

# 17th International Conference on Global Research and Education (Inter-Academia 2018)

Hotel EUROPA ROYALE Kaunas, Miško str. 11, Kaunas

## Conference Programme

Monday, September 24, 2018

8:00 – 9:00	Registration	
9:00 – 9:30	Opening Ceremony	
<b>Session 1 (Hall 1)</b>		
<b>Session Chairs:</b> Kazuhiko Hara, Shizuoka University Giedrius Laukaitis, Kaunas University of Technology		
9:30 – 10:00	<b>MO-1 (Invited) Recent Progress of Micro Field Emitters</b> Hidenori Mimura, Shizuoka University, Japan	
10:00 – 10:30	<b>MO-2 (Invited) Ultrasonic measurement and non-destructive techniques for extreme conditions and non-conventional applications</b> Renaldas Raišutis, Kaunas University of Technology, Lithuania	
10:30 – 10:50	<i>Coffee break</i>	
	<b>Session 2 (Hall 1)</b> <b>Session Chairs:</b> Hidenori Mimura, Shizuoka University Volodymyr Gnatyuk, National Academy of Sciences of Ukraine	<b>Session 2 (Hall 2)</b> <b>Session Chairs:</b> Maxim Sychov, Russian Academy of Sciences Miranda Khajishvili, Batumi Shota Rustaveli State University
10:50 – 11:10	<b>MO-3 Chemical vapor deposition of GaN films using gallium vapor as a gallium source on a c-plane sapphire substrate</b> Kazuhiko Hara, Shizuoka University, Japan	<b>MO-8 Evaluation of deterioration of engine oil using shear horizontal surface acoustic wave sensor based on acoustoelectric interaction</b> Jun Kondoh, Shizuoka University, Japan
11:10 – 11:30	<b>MO-4 Comparable Analyze of TiO<sub>2</sub> Properties on Ti Formed by Laser Radiation, Sol-Gel, Electrochemical Anodization and Magnetron Sputtering</b> Arturs Medvids, Riga Technical University, Latvia	<b>MO-9 Multiple-valued computing by photon-coupled, photoswitchable proteins</b> Balázs Rakos, Budapest University of Technology and Economics, Hungary
11:30 – 11:50	<b>MO-5 Photocatalytic activity of unbiased and biased TiO<sub>2</sub>-WO<sub>3</sub> bilayers</b> Marius Dobromir, Alexandru Ioan Cuza University of Iasi, Romania	<b>MO-10 A Hybrid Machine Learning Approach for Daily Prediction of Solar Radiation</b> Amir Mosavi, Obuda University, Hungary
11:50 – 12:10	<b>MO-6 XPS study of the In/CdTe interface modified by nanosecond laser irradiation</b> Kateryna Zelenska, Shizuoka University, Japan	<b>MO-11 A Nanoantenna - MIM Diode - Lens Device Concept for Infrared Energy Harvesting</b> Muhammad Fayyaz Kashif, Budapest University of Technology and Economics, Hungary
12:10 – 12:30	<b>MO-7 Monolayer PMMA template with close packed structure on large scale</b> Sridevi Meenachisundaram, Shizuoka University, Japan	<b>MO-12 Vehicle detection using aerial images under disaster situations</b> Ayane Makiuchi, Shizuoka University, Japan
12:30 – 12:35	<b>Conference photo</b>	
12:35 – 13:30	<i>Lunch</i>	

	<b>Session 3 (Hall 1)</b> <b>Session Chairs:</b> <b>Kenji Murakami</b> , Shizuoka University <b>Yasunori Okano</b> , Osaka University	<b>Session 3 (Hall 2)</b> <b>Session Chairs:</b> <b>Arturs Medvids</b> , Riga Technical University <b>Sakai Katsuhiko</b> , Shizuoka University
13:30 – 13:50	<b>MO-13 Remote Detection of Holes Generated by Impact Ionization</b> Yukinori Ono, Shizuoka University, Japan	<b>MO-17 Electromotive force of n-type Si wafer connected to piezoelectric device with its vibration under temperature gradient</b> Hiroya Ikeda, Shizuoka University, Japan
13:50 – 14:10	<b>MO-14 Normal and axial mode of operation of human sweat duct in sub-terahertz frequency region</b> Saroj Tripathi, Shizuoka University, Japan	<b>MO-18 Gamma-ray spectroscopic performance of large-area CdTe-based Schottky diodes</b> Volodymyr Gnatyuk, V.E. Lashkaryov Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine, Ukraine
14:10 – 14:30	<b>MO-15 A Study of Single-Electron Tunnelling in 1D Distributed Arrays of Donor Quantum Dots</b> Daniel Moraru, Shizuoka University, Japan	<b>MO-19 Correlation Between Optical, Morphological and Compositional Properties of GeSn Epitaxial Layers Irradiated by Nd:YAG Laser Radiation</b> Pavels Onufrijevs, Riga Technical University, Latvia
14:30 – 14:50	<b>MO-16 Low-Voltage Multifunctional Graphene Nanoelectromechanical Devices</b> Manoharan Muruganthan, Japan Advanced Institute of Science and Technology, Japan	<b>MO-20 Synthetic light interference image analysis algorithm in wedge interferometer</b> Jakub Mruk, Warsaw University of Technology, Poland
14:50 – 15:00	<i>Bus</i>	
15:00 – 17:30	<i>Excursion to SANTAKA Integrated Science, Studies and Business Centre (Valley), K. Barsausko str. 59, Kaunas, Lithuania</i>	
18:00 – 20:00	<i>Dinner</i>	

### Tuesday, September 25, 2018

9:00 – 9:30	Registration	
<b>Session 4 (Hall 1)</b>		
<b>Session Chairs:</b> <b>Ryszard Jablonski</b> , Warsaw University of Technology <b>Jun Kondoh</b> , Shizuoka University		
9:30 – 10:00	<b>TU-1 (Invited) Multimodal Unobtrusive Devices for Chronic Disease Monitoring</b> Vaidotas Marozas, Kaunas University of Technology, Lithuania	
10:00 – 10:30	<b>TU-2 (Invited) Properties of polymer based gels for radiation sensors</b> Diana Adlienė, Kaunas University of Technology, Lithuania	
10:30 – 10:50	<i>Coffee break</i>	
	<b>Session 5 (Hall 1)</b> <b>Session Chairs:</b> <b>Daniel Moraru</b> , Shizuoka University <b>Yukinori Ono</b> , Shizuoka University	<b>Session 5 (Hall 2)</b> <b>Session Chairs:</b> <b>Hiroya Ikeda</b> , Shizuoka University <b>Balázs Rakos</b> , Budapest University of Technology and Economics
10:50 – 11:10	<b>TU-3 Effect of damage introduction and He existence on D retention by high flux D plasma exposure</b> Yasuhisa Oya, Shizuoka University, Japan	<b>TU-8 Numerical Simulation of Shaking Optimization in a Suspension Culture of iPSC Cells</b> Yasunori Okano, Osaka University, Japan
11:10 – 11:30	<b>TU-4 Mechanical properties of cellular structures with Shwartz Primitive topology</b> Maxim M. Sychov, Russian Academy of Sciences, Russia	<b>TU-9 Re-examination of the concept of “Primary Energy” and problems on the introduction system of renewable energies in Japan</b> Satoshi Matsuda, Shizuoka University, Japan

11:30 – 11:50	<b>TU-5 Deuterium removal efficiency in tungsten as a function of hydrogen ion beam fluence and temperature</b> Mingzhong Zhao, Shizuoka University, Japan	<b>TU-10 To the Problems of Detecting Signals Passing Through a Random Phase Screen</b> Miranda Khajishvili, Batumi Shota Rustaveli State University, Georgia
11:50 – 12:10	<b>TU-6 The numerical study of co-existence effect of thermal and solutal Marangoni convections in a liquid bridge</b> Chihao Jin, Osaka University, Japan	<b>TU-11 Full dynamics and optimization of a controllable minimally invasive robot for soft tissue surgery and servicing the artificial organs</b> Grzegorz Ilewicz, University of Bielsko - Biala, Poland
12:10 – 12:30	<b>TU-7 Recovery of the workpiece material in ECM of sintered carbide</b> Sicong Wang, Shizuoka University, Japan	<b>TU-12 Feasibility study of a neutron detector made of boron-doped diamond using Monte Carlo simulation</b> Taku Miyake, Shizuoka University, Japan
12:30 – 13:30	<i>Lunch</i>	
	<b>Session 6 (Hall 1)</b> <b>Session Chairs:</b> Saroj Tripathi, Shizuoka University Lucel Sirghi, Alexandru Ioan Cuza University	<b>Session 6 (Hall 2)</b> <b>Session Chairs:</b> Satoshi Matsuda, Shizuoka University Grzegorz Ilewicz, University of Bielsko- Biala
13:30 – 13:50	<b>TU-13 A Statistical Study on the Origin of Dopant Clusters in Highly-Doped Si Nanoscale <i>pn</i> Tunnel Diodes</b> Daniel Moraru, Shizuoka University, Japan	<b>TU-16 An Application of The Nash Equilibrium to an Experimental Setting: The Real Meaning of the Sacrifice Move in Board Games</b> Valerie A. Wilkinson, Shizuoka University, Japan
13:50 – 14:10 (Canceled)	<b>TU-14 Photoconversion efficiency in solar cells based on heterostructures ITO-Si with Au nanoparticles</b> Anastasiia Mykytiuk, Taras Shevchenko National University of Kyiv, Ukraine	<b>TU-17 Assessment of renewable energy systems in northern Philippines using geospatial toolkit</b> Carlos Pascual, Mariano Marcos State University, Philippines
14:10 – 14:30	<b>TU-15 Photocatalytic activity of ZnO-loaded titania nanotube arrays: structural, morphological and compositional effects</b> Marius Dobromir, Alexandru Ioan Cuza University of Iasi, Romania	<b>TU-18 A Parallel Fuzzy Filter Network for Pattern Recognition</b> Balázs Tusor, Obuda University, Hungary
14:30 – 15:00	<i>Bus</i>	
15:00 – 19:00	<i>Excursion Kaunas at a glance</i>	
19:00 – 21:00	<i>Dinner</i>	

### Wednesday, September 26, 2018

9:00 – 9:30	Registration
	<b>Session 7 (Hall 1)</b>  <b>Session Chairs:</b> Yasuhisa Oya, Shizuoka University Mashiko Takashi, Shizuoka University
9:30 – 10:00	<b>WE-1 (Invited) Research on Functional Materials for Energy Conversion Devices: Photovoltaics and Mechanoluminescence</b> Kenji Murakami, Shizuoka University, Japan
10:00 – 10:30	<b>WE-2 (Invited) Modeling of properties of single chamber fuel cell components</b> Arvidas Galdikas, Kaunas University of Technology, Lithuania
10:30 – 10:50	<i>Coffee break</i>

Session 8 (Hall 1)		
<b>Session Chairs:</b> Adam Wozniak, Warsaw University of Technology Valerie A. Wilkinson, Shizuoka University		
10:50 – 12:30	<b>Special Poster Session for iA Young Researchers (iAY) – 5 min oral communication</b>	<b>WE-3 Characterization of thermoelectric generation in Si-wire thermopile structure</b> Khotimatul Fauziah, Shizuoka University, Japan
		<b>WE-4 Ellipsometric diagnostic of anisotropy properties of surface layer of silicon after laser treatment</b> Dmytro Gnatyuk, Taras Shevchenko National University of Kyiv, Ukraine
		<b>WE-5 Single molecule force spectroscopy on collagen deposited on hydroxylated silicon substrate</b> Alexandra Besleaga, Alexandru Ioan Cuza University of Iasi, Romania
		<b>WE-7 Low-k sol-gel coating for surface planarization at integrated circuit production</b> Vasili Vaskevich, F. Scorina Gomel State University, Belarus
		<b>WE-8 Instability of CdTe radiation detector characterized by carrier transport properties</b> Hisaya Nakagawa, Shizuoka University, Japan
		<b>WE-9 Investigation of X-ray attenuation properties in water solutions of sodium tungstate dihydrate and silicotungstic acid</b> Laurynas Gilys, Kaunas University of Technology, Lithuania
		<b>WE-10 Formation of Alumina and Alumina-Zirconia coatings employing Plasma Spraying</b> Jacob S. Mathew, Kaunas University of Technology, Lithuania
		<b>WE-11 Activation of water by surface DBD micro plasma in atmospheric air</b> Alexandra Besleaga, Alexandru Ioan Cuza University of Iasi, Romania
		<b>WE-13 Lead ferrite doped chrome thin films synthesis by reactive magnetron sputtering and investigation</b> Benas Beklešovas, Kaunas University of Technology, Lithuania
		<b>WE-14 Influence of deposition parameters on the structure of TiO<sub>2</sub> thin films prepared by reactive magnetron sputtering technique</b> Vytautas Kavaliūnas, Kaunas University of Technology, Lithuania
		<b>WE-15 Formation and investigation of doped cerium oxide thin films formed using e-beam deposition technique</b> Nursultan Kainbayev, Kaunas University of Technology, Lithuania
		<b>WE-16 Investigation of deposition parameters influence on the properties of doped diamond-like carbon films</b> Vilius Dovydaitis, Kaunas University of Technology, Lithuania
		<b>WE-17 Aerial image registration for grasping road conditions</b> Kyoji Ogasawara, Shizuoka University, Japan
		<b>WE-18 Up-Conversion Nanosized Phosphors Based Fluoride For Photodynamic Therapy Of Malignant Tumors</b> Anastasiia Dorokhina, Saint-Petersburg State Institute of Technology, Russia
<b>WE-19 Friction and adhesion forces at single-asperity contact between a silicon and polydimethylsiloxane surfaces</b> Alexandra Besleaga, Alexandru Ioan Cuza University of Iasi, Romania		
<b>WE-20 TiO<sub>2</sub> Formation on Ti Substrate by Plasma Immersion Ion Implantation: Morphology, Photocatalytic and Optical Properties</b> Edvins Letko, Riga Technical University, Latvia		
12:30 – 13:30	<i>Lunch</i>	

**Session 9 (Hotel lobby)**

**Session Chairs:** Živilė Rutkūnienė, Kaunas University of Technology  
Kristina Bočkutė, Kaunas University of Technology

13:30 – 15:30	Poster session
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**Session 10 (Hall 1)**

15:30 – 16:00	Conference closing
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16:00 – 17:00	iA Committee Meeting
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19:00 – 22:00	<i>Gala Dinner</i>
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**Thursday, September 27, 2018**

9:00 – 20:00	<i>Conference Excursion</i>
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## *Poster Session Programme*

A poster board will be provided in the poster presentation area. The board's segments will measure approximately 1.0 m high x 0.7 m wide and will be set up vertically. On your designated board, you will find all the materials needed for mounting your poster. Poster numbers will be in the upper corner of each poster board and this number corresponds with the number assigned to each poster in the conference program.

Presenters are encouraged to mount their poster in the morning and remove them at the end of the day. Authors must remain with their posters for the duration of their scheduled session, as indicated in the conference program. All posters must remain up until the session ends and then must be removed within one hour.

**Wednesday, September 26, 2018**

<b>Poster Session, 13:30 – 15:30</b>	
	<b>Session Chairs:</b> Živilė Rutkūnienė, Kaunas University of Technology Kristina Bočkutė, Kaunas University of Technology
P1	<b>Characterization of thermoelectric generation in Si-wire thermopile structure</b> Khotimatul Fauziah, Shizuoka University, Japan
P2	<b>Ellipsometric diagnostic of anisotropy properties of surface layer of silicon after laser treatment</b> Dmytro Gnatyuk, Taras Shevchenko National University of Kyiv, Ukraine
P3	<b>Single molecule force spectroscopy on collagen deposited on hydroxylated silicon substrate</b> Alexandra Besleaga, Alexandru Ioan Cuza University of Iasi, Romania
P5	<b>Low-k sol-gel coating for surface planarization at integrated circuit production</b> Vasili Vaskevich, F. Scorina Gomel State University, Belarus
P6	<b>Instability of CdTe radiation detector characterized by carrier transport properties</b> Hisaya Nakagawa, Shizuoka University, Japan
P7	<b>Investigation of X-ray attenuation properties in water solutions of sodium tungstate dihydrate and silicotungstic acid</b> Laurynas Gilys, Kaunas University of Technology, Lithuania
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P11	<b>Lead ferrite doped chrome thin films synthesis by reactive magnetron sputtering and investigation</b> Benas Beklešovas, Kaunas University of Technology, Lithuania
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P15	<b>Aerial image registration for grasping road conditions</b> Kyoji Ogasawara, Shizuoka University, Japan
P16	<b>Up-Conversion Nanosized Phosphors Based Fluoride For Photodynamic Therapy Of Malignant Tumors</b> Anastasiia Dorokhina, Saint-Petersburg State Institute of Technology, Russia
P17	<b>Structure and mechanical properties of gradient metal-carbon films</b> Alexander V. Rogachev, Francisk Skorina Gomel State University, Belarus
P18	<b>Synthesis of BiFeO<sub>3</sub>-Powders and Films by Sol-Gel Process</b> Alina Semchenko, Francisk Skorina Gomel State University, Belarus

P19	<b>Android Botnet Detection Using Soft Computing Methods</b> Amir Mosavi, Obuda University, Hungary
P20	<b>A Hybrid Neuro-Fuzzy Algorithm for Estimation of Reference Evapotranspiration</b> Amir Mosavi, Obuda University, Hungary
P21	<b>On the Role of Shaped Noise Visibility for Post-Compression Image Enhancement</b> Damon M. Chandler, Shizuoka University, Japan
P22	<b>TiO<sub>2</sub> Formation on Ti Substrate by Plasma Immersion Ion Implantation: Morphology, Photocatalytic and Optical Properties</b> Edvins Letko, Riga Technical University, Latvia
P23	<b>A Comparison of an Execution Efficiency of the Use of a Skip List and Simple List in a .NET Application</b> Igor Košťál, University of Economics in Bratislava, Slovakia
P24	<b>Design and creation of metal-polymer absorbing metamaterials using the vacuum-plasma technologies</b> Igor Semchenko, Francisk Skorina Gomel State University, Belarus
P25	<b>Investigation of X-ray attenuation properties in 3D printing materials used for development of head and neck phantom</b> Jurgita Laurikaitienė, Kaunas University of Technology, Kaunas
P26	<b>Application of artificial neural networks to the analysis of alcohol addiction</b> Krzysztof Urbaniak, Politechnika Warszawska, Poland
P27	<b>Two-photon fluorescent microscopy for 3D dopant imaging in wide bandgap semiconductors</b> Ryszard Jablonski, Warsaw University of Technology, Poland
P28	<b>Re-examination of the concept of “Primary Energy” and problems on the introduction system of renewable energies in Japan</b> Satoshi Matsuda, Shizuoka University, Japan
P29	<b>Ion Mobility Spectrometry detection of corona discharge decomposition of phthalates</b> Štefan Matejčík, Comenius University, Slovakia
P30	<b>Thermal convection of a phase-changing fluid</b> Takashi Mashiko, Shizuoka University, Japan
P31	<b>Automatic identification of the kidney shape in CT images</b> Tomasz Les, Warsaw University of Technology, Poland
P32	<b>The Flip-Side of Academic English (AE)</b> Valerie A. Wilkinson, Shizuoka University, Japan
P33	<b>ZnO/Me Sol-Gel Film for Solar Cells and Photodetectors</b> Vitali Sidsky, Francisk Skorina Gomel State University, Belarus
P34	<b>Friction and adhesion forces at single-asperity contact between a silicon and polydimethylsiloxane surfaces</b> Alexandra Besleaga, Alexandru Ioan Cuza University of Iasi, Romania