

Scientific Program

International Webinar on

Quantum Physics and Nuclear Technology

Monday
July 26, 2021

Day 1 - July 26, 2021 - British Time

11.00 - 11.10 Introduction

Keynote Presentations

11:10 - 11:45 Resonant Light Scattering by Subwavelength Particles: New effects
Michael I. Tribelsky, Lomonosov Moscow State University, Russia

Oral Presentations

11:45 - 12:10 Seamless frequency-connection quantum network of solid spins through diamond optomechanical cavity
Ying Gu, Peking University, China

12:10 - 12:35 Design and synthesis of new superconductors and topological quantum catalysts
Huixia Luo, Sun Yat-Sen University, China

12:35 - 13:00 Simultaneous measurement of polarization and orbital angular momentum of optical signals
Ziyao Lyu, Shanghai Jiao Tong University, China

Lunch (13:00 - 13:30)

Keynote Presentations

13:30 - 14:05 A Four Red and Green Channel Using Multi slot-waveguide Technology
Dror Malka, Holon Institute of Technology (HIT), Israel

Oral Presentations

14:05 - 14:30 Magnon superfluidity at room temperature
Yury Bunkov, M-Granat, Russian Quantum Center, Russia

14:30 - 14:55 Electrochemical growth of CoFe_2O_4 nanowires with high internal magnetic field
Nabil Labchir, University of Lyon, France

14:55 - 15:20 Superinsulators a new Topological Phase of Matter
Maria Cristina Diamantini, University of Perugia, Italy

15:20 - 15:45 Deep Unity of Quantum and Newtonian Gravitation Field Theories at the Space Thermostat Presence with Finite Temperature
Ivanov Mikhail Jakovlevich, Central Institute of Aviation Motors, Russia

15:45 - 16:10 When laser methods encounter porphyrin derivatives to create multifunctional thin layers destined for corrosion inhibition and sensor devices
FAGADAR-COSMA Eugenia, Institute of Chemistry "Coriolan Dragulescu", Romania

16:10 - 16:35 The Gauss-Newton Quantum-Relativity (GNQR)
Benedykt Michal Josef Campbell Biezanek, United Kingdom

16:35 - 17:00 Effect of Reaction Volume and Metal Concentration on the Morphology and Magnetic Properties of Iron-Nickel Alloy
Norhan Nady, SRTA-City, Egypt

17:00 - 17:25 Kaushal and Gravity
Kaushal Prashant, University of Glasgow, United Kingdom

17:25 - 17:50 Silicone Gel-encased Bonding Wire Deformation Measurement Using a LF-OCT system
Zhiyi Zhao, University of Liverpool, United Kingdom

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- 17:50 - 18:15 Magnetic flux observations using a Ferrolens
Timm Vanderelli, Primary Investigator, Ferrocell USA
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- 18:15 - 18:40 Two-Dimensional Silicon Carbide: Bridging Theory and Experiment
Sakineh Chabi, University of New Mexico, USA
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- 18:40 - 19:05 **William Brown**, Colorado State University - Pueblo, USA
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- 19:05 - 19:30 About one vector boson with twice electron mass
Gladkov Sergey Oktyabrinoich, Moscow aviation institute, Russia

End of Day 1 Sessions

Tuesday
July 27, 2021

Day 2 - July 27, 2021 - British Time

Keynote Presentation

- 11:00 - 11:35 Conformal Coatings for Laser Applications
Adriana Szeghalmi, Friedrich Schiller University Jena, Germany

Oral Presentations

- 11:35 - 12:00 Uniform Beam Diffraction: A blue print for poling quality of Quasi-Phase-Matching devices
Prashant Povel Dwivedi, Manipal University Jaipur, India
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- 12:00 - 12:25 Overcoming the asymmetry of the electron and hole doping for magnetic transitions in bilayer CrI₃
Sukanya Ghosh, Abdus Salam International Centre for Theoretical Physics, Italy
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- 12:25 - 12:50 Astronomical Evidence of Magnetic Monopoles and Its Implication-Mechanism of Supernova explosion and Challenge to Black Hole Models
Qiu-He Peng, Nanjing University, China
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- 12:50 - 13:15 Paramagnetic effects in biological systems under exposure to low intensity electromagnetic fields
Emanuele Calabrò, University of Messina, Italy

Lunch (13:15 - 13:55)

- 13:55 - 14:20 High-entropy alloys and their potential toward magnetic applications
Magdalena Wencka, Jozef Stefan Institute, Slovenia and Institute of Molecular Physics, Poland
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- 14:20 - 14:45 Thermo-responsive core/shell SPION and their drug release properties
Halima Alem, Universite de Lorraine, France
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- 14:45 - 15:10 Magnetoresistive Superferromagnetic Sensors
V.N. Kondratyev, tBLTP, JINR, Russia
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- 15:10 - 15:35 Quantum Dynamics of Ultracold Atoms under Tunable Trap
Utpal Roy, Indian Institute of Technology, India

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15:35 - 16:00 Gauge Invariance in Counting and Combinatorics and its Applications to Quantum Mechanics and General Relativity
Koustubh Ajit Kabe, Mumbai University, India

Keynote Presentation

16:00 - 17:00 Creating materials with a desired refraction coefficient
Alexander G. Ramm, Kansas State University, USA

Oral Presentations

17:00 - 17:25 A Turiyam set to deal human cognition and its quantum state
Prem Kumar Singh, Gandhi Institute of Technology and Management, India

17:25 - 17:50 Quantum-classical mechanics: Principles, applications, and prospects
Vladimir Valentinovich Egorov, Russian Academy of Sciences, Russia

Poster Presentations

17:50 - 18:05 Exchange mechanisms in a class of molecular magnets
M. Georgiev, Bulgarian Academy of Sciences, Bulgaria

Video Presentations

18:05 - 18:20 Adaptive Laser Soldering Technology Based on Commercial CW 450 nm Diode Lasers
Hristo Iliev, Sofia University St."Kliment Ohridski", Bulgaria

End of Day 2 Sessions