome "Tor Vergata"*, A. Murari - *Consorzio RFX, Padua*, A. Malizia - *University of Rome "Tor Vergata"*, G. Farias - *Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile*, M. Lungaroni, E. Peluso, S. Parracino - *University of Rome "Tor Vergata"*, J. Vega - *CIEMAT, Madrid, Spain*, P. Gaudio - *University of Rome "Tor Vergata"*

Thursday, May 4, 2017

9,00 A3 Biomedical Imaging and Treatment

A3_01 Measurement of Carotid Arterial Stiffness by two-point Heart-Pulse Laser Detection

M. Benedetti, G. Capelli – *Julight*, V. Favalli - *Fondazione Policlinico San Matteo*, A. Mariano - *Università di Pavia*, N. Rebrova - *University College Cork, Ireland*, A. Consoli, J. Ayadi, L. Gilardi - *Eclxys Sagl, Switzerland*, M. Perna - *Saphyrion Sagl, Bioggio, Switzerland*, P. Minzioni - *Università di Pavia*, E. Arbustini - *Fondazione Policlinico San Matteo*, G. Giuliani – *Julight*

A3_02 Functional Imaging of Zebrafish Neuronal Activity by Bessel Illumination-Based SPIM

L. Turrini, C. Muellenbroich - *LENS, Sesto Fiorentino*, T. Alterini - *LENS, Sesto Fiorentino*, L. Silvestri, L. Sacconi, F. Vanzi, F.S. Pavone - *LENS, Sesto Fiorentino and University of Florence*

A3_03 Mesoscale Imaging of the Cardiac Conduction System

E. Lazzeri, I. Costantini - *European Laboratory for Non-Linear Spectroscopy, Florence*, S. Cannazzaro - *National Institute of Optics, Florence*, C. Ferrantini - *University of Florence*, C. Crocini - *European Laboratory for Non-Linear Spectroscopy, Florence and National Institute of Optics, Florence, Italy*, R. Coppini, E. Cerbai, C. Poggesi - *University of Florence*, F.S. Pavone, L. Sacconi - *European Laboratory for Non-Linear Spectroscopy, Florence and National Institute of Optics, Florence, Italy*

A3_04 Effects of Cross-Linking (CXL) Treatment on Corneal Collagen probed by Second Harmonic Generation Microscopy

R. Mercatelli - *National Institute of Optics (INO-CNR), Sesto Fiorentino*, F. Ratto, F. Rossi - *Institute of Applied Physics (IFAC-CNR), Sesto Fiorentino*, L. Menabuoni - *Public Hospital of Prato*, R. Nicoletti – *CSO*, A. Malandrini, F. Tatini, R. Pini - *Institute of Applied Physics (IFAC-CNR), Sesto Fiorentino*, F.S. Pavone - *European Laboratory for Non-Linear Spectroscopy (LENS), Sesto Fiorentino and University of Florence*, R. Cicchi - *National Institute of Optics (INO-CNR), Sesto Fiorentino and European Laboratory for Non-Linear Spectroscopy (LENS), Sesto Fiorentino*

A3_05 1070 nm Fiber Laser for Dental Ceramic Surface Processing: Ultrastructural Analysis

C. Fornaini - *University of Parma and University of Nice, France*, F. Poli - *University of Parma*, E. Merigo - *University of Nice, France*, S. Selleri, A. Cucinotta - *University of Parma*

A3_06 In-Situ Laser Fenestration of Endovascular Stent-Graft in Abdominal Aortic Aneurysm Repair (EVAR)

F. Micheletti, F. Rossi - *IFAC-CNR, Institute of Applied Physics "Nello Carrara", Italian National Research Council, Sesto Fiorentino*, S. Condino, V. Ferrari, R. Piazza - *University of Pisa*, R. Pini - *IFAC-CNR, Institute of Applied Physics "Nello Carrara", Italian National Research Council, Sesto Fiorentino*

9,00 B3 Sensors

B3_01 invited

A ϕ -OTDR Sensor for High-Frequency Distributed Vibration Measurements with Minimal Post-Processing

Y. Muanenda, C.J. Oton, S. Faralli, F. Di Pasquale - *Istituto TeCIP, Scuola Superiore Sant' Anna*

B3_02 All-Polymer Photonic Crystal Sensors

P. Lova, G. Manfredi, S. Silvano, P. Giusto, M. Alloisio, A. Servida, D. Comoretto - *Università di Genova*

B3_03 Portable Gas Analyzers for In-Field Applications to Vulcanology And Atmospheric Studies Aboard Aircraft and Drones

S. Viciani - *CNR-INO, Firenze*, A. Chiarugi - *INGV, Pisa*, A. Montori - *CNR-INO, Firenze*, L. Tozzetti - *CNR-INO, Firenze and University of Florence*, M. Burton - *University of Manchester, UK*, F. D'Amato - *CNR-INO, Firenze*

B3_04 Laser Temperature Measurement On The 2 Micron Carbon Dioxide Absorption Band

A. Ghetti, L. Cocola - *CNR IFN UOS Padova*, G. Tondello - *CNR IFN UOS Padova and LPRO*, L. Poletto - *CNR IFN UOS Padova*

B3_05 An Innovative Electro-Optical System for the Detection of HV Power Line Insulators Defects

U. Perini, E. Golinelli, G.M. Ogliari, G. Pirovano - *RSE*, R. Bratovich, A. Barberis - *NTW, Milano*

9,00 C3 Sources and Lasers

C3_01 On-Chip Photon-Pair Source by Direct Laser Writing with a Femtosecond Laser

S. Atzeni - *Politecnico di Milano and Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (IFN-CNR), Milano*, G. Corrielli - *Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (IFN-CNR), Milano and Politecnico di Milano*, A. Crespi - *Politecnico di Milano and Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (IFN-CNR), Milano*, F. Sciarrino, R. Osellame - *Sapienza Università di Roma*

C3_02 Probing and Controlling the Comb Features of a THz QCL

L. Consolino, A. Campa, F. Cappelli, P. Cancio Pastor, S. Bartalini - *CNR-INO, Sesto Fiorentino, Italy and LENS, Sesto Fiorentino*, G. Scalari, M. Rosch, M. Beck, J. Faist - *ETH, Zurich, Switzerland*, P. De Natale - *CNR-INO, Sesto Fiorentino, Italy and LENS, Sesto Fiorentino*

C3_03 Defect-Related Degradation in InGaN Laser Diodes

D. Monti, M. Meneghini, C. De Santi, G. Meneghesso, E. Zanoni - *University of Padova*, A. Bojarska - *Institute of High Pressure Physics "Unipress", Poland*, P. Perlin - *Institute of High Pressure Physics "Unipress", Poland and TopGaN Limited, Poland*

C3_04 Kerr-Lens Mode-Locked Cr²⁺:ZnSe Laser

Y. Wang, T.T. Fernandez - *Politecnico di Milano*, N. Coluccelli, A. Gambetta, P. Laporta, G. Galzerano - *Politecnico di Milano and Istituto di Fotonica e Nanotecnologie - CNR, Milano*

C3_05 Design and Fabrication of Dysprosium-Doped Zblan Fiber Laser

M.C. Falconi, D. La Neve - *Politecnico di Bari*, Y. Wang, T.T. Fernandez, G. Galzerano - *IFN CNR Politecnico di Milano*, F. Prudenzano - *Politecnico di Bari*

C3_06 Thermal Dynamics of Yb-Doped Amplifier Based on Symmetry-Free Photonic Crystal Fiber

F. Poli, C. Molardi - *University of Parma*, L. Rosa - *Swinburne University of Technology, Australia*, A. Cucinotta, S. Selleri - *University of Parma*

10,30-11,00 Coffee Break

11,00 A4 Nanosensors, Detectors and Sources

A4_01 Multi-Sensing Meta Nanostructures with Surface-Enhanced Raman Scattering and Surface Plasmon Resonance Functionalities

M. Rippa, R. Castagna - *Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*, M. Pannico, P. Musto - *Institute for Polymers, Composites and Biomaterials of CNR, Pozzuoli*, J, Zyss - *Institut d'Alembert, ENS de Cachan, France and Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*, L. Petti - *Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli*

A4_02 Assessment of the Chromatic Behavior of Colloidal Sensors

A. Chiappini, C. Armellini - *IFN-CNR CSMFO Lab., Trento*, A. Vaccari - *Fondazione Bruno Kessler*, V. Piccolo - *University of Trento*, A. Piotrowska, D. Zonta - *IFN-CNR CSMFO Lab., Trento and University of Trento*, M. Ferrari - *IFN-CNR CSMFO Lab., Trento*

A4_03 Low Cost Lithographic Fabrication of Tunable Plasmonic Nanostructures

A. Colombelli, M.G. Manera - *Institute for Microelectronics and Microsystems, Lecce*, S. Rizzato, A.G. Monteduro, G. Maruccio - *University of Salento*, R. Rella - *Institute for Microelectronics and Microsystems, Lecce*

A4_04 Self-Organised Flexible Plasmonic Arrays

D. Repetto, C. Mennucci, M. Barelli, F. Buatier de Mongeot - *Università di Genova*

A4_05 Hybrid Graphene/Silicon Photodetectors Operating at 2 Micron

M. Casalino - *Institute for Microelectronics and Microsystems, Research National Council, Naples*, I. Giglio - *"Mediterranea" University*, G. Coppola - *Institute for Microelectronics and Microsystems, Research National Council, Naples*

A4_06 Visible Laser Operation of a Pr³⁺:KY₃F₁₀ Single-Crystal Fibre

A. Sottile - *Università di Pisa and NEST, Istituto Nanoscienze - CNR, Pisa*, E. Damiano, Z. Zhang - *Università di Pisa*, M. Tonelli - *Università di Pisa and NEST, Istituto Nanoscienze - CNR, Pisa*

A4_07 Laser Activated Remote Phosphor for Lighting Applications

N. Trivellin, M. Buffolo, M. Meneghini, G. Meneghesso, E. Zanoni - *University of Padova*

11,00 B4 Optical Network Devices

B4_01 invited

Lighting System with High Power LEDs, Light Management Structure, and Large-Area Electronics in the LUMENTILE™ European Project

L. Carraro, M. Simonetta, G. Benetti, A. Tramonte, G. Capelli - *Università degli Studi di Pavia*, M. Benedetti, E. Randone - *Julight*, A. Ylisaukko-oja, K. Keranen - *Technological Research Centre of Finland, Finland*, T. Facchinetti, G. Giuliani - *Università degli Studi di Pavia*

B4_02 Integrated Optics Tunable Mirror

A. Righetti, M.C. Ubaldi, L. Ferrario, G. Grasso - *Fondazione CIFE*

B4_03 High-Performance SOI AWG For Optical Network Applications

C. Castellan, S. Tondini, M. Mancinelli - *University of Trento*, C. Kopp - *CEA, Minatec, Grenoble, France*, L. Pavesi - *University of Trento*

B4_04 Silicon-Graphene Schottky Photodetectors Integrated with an Optical Cavity at 1550 nm

M. Casalino, G. Coppola - *Institute for Microelectronics and Microsystems (CNR), Naples*, U. Sassi, I. Goykhmann, A.C. Ferrari - *University of Cambridge, UK*

B4_05 Simulation of Quantum Dot Fabry-Perot Comb Lasers: Role of the Carrier Grating

L.L. Columbo - *Politecnico di Torino and CNR-IFN Istituto di Fotonica e*

Nanotecnologie, Bari, P. Bardella, I. Montrosset, M. Gioannini - *Politecnico di Torino*

B4_06 Automatic Resonance Alignment of a Double-Ring based Optical Node via GBNM Algorithm

S. Tondini - *University of Trento*, C. Kopp - *CEA Léti, Grenoble, France*, L. Pavesi - *University of Trento*

11,00 C4 Optical Fiber Sensors

C4_01 Fibre Optic Sensors in Geotechnical Applications

L. Schenato - *National Research Council, Padova*, L. Palmieri, S. Bersan, A. Bisson, E. Autizi, S. Cola, P. Simonini, A. Galtarossa - *University of Padova*, A. Pasuto - *National Research Council, Padova*

C4_02 Brillouin-based Fiber Sensing System Employing a Modified Brillouin Ring Laser Source

D. Marini - *Consiglio Nazionale delle Ricerche, IMM Institute, Bologna* M. Iuliano - *Consiglio Nazionale delle Ricerche, IMM Institute, Bologna and Università degli Studi di Bologna*, F. Bastianini - *Sestosensor*, G. Bolognini - *Consiglio Nazionale delle Ricerche, IMM Institute, Bologna*

C4_03 Cavitation Detection in Water Pipelines by Coherent Optical Fibre Sensor

M. Mattarei, M. Ferrario, F. Bellani, P. Boffi, M. Martinelli - *Politecnico di Milano*

C4_04 Bend-Insensitive Fiber Probe for Temperature Monitoring

M. Olivero, A. Vallan, R. Orta, G. Perrone - *Politecnico di Torino*

C4_05 OFDR based Dynamic Strain Measurements

L. Marcon, A. Galtarossa, M. Santagiustina, L. Palmieri - *University of Padova*

C4_06 Double Slope-Assisted Brillouin Optical Correlation Domain Analysis

J. Morosi, M. Ferrario, P. Boffi, M. Martinelli - *Politecnico di Milano*

C4_07 Hollow-Core Inhibited Coupling Fibres for Label-free DNA Detection

F. Giovanardi - *of Modena and Reggio Emilia*, C. Molardi, A. Cucinotta - *University of Parma*, L. Vincetti - *University of Modena and Reggio Emilia*

12,45-14,00 Lunch

14,00-15,45 Plenary session

CORIFI

Opportunities for Research and Innovation

15,45-16,15 Coffee Break

16,15 A5 Biomedical Sensing

A5_01 Self-Assembled and Repeatable SERS Nanoprobes on Fibre Tip

M. Pisco - *University of Sannio*, F. Galeotti - *National Research Council, Institute for Macromolecular Studies (ISMAC-CNR), Milano*, G. Quero - *University of Sannio*, G. Grisci - *National Research Council, Institute for Macromolecular Studies (ISMAC-CNR), Milano*, A. Micco - *University of Sannio*, L.V. Mercaldo, P. Delli Veneri - *ENEA, Portici Research Center*, A. Cutolo, A. Cusano - *University of Sannio*

A5_02 Tapered Fibers for Optogenetics: from Wide Volume to Site-Selective Optical Control of Neural Activity in the Mouse Brain

F. Pisanello - *Istituto Italiano di Tecnologia (IIT)*, G. Mandelbaum - *Harvard Medical School, USA*, M. Pisanello - *Istituto Italiano di Tecnologia (IIT) and Università del Salento*, I. Oldenburg - *Harvard Medical School, USA*, L. Sileo, E. Bellistri, B-Spagnolo - *Istituto Italiano di Tecnologia (IIT)*, J. Markowitz, R. Peterson - *Harvard Medical School, USA*, A. Della Patria - *Istituto Italiano di Tecnologia (IIT)*, T. Haynes - *Harvard Medical School, USA*, M. Emara - *Istituto Italiano di Tecnologia (IIT) and Università del Salento*, S.R. Datta, B. Sabatini - *Harvard Medical School, USA*, M. De Vittorio - *Istituto Italiano di Tecnologia (IIT) and Università del Salento*

A5_03 Micro-Opto-Acousto-Fluidic System for the Analysis of Single-Cell Mechanics

V. Vitali, T. Yang - *Università di Pavia*, F. Bragheri - *Istituto di Fotonica e Nanotecnologie, CNR, Milano*, G. Nava - *Università di Milano*, I. Chiodi, C. Mondello - *Istituto di Genetica Molecolare (IGM)-CNR, Pavia*, R. Osellame - *Istituto di Fotonica e Nanotecnologie, CNR, Milano*, K. Berg-Sørensen - *Technical University of Denmark, Denmark*, I. Cristiani, P. Minzioni - *Università di Pavia*

A5_04 Sensorized Needles for Epidurals

B. Carotenuto, A. Micco, A. Ricciardi - *University of Sannio*, E. Amorizzo, M. Mercieri - *Sapienza University, Rome*, A. Cutolo, A. Cusano - *University of Sannio*

A5_05 Plasmonic Nanostructures for Biosensing Application

I.G. Balasa, N. Michieli, B. Kalinić, C. Scian, T. Cesca, G. Mattei - *Università di Padova*

A5_06 Low-Coherence Reflectometry for Cell Refractive Index Sensing

G. Rigamonti, F. Carpignano - *Università di Pavia*, G. Mazzini - *Istituto di Genetica Molecolare IGM-C.N.R., Pavia and Università di Pavia*, S. Merlo - *Università di Pavia*

A5_07 Microspheres and Microbubbles for Chemical/Biological Optical Sensing

M.C. Falconi, G. Palma, D. La Neve - *Politecnico di Bari*, F. Chiavaioli, G. Nunzi Conti, G.C. Righini, C. Trono - *IFAC-CNR, Firenze*, F. Prudeniano - *Politecnico di Bari*

A5_08 We-Lab: Challenging an Educational Tool in Real Diagnostic Applications

M. Barozzi, A. Tonelli, A. Zaccarelli, A. Grazioli, M. Sozzi, A. Candiani - *DNAPhone*, A. Cucinotta, S. Selleri - *Università degli Studi di Parma*

16,15 B5 Access and Data-Center Networks

B5_01 invited

Up to 4x192 LTE-A Radio Waveforms Transmission in a Point to Multipoint architecture for Massive Fronthauling Solutions

P. Torres-Ferrera - *Universidad Nacional Autónoma de México, Mexico* S. Straullu, S. Abrate - *Istituto Superiore Mario Boella*, R. Gaudino - *Politecnico di Torino*

B5_02 LTE Transmission over Fiber Optic Pulse Width Modulation

L. Combi, A. Gatto, P. Parolari, M. Martinelli - *Politecnico di Milano*, R. Sacchi, R. Giacometti, A. Lena, C. Canziani - *Keysight Technologies Italy*, U. Spagnolini - *Politecnico di Milano*

B5_03 Optical Network Slicing Approaches with Carrier Ethernet Tests

F. Matera - *Fondazione Ugo Bordonj*, V. Attanasio - *ISCOM, Rome, Italy and Università Tor Vergata*, E. Nasti - *ISCOM, Rome*, P. Susanna - *ISCOM, Rome, Italy and Università Tor Vergata*, E. Manca - *ISCOM, Rome*, L. Salamandra - *ISCOM, Rome, Italy and Università Tor Vergata*, S. Di Bartolo, A. Pizzoleo - *ISCOM, Rome*

B5_04 Street-aware Algorithm for Optimal Dimensioning of protected-PON in very large Regions

G. Arévalo - *Universidad Politécnica Salesiana, Ecuador*, R. Gaudino - *Politécnico di Torino*

B5_05 Power and Cost Savings in Metro and Data Center Networks Using Optical Transceivers Based on a Polymeric Substrate

M. Quagliotti, A. Pagano, D. Roccatò - *TIM*, V. Katopodis, M. Spyropoulou - *NTUA, Athens, Greece*, A. Beretta, A. Dedè, A. Vannucci - *LINKRA*

B5_06 Intra-Datacenter Links Optical PCI Express Interconnections

A. Gatto, P. Parolari, M. Brunero, F. Corapi - *Politecnico di Milano*, V. Costa, M. Grassi - *Italtel*, P. Boffi - *Politecnico di Milano*

B5_07 Spectrum Fragmentation Metrics and their Use in Optical Channel Allocation Algorithms

M. Quagliotti - *Telecom Italia*, D. Cifuentes Arango - *Politecnico di Torino*, M. Schiano - *Telecom Italia*, A. Carena, M. Cantono, V. Curri - *Politecnico di Torino*

16,15 C5 Exhibitors' Showcase

Friday, May 5, 2017

9,00 A6 Spectroscopy

A6_01 invited

Mid-infrared Molecular Precision Spectroscopy with a Metrological-Grade Tunable Coherent Source

M. Verde, G. Insero - *CNR-INO, Sesto Fiorentino and LENS, Sesto Fiorentino*, Davide D'ambrosio - *CNR-INO, Sesto Fiorentino and INRIM* S. Borri - *CNR-INO, Sesto Fiorentino and LENS, Sesto Fiorentino*, D. Calonico - *INRIM*, P. Pastor - *CNR-INO, Sesto Fiorentino and LENS, Sesto Fiorentino*, C. Clivati - *INRIM*, M. Inguscio - *CNR-INO, Sesto Fiorentino and LENS, Sesto Fiorentino*, F. Levi - *INRIM*, P. De Natale - *CNR-INO, Sesto Fiorentino and LENS, Sesto Fiorentino*, G. Santambrogio - *CNR-INO, Sesto Fiorentino and INRIM*

A6_02 Frequency Offset Raman Spectroscopy (FORS) for in-Depth Analysis of Scattering Media

S.K.V. Sekar, S. Mosca - *Politecnico di Milano*, A. Farina - *CNR, Istituto di Fotonica e Nanotecnologie, Milano*, F. Martelli - *Università degli Studi di Firenze*, P. Taroni, G. Valentini - *Politecnico di Milano and CNR, Istituto di Fotonica e Nanotecnologie, Milano*, R. Cubeddu - *Politecnico di Milano*, A. Pifferi - *Politecnico di Milano and CNR, Istituto di Fotonica e Nanotecnologie, Milano*

A6_03 Broadband CW Nonlinear Generation for Metrological Grade Terahertz Spectroscopy

M. De Regis - *LENS, European Laboratory for Nonlinear Spectroscopy, Sesto Fiorentino (Fi)*, L. Consolino, S. Bartalini, M. Ravaro, P. De Natale - *INO, Istituto Nazionale di Ottica - CNR, Florence and LENS, European Laboratory for Nonlinear Spectroscopy, Sesto Fiorentino (Fi)*

A6_04 Broadband (600-1200 nm) Diffuse Optical Spectroscopy: Characterization of THYROID Tissue Constituents and IN VIVO Study

S.V. Sekar - *Politecnico di Milano*, A. Farina *Consiglio Nazionale delle Ricerche, Milan*, A. Dalla Mora - *Politecnico di Milano*, P. Taroni - *Politecnico di Milano and Consiglio Nazionale delle Ricerche, Milan*, C. Lindner - *ICFO-Institut de Ciències Fotòniques, Castelldefels (Barcelona), Spain*, M. Mora - *IDIBAPS-Fundació Clínic per la Recerca Biomèdica, Barcelona, Spain*, P. Farzam, M. Pagliuzzi - *ICFO-Institut de Ciències Fotòniques, Castelldefels (Barcelona), Spain*, M. Squarcia, I. Halperin, F. Hanzu - *IDIBAPS-Fundació Clínic per la Recerca Biomèdica, Barcelona, Spain*, H. Dehghani - *University of Birmingham, UK*, T. Durduran - *ICFO-Institut de Ciències Fotòniques, Castelldefels (Barcelona) and ICREA-Institució Catalana de Recerca i Estudis Avançats, Barcelona, Spain*, A. Pifferi - *Politecnico di Milano and Consiglio Nazionale delle Ricerche, Milan*

A6_05 Fluorescence Measurements of Neuronal Activity during PTZ-induced Seizures in Zebrafish

L. Turrini - *LENS, Sesto Fiorentino*, C. Fornetto, G. Marchetto - *University of Firenze*, N. Tiso, A. Vettori - *University of Padova*, F.S. Pavone - *LENS, Sesto Fiorentino and University of Firenze*, F. Vanzi - *LENS, Sesto Fiorentino*

9,00 B6 Optical Fibers

B6_01 Geometric Phase and Angular Momentum of the Light

P. Martelli, A. Fasiello, M. Martinelli - *Politecnico di Milano*

B6_02 Diffractive Optics for OAM-MODE Division Multiplexing in Optical Fibers

G. Ruffato, M. Massari, E. Gazzola - *University of Padova and Laboratory for Nanofabrication of Nanodevices, Padova*, G. Parisi - *CNR -INFM TASC IOM National Laboratory, Trieste*, F. Romanato - *University of Padova*

B6_03 Singularities in Higher Order Modes of Optical Fiber

C.H. Krishna, R. Sourabh - *National Institute of Technology, India*

B6_04 Modeling the Parametric Amplification in Few Mode Fibers

A. Trichili - *University of Carthage, Ghazala Technopark, Tunisia and Università di Padova*, M. Zghal - *University of Carthage, Tunisia and Institut Mines-Télécom, France*, L. Palmieri, A. Galtarossa, M. Santagiustina - *Università di Padova*

B6_05 Polarization Scrambling in Nonlinear Fiber Optic with Counterpropagating Delayed Loop

J. Morosi - *Politecnico di Milano*, M. Guasoni - *University of Southampton, UK*, J. Fatome - *Université de Bourgogne Franche-Comté, France*

B6_06 Extrusion of Glass for the Fabrication of Complex-Shaped Optical Fibers

E. Ceci Ginistrelli - *Politecnico di Torino and University of Southampton, UK*, J. Lousteau - *University of Southampton, UK*, D. Frisari - *Politecnico di Torino and University of Southampton, UK*, N.G. Boetti - *Istituto Superiore Mario Boella, D. Pugliese, D. Janner - Politecnico di Torino*, F. Poletti - *University of Southampton, UK*, D. Milanese - *Politecnico di Torino*

9,00 C6 Advanced Microscopy

C6_01 Deconvolution Techniques for THZ Characterization of thin Painting Layers

I. Cacciari, D. Ciofini, S. Siano - *Istituto di Fisica Applicata "N. Carrara" - Consiglio Nazionale delle Ricerche, Florence*

C6_02 LiF Imaging Detectors Read by Confocal Laser Microscope for Characterization of X-Ray Beam Coupled with Polycapillary Optics

F. Bonfigli - *ENEA C.R. Frascati*, D. Hampai - *INFN - LNF, Frascati*, S.B. Dabagov - *INFN - LNF, Frascati and NR Nuclear University MEPhI, Russia*, S.B. Dabagov - *NR Nuclear University MEPhI, Russia*, R.M. Montereali - *ENEA C.R. Frascati*

C6_03 Femtosecond Stimulated Raman Losses and Stimulated Raman Gain Microscopy

A. D'Arco, M.A. Ferrara, M. Indolfi, D. Passaro, V. Tufano, L. Sirleto - *National Research Council (CNR), Institute for Microelectronics and Microsystems, Naples*

C6_04 Photon Assisted Ultrafast Scanning Electron Microscopy

S.M. Pietralunga - *CNR-IFN, Milano and Center for Nanoscience and Technology at poliMI, Istituto Italiano di Tecnologia*, M. Zani, V. Sala, G. Irde - *Politecnico di Milano*, C. Manzoni - *CNR-IFN, Milano, Italy*, G. Isella, G. Cerullo - *Politecnico di Milano*, G. Lanzani, A. Tagliaferri - *Center for Nanoscience and Technology at poliMI, Istituto Italiano di Tecnologia and Politecnico di Milano*

C6_05 invited

A Pocket Device for High-Throughput Optofluidic Holographic Microscopy

M. Paturzo, V. Bianco, B. Mandracchia, P. Ferraro - *CNR-ISASI, Pozzuoli*

10,30-11,00 Coffee Break

**11,00-13,00 Plenary Session
Symposium
FOTONICA 4.0**

13,00-14,15 Lunch Break