

- 11:55 *Harmonic generation and photon management at the nanoscale*  
**Costantino De Angelis**, CNR-INO
- 12:15 *Infrared sensors for application to atmosphere, metrology and volcanology*  
**Silvia Viciani**, CNR-INO
- 12:35 *A microscopic FTIR spectrometer on the tip of an optical fiber*  
**Pietro Malara**, CNR-INO
- 13:00 Lunch
- 14:30 *Ion acceleration at the Intense Laser Irradiation Laboratory: from exploration to exploitation*  
**Fernando Brandi**, CNR-INO
- 14:50 *A label-free fluorescence approach for high resolution imaging of myelinated fiber*  
**Irene Costantini**, CNR-INO
- 15:10 *Observation of metastable supersolid properties in a dipolar quantum gas*  
**Luca Tanzi**, CNR-INO
- 15:30 *Disordered photonic systems as information entropy sources and their applications in cryptography*  
**Francesco Riboli**, CNR-INO
- 15:50 *Optical detection of radiocarbon dioxide*  
**Jacopo Galli**, CNR-INO
- 16:10 *Photonics beyond H2020*  
**Anna Pelagotti**, European Commission Photonics Unit
- 16:30 Conclusions

Area della Ricerca di Firenze 3-5 aprile 2019

**INO ANNUAL SYMPOSIUM 2019**  
FOCUSING OPTICS ON ENVIRONMENTAL AND  
HEALTH CHALLENGES

## WEDNESDAY, APRIL 3

- 14:30 Opening
- 14:45 Poster Pitch
- 16:00 Posters and drinks
- 17:30 Lab tours

## THURSDAY, APRIL 4 (ITALIAN LANGUAGE UNTIL LUNCH)

- 09:30 Opening: **Corrado Spinella**, DSFTM-CNR Director, **Monica Barni**, Regione Toscana and **Paolo De Natale**, Firenze CNR Area President and CNR-INO Director  
Chairman: **Alessandro Farini**, CNR-INO
- 09:50 *Order and disorder in Brain*  
**Gian Michele Ratto**, CNR-NANO
- 10:20 *The hidden light of plants*  
**Franco Miglietta**, CNR-IBIMET
- 10:50 Coffee Break
- 11:20 Researchers in Antarctica - Live connection
- 11:50 *Environment and Biology*  
**Mario Tozzi**, CNR  
**Alberto Diaspro**, IIT
- 12:50 Conclusions and Kahoot test for students
- 13:15 Lunch
- 14:30 Keynote: **Stephan Borrmann**, Johannes-Gutenberg-University Mainz e Max-Planck-Institute for Chemistry
- 15:10 *Single molecule microscopy: uncovering the world under the diffraction barrier*  
**Lucia Gardini**, CNR-INO
- 15:30 *Out-of-equilibrium dynamics and quantum transport with ultracold atomic Fermi gases*  
**Francesco Scazza**, CNR-INO

- 15:50 *Organic-molecule-based quantum nanophotonics in Firenze*  
**Pietro Lombardi**, CNR-INO
- 16:15 Coffee break
- 16:45 *Investigating Quantum Radiation Friction*  
**Andrea Macchi**, CNR-INO
- 17:05 *Microscopy for Cultural Heritage: nonlinear optics and photoacoustic imaging*  
**Alice Dal Fovo**, CNR-INO
- 17:25 *Quantum control of spin qubits in diamond*  
**Nicole Fabbri**, CNR-INO
- 17:45 *Lamb-dip spectroscopy of buffer-gas-cooled stable molecules*  
**Valentina Di Sarno**, CNR-INO
- 18:05 Conclusions
- 19:00 Appetizer at Villa il Gioiello, Galileo Galilei's house
- 20:00 Social dinner

## FRIDAY, APRIL 5

- 09:00 Keynote: **Chris Xu**, Cornell University School of Applied and Engineering Physics
- 09:40 *FORUM - a new satellite mission to monitor the far-IR emission of the Earth and exploratory field campaign*  
**Luca Palchetti**, CNR-INO
- 10:00 *Entangling macroscopic light states by delocalized photon addition*  
**Nicola Biagi**, CNR-INO
- 10:20 *Infrared on-chip frequency combs*  
**Francesco Cappelli**, CNR-INO
- 10:45 Coffee break
- 11:15 *A bionic construct to target the tumor microenvironment with a plasmonic contrast agent*  
**Fulvio Ratto**, CNR-IFAC
- 11:35 *Quantum Droplets in Ultra-Cold Gases*  
**Alessio Recati**, CNR-INO