

FINAL PROGRAM

International Workshop

BIOPHOTONICS 2011

June 8-10, 2011

Parma, Italy

TOPICS

Optical Sensing

Optofluidics

Biomaterials

Nano-Biophotonics

Fiber Sensors

Microscopy and Imaging

Spectroscopy

Diagnostic and Therapeutic Applications

CONFERENCE CHAIRS

Stefano Selleri, University of Parma

Roberto Pini, IFAC-CNR Florence

**“Santa Elisabetta” Congress Center
Parma University Campus, Parma, Italy**

<http://biophotonics.tlc.unipr.it>

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BioPhotonics 2011

Parma, Italy

June 8-10, 2011

Santa Elisabetta Congress Center
Parma University Campus
Viale G. P. Usberti 93, Parma, Italy

<http://biophotonics.tlc.unipr.it>

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BioPhotonics 2011

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Conference Chairs

Stefano Selleri, *University of Parma (Italy)*

Roberto Pini, *IFAC-CNR Florence (Italy)*

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For information

<http://biophotonics.tlc.unipr.it>

biophotonics2011@tlc.unipr.it

Conference Venue

Santa Elisabetta Congress Center

Parma University Campus

Viale G. P. Usberti 93, Parma, Italy

+39 0521 905527

CHAIRMEN WELCOME

“Biophotonics is a multidisciplinary research area that utilizes light-based technologies, in medicine and life science. The vision behind biophotonics is to gain a full understanding of the origin and molecular mechanisms of diseases to either prevent them or, at least, diagnose them early and precisely, followed by a treatment which is specifically adapted to individual needs.”
(by “Lighting the way ahead”, Photonics21 Strategic Research Agenda, 2010)

From the very beginning of the International Workshop BioPhotonics 2011 organization, it has been clear that talking about biophotonics would have meant to gather scientists with many different experiences, competences and background to cover all different aspects of this new and emerging field. The workshop organizers, the University of Parma, the IEEE Photonics Society Italy Chapter and the IEEE Italy Section took up this ambitious challenge, and humbly worked to set up a meeting place where the most advanced achievements of research in biology, chemistry, photonics, physics, engineering could meet, interplay, be integrated and discussed.

Being at BioPhotonics 2011 is thus a unique opportunity to interact within a multidisciplinary and fertile forum of experts, where researchers and professionals exchange their specific knowledge and experiences.

The workshop will have three Plenary Sessions with keynote speakers from all over the world and ten further oral sessions plus a poster one. The main topics comprise Fiber-based Sensing Technologies, Sensing Platforms, Spectroscopy-Microscopy and Imaging Techniques, Optical Manipulation, Trapping and Ablation, Nano-Biophotonics and Materials, Optofluidic Platform, Diagnostic and Therapeutic Applications. More than twenty invited speakers will enrich the conference presenting the activity of important European and international research groups.

The participants will furthermore enjoy the city of Parma, placed in the so called food valley, famous for its ham and its cheese, and its main monuments, among them the Cathedral, a very fine example of Romanesque architecture, and the Baptistery, entirely built with rose-coloured marble from Verona, by the architect and sculptor Benedetto Antelami, between the XII and XIII century.

We are confident that between abstracts, technical sessions, ham and cheese and city tours, all participants will contribute to lead a very rewarding workshop. Have a great time in Parma at BioPhotonics 2011!

Stefano Selleri

Roberto Pini

Workshop Sessions

8:15 – 8:45 Registration

8:45 – 9:00 Opening

We1 – Plenary Session

9:00 – 10:30 Room: "Auditorium"

9:00 – 9:30 We1.1 (Invited paper)

"Raman spectroscopy – An essential tool for biophotonics"

J. Popp^{1,2}, B. Dietzek^{1,2}, M. Schmitt¹, P. Rösch¹, R. Möller², C. Krafft²

¹*Institute of Physical Chemistry, Friedrich-Schiller University Jena, Germany*

²*Institute of Photonic Technology, Jena, Germany*

9:30 – 10:00 We1.2 (Invited paper)

"New horizons in biosensing using novel optical fibre-based sensing architectures"

T. M. Monro

Institute for Photonics & Advanced Sensing (IPAS), The University of Adelaide, Adelaide, Australia

10:00 – 10:30 We1.3 (Invited paper)

"Nanobiophotonics: using the nanophotonic toolbox to manipulate biological fluorophores"

C. Blum¹, N. Zijlstra¹, Y. Cesa¹, J. M. van den Broek², A. P. Mosk², W. L. Vos², V. Subramaniam¹

¹*Nanobiophysics, MESA+ Institute for Nanotechnology & MIRA Institute, University of Twente, Enschede, The Netherlands*

²*Complex Photonic Systems, MESA+ Institute for Nanotechnology, University of Twente, Enschede, The Netherlands*

10:30 – 10:50 Coffee Break

We2 – Fiber-based Sensing Technologies

10:50 – 12:55 Room: "Auditorium"

10:50 – 11:15 We2. 1 (Invited paper)

"Advances in all-optical sensors for biomedical monitoring"

S. O'Keefe, K. Bremer, U. Timm, D. McCarthy, G. Leen, E. Lewis

Optical Fibre Sensors Research Centre, University of Limerick, Ireland

11:15 – 11:30 We2.2

"Long period grating-based fiber optic sensor for label-free DNA detection"

M. Sozzi¹, E. Coscelli¹, F. Poli¹, A. Cucinotta¹, R. Corradini², R. Marchelli², M. Konstantaki³, S. Pissadak³, S. Selleri¹

¹*Information Engineering Department, University of Parma, Parma, Italy*

²*Organic and Industrial Chemistry Department, University of Parma, Parma, Italy*

³*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece*

11:30 – 11:45 We2.3

“Enhanced durability FBG-based sensor pads for biomedical applications as human–machine interface surfaces”

G. T. Kanellos¹, D. Tsiokos¹, N. Pleros¹, P. Childs², S. Pissadakis², G. Papaioannou³

¹*Informatics and telematics Institute, Centre for Research and Technology Hellas*

²*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece*

³*S.S.F. Safe Smart Fabric Adaptable Surface Ltd, Nicosia, Cyprus*

11:45 – 12:00 We2.4

“Double tilted fiber Bragg grating for label-free DNA detection”

A. Candiani¹, P. Childs², S. Pissadakis², M. Sozzi¹, E. Coscelli¹, F. Poli¹, A. Cucinotta¹, S. Selleri¹, R. Veneziano³, R. Corradini³, R. Marchelli³

¹*Information Engineering Department, University of Parma, Parma, Italy*

²*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece*

³*Organic and Industrial Chemistry Department, University of Parma, Parma, Italy*

12:00 – 12:15 We2.5

“Long period optical fibre grating outcladding overlaid sensors: a versatile photonic platform for health and bio applications”

S. Pissadakis¹, D. Anglos^{1,2}, A. Klini^{1,2}, M. Konstantaki¹

¹*Inst. of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece*

²*Department of Chemistry, University of Crete, Heraklion 71103 Crete, Greece*

12:15 – 12:30 We2.6

“Novel fiber tip sensor potentially suitable for gastric pH measurement”

F. Baldini, G. Ghini, A. Giannetti, F. Senesi, C. Trono

IFAC-CNR, Sesto Fiorentino (FI), Italy

12:30 – 12:55 We2.7 (Invited paper)

“Glass-clad crystal fibers based functional optical coherence tomography”

T. Ho¹, S. Huang¹, P. S. Yeh², J. Tjiu³, N. Cheng¹, C. Chang¹, K. Hsu¹, D. Jheng¹, Y. Wang¹, Y. Lin¹, C. Lai¹, P. Huang¹

¹*Graduate Institute of Photonics and Optoelectronics, National Taiwan University, Taipei, Taiwan, R.O.C.*

²*Department of Electronic Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, R.O.C.*

³*Department of Dermatology, National Taiwan University Hospital, Taipei, Taiwan, R.O.C.*

12:55 – 14:30 Lunch

We3 – Nano-biophotonics and Materials

14:30 – 16:35 Room: “Auditorium”

14:30 – 14:55 We3.1 (Invited Paper)

“Novel probes for high resolution fluorescence imaging on live cells”

G. Signore¹, B. Storti^{1,2}, G. Abbandonato^{1,2}, S. Abbruzzetti³, C. Viappiani³, R. Bizzarri²

¹*IIT@NEST, Center for Nanotechnology Innovation, Pisa, Italy*

²*NEST, Scuola Normale Superiore and Institute of Nanoscience - CNR, Pisa, Italy*

³*Department of Physics, University of Parma, Parma, Italy*

14:55 – 15:10 We3.2

“Fabrication, optical stability and photothermal conversion from silanized gold nanorods as multifunctional transducers of near infrared light”

F. Ratto¹, P. Matteini¹, F. Rossi¹, R. Pini¹, S. Centi², F. Fusi²

¹*Institute of Applied Physics “Nello Carrara”, National Research Council, Sesto Fiorentino (FI), Italy*

²*Dipartimento di Fisiopatologia Clinica, University of Florence, Florence, Italy*

15:10 – 15:25 We3.3

“Alumina-embedded Au nanowires for SERS sensing”

L. Rosa¹, R. Buividas¹, S. Juodkazis¹, T. Kondo², H. Masuda²

¹*Centre for Micro-Photonics, Swinburne University of Technology, Hawthorn, Australia*

²*Kanagawa Academy of Science and Technology, Sagami-hara, Kanagawa, Japan*

15:25 – 15:40 We3.4

“Hybrid laser-activatable gold nanorods-based hydrogels for photothermal applications”

P. Matteini¹, F. Ratto¹, F. Rossi¹, R. Pini¹, B. Tiribilli², G. Giambastiani³, L. Luconi³, L. Dei⁴, G. Caminati⁴

¹*Institute of Applied Physics “Nello Carrara”, National Research Council, Sesto Fiorentino (FI), Italy*

²*Istituto dei Sistemi Complessi, National Research Council, Sesto Fiorentino (FI), Italy*

³*Istituto di Chimica dei Composti Organometallici, National Research Council, Sesto Fiorentino (FI), Italy*

⁴*Dipartimento di Chimica e Consorzio CSGI, Università di Firenze, Sesto Fiorentino (Florence), Italy*

15:40 – 15:55 We3.5

“Using Graphene as a Fluorescence Quencher for Studying Biomolecular Interactions”

A. Kasry^{1,2}, A. Afzali¹, B. Menges³, G. Tulevski²

¹*IBM T. J. Watson Research Center, Yorktown Heights, NY, USA*

²*Egypt Nanotechnology Center (EGNC), Giza, Egypt*

³*Max Planck Institute for Polymer Research, Mainz, Germany*

15:55 – 16:10 We3.6

“Localized photocatalysis by Au-Titania plasmonics”

L. Rosa¹, S. Juodkazis¹, E. Kowalska²

¹*Centre for Micro-Photonics, Swinburne University of Technology, Hawthorn, Australia*

²*Friedrich-Alexander University of Erlangen-Nuremberg, Erlangen, Germany*

16:10 – 16:35 We 3.7 (Invited paper)

“Fabrication and characterization of nanoscale structures for membrane sensing”

K. Kumar¹, L. Isa¹, A. Dahlin¹, T. Sannomiya¹, E. Reimhult²

¹*ETH Zurich, Zurich, Switzerland*

²*University of Natural Resources and Life Sciences (BOKU), Department of Nanobiotechnology, Wien, Austria*

We4 – Optofluidic Platforms

14:30 – 16:40 Room: “Aula Master”

14:30 – 14:55 We4.1 (Invited paper)

“Femtosecond laser micromachining for the realization of fully integrated optofluidic devices”

R. Osellame, R. M. Vazquez, A. Crespi, G. Cerullo, R. Ramponi

Politecnico di Milano, Milan, Italy

14:55 – 15:10 We4.2

“Automated Sample Processing for Optical Microcytometry”

J. Memisevic, L. C. Shriver-Lake, P. B. Howell Jr., J. P. Golden, N. Hashemi, K. B. Jackson, F. S. Ligler
Center for Bio/Molecular Science and Engineering, US Naval Research Laboratory, Washington DC, USA

15:10 – 15:25 We4.3

“Modelling biochemical interactions in a microfluidic assisted porous silicon microarray for optical sensing”

E. Orabona, I. Rea, I. Rendina, L. De Stefano

Institute for Microelectronics and Microsystems - Unit of Naples, Research National Council, Naples, Italy

15:25 – 15:40 We4.4

“Single cell trapping and stretching in a femtosecond laser fabricated optofluidic chip”

L. Ferrara¹, F. Bragheri¹, P. Minzioni¹, I. Cristiani¹, K. C. Vishnubhatla², N. Bellini³, R. Ramponi³, R. Osellame³

¹*CNISM and Electronics Department, University of Pavia, Pavia, Italy*

²*Center for Nanoscience and Technology, IIT@POLIMI, Milan, Italy*

³*IFN-CNR and Physics Department, Politecnico di Milano, Milan, Italy*

15:40 – 15:55 We4.5

“Silicon micromachined photonic crystal integrated in an opto-fluidic microsystem”

S. Surdo¹, L. M. Strambini¹, G. Barillaro¹, F. Carpignano², S. Merlo²

¹*Department of Information Engineering, University of Pisa, Pisa, Italy*

²*Department of Electronics, University of Pavia, Pavia, Italy*

15:55 – 16:10 We4.6

“Dispensing and manipulation of nano-drops by Pyro-EHD (Electro-Hydro-Dynamic) effect”

S. Coppola¹, V. Vespini¹, S. Grilli¹, M. Paturzo¹, P. Ferraro¹, L. De Petrocellis², P. Orlando³

¹*National Institute of Optics (INO-CNR), Pozzuoli (NA), Italy*

²*Istituto di Cibernetica (ICIB-CNR), Pozzuoli (NA), Italy*

³*Institute of Protein Biochemistry (IBP-CNR), Naples, Italy*

16:10 – 16:25 We4.7

“Point-of-care parvovirus B19 detection and genotyping based on microfluidics and chemiluminescence 'contact' imaging detection”

L. S. Dolci¹, M. Mirasoli¹, F. Bonvicini², A. Buragina¹, F. Di Furio², M. Guardigli¹, A. Roda¹

¹*Department of Pharmaceutical Science, University of Bologna, Bologna, Italy*

²*Department of Haematology and Oncological Sciences “L. e A. Seragnoli”, Microbiology Section, University of Bologna, Bologna, Italy*

16:25 – 16:40 We4.8

“The Channel Array Interrogation (CAI) instrument for C-reactive protein analysis”

A. Giannetti¹, C. Trono¹, F. Baldini¹, L. Bolzoni², G. Porro²

¹*IFAC-CNR, Sesto Fiorentino (FI), Italy*

²*Datamed S.r.L., Rodano (MI), Italy*

17:00 Parma Tour

A bus, leaving from the S. Elisabetta Congress Center at 17:00, will take the participants downtown to visit the most important monuments of Parma.

Th1 – Plenary Session

9:00 – 10:30 Room: "Auditorium"

9.00 – 9:30 Th1.1 (Invited paper)

"Optoacoustic imaging and sensing utilizing functionalized plasmonic nanoparticles as molecular probes"

A. A. Oraevsky

TomoWave Laboratories, Houston, TX, USA

9:30 – 10:00 Th1.2 (Invited paper)

"Can Optical Coherence Tomography detect cancer in solid tissues?"

D. D. Sampson^{1,2}, R. A. McLaughlin¹, B. F. Kennedy¹, D. Lorenser¹

¹*Optical+Biomedical Engineering Laboratory, School of Electrical, Electronic & Computer Engineering, The University of Western Australia, Australia*

²*Centre for Microscopy, Characterisation & Analysis, The University of Western Australia, Australia*

10:00 – 10:30 Th1.3 (Invited paper)

"In vivo non linear morphofunctional imaging of tissues"

F. S. Pavone

University of Florence and European Laboratory for Non-Linear Spectroscopy (LENs), Sesto Fiorentino (FI), Italy

10:30 – 10:50 Coffee Break

Th2 – Sensing Platforms

10:50 – 13:10 Room: "Aula Master"

10:50 – 11:15 Th2.1 (Invited paper)

"Photonic crystal surface waves for optical biosensing"

V. N. Konopsky, E. V. Alieva

Institute of Spectroscopy, Russian Academy of Sciences, Troitsk, Moscow region, Russia

11:15 – 11:30 Th2.2

"Magnetophotonic crystals with metalized surfaces: an approach to optical biosensors"

A. Baryshev, K. Kawasaki, M. Inoue

Toyohashi University of Technology, Tenpaku, Toyohashi, Aichi, Japan

11:30 – 11:45 Th2.3

"Fluorescence detection of fibrillar proteins on silicon microstructures"

S. Merlo¹, F. Carpignano¹, G. Silva¹, G. Barillaro², S. Surdo², L. M. Strambini², G. Mazzini³, S. Raimondi⁴, M. Stoppini⁴

¹*Department of Electronics, University of Pavia, Pavia, Italy*

²*Department of Information Engineering, University of Pisa, Pisa, Italy*

³*IGM-CNR, Pavia, Italy and dept. of Animal Biology, University of Pavia, Pavia, Italy*

⁴*Department of Biochemistry, University of Pavia, Pavia, Italy*

11:45 – 12:00 Th2.4

“Real-time antibody-antigen detection by means of Bloch surface waves on silicon-based multilayers”

P. Rivolo¹, G. Digregorio¹, F. Frascella¹, P. Mandracci¹, M. Ballarini¹, F. Giorgis¹, E. Descrovi¹, L. Dominici², F. Michelotti²

¹*Department of Materials Science and Chemical Engineering, Politecnico di Torino, Turin, Italy*

²*Department of basic and applied Sciences for Engineering, SAPIENZA University of Rome, Rome, Italy*

12:00 – 12:15 Th2.5

“Investigation of protein aggregation dynamics using a Bloch surface wave sensor”

V. Paeder, S. Santi, L. Hvozdar, V. Musi, H. P. Herzig

Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Microengineering (IMT), Optics & Photonics Technology Laboratory (OPT), Neuchâtel, Switzerland

12:15 – 12:30 Th2.6

“Integrated lasers for polymer based lab-on-a-chip systems”

C. Vannahme¹, M. Schelb¹, S. Klinkhammer², U. Lemmer², T. Mappes¹

¹*Institute of Microstructure Technology, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany*

²*Light Technology Institute, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany*

12:30 – 12:45 Th2.7

“Terahertz microsensor for biomedical applications”

M. Perenzoni, D. Perenzoni, D. Stoppa, V. Mulloni, F. Solazzi, G. Resta, B. Margesin

Center for Materials and Microsystems, Bruno Kessler Foundation, Povo (TN), Italy

12:45 – 13:10 Th2.8 (Invited paper)

“Biosensing with plasmonic metamaterials”

A. V. Zayats

Nano-optics and Near-field Spectroscopy Laboratory, Department of Physics, King’s College London, Strand, London, United Kingdom

Th3 – Spectroscopy and Imaging Techniques

10:50 – 13:10 Room: “Auditorium”

10:50 – 11:15 Th3.1 (Invited paper)

“Bio-chemiluminescence-based biosensors for point-of-care applications”

A. Roda

Department of Pharmaceutical Sciences, University of Bologna, Bologna, Italy

11:15 – 11:30 Th3.2

“Raman microspectroscopy is a tool to identify the metastatic ability of breast tumors”

C. Nieva^{1,2}, N. Santana¹, M. Marro², S. Rao², D. Petrov^{2,3}, A. Sierra¹

¹*IDIBELL-Institut d’Investigació Biomèdica de Bellvitge, L’Hospitalet de Llobregat, Barcelona, Spain*

²*ICFO-Institut de Ciències Fotòniques, parc mediterrani de tecnologia, Castelldefels (Barcelona), Spain*

³*ICREA-Institució Catalana de Recerca i Estudis Avançats, Barcelona, Spain*

11:30 – 11:45 Th3.3

“A spread spectrum approach to diffusive optical spectroscopy and imaging”

L. Ascari¹, M. Giacalone², S. Iannaccone¹, G. Berrettini¹, L. Potì²

¹Centre of Excellence for Information, Communication, and Perception Engineering (CEIICP), Scuola Superiore Sant'Anna, Pisa, Italy.

²Photonic Networks National Laboratory, CNIT, Pisa, Italy

11:45 – 12:00 Th3.4

“Extending the applicability of Raman microspectroscopy in biomedicine using statistical analysis and plasmonic effects”

M. Marro¹, S. Raj¹, S. Rao¹, D. Petrov^{1,2}

¹ICFO – The Institute of Photonic Sciences, Castelldefels (Barcelona), Spain

²ICREA - Catalan Institution for Research and Advanced Studies, Barcelona, Spain

12:00 – 12:25 Th3.5 (Invited paper)

“Time domain diffuse optical imaging and spectroscopy of breast”

P. Taroni¹, A. Pifferi¹, G. Quarto¹, A. Torricelli¹, R. Cubeddu¹, L. Spinelli²

¹Department of Physics, Politecnico di Milano, Milan, Italy

²Institute for Photonics and Nanotechnologies, National Research Council, Milan, Italy

12:25 – 12:40 Th3.6

“Breast imaging with the Twente photoacoustic mammoscope”

D. Piras¹, S. Manohar¹, W. Xia¹, M. Heijblom¹, E. Ten Tije¹, J. Van Hespren¹, F. van den Engh², J. Klaase², T. van Leeuwen¹, W. Steenbergen¹

¹Biomedical Photonic Imaging Group, MIRA Institute, TNW Faculty, University of Twente, Enschede, The Netherlands

²Center for Breast Care, Medisch Spectrum Twente hospital, Enschede, The Netherlands

12:40 – 12:55 Th3.7

“Ultrasensitive surface plasmon resonance imaging method for detection of genomic disorders in unamplified human genomic DNA”

R. D'Agata¹, G. Spoto¹, L. M. Zanolì², G. Breveglieri³, M. Borgatti³, R. Gambari³

¹Department of Chemistry, University of Catania, Catania, Italy

²Department of Chemistry, Scuola Superiore di Catania, c/o Department of Chemistry, University of Catania, Catania, Italy

³Biotechnology Center, University of Ferrara, Ferrara, Italy

12:55 – 13:10 Th3.8

“Studying mammalian development with optical coherence tomography”

I. V. Larina¹, M. E. Dickinson¹, K. V. Larin²

¹Department Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, TX, USA

²Department of Biomedical Engineering, University of Houston, Houston, TX, USA

13:10 – 14:30 Lunch

Th4 – Plasmonic Platforms

14:30 – 16:35 Room: "Aula Master"

14:30 – 14:55 Th4.1 (Invited paper)

"Biosensors based on surface plasmon resonance: present and future"

J. Homola

Institute of Photonics and Electronics, Prague, Czech Republic

14:55 – 15:10 Th4.2

"Multiplexed analysis of mycotoxins with imaging surface plasmon resonance spectroscopy"

D. Dorokhin¹, M. C.R. Franssen¹, H. Zuilhof¹, M. W. F. Nielen¹, W. Haasnoot²

¹Laboratory of Organic Chemistry, Wageningen University, Wageningen, The Netherlands

²RIKILT Institute of Food Safety, Wageningen, The Netherlands

15:10 – 15:25 Th4.3

"Surface plasmon resonance imaging for affinity-based sensing: an analytical approach"

S. Scarano, M. L. Ermini, M. Mascini, M. Minunni

Department of Chemistry "Ugo Schiff", University of Florence, Sesto Fiorentino (FI), Italy

15:25 – 15:40 Th4.4

"Nanostructured substrates for surface plasmon resonance sensors"

A. Duval¹, A. Dhawan², M. Nakkach¹, A. Bellemain¹, J. Moreau¹, T. Vo-Dinh², M. Canva¹

¹Laboratoire Charles Fabry de l'Institut d'Optique (LFCFIO), Institut d'Optique Graduate School (IOGS), Univ. Paris Sud (UPS), CNRS Campus Polytechnique, Palaiseau, France

²Fitzpatrick Institute for Photonics, Duke University, Durham, NC, USA

15:40 – 15:55 Th4.5

"Magneto-plasmonic effects for novel optical sensors application"

M. G. Manera¹, G. Montagna¹, R. Rella¹, A. Garcia Martin², G. Armelles², A. Cebollada¹, J. M. Garcia-Martin², M. U. Gonzales², E. Ferreira-Vila²

¹IMM-CNR Lecce, Lecce, Italy

²Madrid Microelectronics Institute, IMM-CSIC, Isaac Newton, Tres Cantos, Madrid, Spain

15:55 – 16:10 Th4.6

"Plasmonic platforms for bio-detection devices"

A. Sonato^{1,2}, G. Ruffato^{2,3,4}, M. Natali⁵, G. Zacco^{2,3,4}, M. Morpurgo⁶, D. Silvestri⁶, M. Dettin⁷, F. Romanato^{2,3,4}

¹Department of Chemical Sciences, University of Padova, Padova, Italy

²LaNN Laboratory for Nanofabrication of Nanodevices, Padova, Italy

³Department of Physics, University of Padova, Padova, Italy

⁴IOM-CNR, Area Science Park, Basovizza, Italy

⁵Institute of Inorganic Chemistry and Surfaces (CNR-ICIS), Padova, Italy

⁶Department of Pharmaceutical Sciences, University of Padova, Padova, Italy

⁷Department of Chemical Processes Engineering, University of Padova, Padova, Italy

16:10 – 16:35 Th4.7 (Invited paper)

"Sensing with plasmonic nanostructures"

J. R. Krenn

Institute of Physics. University of Graz, Graz, Austria

Th5 – Microscopy and Imaging Techniques 1

14:30 – 16:20 Room: "Auditorium"

14:30 – 14:55 Th5.1 (Invited paper)

"Evaluation of polyglutamine aggregate structure in vitro and in vivo, new avenues for CARS microscopy"

N. M. Perney¹, L. Braddick¹, M. Jurna², H. Offerhaus², L. Serpell³, E. Blanch⁴, L. Holden-Dye⁵, B. Brocklesby¹, T. Melvin¹

¹Optoelectronics Research Centre, University of Southampton, Highfield, Southampton, UK

²Optical Sciences Group, MESA+ Institute for Nanotechnology, University of Twente, The Netherlands

³School of Life Sciences, University of Sussex, Falmer, Brighton, UK

⁴Faculty of Life Sciences, Manchester Interdisciplinary Biocentre, The University of Manchester, Manchester, U.K.

⁵School of Biological Sciences, University of Southampton, Highfield, Southampton, UK

14:55 – 15:10 Th5.2

"Digital holographic self-referencing quantitative phase microscopy"

M. Paturzo¹, D. Balduzzi², A. Galli², L. Miccio¹, S. Grilli¹, A. Finizio¹, P. Ferraro¹, G. Coppola³, G. Di Caprio³, M. Gioffré³, R. Puglisi²,

¹National Institute of Optics (INO-CNR), Pozzuoli (NA), Italy

²Istituto Sperimentale Italiano "Lazzaro Spallanzani", Località La Quercia, Rivolta d'Adda (CR), Italy

³Institute for Microelectronics and Microsystems-CNR, Naples, Italy

15:10 – 15:25 Th5.3

"Spectrally controllable low noise continuum source for two photon excitation"

C. de Mauro¹, D. Alfieri¹, M. Arrigoni², D. Armstrong², F. S. Pavone³

¹Light4tech Firenze s.r.l., Scandicci (FI), Italy

²Coherent Inc., Santa Clara, CA, USA

³Department of Physics, University of Florence, Sesto Fiorentino, Italy

15:25 – 15:40 Th5.4

"Optical recording of action potential in T-tubular network"

L. Sacconi^{1,2}, J. Lotti¹, F. S. Pavone^{1,2}, R. Coppini³, E. Cerbai^{3,4}, C. Ferrantini⁵, C. Tesi⁵, C. Poggesi⁵, P. Yan⁶, L. M. Loew⁶

¹European Laboratory for Nonlinear Spectroscopy (LENs), University of Florence, Sesto Fiorentino (FI), Italy

²Department of Physics, University of Florence, Italy

³Department of Pharmacology, University of Florence, Italy

⁴Interuniversity Center of Molecular Medicine and Applied Biophysics (CIMMBA), University of Florence, Italy

⁵Department of Physiology, University of Florence, Italy

⁶Center for Cell Analysis and Modeling (CCAM), University of Connecticut, Health Center, Farmington, CT, USA

15:40 – 15:55 Th5.5

"Simultaneous multiplane imaging in digital holographic microscopy"

M. Paturzo, A. Finizio, P. Ferraro

National Institute of Optics (INO-CNR), Pozzuoli (NA), Italy

15:55 – 16:20 Th5.6 (Invited paper)

"Applying biophotonics in molecular medicine"

F. Chuang, D. Matthews

NSF Center for Biophotonics Science & Technology, University of California, Davis, CA, USA

16:35 Coffee Break

Coffee break will be held during poster session.

Th6 – Poster Session

16:35 – 18:00

Th6.1

“Effect of water absorption on the stability of a polymer based Young’s interferometric sensor”

M. Wang¹, J. Hiltunen², S. Uusitalo², L. Hakalahti², R. Myllylä¹

¹*Optoelectronics and Measurement Techniques Laboratory, University of Oulu, Oulu, Finland*

²*VTT Technical Research Center of Finland, Oulu, Finland*

Th6.2

“Microstructured optical fibre Bragg grating modulator employing an infiltrated ferrofluid”

A. Candiani^{1,2}, M. Konstantaki², S. Pissadakis², C. Sterner³, W. Margulis³

¹*Information Engineering Department, University of Parma, Parma, Italy*

²*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece*

³*Department of Fiber Photonics, Acreo AB, Stockholm, Sweden*

Th6.3

“Long range surface plasmon-coupled fluorescence emission for biosensor application”

K. Toma, J. Dostalek, W. Knoll

AIT Austrian Institute of Technology, Wien, Austria

Th6.4

“Plasmonic biosensor schemes with thermo-responsive hydrogel binding matrix”

M. Toma¹, A. Mateescu², U. Jonas², W. Knoll¹, J. Dostalek¹

¹*AIT Austrian Institute of Technology, Wien, Austria*

²*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece*

Th6.5

“Comparative study for SPR biosensors based gold and silver colloidal nanoparticles”

M. Lismont, L. Dreesen

Laboratory of Biophotonics, University of Liège, Liège, Belgium

Th6.6

“A localized surface plasmon sensor for early cancer detection”

F. Rohde, R. Porcar

COSINGO, Imagine Optic Spain SL, Castelldefels (Barcelona), Spain

Th6.7

“Surface nanostructuring for surface plasmon resonance imaging”

M. L. Ermini, S. Scarano, M. Minunni

Department of Chemistry “Ugo Schiff”, University of Florence, Sesto Fiorentino (FI), Italy

Th6.9

“Droplet-based microfluidics for DNA analysis”

L. M. Zanolì¹, M. Licciardello², G. Spoto², A. Calabretta³, C. Lantano³, R. Corradini³, R. Marchelli³

¹*Department of Chemistry, Scuola Superiore di Catania, c/o Department of Chemistry, University of Catania, Catania, Italy*

²*Department of Chemistry, University of Catania, Catania, Italy*

³*Organic and Industrial Chemistry Department, University of Parma, Parma, Italy*

Th6.10

“Principal component analysis of data from laser scanning flow cytometry”

A. Palucci¹, V. Spizzichino¹, F. Angelini²

¹*UTAPRAD-DIM ENEA Frascati Research Center, Frascati (RM), Italy*

²*ISAC-CNR, Rome, Italy*

Th6.11

“Thermal embedding of gold islands in glass: morphology and in situ optical measurements”

T. Karakouz¹, A. B. Tesler¹, A. Vaskevich¹, I. Rubinstein¹, T. Sannomiya²

¹*Department of Materials & Interfaces, Weizmann Institute of Science, Rehovot, Israel*

²*Terabase Inc., Okazaki National Institute of Natural Science, Japan*

Th6.13

“Blue and red upconverted emission from fluoride crystal nanoparticles”

A. Toncelli¹, B. Ahmadi²

¹*Institute of Nanoscience NEST-CNR, Department of Physics, University of Pisa, Pisa, Italy*

²*Department of Physics, University of Pisa, Pisa, Italy*

Th6.14

“Fabrication of three-dimensional conducting nanostructures by nonlinear lithography”

K. Terzaki^{1,2}, A. Gaidukeviciute¹, C. Reinhardt¹, C. Fotakis^{1,3}, M. Vamvakaki^{1,2}, M. Farsari¹

¹*Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece*

²*Department of Materials Science and Technology, University of Crete, Crete, Greece*

³*Department of Physics, University of Crete, Crete, Greece*

Th6.15

“Micro-Raman spectroscopy on human mammary epithelial cells irradiated by different doses of X-rays”

R. Risi¹, L. Manti¹, G. Perna², M. Lasalvia², V. Capozzi², M. Lepore³

¹*Department of Physical Science, University of Naples “Federico II”, Naples, Italy*

²*Department of Biomedical Science, University of Foggia, Foggia, Italy*

³*Dipartimento di Medicina Sperimentale, Seconda Università di Napoli, Naples, Italy*

Th6.16

“Determination of glucose content by means of a visible micro-Raman spectroscopy and interval partial least square multivariate analysis”

M. Lepore¹, M. Portaccio¹, B. Della Ventura¹, L. Mita¹, D. G. Mita¹, C. Camerlingo², I. Delfino³

¹*Dipartimento di Medicina Sperimentale, Seconda Università di Napoli, Naples, Italy*

²*ICIB-CNR Istituto di Cibernetica, Pozzuoli (NA), Italy*

³*Biophysics and Nanoscience Centre, CNISM, Università della Tuscia, Viterbo, Italy*

Th6.17

“New highly efficient switching fluorescent probes for DNA detection”

A. Manicardi, A. Ghidini, T. Tedeschi, A. Tonelli, S. Sforza, R. Corradini, R. Marchelli
Organic and Industrial Chemistry Department, University of Parma, Parma, Italy

Th6.18

“Spectroscopic techniques in the investigation of cell polarization and migration”

B. Bisel, F. S. Pavone

European Laboratory for Non-Linear Spectroscopy (LENS), University of Florence, Sesto Fiorentino (FI), Italy

Th6.19

“In-vivo non-linear imaging of collagen before and after laser micro-ablative fractional resurfacing treatment”

R. Cicchi¹, D. Kapsokalyvas¹, F. S. Pavone¹, M. Troiano², P. Campolmi², C. Morini², T. Lotti²

¹*European Laboratory for Non-Linear Spectroscopy (LENS), University of Florence, Sesto Fiorentino (FI), Italy*

²*Interuniversity Center for Biological and Psychosomatic Dermatology (CIDEBIP) and Department of Dermatological Sciences, Florence, Italy*

Th6.20

“Multispot multiphoton microscope system for high speed biological imaging”

D. Alfieri¹, C. de Mauro¹, L. Sacconi², A. L. Allegra Mascaro², F. S. Pavone²

¹*Light4tech Firenze s.r.l., Scandicci (FI), Italy*

²*Department of Physics, University of Florence, Sesto Fiorentino (FI), Italy*

Th6.21

“Combined optical trapping and nanometer-precision localization for the single-molecule study of DNA-binding proteins”

C. Mónico, G. Belcastro, M. Capitanio, F. Vanzi, F. S. Pavone

European Laboratory for Non-Linear Spectroscopy (LENS), University of Florence, Sesto Fiorentino (FI), Italy

Th6.22

“Single particle tracking of amyloid oligomers on the plasma membrane of living cells”

M. Calamai, F. S. Pavone

European Laboratory for Non-Linear Spectroscopy (LENS), University of Florence, Sesto Fiorentino (FI), Italy

Th6.23

“Optical sensor for extracorporeal blood flow measurement”

M. Norgia¹, A. Pesatori¹, L. Rovati²

¹*Department of Electronics and Information, Politecnico di Milano, Milan, Italy*

²*Information Engineering Department, University of Modena and Reggio Emilia, Modena, Italy*

Th6.24

“Self-mixing interferometer for direct vibration measurement on human skin”

M. Norgia¹, A. Pesatori¹, I. Milesi², R. Dellacà²

¹*Department of Electronics and Information, Politecnico di Milano, Milan, Italy*

²*Department of Bioengineering, Politecnico di Milano, Milan, Italy*

Th6.26

“Fiberoptic heart rate sensor for integration into personal protective equipment”

J. Witt¹, K. Krebber¹, J. Demuth², L. Šašek²

¹*Federal Institute for Materials Research and Testing, Berlin, Germany*

²*Safibra, s.r.o., Ricany, Czech Republic*

Th6.27

“A portable bioluminescence engineered cell-based biosensor for detection of pollutants released from electronic-waste (e-waste)”

L. Cevenini¹, E. Michelini^{1,2}, L. Mezzanotte¹, A. Roda^{1,2}

¹*Department of Pharmaceutical Sciences, University of Bologna, Bologna, Italy*

²*INBB Interuniversity Consortium of Structural and Systems Biology, Rome, Italy*

Th6.28

“Path-length-resolved forced-diffusive particle dynamics in Fourier-domain optical coherence tomography”

K. Kalkman¹, T. T. van Leeuwen¹, R. Sprik²

¹*Biomedical Engineering & Physics, Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands*

²*van der Waals-Zeeman Institute, Institute of Physics, University of Amsterdam, Amsterdam, The Netherlands*

Th6.29

“Development and confocal imaging of ZnO nanoparticles as a new photosensitizer for the diagnostic and treatment of cancer”

S. Firdous

Biophotonics Lab., National Institute of Laser and Optronics, Nilore, Islamabad, Pakistan.

Th6.31

“Detection of biomolecules using light scattering”

C. Morasso¹, F. Gramatica¹, T. Bellini², D. Prosperi³

¹*Biophysics and Nano-medicine Lab, Fondazione Don Carlo Gnocchi ONLUS, Milan, Italy*

²*Department of Chemistry, Biochemistry and Biotechnologies for Medical Sciences, University of Milan, Milan, Italy*

³*Department of Biotechnologies and Biosciences, University of Milano-Bicocca, Milan, Italy*

19:00 Social Dinner

BioPhotonics 2011 Social Dinner will be held at ALMA international educational and training centre for Italian cuisine in Colorno. A bus, leaving from the S. Elisabetta Congress Center at 18:00, will take the participants to the dinner.

Friday June 10th, 2011

Fr1 – Plenary Session

9:00 – 10:30 Room: “Auditorium”

9:00 – 9:30 Fr1.1 (Invited paper)

“Shaping the future of Biophotonics: the application of novel light fields”

K. Dholakia¹, J. Baumgartl¹, X. Tsampoula¹, M. Mazilu¹, F. Gunn-Moore², T. Cizmar³

¹SUPA, School of Physics and Astronomy, University of St Andrews, St Andrews, UK

²SUPA, School of Biology, University of St Andrews, St Andrews, UK

³SUPA, School of Medicine, University of St Andrews, St Andrews, UK

9:30 – 10:00 Fr1.2 (Invited paper)

“Surface plasmon and guided optical wave enhanced fluorescence”

Yi Wang, J. Dostalek, W. Knoll

AIT Austrian Institute of Technology, Wien, Austria

10:00 – 10:30 Fr1.3 (Invited paper)

“Diagnostics and Treatment of Tumours using Laser Techniques”

K. Svanberg

Department of Oncology, Lund University Hospital, Lund University, Lund, Sweden

Lund University Medical Laser Centre, Lund University, Lund, Sweden

10:30 – 10:50 Coffee Break

Fr2 – Microscopy and Imaging Techniques 2

10:50 – 12:40 Room: “Auditorium”

10:50 – 11:15 Fr2.1 (Invited paper)

“Characterization of biopsy samples with Optical Computed Tomography”

G. Zacharakis¹, G. Spiliopoulos¹, R. Favicchio¹, J. Ripoll¹, A. Kokolakis², K. Lasithiotakis², K. Krasagakis², E. Giannikaki², A. Toska²

¹Institute of Electronic Structure and Laser – Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece

²Department of Dermatology, University Hospital of Heraklion, Greece

11:15 – 11:30 Fr2.2

“Single molecule fluorescence resonance energy transfer scanning near-field optical microscopy”

S. K. Sekatskii

Laboratory of Physics of Living Matter, IPSB, BSP, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

11:30 – 11:45 Fr2.3

“Normalized autofluorescence imaging diagnostics via single color channel images processing”

A. Douplik^{1,2,4}, K. Krauss^{3,4}, R. Hohenstein^{1,4}, M. Schmidt^{1,4}, E. G. Hahn^{3,4}, M. Raithe^{3,4}, J. Mudter^{3,4}, M. Neurath^{3,4}

¹Chair of Photonic Technologies, Erlangen, Germany

²Erlangen Graduate School in Advanced Optical Technologies (SAOT), Erlangen, Germany

³Department of Medicine 1, Erlangen, Germany

⁴Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany

11:45 – 12:00 Fr2.4

“CMOS single-photon detectors for advance fluorescence sensing application”

M. Benetti¹, C. Pederzoli², D. Stoppa², M. Popleteeva¹, G. Dalla Betta¹, L. Pancheri², C. Collini², L. Lorenzelli², E. Morganti², L. Lunelli², L. Pasquardini²

¹Department of Information Engineering and Computer Science DISI, University of Trento, Povo (TN), Italy

²Foundation Bruno Kessler, Povo (TN), Italy

12:00 – 12:25 Fr2.5 (Invited paper)

“Bioimaging beyond the diffraction limit of light to study biological macromolecules: from far-field optical nanoscopy to high-precision localization methods”

A. Diaspro, P. Bianchini, F. Cella Zancchi, B. Harke, S. Galiani, Z. Lavagnino, M. Perrone, E. Ronzitti
IIT, Italian Institute of Technology, Genova, Italy

Department of Physics, University of Genova, Genova, Italy

IFOM-IEO, Milan, Italy

12:25 – 12:40 Fr2.6

“MEMS based dual-axis confocal fluorescence handheld microscope”

W. Piyawattanametha^{1,2}, M. J. Mandella³

¹National Electronics and Computer Technology Center, Klong Luang, Pathumthani, Thailand

²Faculty of Medicine, Chulalongkorn University, Pathumwan, Bangkok, Thailand

³Department of Pediatrics, Stanford University School of Medicine, Stanford, CA, USA

Fr3 – Optical Manipulation, Trapping and Ablation

10:50 – 12:35 Room: “Aula Master”

10:50 – 11:05 Fr3.1

“Temperature field of red blood cell exposed to infrared laser tweezers”

I. Krasnikov¹, A. Seteikin¹, I. Bernhardt²

¹Amur State University, Blagoveschensk, Russia

²Laboratory of Biophysics Saarland University, Saarbrücken, Germany

11:05 – 11:20 Fr3.2

“Optical fiber tweezers fabricated by two photon lithography for contactless cell manipulation”

C. Liberale¹, G. Cojoc¹, E. Di Fabrizio¹, F. Bragheri², L. Ferrara², P. Minzioni², I. Cristiani²

¹Italian Institute of Technology - IIT, Genova, Italy

²CNISM and Electronics Department, University of Pavia, Pavia, Italy

11:20 – 11:35 Fr3.3

“Optical classification of human embryonic stem cells”

N. M. B. Perney¹, P. Horak¹, T. Melvin¹, J. Hughes², N. A. Hanley²

¹Optoelectronics Research Centre, University of Southampton, Southampton, UK

²Endocrinology & Diabetes, University of Manchester, Manchester, UK

11:35 – 11:50 Fr3.4

“Trapping and manipulating micro-objects by Bessel beams obtained through home made polymeric microaxicons”

F. Merola¹, S. Coppola¹, V. Vespini¹, S. Grilli¹, P. Ferraro¹, D. Balduzzi², A. Galli², R. Puglisi²

¹National Institute of Optics (INO-CNR), Pozzuoli (NA), Italy

²Istituto Sperimentale Italiano “Lazzaro Spallanzani”, Località La Quercia, Rivolta d’Adda (CR), Italy

11:50 – 12:05 Fr3.5

“Use of scanning ion conductance microscopy to map elastic properties of cell membranes”

M. Pellegrino¹, P. Orsini¹, M. Pellegrini², E. Tognoni³, P. Baschieri³, F. Dinelli³, D. Petracchi³, C. Ascoli³

¹*Department of Physiology and Biochemistry, University of Pisa, Pisa, Italy*

²*Scuola Normale Superiore di Pisa, Pisa, Italy*

³*National Institute of Optics (INO-CNR), Pisa, Italy*

12:05 – 12:20 Fr3.6

“Laser axotomy on cerebellar climbing fibers”

A. L. Allegra Mascaro¹, P. Cesare², L. Sacconi¹, G. Grasselli², P. Strata², F. S. Pavone¹

¹*European Laboratory for Non-Linear Spectroscopy (LENs), University of Florence, Sesto Fiorentino (FI), Italy*

²*EBRI-Santa Lucia Foundation (IRCCS), Rome, Italy, and Department of Neuroscience and National Institute of Neuroscience, University of Turin, Turin, Italy*

12:20 – 12:35 Fr3.7

“Bone tissue ablation by femtosecond laser beam”

I. Ionita¹, M. Zamfirescu²

¹*Optics Department, University of Bucharest, Bucharest, Romania*

²*NILPRP National Institute for Laser, Plasma and Radiation Physics, Bucharest, Romania*

12:40 – 14:00 Lunch

Fr4 – Diagnostic and Therapeutic Applications

14:00 – 16:15 Room: “Auditorium”

14:00 – 14:25 Fr4.1 (Invited paper)

“Ultrashort pulse radiobiology with laser driven plasma accelerators”

A. Giulietti

National Institute of Optics (INO-CNR), Pisa, Italy

14:25 – 14:50 Fr4.2 (Invited paper)

“Non-intrusive diagnostic gas monitoring in human cavities”

S. Svanberg

Lund University, Lund, Sweden

14:50 – 15:05 Fr4.3

“Laser velocimeter for the measurement of eye movements”

G. Capelli, G. Giuliani

Department of Electronics, University of Pavia, Pavia, Italy

15:05 – 15:20 Fr4.4

“Experimental study on laser assisted vascular repair and anastomosis with ICG-loaded chitosan films”

F. Rossi¹, P. Matteini¹, F. Ratto¹, R. Pini¹, G. Esposito², A. Albanese², A. Puca², G. Maira², G. Rossi³

¹*Institute of Applied Physics “Nello Carrara”, National Research Council, Sesto Fiorentino (FI), Italy*

²*Institute of Neurosurgery, Università Cattolica del Sacro Cuore, Rome, Italy*

³*Dipartimento di Scienze Veterinarie, University of Camerino, Matelica (MC), Italy*

15:20 – 15:35 Fr4.5

“Photoactive calcium phosphate minerals for the treatment of the sensitive teeth”

E. Elmadani¹, A. Jha¹, T. Brown², W. Sibbett², C. Leburn², M. Duggal³, J. Toumba³

¹*Institute for Materials research, University of Leeds, Leeds, UK*

²*Physics and Astronomy, University of St. Andrews, St. Andrews, UK*

³*Paediatric Dentistry, Leeds Dental Institute, Leeds, UK*

15:35 – 15:50 Fr4.6

“Non-contact monitoring of the heart beat using optical laser diode vibrocardiography”

G. Capelli, C. Bollati, G. Giuliani

Department of Electronics, University of Pavia, Pavia, Italy

15:50 – 16:15 Fr4.7 (Invited paper)

“The role of optical tissue phantom in verification and validation of medical imaging devices”

J.-P. Bouchard, I. Noiseux, I. Veilleux, O. Mermut

National Optics Institute (INO), Québec, Canada

16:15 – 16:30 Closing Remarks

“SANTA ELISABETTA” CONGRESS CENTER

The “Santa Elisabetta” Congress Center is located within the Parma University Campus, in Viale G. P. Usberti 93, Parma.

To reach the Campus from downtown Parma or from the railway station, you can take the bus (line No. 7, 14 or 21, direction: “Università Sud”). Bus tickets are sold in tobacco shops (“Tabaccheria”) and in TEP offices. Tickets can be purchased also onboard, but at a higher price.

Once you arrive at the Campus, you have to get off at the last stop. The S. Elisabetta Conference center is at walking distance in front of the block of buildings hosting the Engineering Departments.

You can also reach the Campus by car, following directions to Langhirano. Participants coming by car should note that the Campus gates close at 19:00.



BIOPHOTONICS 2011 SOCIAL DINNER

The BioPhotonics 2011 social dinner will take place on Thursday, June 9th at the ALMA international educational and training centre for Italian cuisine in Colorno, near Parma.

ALMA educates chefs and sommelier from all around the world, forming professionals of Italian Cuisine with training programs at the highest level, executed by world’s leading teachers.



The dinner will be hosted in the magnificent Palazzo Ducale of Colorno, whose first stones were placed in the 14th century. The Palace reached a great splendour thanks to the cultivated and nice Barbara Sanseverino who, between the XVI and XVII century, made it the seat of a refined court life by gathering the paintings of Tiziano, Giulio Romano, Correggio, Mantegna and Raffaello.

A reserved bus is available for participants to reach Colorno. The bus will leave from the S. Elisabetta Congress Center at 18:00.

ALMA can be reached by car from Parma A1 highway exit, following directions to “Mantova” or by bus (bus n. 2 from Parma train station). *ALMA address: Piazza Garibaldi, 26 - 43052 Colorno (Parma).*

Program Overview

		Wednesday June 8	Thursday June 9	Friday June 10		
Morning	Registration					
	Opening					
	We1 – Plenary Session		Th1 – Plenary Session		Fr1 – Plenary Session	
	Coffee Break		Coffee Break		Coffee Break	
	We2 – Fiber-based sensing technologies		Th2 – Sensing Platforms	Th3 – Spectroscopy and Imaging Techniques	Fr2 – Microscopy and Imaging Techniques 2	Fr3 – Optical Manipulation, Trapping and Ablation
Lunch		Lunch		Lunch		
Afternoon	We3 – Nanobiophotonics and Materials	We4 – Optofluidic Platforms	Th4 – Plasmonic Platforms	Th5 – Microscopy and Imaging Techniques 1	Fr4 - Diagnostic and Therapeutic Applications	
	Parma Tour		Coffee Break		Closing Remarks	
			Th6 – Poster Session			
		Social Dinner				



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BIOPHOTONICS 2011

Parma, Italy
June 8-10, 2011

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