



# Greek-Russian Workshop on Quantum Technologies

co-organized by



HELLENIC  
REPUBLIC  
MINISTRY OF  
EDUCATION, RESEARCH  
AND RELIGIOUS AFFAIRS



DEMOKRITOS  
NATIONAL CENTER FOR SCIENTIFIC RESEARCH



FORTH  
Institute of Electronic Structure  
and Laser

Athens, Greece, 1-2 April 2016

NCSR "DEMOKRITOS"

**Friday, April 1**

## Registration

8.30-9.00 (Lecture Hall 3/Building 8)

## Welcome address

9:00-9:10 Dr. Nikolaos KANELLOPOULOS, Chairman of the Board and Director of NCSR "DEMOKRITOS"

## Session I: Quantum Nanoelectronics

Chair: D. CHARALAMBIDIS

9:10-9:30 Konstantin ARUTYUNOV (MIEM, National Research University Higher School of Economics, Moscow Institute of Electronics and Mathematics,) "*Nano-scale superconductivity*"

9:30-9:50 Panagiotis ARGITIS (National Center for Scientific Research "DEMOKRITOS") "*Molecular interfacial layers for organic optoelectronics*"

9:50-10:10 Valery RYAZANOV (Chernogolovka) "*Coherent and nonequilibrium phenomena in hybrid Josephson structures*"

10:10-10:30 George DELIGIORGIS (FORTH, Foundation for Research and Technology - Hellas) "*Graphene and CNT transistors*"

10:30-10:50 Georgy GOLTSMAN (MGPU, Moscow State Pedagogical University) "*Single photon detectors*"

10:50-11:10 Andrei ZAIKIN (LPI RAS, Lebedev Physical Institute of the Russian Academy of Sciences) "*Quantum fluctuations in superconducting nanowires*"

11:10-11:40 *Coffee Break*

**Session II: Quantum Information – Communication**

*Chair: G. TSIRONIS*

11:40-12:00 Alexey USTINOV (MISIS, National University of Science and Technology, Moscow) "*Superconducting quantum circuits*"

12:00-12:20 Oleg ASTAFIEV (MPTI, Moscow Institute of Physics and Technology) "*Quantum optics on-chip*"

12:20-12:40 Georgios NIKOLOPOULOS (FORTH, Foundation for Research and Technology - Hellas) "*Quantum communication & cryptography*"

12:40-13:00 Evgenii ILICHEV (NGTU, Novosibirsk State Technical University) "*Quantum detectors and amplifiers*"

13:00-14:10 *Lunch Break (Library – Exhibition Center – Building 15)*

**Workshop addresses**

*Chair: N. KANELLOPOULOS*

14:10-14:20 Prof. Costas FOTAKIS, Alternate Minister for Research and Innovation

14:20-14:30 Penelope-Maria SPILIOTI, Head of the directorate for International Research and Technology Collaborations, General Secretariat for Research and Technology

14:30-14:40 Prof. Spiros ANASTASIADIS, Director of FORTH-IESL

14:40-14:50 Andrey MASLOV, Ambassador of the Russian Federation

14:50-15:00 Ludmila OGORODOVA, Deputy Minister of Education and Science of the Russian Federation

15:00-15:10 Irina KUKLINA, Executive Director International Centre for Innovation in Science Technology & Education

15:10-15:20 Dmitry KOROTKOV, Head of Division Department of Science and Technology

**Session III: Photonics**

*Chair: K. ARUTYUNOV*

15:20-15:40 Alexander SERGEEV (IAP RAS, Institute of Applied Physics of the Russian Academy of Sciences) "*Subexawatt Laser Project XCELS*"

15:40-16:00 Ildar GABITOV (Skoltech, Skolkovo Institute of Science and Technology) "*Polarization switching on rf-SQUID based metasurfaces*"

16:00-16:30 *Coffee Break*

16:30-16:50 Stavros PISSADAKIS (FORTH, Foundation for Research and Technology - Hellas) "*Photonics in Greece, research directions and prospects*"

- 16:50-17:10 Dimitris CHARALAMBIDIS (University of Crete and FORTH, Foundation for Research and Technology - Hellas) *"Ultrafast dynamics, femto-, atto- and all that"*
- 17:10-17:30 Pavlos SAVVIDIS (Univ. of Crete and FORTH, Foundation for Research and Technology - Hellas) *"Manipulating polariton condensates on a chip"*
- 17:30-17:50 Pavlos LAGOUDAKIS (Skoltech,Skolkovo Institute of Science and Technology) *"Engineering polariton simulators"*

## Saturday, April 2

### **Session IV: Quantum Materials**

*Chair: A. USTINOV*

- 9:00-9:20 George TSIRONIS (University of Crete and FORTH, Foundation for Research and Technology - Hellas) *"Quantum Meta-materials"*
- 9:20-9:40 Sergei MUKHIN (National Univ. of Science and Technology, Moscow) *"Instantonic states of resonator with Majorana fermions"*
- 9:40-10:00 George NEOFOTISTOS (University of Crete) *"Chimera states in magnetically driven SQUID metamaterials"*
- 10:00-10:20 George KONSTANDINIDIS (FORTH, Foundation for Research and Technology - Hellas) *"Hybrid superconductor/2DEG nanostructures"*
- 10:20-10:40 *Coffee Break*
- 10:40-11:10 Common session of the four working groups (pillars). Defining working modus and task allocation (*Lecture Hall 3/Building 8*)
- 11:10-12:20 Separate editorial meetings of the four working groups (*Library – Exhibition Center – Building 15*)
- 12:20-14:00 Lunch Break (*Library – Exhibition Center – Building 15*)
- 14:00-15:00 Common session of the four working groups  
Reporting of the working group coordinators (*Lecture Hall 3/Building 8*)
- 15:00-17:00 Finalizing the collaboration program proposal document  
Further actions
- 17:00-17:15 Closing remarks, Dr. Maria DOUKA, Scientific Advisor, Office of the Alternate Minister for Research and Innovation

### ***End of the Workshop***