



SCIENTIFIC PROGRAM

4th International Conference on
**Applied Science,
Engineering, and Technology**

International Conference on
Optics, Photonics, and Lasers

3rd International Conference on
**Aerospace, Mechanical, &
Mechatronics Engineering**

June 21-22, 2023 | Dubai, UAE

Novotel Suites Dubai Mall of the Emirates,
2A Street - opposite Mall of The Emirates - Al Barsha -
Al Barsha 1 - Dubai - United Arab Emirates
Conference Code: **MKJDCXDG**

Day 1 June 21, 2023

08:00-09:00 | Registrations

09:00-09:15 | Introduction & Opening Ceremony

Conference Chair | Giovanni Perillo, University of Naples Parthenope, Italy

Plenary Session

Session Chair | Abdelmageed A. Elmustafa, Old Dominion University, Norfolk and Newport News, USA

09:15-10:00 | Title: **Interpenetrating Multiphase Turbulent Flows**

Charles A. Petty, Michigan State University, USA

10:00-10:45 | Title: **Research activities in the Applied Research Center Located inside Thomas Jefferson National Accelerator Facility Including Synthesize and RF Magnetron Sputtering of HEAs and Microelectronic Thin Films**

Abdelmageed A. Elmustafa, Old Dominion University, Norfolk and Newport News, USA

10:45-11:00 Networking & Refreshments Break

Keynote Session

Sessions | Applied Science Engineering | Mechanical Engineering | Aerospace Engineering | Polymer Science & Composite Materials | Civil Engineering | Electrical and Electronic Engineering | Materials Science | Manufacturing Engineering | Biotechnology and Biomaterials | Chemical Engineering | Aerospace Systems and Technology | Aerospace Manufacturing Engineering

11:00-11:30 | Title: **Self-Carried Nanodrug (SCND-SIS3) as a Targeted Therapeutic Agent for Cancer**

Hui Yao Lan, The Chinese University of Hong Kong, Hong Kong

11:30-12:00 | Title: **Social Sustainability in New Millennium: a Challenge Cities Cannot Miss**

Giovanni Perillo, University of Naples Parthenope, Italy

12:00-12:30 | Title: **Results of the Research of CAM Mechanisms in VÚTS Liberec**

Miroslav Václavík, VÚTS Liberec, The Czech Republic

12:30-13:00 | Title: **Applied Science in Civil Engineering**

Lukas Vrablik, CTU in Prague, Czech Republic

13:00-14:00 Group Photos & Lunch Break

Keynote Session

Session Chair | Yuen Hong Tsang, The Hong Kong Polytechnic University, Hong Kong

14:00-14:30 | Title: **Aerosol Jet Printed 2D Materials based Saturable Absorbers for Ultrafast Lasers**

Yuen Hong Tsang, The Hong Kong Polytechnic University, Hong Kong

Invited Talks

Sessions | Lasers in Medicine and Biology | Quantum Optics | 2D Photonic Materials and Devices | Sensor Technology | Microscopy and Adaptive Optics | Applications of Photonic Technologies | Optoelectronic Devices | Laser Spectroscopy and Microscopy

14:30-14:55 | Title: **Engineered Sandwich-structured Composite Wound Dressings with Unidirectional Drainage and Anti-adhesion Supporting Accelerated Wound Healing**

Wang Haipeng, Shandong University, China

14:55-15:20 | Title: **New Optical Method for the Non-invasive Determination of the Sun Protection Factor of Sunscreens**

Juergen Lademann, Charité University Medicine Berlin, Germany

15:20-15:45 | **Title: High Quality Factor Microresonators for Nonlinear and Quantum Optics**
Igor A. Bilenko, Moscow State University, Russia

15:45-16:10 | **Title: Maskless Lithography Based on Digital Light Processing for Large-Area Fabrication of Two/Three-Dimensional (2D/3D) Microstructures**
Yung-Chun Lee, National Cheng Kung University, Taiwan

16:20-16:25 Networking & Refreshments Break

Poster Presentations

P-001 | **Title: Respiration in Wavelengths using Laser Photoacoustic Spectroscopy System**
Popa Cristina- Mihaela, National Institute for Laser Plasma and Radiation Physics (INFLPR), Romania

P-002 | **Title: Laser Spectroscopy for The Assessment of Volatile Organic Compounds as Important Precursors for Secondary Pollutants**
Bercu Mioara, National Institute for Laser Plasma and Radiation Physics (INFLPR), Romania

P-003 | **Title: Effect of Long Term-storage on Internal Atmosphere of Organic and Conventional Commercial Fruits using Laser Spectroscopy**
Bratu Ana-Maria, National Institute for Laser Plasma and Radiation Physics (INFLPR), Romania

P-004 | **Title: Formation of Semiconductor Nanocrystals based on Sulfide Zinc**
Aiman Akylbekova, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan

End of the Session

Day 2 June 22, 2023

Plenary Session

09:15-10:00 | **Title: Designing Architecture in Virtual Reality**
Michal Sourek, Czech Technical University, Prague

10:00-10:45 | **Title: Three Dimensional Interpenetrating Multiphase Turbulent Flows: Part II**
Charles A. Petty, Michigan State University, USA

10:45-11:00 Networking & Refreshments Break

Keynote Session

Session Chair | Charles A. Petty, Michigan State University, USA

11:00-11:30 | **Title: Formal Verification: Concept, Tools and Applications**
Nahla Elaraby, Technical University of Vienna - TU Wien, Austria

11:30-12:00 | **Title: Advanced Materials and Space Sustainability**
Loredana Santo, University of Rome Tor Vergata, Rome, Italy

12:00-12:30 | **Title: Structural Behaviour of 3D Stitched Sandwich Structures**
Zhongwei Guan, Technology Innovation Institute, United Arab Emirates

12:30-13:00 | **Title: University – Industry Collaboration for Harnessing Emerging Technologies**
Halim Hamid Redhwi, Dhahran Techno Valley Holding Company King Fahd University of Petroleum & Minerals, Saudi Arabia

13:00-14:00 Group Photos & Lunch Break

14:00-14:30 | **Title: Morphing Green Aircraft Design Technologies for Fuel Consumption Reduction**
Ruxandra Mihaela Botez, École de technologie supérieure, Université de Québec, Canada

Invited Talks

14:30-15:00 | **Title: Dissolution of Non-functionalized and Functionalized Nanomaterials in Simulated Biological and Environmental Fluids**
Ewa Cukrowska, North-West University, South Africa

15:00-15:30 | **Title: AI-Based Speech Enhancement**

Mohammed Krini, Aschaffenburg University of Applied Sciences Germany

Virtual Presentations

- V-001 | Keynote | Title: Hybrid Energy Harvesters And an Example Of Modeling Commercial Piezoelectric**
Nazenin Gure, Marmara University, Istanbul, Turkey
- V-002 | Invited | Title: High-resolution Retinal Imaging**
Mircea Mujat, Physical Sciences, Inc, USA
- V-003 | Keynote | Title: Mechanical and Electromagnetic Effects due Interactions of Individual Carbon Nanotubes with External field**
Svetlana von Gratowski, Kotel'nikov Institute of Radioengineering and Electronics Russian Academy of Sciences, Russia
- V-004 | Keynote | Title: Lithographic Additive Manufacturing of Practical Components**
Soshu Kiriara, Joining and Welding Research Institute, Osaka University, Japan
- V-005 | Invited | Title: Optics, Photonics, and Lasers**
Yang Yue, Xiian Jiaotong University, China

End of the Session



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