



OPTOELECTRONICS INTO A POWERFUL ECONOMY

October 20-23, 2020



Tuesday, October 20

09:30 – 10:00	<p>Welcome note Roxana SAVASTRU (INOE, Romania) Roxana RĂDVAN Cecilia ROMAN Cătălin DUMITRESCU</p>
<p>1st Workshop Optoelectronics in Environment and Climate research Chairperson Doina NICOLAE</p>	
10:00 – 10:20	<p>Environment and Climate research @ INOE: 20 years of history Doina NICOLAE (INOE, Romania)</p>
10:20 – 10:40	<p>A 41-years bioclimatology of thermal stress in Europe Bogdan ANTONESCU (INOE, Romania)</p>
10:40 – 11:00	<p>Estimating ground level concentrations of PM2.5 using satellite AOD and WRF-Chem model data Mihai BOLDEANU (INOE, Romania)</p>
11:00 – 11:20	<p>Desert dust characterization from remote sensing measurements during Pre-TECT campaign Vassilis AMIRIDIS (National Observatory of Athens, Greece)</p>
11:20 – 11:40	<p>Aerosol Remote Sensing research in ACTRIS Lucia MONA (CNR, Italy), Doina NICOLAE (INOE, Romania)</p>
11:40 – 12:00	<p>ACTRIS-EARLINET campaign during COVID-19 lockdown Iwona STACHLEVSKA (University of Warsaw, Poland)</p>
12:00 – 13:00	<p>Break</p>
13:00 – 13:20	<p>Insights on the biomass burning events measured by lidars in EARLINET Mariana ADAM (INOE, Romania)</p>
13:20 – 13:40	<p>Assessment of waste burning in Romania Luminita MARMUREANU (INOE, Romania)</p>
13:40 – 14:00	<p>Red Sun over Manchester H.M.A.M. RICKETTS (University of Manchester, U.K.)</p>
14:00 – 14:20	<p>Root oxidates modulates soil microbiota: consequences on soil functions Emoke Dalma KOVACS (INOE-ICIA, Romania)</p>
14:40 – 14:40	<p>Elevation characteristics influence on soil microbial diversity Emoke Dalma KOVACS (INOE-ICIA, Romania)</p>

Wednesday, October 21

2nd Workshop PVD technologies for optoelectronics, optical, decorative, plasmonic and medical applications Chairperson Viorel BRAIC	
10:00 – 10:20	A systematic experimental approach for design, deposition and characterization of PVD optical coatings Iulian PANĂ (INOE, Romania)
10:20 – 10:40	Optical emission spectroscopy techniques for controlling the reactive magnetron plasma processes and tuning the properties of thin films Cătălin VIȚELARU (INOE, Romania)
10:40 – 11:00	Biocompatible coatings used in the field of medicine Alina VLĂDESCU (INOE, Romania)
11:00 – 11:20	Electrochemical impedance spectroscopy used for carbonitrides and oxynitrides investigation Mihaela DINU (INOE, Romania)
11:20 – 11:40	Heteroepitaxial and nanostructured films for photonics, high temperature electrical contacts and charge storage devices Cătălin ZOIȚA (INOE, Romania)
11:40 – 12:00	Silver films: from plasmonic to biomaterials Mariana BRAIC (INOE, Romania)
12:00 – 13:00	Break
3rd Workshop Optoelectronics and optospintronics: emergent phenomena, materials and applications Chairperson Cristiana GRIGORESCU	
13:00 – 13:20	Multinary metal alloys of the (half –) Heusler, Diluted Magnetic Semiconductors and High Entropy families- how would spin make a choice? C.E.A. GRIGORESCU (INOE, Romania)
13:20 – 13:40	Plasmonics, spintronics and label-free spectroscopies - lessons to be learned for interspecies discrimination A.-M. IORDACHE (INOE, Romania)
13:40 – 14:00	Complex characterization of a zinc phosphate-tellurite glass as Faraday rotator M. ELIȘA (INOE, Romania)
14:00 – 14:20	Silicon-based tandem heterojunction solar cells incorporating copper oxide: performance optimization and defect analysis Laurențiu FARA (Polytechnic University of Bucharest, Romania)
14:20 – 14:40	Structural modification pattern of plasma deposited graphene nanowall layers induced by nitrogen doping A.M.I. TREFILOV (National Institute for Laser, Plasma and Radiation Physics, Romania)
14:40 – 15:00	Collective phenomena of branching for overcritical currents in arrays of intrinsic Josephson junctions M. CUZMINSKI (“Horia Hulubei” National Institute for Physics and Nuclear Engineering, Romania)
15:00 – 15:20	Plasma self-organization in high intensity laser beam

	A. ZUBAREV (National Institute for Laser, Plasma and Radiation Physics, Romania)
15:20 – 15:40	Electrical and morphological characterization of carbon nanowall layers obtained by a low-pressure plasma jet B.I. BITA (National Institute for Laser, Plasma and Radiation Physics, Romania)

Thursday, October 22

4th Workshop Optoelectronics: materials, sensors and products Chairperson Laurențiu BAȘCHIR	
10:00 – 10:20	Chalcogenide materials and fiber optics in optoelectronics Laurențiu BAȘCHIR (INOE, Romania)
10:20 – 10:40	Synthesis of high refractive index infrared glasses by ball-milling and Spark Plasma Sintering Valentin REUX (Institut des Sciences Chimiques de Rennes, France)
10:40 – 11:00	Surface water quality monitoring -a citizen science perspective Elfrida CÂRSTEA (INOE, Romania)
11:00 – 11:20	New perspectives for "smart" wearable systems, also in relation to the Covid-19 situation Malgorzata KUJAWSKA (Poznan University of Medical Sciences, Poland) Enrico COZZONI (GradoZero, Italy)
11:20 – 11:40	Gradient refractive index (GRIN) obtained in chalcogenide glasses by ion exchange Claire FOURMENTIN (Institut des Sciences Chimiques de Rennes, France)
11:40 – 12:00	Assessing environmental factors related to covid-19 transmission in Bucharest city, in Romania Maria ZORAN (INOE, Romania)
12:00 – 13:00	Break
13:00 – 13:20	Product design and engineering for electronics by Karfidov Lab Dmitry VASILEV (Karfidov Lab, Russia)
13:20 – 13:40	Electromagnetic sensors for cardio-respiratory monitoring Olev MARTENS (Tallinn University of Technology, Estonia)
13:40 – 14:00	From Idea to Market, Practical Steps to Go Beyond a Project's Funded Lifetime Berthold HEINEMANN (MaiMinds, Germany)
14:00 – 14:20	Hyperspectral sensors used in medicine Dragoș MANEA (INOE, Romania)
14:20 – 14:40	Determination of the optimal frequency for the detection Cherenkov cone of electromagnetic radiation in saline environment Valeriu SAVU (INOE 2000, Romania)
14:40 – 15:00	A practical approach to the design of a vertical axis wind turbine C. DUMITRESCU (INOE-IHP, Romania)
15:00 – 15:20	Monitoring the wear of the hydraulic gear pumps in endurance through modern methods of predictive and proactive maintenance A.-D. MARINESCU (INOE-IHP, Romania)
15:20 – 15:40	Applications of hydraulics in wind power generation I. BACIU (INOE-IHP, Romania)
15:40 – 16:00	Digital hydraulic used to reduce energy loses in hydraulic systems A. HRISTEA (INOE-IHP, Romania)
16:00	<i>Free discussions, questions, answers!</i>

Friday, October 23

5thWorkshop Optoelectronics in Heritage Science Chairperson Roxana RĂDVAN	
10:00 – 10:20	Physico-chemical elucidation of pioneering photography and electrotyping reproduction developed around 1840 in Vienna Wolfgang KAUTEK (University of Vienna, Austria)
10:20 – 10:40	Use of 3D laser and optical scanning for monitoring of Cultural Heritage objects Vadim PARFENOV(St. Petersburg Electrotechnical University, Russia)
10:40 – 11:00	Why Laser Cleaning? A Case Study of the Pectoral from Golyama Kosmatka Tumulus Petya PENKOVA (National Archaeological Institute with Museum - Bulgarian Academy of Sciences, Bulgaria)
11:00 – 11:20	Byzantine coins evaluation using a non-destructive XRF analytical technique Claudiu TĂNĂSELIA (INOE-ICIA, Romania)
11:20 – 11:40	Study of the picturesque decoration of the State Office of Emperor Nicholas II in the Alexander Palace in Tsarskoye Selo Maurizio BECUCCI (University of Florence, Italy)
11:40 – 12:00	Advanced laser techniques for conservation and restoration of CH Monica DINU (INOE, Romania)
12:00 – 12:20	Uncovering layers of the past. Spectral imaging techniques for artworks investigation Lucian RATOIU (INOE, Romania)
12:20 – 12:40	3D digitization practices in CH Laurențiu ANGHELUȚĂ (INOE, Romania)
12:40 – 13:00	Science, practice and public administration in the field of cultural heritage protection - the case of IMPLEMENT project Raluca IOSIPESCU (INP, Romania)