

TERAMETANANO

International conference on Terahertz Emission, Metamaterials and Nanophotonics

10-14 SEP 2024 PROGRAM

ANGEVIN CASTLE
CONFERENCE
CENTRE,
GAETA, ITALY



Tuesday, September 10

9:00 Registration desk open

10:30 10:50 Opening Session: *institutional greetings*

11:00 12:45 Session 1: *Polaritronics*

Chair: M.E. Portnoi

- P.M. Walker, Univ. of Sheffield, UK: "Measuring Exciton-Polariton Interactions at the Few Particle Level"
- H. Sigurdsson, Univ. of Iceland, Iceland: "Dirac exciton-polariton condensates in photonic crystal gratings"
- O. Kyriienko, Univ. of Exeter, UK: "Nonlinear optical information processing with exciton-polaritons"

13:00 14:30 Lunch

14:30 16:15 Session 2: *Quantum systems*

Chair: H. Sigurdsson

- A. Vidiella-Barranco, Univ. of Campinas, Brasil: "Cavity-assisted entanglement in hybrid macroscopic quantum systems"
- S. Lazić, Univ. Autónoma de Madrid, Spain: "Dynamic sound-induced tuning of photon polarization state and charge population in GaN/InGaN nanowire quantum dots"
- A. Maffucci, Univ. of Cassino and Southern Lazio, Italy: "Equivalent circuit models for quantum and nanoscale systems"

16:15 16:45 Coffee Break

16:45 17:30 Round Table: "COST actions and other opportunities"

Chair: G. Eramo

17:30 18:00 Guided Tour of the Angevin Castle

19:30 23:00 Welcome Cocktail

Wednesday, September 11

9:00 10:45 Session 3: *THz applications*

Chair: G. Fedorov

- M. Pereira, Khalifa Univ. Abu Dhabi, UAE: "Materials and Devices for Photonics and Medical Applications in the TERA-MIR Range"
- I. Kašalynas, Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania: "Investigation of terahertz emission of 2D plasmons in grating-gated AlGaIn/GaN heterostructures"
- D. Smirnov, Florida State Univ., USA: "Magnetic Excitations in a Heisenberg-Kitaev Quantum Magnet $\text{Na}_2\text{Co}_2\text{TeO}_6$ "

10:45 11:15 Coffee Break

11:15 13:00 Session 4: *Novel devices and materials*

Chair: D. Smirnov

- F. Kusmartsev, Khalifa Univ. Abu Dhabi, UAE: "Perfect THz darkness of metamaterials"
- I. Leontis & S. Russo, Univ. of Exeter, UK: "Physics of 2D perovskite photodetectors"
- G. Pozina, Linköping Univ., Sweden: "Ultra-wide bandgap Ga₂O₃ as a promising candidate for devices beyond 3N technology"

13:00 14:30 Lunch

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Wednesday, September 11

14:30 16:15 Session 5: *Short communications*

Chair: I. Kasalinas

- **B. Fainberg**, Holon Institute of Technology, Israel, "*Hartree method for calculation of exciton-polariton luminescence and exciton superfluorescence: Stokes shift, non-Markovian Fano resonances, and high-temperature superfluorescence in quasi-2D hybrid perovskites*"
- **S. Sibilìa**, E-lectra, University of Cassino and S. Lazio, Italy: "*Electromagnetic shielding with graphene nanoplatelets coatings*"
- **F. Siconolfi**, Univ. of Cassino and Southern Lazio, Italy: "*Electrothermal behavior of industrial-grade graphene*"
- **G. Cavaliere**, Univ. of Salerno, Italy: "*Portable monitoring platforms based on nanomembranes*"

16:15 16:45 *Coffee Break*

16:45 17:30 Round Table: "*Bridging the THz gap: current status and perspectives*"

Chair: M. E. Portnoi

17:30 18.30 Guided tour to Gaeta

Thursday, September 12

9:00 10:45 Session 6: *Special open session on "TERASSE" project*

Chair: A. Maffucci

- **F. Ogrin**, MaxLLG Exeter, UK: "*Anisotropy magnetic metamaterials for high frequency communication technologies*"
- **A. Boag**, Univ. of Tel Aviv, Israel: "*Quantization of Electromagnetic Scattering in Characteristic Mode Basis*"
- **M.E. Portnoi**, Univ. of Exeter, UK: "*Terahertz photonics of one-dimensional nanocarbons*"

10:45 11:15 *Coffee Break*

11:15 13:00 Session 7: *Special open session on "FLORIN" project*

Chair: M.E. Portnoi

- **G. Fedorov**, Univ. of Eastern Finland, Finland: "*Terahertz emission from optically pumped carbon nanotubes*"
- **P. Lamberti**, Univ. of Salerno, Italy: "*Numerical modeling support to the study of the electromagnetic interaction between cell membrane and nanoparticles*"
- **Y. Svirko**, Univ. of Eastern Finland, Finland: "*Nonlinear optical microscopy of diamond micro-needles*"

13:00 14:30 *Lunch*

14:30 16:15 Session 8: *Special open session on "EUTINN" project*

Chair: Y. Svirko

- **C. Couteau**, Univ. of Technology of Troyes, France: "*Quantum photonics using nanotechnologies*"
- **M. Lucido**, Univ. of Cassino and S. Lazio, Italy: "*Plane wave scattering from graphene covered thin microsize dielectric disk*"
- **A. Tamburrino**, Univ. of Cassino and Southern Lazio, Italy: "*Efficient numerical models for plasmonics*"

16:15 16:45 *Coffee Break*

16:45 17:30 The EUT+ program and the EUTINN research institute

Chair: C. Couteau

20:00 23:00 *Social dinner*

Friday, September 13

9:00 18:00 All day excursion to archeological sites in Terracina and Sperlonga

Saturday, September 14

10:00 13:00 Project meetings and networking activities