

2<sup>nd</sup> International Conference on

# QUANTUM PHYSICS AND QUANTUM TECHNOLOGY

September 25-26, 2017 Berlin, Germany



v. Kleist

conference**series**.com 08:30-08:55

# Opening Ceremony

## Special Sessions

08:55-09:00 **Introduction**

**Title: A new approach to quantum mechanics**

09:00-10:00

**Yakir Aharonov**, Chapman University, USA

**Keynote: The transition path time distribution - quantum mechanics, vanishing tunneling flight times and special relativity**

10:00-10:45

**Eli Pollak**, Weizmann Institute of Science, Israel

## Networking and Refreshments Break 10:45-11:05 @ Foyer

11:05-11:50

**Keynote: Quantum master equation for Fermions and a unitary relativistic quantum theory**

**Eliade Stefanescu**, Center of Advanced Studies in Physics of the Romanian Academy, Romania

11:50-12:35

**Keynote: The Shell-Nodal structure of the atoms**

**George P Shpenkov**, USTB, Poland

**Sessions: Quantum Science | Quantum States | Quantum Field Theory | Theory of Everything: String Theory | Flow of Time | Quantum Physics and the Universe**

**Session Chair: Ozhigov Yuri Igorevich**, Moscow State University, Russia

**Session Co-chair: Eli Pollak**, Weizmann Institute of Science, Israel

## Session Introduction

12:35-13:00

**Title: Electromagnetically induced transparency in circuit quantum electrodynamics with nested polariton states**

**David Pappas**, NIST, USA

13:00-13:25

**Title: Correlated motion in atomic and molecular three-particle systems**

**Hazel Cox**, University of Sussex, UK

## Lunch Break 13:25-14:25 @ Restaurant Theodor's

14:25-14:50

**Title: On some unknown features of the Bose-Einstein statistics**

**Aleksey Ilyin**, Moscow Institute of Physics and Technology, Russia

14:50-15:15

**Title: Weak and strong non-linear effects in Josephson junction chains**

**Wiebke Guichard**, Institut NEEL CNRS, France

15:15-15:40

**Title: Finite dimensional models of QED**

**Ozhigov Yuri Igorevich**, Moscow State University, Russia

15:40-16:05

**Title: Quantum wave mixing and resolving photonic classical and non-classical coherent states**

**Vladimir Antonov**, Royal Holloway University of London, UK

## Networking and Refreshments Break 16:05-16:25 @ Foyer

16:25-16:50

**Title: Experimental probing of quantum criticality at the superconductor-insulator quantum phase transition**

**Aviad Frydman**, Bar-Ilan University, Israel

16:50-17:15

**Title: 3025 - Science in fiction**

**Tina Matzat**, CEO and Founder of Qbit Films, Germany

17:15-17:40

**Title: Proposed link between the periodic table and the standard model**

**John Roberts**, University of Liverpool, UK

17:40-18:05

**Title: Excited S states of two electron atoms**

**Adam Baskerville**, University of Sussex, UK

## Panel Discussion

## Special Sessions

### Introduction

**09:00-09:45** **Keynote: Quantum electronic transport and conductance anomaly in quasi-1D systems**  
**Mukunda Das**, Australian National University, Australia

**09:45-10:45** **Title: Universal quantum laws, health and well-being**  
**Menas Kafatos**, Chapman University, USA

### Networking and Refreshments Break 10:45-11:05 @ Foyer

**11:05-12:05** **Title: Revision of abstract quantum computer: Why do we need and how to build it?**  
**Ozhigov Yuri Igorevich**, Moscow State University, Russia

**Sessions: Quantum Information and Quantum Computing | Quantum Optics | In Depth Quantum Mechanics | Quantum Mechanics Interpretations | Quantum Transport and Dissipation | Physical Mathematics | Quantum Technology**

**Session Chair: Eliade Stefanescu**, Center of Advanced Studies in Physics of the Romanian Academy, Romania

**Session Co-Chair: Hazel Cox**, University of Sussex, UK

### Session Introduction

**12:05-12:30** **Title: New principles of solving the problem of combining the gravitational and electromagnetic fields**

**V A Nastasenko**, Kherson State Maritime Academy, Ukraine

**12:30-12:55** **Title: Quantum key distribution networks and their applications for blockchain-based technologies**

**Aleksey Fedorov**, Russian Quantum Center, Russia

### Lunch Break 12:55-13:55 @ Restaurant Theodor's

**13:55-14:20** **Title: Vibrational state control of BECs using stochastic webs**  
**Nathan Welch**, University of Nottingham, UK

**14:20-14:45** **Title: On the motion of macroscopic bodies in quantum theory**  
**Alexey Kryukov**, University of Wisconsin Colleges, USA

**14:45-15:10** **Title: Unified quantum metric**  
**Eugene A Machusky**, NTU University, Ukraine

**15:10-15:35** **Title: Information entropy of quantum dynamics**  
**Dmytro Progonov**, NTU University, Ukraine

**15:35-16:00** **Title: X-ray quantum optics**  
**Adriana Palffy**, Max Planck Institute for Nuclear Physics, Germany

### Networking and Refreshments Break 16:00-16:20 @ Foyer

**16:20-16:45** **Title: Iterative generation of non-classical states of light**  
**Rosa TUALLE-BROURI**, Université Paris Sud, France

**16:45-17:10** **Title: Many particle interactions in the integer quantum Hall effect regime**  
**Josef Oswald**, Montanuniversität Leoben, Austria

**17:10-17:35** **Title: Coherent observers for linear quantum systems**  
**Nina H Amini**, Laboratoire des Signaux et Systèmes (L2S), France

### Panel Discussion

### Awards & Closing Ceremony