UNIVERSITY OF TRENTO

17 February 2018

15.00-16.00 Registration

16.00-16.20 Opening

16.20-18.00 Professional Development Lectures: From Academy to Industry

16.20-17.00 Maurizio Sbetti: *Careers for physicists in photonics-enabled industrial companies: a personal experience*
ADIGE S.P.A., BLM GROUP, Levico Terme, Italy

17.00-17.30 Mattia Mancinelli: *The line between Academy and Industry*
Research Programs, SM Optics s.r.l., Vimercate, Italy

17.30-17.50 Maddalena Bertolla: *Industry meets academic research: the challenge of sensing an interlacing yarn*
Department of Physics, University of Trento & Aquafil Spa, Arco, Italy

17.50-18.00 Discussions: Round Table

18.00-19.00 Welcome Reception

18 February 2018

9.00-9.45 David Andrews: *Photons and Nanoscale Forces*
University of East Anglia, Norwich, United Kingdom

9.45-10.30 Mher Ghulinyan: *Integrated resonators optics*
Functional Materials and Photonics Structures, Fondazione Bruno Kessler, Povo, Italy

10.30-11.00 Coffee Break

11.00-11.45 Fernando Ramiro Manzano: *Forward and backward photonic routes through integrated devices*
Centro de Tecnologías Físicas, Instituto de Tecnología Química (CSIC-UPV), Valencia, Spain

11.45-13.00 Student talks

11.45-12.00 Andrea Ficorella: *Characterization of Optical Crosstalk in Vertically-integrated SPAD Arrays*

12.00-12.15 Astghik Kuzanyan: *Ultrafast detection of IR photons by thermoelectric single-photon detector at the telecommunication wavelength*

12.15-12.30 Angeles Camacho: *Additive manufacturing towards fabrication of next generation of optical fibres*

12.30-12.45 Vitori A. Amorim: *Optical and microfluidic monolithic devices fabricated by femtosecond laser micromachining*

12.45-13.00 Benoît Morel: *Nondiffracting femtosecond pulses and laser ablation*

13.00-14.30 Lunch Break

14.30-15.15 Michael Berry: *Superoscillations (faster than Fourier) (p) revisited: vorticulture, noise, fractals*
University of Bristol, Bristol, United Kingdom

15.15-16.00 Artur Aleksanyan: *Self-engineered approaches towards optical vortex coronagraphy*
Laboratoire Photonique Numérique et Nanosciences (LP2N), Institut d'Optique d'Aquitaine, Talence, France

16.00-16.30 Coffee Break

16.30-17.45 Student talks

16.30-16.45 Mateusz Szatkowski: *Correction of spatial light modulator – optical vortex dynamics criterion*

16.45-17.00 Arevik Amiryan: *Investigation of Faraday Rotation effect using pressure-controlled thickness nano-cell*

17.00-17.15 Vardazar Kotanjyan: *Generation of surface electromagnetic waves propagating along cylindrical interface between two homogeneous media*

17.15-17.30 Emmanuel Klinger: *Giant Magnetic Circular Dichroism exhibited using Derivative of Selective Reflection spectroscopy*

18.30-22.00 MUSE Guide Tour/Social Dinner

19 February 2018

9.00-9.45 David Blaschke: *Dynamical Schwinger effect in strong, time-dependent external fields*
University of Wroclaw, Poland; JINR Dubna, Russia; MEPhI, Russia

9.45-10.30 Iacopo Carusotto: *Quantum fluids of light*
INO-CNR BEC Center, Povo, Italy

10.30-11.00 Coffee Break

11.00-11.45 Giorgio Colangelo: *Simultaneous measurements of non-commuting observables in atomic interferometry*
ICFO - The Institute of Photonic Sciences The Barcelona Institute of Science and Technology, Barcelona, Spain

11.45-12.30 Student talks

11.45-12.00 Claudio Castellan: *Second Harmonic Generation in strained silicon*

12.00-12.15 Stefano Signorini: *Wavelength conversion and generation via intermodal four wave mixing in silicon waveguides*

12.15-12.30 Andrea Geraldi: *Stimulated Emission Tomography of Hyperentangled States*

12.30-12.40 Group Photo

12.40-14.00 Lunch Break

14.00-14.45 Michael Berry: *Magic mirrors and magic windows (department colloquium)*
University of Bristol, Bristol, United Kingdom

14.45-15.30 Massimo Borghi: I*ntegrated quantum photonics*
Centre for Quantum Photonics, University of Bristol, Bristol, United Kingdom

15.30-16.00 Coffee Break

16.00-18.00 Poster Session and Exhibition

Poster Presentations

1. **Federico Caporaletti:** *Nuclear γ-resonance time-domain interferometry as probe of slow dynamics in condensed matter*
2. **Astghik Chalyan:** *Automatic alignment of photonic components of massive optical switch to ITU channels*
3. **Tatyana Gaydamak:** *Easy-plane ferroborates. Magnetopiezoelectric effects*
4. **Marta Lange:** *Portable optical device for diagnostics of skin malformations*
5. **Sheler Maktoobi:** *Diffractive Coupling for Optical Neural Network*
6. **Sara Piccione:** *Mid-Infrared coincidence measurements on twin photons at room temperature*
7. **Ardi Rahma:** *Design of Spin Coater and Characterization of Spin Coating Process*

8. **Consuelo Ripoll:** *Nanosensor platform for metabolic profiling of breast cancer*
9. **Lusine Tsarukyan:** *Nondestructive readout of Bessel-like photonic structures in an external magnetic field*
10. **Chiara Vecchi:** *Second-Harmonic Generation in stressed Silicon microring resonators for octave spanning optical frequency comb generation*
11. **Mirko Zanon:** *Towards an all-optical optogenetic activation and readout system for insect brains*

20 February 2018

9.00-9.45 Lorenzo Pavesi: Classical and Quantum integrated Silicon Photonics
NanoScience Laboratory, Department of Physics, University of Trento, Povo, Italy

9.45-10.30 Alessandro Tredicucci: *How to control light with light: perfect absorption and transparency through interference*
Dipartimento di Fisica, University of Pisa, Pisa, Italy

10.30-11.00 Coffee Break

11.00-11.45 Mauro F. Pereira: *GHz-THz-Mid Infrared Devices: From Fundamental Theory and Simulations to Real World Applications*
Department of Condensed Matter Theory, Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic

11.45-13.00 Student talks

11.45-12.00 Alessandro Ruocco: *Self focusing of a laser beam into a plasma*

12.00-12.15 Nicolas Valero: *Novel cumulative photo-disruptive laser-skin interaction regime in dermatology: application to laser tattoo removal*

12.15-12.30 Tatevik Chalyan: *Integrated Microring Resonators for molecular interaction analyses*

12.30-12.45 Nataliia Mysko-Krutik: *The orientational order and morphology of N_2-CH_4 solid solutions. Cluster approach*

12.45-13.00 Milad Niroumand: *Multispectral Remote Sensing of Shallow Rivers*

13.00-14.30 Lunch Break

14.30-15.30 Lab Tour

15.30-17.00 Closing Ceremony