

# Scientific Program

## 2<sup>nd</sup> Webinar on Laser, Optics & Photonics

Monday  
November 15, 2021

Day 1 - November 15, 2021

11:00 - 11:15 Introduction

### Oral Presentations

11:15 - 11:40 Characterization, Compensation and Monitoring of Imperfections in Optical Coherent Transceivers  
**Junpeng Liang**, ZTE Corporation, China

### Keynote Presentations

11:40 - 12:10 Quantum Collapse: Exact Results  
**Michael I Tribelsky**, Lomonosov Moscow State University, Russia

### Oral Presentations

12:10 - 12:35 Soft magnetic nanostructured Fe-Co and Fe-Mn based alloys  
**J.J. Suñol**, University of Girona, Spain

12:35 - 13:00 In-Depth practical study of length metrology with laser interferometers applying different techniques  
**Ihab**, Taibah University, Saudi Arabia

13:00 - 13:25 The ratio of uncertainties in the mathematical description of AC electric machines is the principle of improving power generation  
**Vladimir Kodkin**, South Ural State University, Russia

### Lunch Break (13:25 - 14:00)

14:00 - 14:25 Is our mathematics suitable for understanding quantum mechanics?  
**Stefan Freundt**, Humboldt University of Berlin, Berlin

14:25 - 14:50 Sodium isocyanide: helium potential energy surface and astrophysical applications  
**Chaima Gharbi**, Laboratoire de Spectroscopie et Dynamique Moléculaire, Université de Tunis, Tunisia

14:50 - 15:15 E-BABE-New Quantum Approach for Evaluation of Transmission Coefficients in Nuclear Processes  
**Cristiana Oprea**, Joint Institute for Nuclear Research, Russia

15:15 - 15:40 Magnetic behavior of an advanced TWIP steel microalloyed with boron in the as-cast condition  
**A.E. Salas-Reyes**, Departamento de Ingeniería METALÚRGICA, Facultad de Química, UNAM, Mexico

15:40 - 16:05 Detecting magmatic-derived fluids using pyrite chemistry: the importance of LA-ICP-MS analyses for metallogenic models and exploration  
**Lucie Mathieu**, Université du Québec à Chicoutimi (UQAC), Canada

16:05 - 16:30 Magnetic materials for the recovery of oil spilled at sea  
**Yolanda M. Vargas-Rodríguez**, Universidad Nacional Autónoma de México, Mexico

16:30 - 16:55 Magnetic Nanomedicine: Advances in Treating COVID, Infection, Inflammation, Cancer and Bone Growth  
**Thomas J. Webster**, Interstellar Therapeutics, USA

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### Poster Presentations

- 16:55 - 17:10 Fractal Analysis of Surface Roughness of TiO<sub>2</sub> Nanofilms Grown by Reactive DC Magnetron Sputtering  
**H. Cristina Vasconcelos**, NOVA University Lisbon, Portugal
- 17:10 - 17:25 Advances in Quantum Metrology for Precise Measurement  
**Arunava Majumder**, Indian institute of technology Kharagpur, India
- 17:25 - 17:40 An Approach for Unity Field theory with new Quantum Vacuum Energy Aether Concept  
**Stephane Neuville**, Le Plessis-Belleville, France

End of Day 1

**Tuesday**  
**November 16, 2021**

Day 2 - November 16, 2021

### Keynote Presentations

- 11:15 - 11:30 Is there a force system in the universe that opposes supergravity, quantum gravity, strong force, weak force and universal gravity? A Big Attempt to Open up A New World of Physics  
**Li Zongcheng**, Soochow University, China

### Oral Presentations

- 11:30 - 11:55 Evolution of 3D/4D Printing and Laser Additive Manufacturing  
**Shamoon Al Islam**, China University of Geosciences, China
- 11:55 - 12:20 New Diode Laser Lithotription Technique Based on Optothermal Converter  
**Evgeny Grebenkin**, Privolzhsky Research Medical University, Russia
- 12:20 - 12:45 Study Magnetism & electronics Properties of EuNbO<sub>3</sub> Perovskites: DFT+U, mBJ  
**Khaoula Djabri**, University USTO-MB Oran, Algeria
- 12:45 - 13:10 Bohmian dynamics of positrons channeling through a chiral carbon nanotube  
**M. Ćosić**, Vinča Institute of Nuclear Sciences -National Institute of Serbia
- 13:10 - 13:35 Conservation laws in the modern string theory for force fields and nuclear matter  
**Ivanov Mikhail Jakovlevich**, Central Institute of Aviation Motors, Russia

Lunch Break (13:35 - 14:00)

- 14:00 - 14:25 Improving the Reliability Design of Mechanical Systems such as Refrigerator  
**Seongwoo Woo**, Ethiopian Technical University, Ethiopia
- 14:25 - 14:50 Quantum Chronoentropics: A Gauge Model for Time and Entropy Explaining the Relationship Between the Time Asymmetry and the Entropic Thermodynamic Arrow  
**Koustubh Ajit Supriya Kabe**, Mumbai University, India
- 14:50 - 15:15 Optical investigations of the sub-structural nano-formations in ferrite-garnet thin films  
**Vadim Koronovskyy**, Taras Shevchenko Kyiv National University, Ukraine
- 15:15 - 15:40 On the interconnection of a black hole and dark  
**Boris E. Meierovich**, Kapitza Institute, Russia

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15:40 - 16:05 Effect of voxel size on detection of fenestration, dehiscence and furcation defects using cone-beam computed tomography  
**Masoumeh Eftekhari**, School of Dentistry, Iran

### Recorded Video Presentations

16:05 - 16:25 Establishment of new synthetic route for next-generation magnetic material using microwave  
**Takayuki Tsuchida**, Tohoku University, Japan

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16:25 - 16:45 Earth's Inner Core is a Dipolar Magnet  
**Subhasis Sen**, Retired Scientist, India

End of Day 2