



Serbian | Српско
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Society | Микроскопију

MCM2019

14th

MULTINATIONAL CONGRESS ON MICROSCOPY

September 15–20, 2019 in Belgrade, Serbia

MCM2019
**14th MULTINATIONAL CONGRESS
ON MICROSCOPY**

PROGRAMME BOOK

BELGRADE 2019

GENERAL INFORMATION

Conference Chair

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Executive Organizer

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SOCIETAL ACTIVITIES

Conference Dinner

Hotel Majestic,
Obilićev venac 28, Belgrade,

Hotel Majestic has been in the very heart of Belgrade since 1936. Hotel Majestic is considered as one of the symbols of Belgrade. Protected as one of Belgrade's historical landmark. The first art deco building of its kind in the capital, designed by Milan S. Minić who was not only the architect but the first owner of the establishment. Hotel Majestic is Milan Minić's most important work, in line with current European traditions. The building is a synthesis of architecture, visual and applied arts, and this phenomenon can be observed in the entire treatment of the interior. Hotel Majestic Belgrade offers tradition, elegance, and comfort. The impeccable tradition, and timeless elegance combine to create a unique hotel in the very pedestrian zone, of Stari Grad (Old Town), Belgrade.

Explore Belgrade

If you come with us we will show you Belgrade, if not please visit website <http://www.tob.rs/en> or <https://belgrade-free-walking-tour.com/>

See you in Belgrade downtown

METROPOL FLOR PLAN

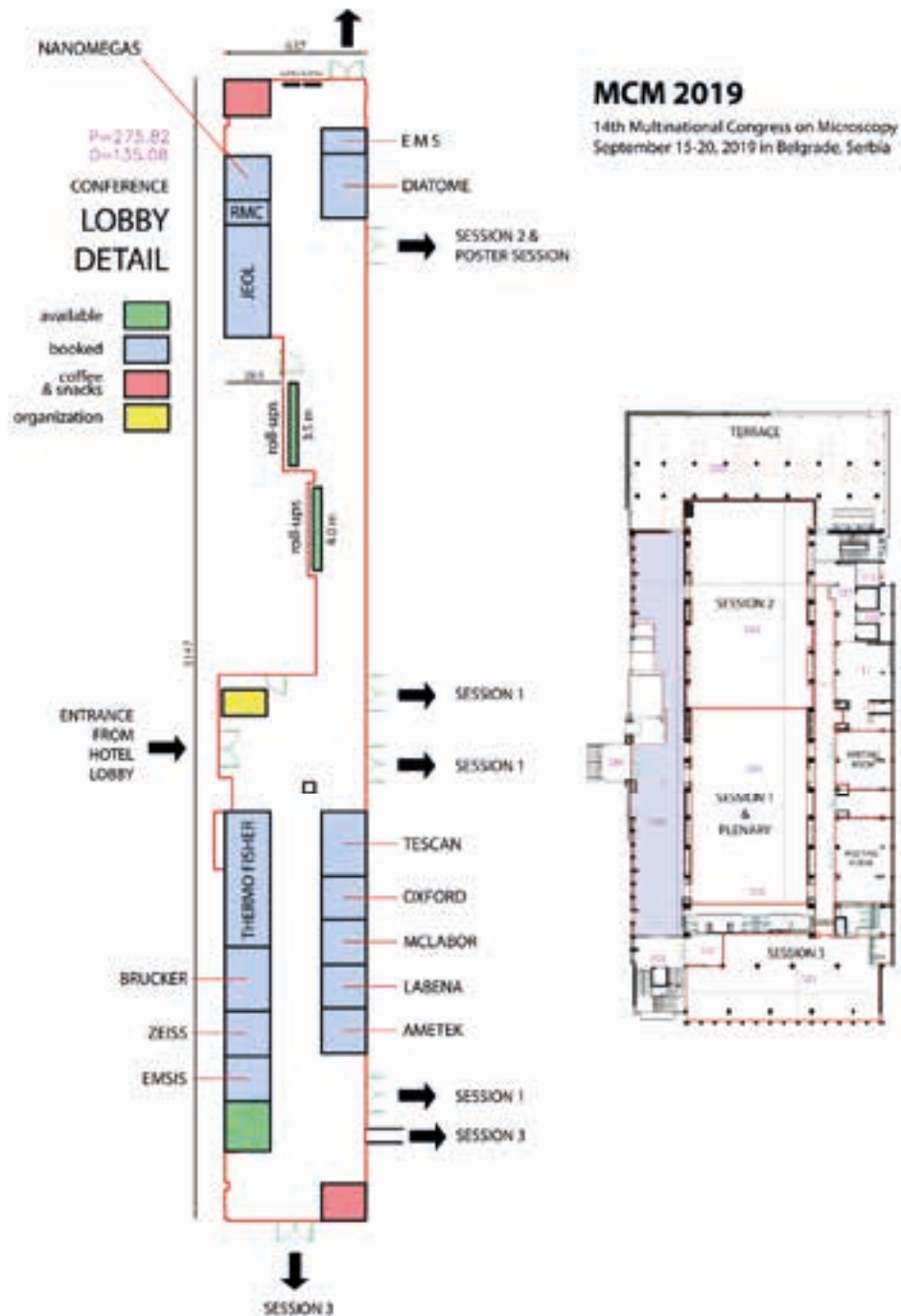
Congress venue Metropol Hotel, Bulevar Kralja Aleksandra 69

SESSION 1 – Ivo Andrić BallRoom B

SESSION 2 – Ivo Andrić BallRoom A

SESSION 3– Lavender

MEETING ROOM 1 – Aristotle



Plenary Lectures

Sunday, 15.09.2019., 18h, Room: Session 1

Prof. Dr. Velimir R. Radmilović

Serbian Academy of Sciences and Arts, Belgrade, Serbia
University of Belgrade, Faculty of Technology and Metallurgy, Nanotechnology and Functional Materials Center, Belgrade, Serbia

“Atomistic Phenomena in Nanostructures for Energy Related Applications”

Monday, 16.09.2019., 9h, Room: Session 1

Dr. Vincenzo Grillo

Istituto di Nanoscienze, CNR (Consiglio Nazionale delle Ricerche), Modena, Italy

“Quantum Sorting: a new paradigm of quantum measurement in electron microscopy”

Tuesday, 17.09.2019., 9h, Room: Session 1

Prof. Dr. Saverio Cinti

Department of Experimental and Clinical Medicine, Center of Obesity University of Ancona (Politecnica delle Marche), Ancona, Italy

“Anatomy and Physiology of The Nutritional System”

Wednesday, 18.09.2019., 9h, Room: Session 1

Dr. András Kovács

Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons, Forschungszentrum Jülich, Germany

“Using off-axis electron holography to measure magnetic properties of materials”

Thursday, 19.09.2019., 9h, Room: Session 1

Prof. Dr. Igor Weber

Division of Molecular Biology, Ruđer Bošković Institute, Zagreb, Croatia

“Microscoping the amoeboid cell motility”

Friday, 20.09.2019., 9h, Room: Session 1

Prof. Dr. Goran Dražić

Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia

“Quantitative Cs corrected STEM of local structures in lead-free ferroelectrics”

Instrumentation and Techniques

IT1 - Advances in sample preparation techniques

Chairpersons: György Zoltán Radnóczy, Meltem Sezen

Monday, 16.09.2019., Room: Session 3

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|--------------------------|---|
| 10:30 | Invited lecture: Ion sample preparation for microanalysis in Earth science | Andrey Kudryavtsev | TESCAN Ltd., Saint-Petesburg, Russia |
| 11:00 | Broad Ion Beam Cross Section Preparation on Nitrocarburised and Oxidised Steel Samples to Correlate Microstructure and Tribological Behaviour | Johannes Rattenberger | Graz Centre for Electron Microscopy - ZFE, Graz, Austria |
| 11:15 | New Approaches To SBF-SEM Specimen Preparation | Eva Ďurinová | Laboratory of Electron Microscopy, Institute of Parasitology, Biology Centre CAS in České Budějovice, Czech Republic |
| 11:30 | Surface zeolites study in sugar- enriched solutions | Rumenka Markoska | University of Rijeka, Department of Biotechnology, Centre for High- throughput technologies, Croatia |
| 11:45 | On the combined use of FIB and PIPS for TEM sample preparation from actinides materials for nuclear applications | Alessandro Benedetti | European Commission, Joint Research Centre, Karlsruhe, Germany |

IT2 - 3D imaging, image processing, and phase-related techniques

Chairpersons: Ognjen Milat, Thomas Heuser

Tuesday, 17.09.2019., Room: Session 3

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|-------------------------------|---|
| 10:30 | Invited lecture: Project „Pattern“ – an open access online tool for spatial analysis of immunolabeling in electron microscopy | Dominik Pinkas | Institute of Molecular Genetics ASCR v.v.i., Electron Microscopy Core Facility, Prague, Czech Republic |
| 10:50 | Analytical electron tomography of metallic samples | Cornelia Trummer | Graz Centre for Electron Microscopy, Graz, Austria |
| 11:10 | Toward an electrostatic OAM sorter | Paolo Rosi | Modena e Reggio Emilia, Via G Campi 213/a, I-41125 Modena, Italy |
| 11:30 | Comparison of collagen distribution between keratoconus and normal human corneal stroma using second harmonic generation microscopy | Mehmet Serif Aydin | Regenerative and Restorative Medicine Research Center (REMÉR), Istanbul Medipol University, Istanbul, Turkey |
| 11:45 | Making a 3D model of merino wool fibre with photogrammetric processing of SEM images | Helena Gabrijelčič Tomc | Faculty of Natural Sciences and Engineering, University of Ljubljana, Ljubljana, Slovenia |

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|-------|--|--------------|--|
| 12:00 | Quantitative three-dimensional microstructure description of porous nano-sized cermet anodes for SOFC using FIB nanotomography | Gregor Kapun | National Institute of Chemistry, and Center of Excellence on Nanoscience and Nanotechnology, Ljubljana, Slovenia |
| 12:15 | Digital optical holographic microscope; interferometric study of thin film delamination buckling patterns | Ognjen Milat | Institute of Physics, Zagreb, Croatia |

IT3 - Diffraction techniques and spectroscopy

Chairpersons: Mariana Klementova, Miran Čeh

Wednesday, 18.09.2019., Room: Session 3

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|--------------------|--|
| 10:30 | Invited lecture: Crystal structure determination using operando and in situ electron diffraction tomography | Joke Hadermann | EMAT, Department of Physics, University of Antwerp, Antwerp, Belgium |
| 11:00 | Automatic processing of a large number of electron diffraction patterns in the TEM | Janos L. Labar | MTA EK MFA, Budapest, Hungary |
| 11:15 | Donwilhelmsite - a new mineral from the Moon | Mariana Klementova | Institute of Physics of the Czech Academy of Sciences, v.v.i., Prague, Czech Republic |
| 11:30 | Invited lecture: Analytical Electron Microscopy: Recent Advances and New Applications | Ferdinand Hofer | Institute for Electron Microscopy and Nanoanalysis, Graz University of Technology, Graz, Austria |
| 12:00 | Vibrational STEM-EELS simulations at atomic resolution | Paul M. Zeiger | Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden |
| 12:15 | Structure and Properties of Novel 1D Self-organized TiO ₂ Nanotubes Deposited by MoS ₂ and CdS via Atomic Layer Deposition | Jan Michalicka | Central European Institute of Technology, Brno University of Technology, Brno, Czech Republic |

IT4 - Correlative, and super-resolution microscopy

Chairpersons: Ferdinand Hofer, Kristof Kovacs

Thursday, 19.09.2019., Room: Session 3

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|----------------------|---|
| 10:30 | Invited lecture: Correlative Raman microscopy, SEM and EDX – examples of application and best practice | Harald Fitzek | Graz Centre for Electron Microscopy, Graz, Austria |
| 11:00 | Microbiologically influenced corrosion (MIC) of steel – a study using correlative SEM, EDX and Raman microscopy | Hartmuth Schroettner | Graz Centre for Electron Microscopy, Graz, Austria and Institute of Electron Microscopy and Nanoanalysis, NAWI Graz, Graz University of Technology, Graz, Austria |

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|-------|---|----------------|--|
| 11:15 | Alpha-synuclein affects differently the internal and external leaflet of the lipid membranes | Samira Jadavi | Department of Nanophysics, Istituto Italiano di Tecnologia, Genova, Italy and Department of Physics, University of Genova, Genova, Italy |
| 11:30 | Unexpected asymmetry in the aggregation of partially labeled peptides revealed by STED-AFM correlative nanoscopy | Claudio Canale | Physics Dept., University of Genova, Genova, Italy. |
| 11:45 | Measuring the Temperature Homogeneity Across FIB Lamellae for In Situ TEM Experiments via Raman Scattering in Crystalline Silicon | Robert Krisper | Graz Centre for Electron Microscopy, Graz, Austria |

IT5 - In situ and environmental microscopy

Chairpersons: Sašo Šturm, Kónya Zoltán

Friday, 20.09.2019., Room: Session 3

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|--------------------|--|
| 10:30 | Invited lecture: <i>In-situ/ex-situ</i> atomic-resolution study on metallic and oxide nanocrystalline materials | Zaoli Zhang | Erich Schmid Institute, Austrian Academy of Sciences, Leoben, Austria |
| 11:00 | In situ TEM of electron beam induced nanocrystallization of WC and W | Stefan Noisternig | University of Vienna, Faculty of Physics, Physics of Nanostructured Materials, Vienna, Austria |
| 11:15 | Nanopatterning silver: targeted oxidation with an electron beam | Huaping Sheng | Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria |
| 11:30 | Micron-scale characterization of twinning and dislocation slip in magnesium single-crystals by advanced SEM in-situ techniques | Petr Hrcuba | Charles university, Prague, Czech Republic |
| 11:45 | Temperature-induced cationic diffusion to regulate the phase transition in VO ₂ film | Yonghui Zheng | Erich Schmid Institute of Materials Science, Austrian Academy of Science, Leoben , Austria |
| 12:00 | Thermosilent behavior in organic alloy of 1,2,4,5-tetrabromobenzene and 1,2,4,5-tetrachlorobenzene | Teodoro Klaser | Department of Physics, Faculty of Science, University of Zagreb, Zagreb, Croatia |
| 12:15 | In situ observation of precipitate growth and decomposition in AlCu ₄ during heat treatment via analytical STEM | Evelin Fisslthaler | Graz Centre for Electron Microscopy, Graz, Austria |

IT6 - Advances in instrumentation and techniques (SEM, TEM, SPM, etc.)

Chairpersons: Daniel Kiener, Vladislav Krzyzaneck

Monday, 16.09.2019., Room: Session 3

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|-----------------------|--|
| 14:00 | Invited lecture: Nanoscale strain mapping in metallic glasses during in situ deformation | Christoph Gammer | Erich Schmid Institute of Materials Science of the Austrian Academy of Sciences, Leoben, Austria |
| 14:30 | Invited lecture: Advanced techniques for low- and very-low energy SEM using reflected and transmitted signals | Ilona Müllerová | Institute of Scientific Instruments CAS, Brno, Czech Republic |
| 15:00 | Quantum Experiments in the TEM: Realizing Unitary Operators using Quadrupoles | Stefan Löffler | USTEM, TU Wien, Wien, Austria |
| 15:15 | Magnetic Differential Phase Contrast Imaging at Atomic Scale | Ján Rusz | Dept. of Physics and Astronomy, Uppsala University, Sweden |
| 15:30 | Improvements in Environmental Scanning Electron Microscopy - Universal Pressure Scanning Electron Microscopy (UPSEM) | Johannes Rattenberger | Graz Centre for Electron Microscopy - ZFE, Graz, Austria |
| 15:45 | Assessing the thickness error rate of quantitative STEM measurements | Radim Skoupy | Institute of Scientific Instruments of the CAS, Brno, Czech Republic |

Monday, 16.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|----------------------|---|--|-----------|
| Silvana Dimitrijević | SEM-EDS analysis of gold mercaptotriazole crystals (Au-MT) | Silvana Dimitrijević, Stevan Dimitrijević, Aleksandra Ivanović | IT6-1 |
| V. Morandi | Advanced approach to Scanning-transmission tomography in the SEM | V. Morandi, M. Ferroni, P. Maccagnani, L. Masini, A. Migliori, L. Ortolani, M. Donarelli, A. Signoroni, M. Savardi | IT6-2 |
| Merve Acikel Elmas | Investigation in the Effects of Exercise on the Testicular Morphology, Cell Proliferation and Blood Testis Barrier in the High Fat Diet-Induced Obesity | Merve Acikel Elmas, Ozlem Bingol Ozakpinar, Meltem Kolgazi, Goksel Sener, Serap Arbak, Feriha Ercan | IT6-3 |
| Manfred Nachtnebel | Correlative analysis of dust particles by SEM, EDXS and Raman | Manfred Nachtnebel, Andrea Steitz, Ute Munoz-Czerny, Johannes Mantler, Gerhard Gruell, Hartmuth Schroettner | IT6-4 |

Life Sciences

LS1 - Live cell imaging, and intracellular dynamics

Chairpersons: Manuela Malatesta, Pavel Hozak

Monday, 16.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|--|
| 10:30 | Invited lecture: Single-molecule tracking reveals distinct behaviors of epigenetic modifiers Tet1 and Tet2 in live embryonic stem cells | Joel Ryan | Department of Biology II and Center for Integrated Protein Science Munich (CIPSM), LMU Munich, Germany |
| 11:00 | Invited lecture: The immobile movement | Marco Biggiogera | Dipartimento di Biologia e Biotechnologie "L. Spallanzani", Università di Pavia, Pavia, Italy |
| 11:30 | Combined two photon excitation fluorescence and third harmonic generation imaging of redox ratio for monitoring metabolic state of live cells of fungus <i>Phycomyces blakesleeanus</i> | Tanja Pajic | Faculty of Biology, University of Belgrade, Serbia |
| 11:45 | A new holotomographic microscope for monitoring apoptotic cell behavior in vivo: a preliminary study | Sara Salucci | Department of Biomolecular Sciences, Urbino University, Urbino, Italy |
| 12:00 | Fixation-induced cell blebbing: how to minimize a loss of soluble proteins from cells? | Pavel Hozak | Institute of Molecular Genetics, CAS, v.v.i., Department of Biology of the Cell Nucleus, and Institute of Molecular Genetics, CAS, v.v.i., Microscopy Centre, Prague, Czech Republic |
| 12:15 | Effects of mild ozonisation on the dynamics of lipid droplets in adipose-derived stem cells and mature adipocytes | Manuela Costanzo | Department of Neurosciences, Biomedicine and Movement Sciences, Anatomy and Histology Section, University of Verona, Verona, Italy |

Monday, 16.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|--------------------|---|---|-----------|
| Snježana Radulović | Impact of Endothelial Lipase Modified HDL on eNOS trafficking and activity in endothelial cells | Snježana Radulović, Benjamin Gottschalk, Pablo Zardoya Laguardia, Irene Schilcher, Markus Trieb, Dagmar Kratky, Gunther Marsche, Wolfgang F. Graier, Kurt Schmidt, Saša Frank | LS1-1 |

LS2 - Structure and imaging of biomolecules

Chairpersons: Sevinc Inan, Tea Pavkov-Keller

Tuesday, 17.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|------------------------|---|
| 10:30 | Invited lecture: The advantages and limitations of advanced imaging for biological structures in live and fixed cells | Sercin Karahuseyinoglu | Koç University School of Medicine, Department of Histology & Embryology, Istanbul, Turkey Co-director, Cellular and Molecular Imaging Center, Koç University Research Center for Translational Medicine (KUTTAM), Istanbul, Turkey |
| 11:00 | Invited lecture: Assembly of the Sulfolobus S-layer revealed by electron cryo-tomography | Lavinia Gambelli | Living Systems Institute, University of Exeter, Exeter, United Kingdom and College of Engineering, Mathematics and Physical Sciences, University of Exeter, Exeter, United Kingdom |
| 11:30 | Mode of action of membrane-active compounds: a biophysical study combining electron and fluorescence microscopy on life bacteria | Nermina Malanovic | University of Graz, Institute of Molecular Biosciences, Biophysics Division, Graz, Austria |
| 11:45 | Ultrastructural arrangement of cadherin dimers at cell-cell adhesion sites revealed by electron tomography | Walter A. Kaufmann | Institute of Science and Technology-Austria, Klosterneuburg, Austria |
| 12:00 | Regioselective para-Carboxylation of Catechols by a Prenylated Flavin Dependent Decarboxylase | Tea Pavkov-Keller | Institute of Molecular Biosciences, University of Graz, Austria |

Tuesday, 17.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|-------------------|--|--|-----------|
| Sevinc Inan | Wortmannin induced apoptosis via autophagy inhibition in 4T1 breast cancer cell line | Elgin Turkoz Uuer, Pinar Kilicaslan Sonmez, Damla Akogullari, Sevinc Inan | LS2-1 |
| Serap Arbak | Protective effect of melatonin on the morphology of testis tissue of diet-induced obese rats: microscopical and biochemical investigations | Nilisu Atay, Merve Açikel Elmas, Hande Yapışlar, Özlem Bingöl Özakpınar, Fikriye Uras, Serap Arbak | LS2-2 |

LS3 - Microscopic applications in symbiotic interactions, plants, microorganisms, and environmental sciences

Chairpersons: Hrvoje Fulgosi, Sonja Duletić Laušević

Wednesday, 18.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|--------------------------|--|
| 10:30 | Invited lecture: Microscopy and palynology side by side- case study of palaeoenvironmental conditions in the past on the area of Central Croatia | Dario Hruševar | University of Zagreb, Faculty of Science, Department of Biology, Division of Botany, Zagreb, Croatia |
| 11:00 | Invited lecture: Microscopic techniques as an expedient tool for binding science and art | Željko Savković | Institute of Botany and Botanical Garden „Jevremovac“, Faculty of Biology, University of Belgrade, Belgrade, Serbia |
| 11:30 | A first proof of an early mechanical coupling and biofilm formation in dilute bacterial suspensions | Rok Kostanjšek | Biotechnical Faculty, University of Ljubljana, Ljubljana, Slovenia |
| 11:45 | Application of Scanning Electron Microscopy for Examination of Infected Tissues | Tereza Juříková | Institute of Microbiology, v.v.i., Academy of Sciences of the Czech Republic, Prague, Czech Republic and Department of Genetics and Microbiology, Faculty of Science, Charles University, Prague, Czech Republic |
| 12:00 | Screening of surface mustard seeds morphology by SEM (scanning electron microscopy) and optical microscopy before and after conventional and modern extraction techniques | Ivana Vrca | Faculty of Chemistry and Technology, University of Split, Croatia |
| 12:15 | The effects of ionizing radiation on the cell wall of microalgae <i>Chlorella sorokiniana</i> - TEM study | Jelena Danilović Luković | Life Sciences Department, Institute for Multidisciplinary Research, University of Belgrade, Belgrade, Serbia and Department for Imunochemistry and Glycobiology, Institute for Application of Nuclear Energy INEP, University of Belgrade, Belgrade, Serbia |

Wednesday, 18.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|-------------------------------|--|--|-----------|
| Mirjana Janjanin | Micromorphological traits of <i>Micromeria graeca</i> (L.) Benth. ex Rchb. (Lamiaceae) leaf glandular trichomes of in vitro propagated plants | Mirjana Janjanin, Svetlana Tošić, Dragana Stojičić, Bojan Zlatković, Snežana Budimir, Branka Uzelac | LS3-1 |
| Sabrina Burattini | Phenotypic cell plasticity of <i>Trichoplax adhaerens</i> Schulze, 1883 (Placozoa) after treatment with ethanol and <i>Prunus spinosa</i> L. ethanol extract | Loretta Guidi, Federica Semprucci, Maria Balsamo, Daniele Fraternali, Mariastella Colomba, Silvio Cecchini, Eleonora Grassi, Lucia Cesaroni, Sabrina Burattini, and Maria Cristina Albertini | LS3-2 |
| Jasna Simonović Radosavljević | Imaging FTIR microscopy – technique for rapid screening of plant cell wall | Jasna Simonović Radosavljević, Jasna Stevanic, Daniela Đikanović, Aleksandra L.J. Mitrović, Lennart Salmén, Ksenija Radotić | LS3-3 |
| Milena Đorđević | The SEM observation in four plum genotypes (<i>Prunus domestica</i> L.) | Milena Đorđević, Radosav Cerović, Dragan Nikolić, Sanja Radičević, Ivana Glišić, Nebojša Milošević | LS3-4 |
| Sabrina Burattini | Albedo and Flavedo from “Limoncella of Mattinata”: morphological and chemical data | S. Burattini, L. Di Patria, L. Potenza, R. Saltarelli, D. Burini, E. Falcieri, P. Gobbi, L. Valentini, D. Sisti, V. Stocchi, G. Annibalini, E. Barbieri | LS3-5 |
| Stefan Andjus | Scanning electron microscopy-a sensitive tool in Porifera determination | Stefan Andjus, Božica Vasiljević, Vladimir Lazović, Momir Paunović | LS3-6 |
| Laura Pagliari | Gimme shelter: Grapevine Pinot Gris virus in deformed endoplasmic reticulum | Laura Pagliari, Giulia Tarquini, Sara Buoso, Alberto Loschi, Paolo Ermacora, Gregor Kapun, Rita Musetti | LS3-7 |
| Jasna Simonović Radosavljević | The use of fluorescence microscopy for classification of pollen grains | Mira Stanković, Jasna Simonović Radosavljević, Daniela Djikanović, Dragica Spasojević, Ksenija Radotić | LS3-8 |
| Roumaissa Ounoki | Distinction between specific ionic and osmotic aspects of the ultrastructural changes induced by salt stress on etioplasts and their greening | Roumaissa Ounoki, Adél Sóti, Annamária Kósa, Beata Mysliwa-Kurdziel, Katalin Solymosi | LS3-9 |
| Milena Đorđević | Pollen in vitro germination, viability and morphology of black chokeberry cultivar ‘Aronia Nero’ (<i>Aronia melanocarpa</i> (Michx.) Elliot) | Milena Đorđević, Svetlana M. Paunović, Mira Milinković, Radosav Cerović, Dragan Nikolić | LS3-10 |

LS4 - Neuroscience and histopathology

Chairpersons: Agnes Kittel, Gerd Leitinger

Thursday, 19.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|------------------------------|--|
| 10:30 | Invited lecture: MICU1 controls cristae junction and spatially anchors mitochondrial Ca ²⁺ uniporter complex | Benjamin Gottschalk | Division of Molecular Biology and Biochemistry, Gottfried Schatz Research Center for Cell Signaling, Metabolism and Aging, Medical University of Graz, Graz, Austria |
| 11:00 | Invited lecture: Studying the complex roles of microglia with high resolution imaging and microglia manipulation approaches | Balázs Pósfai | Momentum Laboratory of Neuroimmunology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary |
| 11:30 | Electron microscopic analysis of neurosecretory granules in the neuroblastomas of paediatric patients | Tamara Kravic-Stevovic | Institute of Histology and Embryology, Faculty of Medicine, University of Belgrade, Belgrade, Serbia |
| 11:45 | Developmental programming: impact of prenatal exposure to dexamethasone on gonadotropic cells in female rat offspring | Nataša Nestorović | Institute for Biological Research "Siniša Stanković", Belgrade, Serbia |
| 12:00 | Adrenal gland functioning in male and female offspring from dx treated mothers | Milica Manojlović-Stojanoski | Institute for Biological Research "Siniša Stanković", Belgrade, Serbia |

Monday, 16.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|-------------------|---|--|-----------|
| Tuğba Ekiz Yılmaz | The effects of experimentally - induced sepsis on folliculogenesis in rat ovary | Müge Taşdemir, Tuğba Ekiz Yılmaz, Mehmet Kaya, Nadir Arıcan, Bülent Ahışalı | LS4-1 |
| Tamara Martinovic | Ultrastructural features of mitochondria in lymphocytes of patients with Diabetes Mellitus type 2 | Tamara Martinovic, Darko Ciric, Tamara Kravic-Stevovic, Andjelija Stankovic, K. Lalic, I. Rasulic, Vladimir Bumbasirevic | LS4-2 |
| Sibel Doğan | The effects of anax imperator adipokinetic hormone on the expression of brain-derived neurotrophic factor in a rat glioma cell line | Sibel Doğan, Sibel Köktürk, Oğuz Mutlu, Fatma Kaya Dağistanlı, Elif Gelenli Dolanbay, Emel Usta, Feride Özdemir | LS4-3 |
| Selma Yilmazer | nAChR $\alpha 7$ effects expression of synaptic translation control proteins CPEB3 and Ngdn in hippocampal organotypic slice culture | Irem L. Atasoy, Selma Yilmazer, Erdinç Dursun, Duygu Gezen-Ak | LS4-4 |
| Oktay Arda | Does the CO ₂ that is used in horizontal incubators sufficiently clean? The effects of in-line filters in embryo development | Oktay Arda, Ebru Öztürk Öksüz, Murat Başar | LS4-5 |

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|-------------------|--|---|--------|
| Darko Ciric | Autophagy analysis in lymphocytes of patients with type 2 Diabetes Mellitus and hyperlipidemia | Darko Ciric, Tamara Martinovic, Vladimir Bumbasirevic, Aleksa Zivkovic, Ankica Jankovic, K. Lalic, I. Rasulic, Tamara Kravic-Stevovic | LS4-6 |
| Balázs Pósfai | A novel type of microglia-neuron interaction and the role of P2Y12 receptors | Balázs Pósfai, Csaba Cserép, Rebeka Fekete, Anett D. Schwarcz, Katinka Ujvári, Nikolett Lénárt, Barbara Orsolits, Zsófia I. László, Zsolt Lele, István Katona, Ádám Dénes | LS4-7 |
| Basak Isildar | Histopathological Evaluation of Skin Dimple in Fibular Hemimelia | Salih Marangoz, Salime Pelin Ergüven, Basak Isildar, Mehmet Kaymakoglu, Guney Yilmaz | LS4-8 |
| Aleksandar Mirčić | Immunofluorescent analysis of c6 glioma cell lines after paclitaxel treatment | Aleksandar Mirčić, Mihajlo Bošnjak, Vladimir Trajković, Vladimir Bumbaširević | LS4-9 |
| Isildar Basak | Effects of Δ -9 tetrahydrocannabinol on the small intestine altered by high fructose diet | Alisa Bahar Beydogan, Isildar Basak, Zeynep Mine Coskun, Ece Koyuturk, Meral Koyuturk, Sema Bolkent | LS4-10 |
| Tuğba Ekiz Yılmaz | The effects of magnesium sulfate on cyclophosphamide induced ovarian damage: folliculogenesis | Tuğba Ekiz Yılmaz, Müge Taşdemir, Mehmet Kaya, Nadir Arıcan, Bülent Ahışalı | LS4-11 |

LS5 - High-resolution microscopy in life sciences

Chairpersons: Jernej Jorgačevski, Marie Vancová

Friday, 20.09.2019., Room: Session 1

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|--|
| 10:30 | Invited lecture: Super-resolution microscopy revealed unique organization of microtubules in tunneling membrane nanotubes | Nataša Resnik | University of Ljubljana, Faculty of Medicine, Institute of Cell Biology, Ljubljana, Slovenia |
| 11:00 | High-resolution detection and dynamics of poised human ribosomal genes | Christian Schöfer | Dept. for Cell and Developmental Biology, Medical University of Vienna, Vienna, Austria |
| 11:15 | Molecular interactions between <i>Borrelia</i> adhesins and extracellular matrix | Martin Strnad | Biology Centre ASCR, Ceske Budejovice, Czech Republic, and Faculty of Science, University of South Bohemia, Ceske Budejovice, Czech Republic |
| 11:30 | Invertebrate epithelia morphogenesis: integration of extracellular matrix, cytoskeleton and cell junctions imaging | Polona Mrak | Department of Biology, Biotechnical faculty, University of Ljubljana, Ljubljana, Slovenia |
| 11:45 | Three dimensional reconstruction of the feeding apparatus of unfed nymph <i>Ixodes ricinus</i> | Marie Vancová | Laboratory of Electron Microscopy, Biology Centre CAS, České Budějovice, Czech Republic |
| 12:00 | West-Nile Virus and Mosquito-only Flavivirus are both infecting Human Neuroblastoma Cell Line cultivated on PET Membranes | Marko Kolenc | University of Ljubljana, Faculty of Medicine, Institute of Microbiology and Immunology, Ljubljana, Slovenia |

LS6 - Nanomaterials in biology and medicine

Chairpersons: Serap Arbak, Stefania Meschini

Monday, 16.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|--|
| 14:00 | Invited lecture: Nanocarriers for neuromuscular diseases | Manuela Malatesta | Department of Neuroscience, Biomedicine and Movement, Section of Anatomy and Histology, Verona University, Verona, Italy |
| 14:30 | Invited lecture: Calcium Phosphate Nanoparticles: Second Generation Non-Viral Vectors | Feray Bakan | Sabancı University Nanotechnology Research and Application Center Gebze Istanbul Turkey |
| 15:00 | Bacterial surface-layer proteins and their secrets | Markus Eder | Institute of Molecular Biosciences, University of Graz, Graz, Austria |
| 15:15 | Low energy STEM: new tool for visualization of nanoparticles conjugated with biomolecules | Jana Nebesarova | Biology Centre of CAS, v.v.i., Institute of Parasitology, Ceske Budejovice, Czech Republic and Faculty of Science, University of South Bohemia, Ceske Budejovice, Czech Republic |
| 15:30 | Autophagy and cell death role in the nanomaterials biodistribution and degradation | Maria Condello | National Center for Drug Research and Evaluation, National Institute of Health, Roma, Italy |
| 15:45 | Hyaluronic acid-based nanocomplexes as an innovative therapeutic tool to treat myotonic dystrophy | Mathieu Repellin | Department of Neuroscience, Biomedicine and Movement, Section of Anatomy and Histology, Verona University, Verona, Italy and University of Lyon, Université Claude Bernard Lyon Villeurbanne, France |

Monday, 16.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|-------------------|--|--|-----------|
| Manuela Costanzo | Testing nanocarriers in vitro: are always cultured cells a reliable reference system? | Manuela Costanzo, Federica Vurro, Laura Calderan, Federico Boschi, Ilaria Andreana, Silvia Arpicco, Barbara Stella, Manuela Malatesta | LS6-1 |
| Federica Vurro | Hyperthermic nanocarriers for biomedical applications | Federica Vurro, Silvia Mannucci, Davide Prospero, Massimiliano Perduca, Concepción Jiménez López, Alice Busato, Marco Gerosa, Stefano Tambalo, Maria Rosaria Marinozzi, Federico Boschi, Manuela Malatesta, Laura Calderan | LS6-2 |
| Flavia Carton | Alcian blue staining to study nanoparticle-cell interactions at transmission electron microscopy | Flavia Carton, Mathieu Repellin, Giovanna Lollo and Manuela Malatesta | LS6-3 |

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|---------------------------|---|--|-------|
| Maria Antonietta Di Bella | Microscopic evidence of the primary astrocytes' morphological differentiation and migration inside porous Poly-L-lactic acid 3D scaffolds | Maria Antonietta Di Bella, Francesco Carfi Pavia, Valerio Brucato, Valeria Blanda, Francesca Zummo, Ilenia Vitrano, Carlo Maria Di Liegro, Giulio Gherzi, Italia Di Liegro and Gabriella Schiera | LS6-4 |
| Katarina Pavlović | Microstructure analysis of porous multilayered core/shell silica particles for immobilization of lipase | Milan P. Nikolić, Vladimir V. Srdić, Slobodanka S. Nikolić, Katarina Pavlović, Aleksa Maričić | LS6-5 |

LS7 - Multidisciplinary approaches for medical and biological sciences

Chairpersons: Elisabetta Falcieri, Melek Ozturk

Tuesday, 17.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|---------------------|--|
| 14:00 | Invited lecture: Drug resistance in cancer and its overcoming | S. Meschini | National Center for Drug Research and Evaluation, National Institute of Health, Rome, Italy |
| 14:30 | Invited lecture: Dissecting the function of centriolar satellites as key regulators of mammalian centrosomes and cilia | E. N. Firat-Karalar | Department of Molecular Biology and Genetics, Koç University, Istanbul, Turkey |
| 15:00 | Biomechanical fingerprint of disease: application of Atomic Force Microscopy to cell and tissue mechanics | G. Ciasca | Institute of Physics, Catholic University of Sacred heart, Rome, Italy |
| 15:15 | Characterization of extracellular vesicles from in vitro and in vivo origins with electron microscopy | S. Hudoklin | Institute of Cell Biology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia |
| 15:30 | Electron microscopy as a helpful tool for virus vaccine development against PRRSV2 | S. Richter | Inst. for Veterinary Disease Control Mödling, AGES, Mödling, Austria |
| 15:45 | Resveratrol recovers the beta cell mass, islet morphology and apoptosis in Fructose-fed Streptozotocin induced Rodent Diabetes | A. S. Akdemir | Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine, Medical Biology Department, Istanbul, Turkey |

Tuesday, 17.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|---------------------------|--|--|-----------|
| A. Erman | Various microscopic techniques for tracing cancer urothelial cells in mouse bladder tumor model | Andreja Erman, Gregor Kapun, Sara Novak, Mojca Pavlin, Goran Dražić, Damjana Drobne, Peter Veranič | LS7-1 |
| A. Stacchiotti | Melatonin fails to protect cardiac mitochondria in Sirtuin 1 heterozygous mice placed on a high fat diet | Alessandra Stacchiotti, Raquel Garcia-Gomez, Antonio Lavazza, Maria Monsalve, Rita Rezzani | LS7-2 |
| Elif Kervancioğlu Demirci | The Effect of Seeding in Programmed Slow Freezing of Immature Testicular Tissue | Gülnoz Kervancioğlu, Elif Kervancioğlu Demirci, Şule Çetinel | LS7-3 |

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|---------------|---|---|--------|
| E. Usta | The effects of <i>Trifolium pratense</i> L. on the expression of leukemia inhibitory factor in the Ishikawa cell line | Emel Usta, Sibel Doğan , Havva Atar, Hatice Çölgeçen , Gamze Tanrıverdi, Feride Özdemir , Sibel Köktürk | LS7-4 |
| E. Cappelozza | An innovative bioreactor for skin explants model | Enrica Cappelozza, Laura Calderan and Manuela Malatesta | LS7-5 |
| M. A. Elmas | Investigation in the Effects of Exercise on the Testicular Morphology, Cell Proliferation and Blood Testis Barrier in the High Fat Diet-Induced Obesity | Merve Acikel Elmas, Ozlem Bingol Ozakpinar, Meltem Kolgazi, Goksel Sener, Serap Arbak, Feriha Ercan | LS7-6 |
| N. Nestorović | Prenatal dexamethasone treatment affects gonadotropic cells in adult male and female rats | Nataša Nestorović, Milica Manojlović-Stojanoski, Nataša Ristić, Svetlana Trifunović, Branko Filipović, Branka Šošić-Jurjević, Verica Milošević | LS7-7 |
| O. E. Tok | Negative effects on endometrium of clomiphene citrate treatment can be prevented with resveratrol? | Olgu Enis Tok, Pinar Özcan, Mukaddes Eşrefoğlu | LS7-8 |
| P. Köroğlu | Alteration in buccal mucosal cells due to the effect of smoking cigarette and periodontitis by assessing genetic and histopathologic damage | P. Köroğlu, B. Alkan | LS7-9 |
| S. Burattini | Morpho-functional effects of electronic cigarette in lung and trachea | Sabrina Burattini, Silvia Cirillo, Fabio Vivarelli, Vladimiro Cardenia, Maria Teresa Rodriguyez-Estrada, Eleonora Turrini, Moreno Paolini, Elisabetta Falcieri, Carmela Fimognari, Donatella Canistro | LS7-10 |
| S. Muftuoglu | Comparison of Basal Membrane Thickness of Granulosa Cells in PCOS | Suleyman Erol, Selim Zirh, Gokce Nur Ari, Cemile Merve Seymen, Gulnur Take Kaplanoglu, Sevda Muftuoglu | LS7-11 |
| I. Bočina | Immunogold labelling of vitamin D receptor and ultrastructural characterisation of metabolizing enzymes in lipid droplets in the rat liver | Natalija Filipović, Ivana Bočina, Ivana Restović, Nives Kević, Maximilian Grobe, Genia Kretzschmar, Tomislav Mašek, Marija Vitlov Uljević, Katarina Vukojević, Mirna Saraga-Babić, Ana Vuica | LS7-12 |
| D. Burini | Morphological evaluation of natural antioxidants protective effect in drug-induced C2C12 myotubes atrophy | Debora Burini, Sabrina Burattini, Davide Curzi, Giovanni Zappia, Pietro Gobbi, Elisabetta Falcieri, Sara Salucci | LS7-13 |
| D. J. Popović | Inhibition of cellular energy production in treatment of cancer inoculated to hamsters | Dušica J. Popović, Dušan Lalošević, Kosta J. Popović, Dejan Miljković, Ivan Čapo, Jovan K. Popović | LS7-14 |
| K. J. Popović | Nitroglycerin induces metformin anticancer effect on fibrosarcoma in hamsters | Kosta J. Popović, Dušica J. Popović, Dušan Lalošević, Dejan Miljković, Ivan Čapo, Jovan K. Popović | LS7-15 |
| N. Cyran | Correlation of Light- and Transmission Electron Microscopy with NanoSIMS | S. Reipert, A. Schintlmeister, A. A. Legin, J-M. Volland, N. Cyran, G. Peredes, H. Goldammer, M. Eckhard, M. Wagner, I. Lichtscheidl | LS7-16 |

LS8 - Emerging and miscellaneous topics in life sciences

Chairpersons: Jana Nebesářová, Nela Puškaš

Wednesday, 18.09.2019., Room: Session 1

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|---|
| 14:00 | Invited lecture: Quantitative Scanning-Free Confocal Fluorescence Microscopy for the Characterization of Fast Dynamic Processes in Live Cells. | Vladana Vukojevic | Karolinska Institutet, Department of Clinical Neuroscience, Center for Molecular Medicine Stockholm, Sweden |
| 14:30 | Invited lecture: Benefits and limitations of Scanning Electron Microscopy and Raman Spectroscopy in microbiological research | Kamila Hurbanova | Institute of Scientific Instruments, CAS, Brno, Czech Republic |
| 15:00 | Line-FRAP: A Fast Technique to Differentiate between the Diffusion Rates of fast diffusing molecules from <i>in vitro</i> to <i>in vivo</i> | Debabrata Dey | Department of Biomolecular Sciences, Weizmann Institute of Science, Rehovot, Israel |
| 15:15 | Quantifying organization of collagen fibers in the uninvolved human colon mucosa 10 cm and 20 cm away from the malignant tumor | Sanja Despotović | Institute of Histology and embryology Aleksandar Đ. Kostić, Faculty of Medicine, University of Belgrade, Serbia |
| 15:30 | Microscopy in dairy science: key hints for product understanding and technology improvement | Paolo D'Incecco | Department of Food, Environmental and Nutritional Sciences, University of Milan, Milan, Italy |
| 15:45 | Vesicular traffic related proteins in superficial urothelial cells of urinary bladder cancer | Daša Zupančič | Institute of Cell Biology, University of Ljubljana, Slovenia |

Wednesday, 18.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|---------------------|--|--|-----------|
| Alessio Papini | Ultrastructure of traumatic resin duct formation in <i>Cupressus sempervirens</i> L. in response to the attack of the fungus <i>Seiridium cardinale</i> (Wag.) Sutton & Gibson | Alessio Papini, Salvatore Moricca, Roberto Danti, Corrado Tani, Isabella Posarelli, Sara Falsini, Gianni Della Rocca | LS8-1 |
| Aslı Erdoğan | Effects of Monobenzyl Ether of Hydroquinone on 3T3 Mouse Fibroblast Viability and Ultrastructure | Aslı Erdoğan, Hasan Serdar Mutlu, Sibel Doğan, Tuğba Kotil | LS8-2 |
| Svetlana Trifunović | Soy extract-dependent modifications of the pituitary somatotrophs in rats: stereological, histological and functional study | Svetlana Trifunović, Milica Manojlović-Stojanoski, Nataša Nestorović, Nataša Ristić, Branko Filipović, Branka Šošić-Jurjević, Verica Milošević | LS8-3 |
| Tuğba Ekiz Yılmaz | The Role of p-IRE1 in the Pathogenesis of Endometriosis: The Contribution of Peritoneal Fluid | Tuğba Ekiz Yılmaz, Başak Işıldar, Altay Gezer, Duygu Kankaya, Cevriye Cansız Ersöz, Ümit Kayışlı, Elif Güzel | LS8-4 |
| Willi Salvenmoser | Effects of knock-down of adhesive proteins on the ultrastructure of adhesive vesicles in the flatworm <i>Minona ileanae</i> | Willi Salvenmoser, Robert Pjeta, Teresa Hofer, Michael W. Hess, Peter Ladurner | LS8-5 |
| Gloria D'Avack | Electroporation: new strategy to improve the drug uptake and overcome the tumor resistance | Maria Condello, Gloria D'Avack, Stefania Meschini | LS8-6 |

Material Sciences

MS1 – Metals, alloys and intermetallics

Chairpersons: Matjaž Godec, Željko Skoko

Monday, 16.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|----------------------|--|
| 10:30 | Invited lecture: Analysis of inclusions in steels: a correlative approach | Barbara Šetina Batič | Institute of Metals and Technology, Ljubljana, Slovenia |
| 11:00 | Invited lecture: Single-step preparation of the mixed-metal oxides from the versatile oxalate precursors – characterization and properties | Marijana Jurić | Ruđer Bošković Institute, Zagreb, Croatia |
| 11:30 | Microstructure and properties of Al-Fe-Mn-Mg-Si alloy prepared by powder metallurgy | Alena Michalcová | Department of Metals and Corrosion Engineering, Behavior of Chemistry and Technology in Prague, Prague, Czech Republic |
| 11:45 | Characterization of nano-sized particles in 14%Cr oxide dispersion strengthened (ODS) steel using classical and frontier microscopy methods | Yael Templeman | Department of Materials Engineering, Ben Gurion University of the Negev, Beer Sheva, Israel |
| 12:00 | Precipitation Behavior in an Intermetallic Fully Lamellar TiAl Alloy | Michael Burtscher | Department Materials Science, Chair of Physical Metallurgy and Metallic Materials, Montanuniversität, Leoben, Austria |
| 12:15 | A microstructure development during intercritical annealing of ductile iron – the dual phase austempered ductile irons | Petar Janjatovic | University of Novi Sad, Faculty of Technical Sciences, Department of Production Engineering, Novi Sad, Serbia |

Tuesday, 17.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|--|
| 14:00 | Effects of alloying elements on the microstructure of Ti-Al-Si alloys | Anna Knaislová | Department of Metals and Corrosion Engineering, University of Chemistry and Technology, Prague, Czech Republic |
| 14:15 | In Situ TEM Fracture Experiments on Ultrafine Grain Chromium at RT: Dislocation Processes and Toughening Mechanisms | Inas Issa | Department Materials Science, Chair of Materials Physics, Montanuniversität Leoben, Austria. |
| 14:30 | Distribution of dislocations on the Lüders band front during cold deformation in steel | M. Matviija | Technical University of Košice, Faculty of Materials, Metallurgy and Recycling, Košice, Slovakia |
| 14:45 | Evaluation of fracture toughness and recrystallization behavior of ultrafine grained tungsten wires | Vladica Nikolić | Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria |

Monday, 16.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|------------------------|--|---|-----------|
| Alice Moros | Homogeneity in superconducting Nb ₃ Sn wires: exploring the routes towards high-performance bending magnets for the CERN Future Circular Collider | Alice Moros, Mattia Ortino, Stefan Löffler, Maxim Alekseev, Anastasia Tsapleva, Pavel Lukyanov, Ildar M. Abdyukhanov, Victor Pantsyrny, Bernardo Bordini, Amalia Ballarino, Simon C. Hopkins, Michael Stöger-Pollach, Johannes Bernardi, Michael Eisterer | MS1-1 |
| Christoffer Müller | Electron microscopy analysis of flash-annealed CuZr based bulk metallic glass | Christoffer Müller, Christian Ebner, Christoph Gammer, Konrad Kosiba, Benjamin Escher, Simon Pauly, Jürgen Eckert, Christian Rentenberger | MS1-2 |
| Slađana Laketić | Interaction of picosecond Nd:YAG laser irradiation with Ti-13Nb-13Zr alloy surface in air and argon atmosphere | Slađana Laketić, Marko Rakin, Miloš Momčilović, Jovan Ciganović, Đorđe Veljović, Ivana Cvijović-Alagić | MS1-3 |
| Vanja Asanovic | Microstructure and fracture analysis of T6 treated hypereutectic Al-13.5Si alloy for IC engine components | Darko Vuksanovic, Vanja Asanovic, Zorica Cvijovic, Jelena Scepanovic, Dragan Radonjic | MS1-4 |
| Martin Bystrianský | Crack development at in-situ tensile testing | Martin Bystrianský, Ludmila Kučerová, Jan Hajšman | MS1-5 |
| Miroslav Dramicanin | Effect of particle size TiO ₂ Flux in A-TIG welding | Miroslav Dramicanin, Sebastian Balos, Petar Janjatovic, Dragan Rajnovic, Savka Adamovic | MS1-6 |
| Filip Průša | Properties of the FeAl ₂₀ Si ₂₀ -MoX (X=5, 10, 15, 20 wt.%) alloy prepared by mechanical alloying and compacted via SPS | Filip Průša, Andrea Školáková, Jiří Lietavec | MS1-7 |
| Andrea Školáková | The effect of Ni and Mo addition on microstructure and properties of Fe-Al-Si alloys | Andrea Školáková, Olga Proshchenko, Filip Průša | MS1-8 |
| Danka Labus Zlatanovic | Friction Stir Spot Welding of Multiple Ultrathin Sheets of Aluminium-magnesium Alloy | Danka Labus Zlatanovic, Sebastian Balos, Jean Pierre Bergmann, Michael Grätzel, Dragan Rajnovic, Tobias Köhler, Lepasava Sidjanin | MS1-9 |
| Jiří Buršík | Microstructure and phase constitution of near-Co ₂ FeSi Heusler alloy | Jiří Buršík, Yvonna Jirásková | MS1-10 |

MS2 - Nanoscale, nanostructured, and carbon based materials

Chairpersons: Andreja Gajović, Sanja Milošević Govedarović

Tuesday, 17.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|-------------------|---|
| 10:30 | Invited lecture: Low-energy electron microscopy of 2D graphene-hexagonal boron nitride heterostructures | Marin Petrović | Faculty of Physics and CENIDE, University of Duisburg-Essen, Duisburg, Germany and Institute of Physics, Zagreb, Croatia |
| 11:00 | Invited lecture: Dynamic acoustic modulation of quantum light emission from GaN/InGaN nanowire quantum dots | Snežana Lazić | Departamento de Física de Materiales, Instituto 'Nicolás Cabrera' and Instituto de Física de Materia Condensada (IFIMAC), Universidad Autónoma de Madrid, Spain |
| 11:30 | Formation and Microstructure Regulation of Ultra-Strong Nanocrystalline Tungsten Nanofoams by Reverse Phase Dissolution | Daniel Kiener | Department Materials Science, Montanuniversität Leoben, Austria |
| 11:45 | Microstructural Characterization of Zinc Tin Oxide (Zn ₂ SnO ₄) Particles Synthesized Via Hydrothermal Synthesis to be Used in Sputter Target | Umut Savacı | Dep of Mat Sci & Eng, Eskisehir Technical University, Eskisehir, Turkey |
| 12:00 | Scattering-Type Scanning Near-field Optical Microscopy and Spectroscopy for Nanoscale Chemical Analysis | Jan Vávra | Neaspec GmbH, Haar, Germany |
| 12:15 | The structure analysis methods for synthesized diamonds consolidation and fractals characterization | Vojislav V. Mitic | University of Nis, Faculty of Electronic Engineering, Nis, Serbia; and Institute of Technical Sciences of SASA, Belgrade, Serbia |

MS3 - Thin films, coatings, surfaces and interfaces

Chairpersons: Aleksandar Miletić, Regina Ciancio

Wednesday, 18.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|---|
| 10:30 | Invited lecture: Atomic Resolution Imaging of Epitaxial Strain Driven Phenomena In Complex Oxides | Cesar Magen | Instituto de Ciencia de Materiales de Aragón, Univ. de Zaragoza-CSIC, Zaragoza, Spain |
| 11:00 | Invited lecture: Influence of film thickness on growth, microstructure and properties of magnetron sputtered ITO films | Claus Rebholz | University of Cyprus, Nicosia, Cyprus |

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| 11:30 | Impact of Oxygen Vacancies on Electronic Properties of Anatase Thin Films | Daniel Knez | CNR-IOM TASC, Trieste, Italy |
| 11:45 | Orientation dependence of metastable-AlN stability in gradient CrN/AlN multilayers revealed by HRTEM | Zhuo Chen | Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria |
| 12:00 | Si nanocrystal growth in a-Si:H thin films and multilayers at various conditions and surrounding materials by TEM and XRD study | Rostislav Medlin | University of West Bohemia, New Technologies-Research Centre, Plzeň, Czech Republic |
| 12:15 | Phase Distribution and Orientation Analysis with EBSD for Different Concentrations in Electroless Ni-B Coatings | Erdem Kilicaslam | Sakarya University, Faculty of Engineering, Department of Metallurgy and Materials Engineering, Sakarya, Turkey |

Wednesday, 18.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|-------------------|--|--|-----------|
| Zoran Samardžija | Quantitative low-voltage WDS electron-probe microanalysis of PMN-PT thin films prepared by pulsed-laser deposition | Zoran Samardžija, Urška Gabor, Matjaž Spreitzer | MS3-1 |
| Vilma Bursikova | Study of thin plasma-polymer film growth under dusty plasma conditions | Vilma Bursikova, Vojtěch Homola, Štěpánka Bittnerová, Roman Přebyl, Petr Tomšej, Monika Stupavská, Anna Charvatova Campbell, Petr Klapetek, Jiří Buršík and Vratislav Perina | MS3-2 |
| Lucija Mandić | Functionalized magnetite nanoparticles for drug loading, release, and delivery of poorly soluble active biomolecules | Lucija Mandić, Anja Sadžak, Suzana Šegota | MS3-3 |
| Sergey Poznyak | Plasma electrolytic oxidation of Zn alloy in aluminate electrolyte | Sergey Karpushenkov, Hanna Maltanova, Aliaksandr Mikhailau, Sergey Poznyak, Larisa Karpushenkava, Kiryl Yasakau, Stevan Stojadinović, Rastko Vasilić | MS3-4 |
| Mario Boháč | Optimisation of BaTiO ₃ thin films prepared by magnetron sputtering for sensor and solar cell use | Mario Boháč, Krunoslav Juraić, Ivana Panžić, Andreja Gajović | MS3-5 |
| Anja Sadžak | Oxidative stress in model membranes: protection via flavonoid embedded nanoparticles | Anja Sadžak, Lucija Mandić, Suzana Šegota | MS3-6 |
| Sara Hawi | Demystifying the composition and thickness of long-lasting commercially available tool coatings by the use of microscopy | Sara Hawi, Saurav Goel | MS3-7 |

MS4 - Ceramics, composites, cultural heritage materials, rocks and minerals

Chairpersons: Aleksander Rečnik, Snežana Vučetić

Thursday, 19.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|-------------------|--|
| 10:30 | Invited lecture: The microstructure and texture of spinel reaction layers around corundum: effects of reaction interface orientation | Gerlinde Habler | University of Vienna, Dept. of Lithospheric Research, Viena, Austria |
| 11:00 | Precession Electron Diffraction: Application to Various Ceramic Composites | Umut Savaci | Department of Materials Science and Engineering, Eskisehir Technical University, Eskisehir, Turkey |
| 11:15 | TEM/MD investigation into the dynamics of SHI induced track formation in insulators | Jacques O'Connell | CHRTEM, Nelson Mandela University, Port Elizabeth, South Africa |
| 11:30 | Invited lecture: The synergy of polarized transmitted light microscopy and scanning electron microscopy in mineralogical-petrological investigations of cultural heritage objects | Kristina Šarić | Faculty of Mining and Geology, University of Belgrade, Belgrade, Serbia |
| 12:00 | Use of Optical Microscopy, SEM and EDS Analysis for Investigation of Historical Paint Layers | Snežana Vučetić | University of Novi Sad, Faculty of Technology, Novi Sad, Serbia |

Tuesday, 17.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|-------------------------|---|---|-----------|
| Sabrina Burattini | Scanning (SEM) and Transmission Electron Microscopy (TEM) in Cultural Heritage | Sabrina Burattini, Elisabetta Falcieri, Laura Baratin | MS4-1 |
| Sandra Drev | The nanoscale origin of chatoyancy in chrysoberyl from Pratinhas, Brazil | Sandra Drev, Aleksander Rečnik, Matjaž Mazaj, Nina Daneu | MS4-2 |
| Umut Savaci | Microstructural Characterizations of $K_{0.5}Bi_{0.5}TiO_3$ - $BaTiO_3$ - $Na_{0.5}Bi_{0.5}TiO_3$ Textured Lead-Free Piezoelectric Ceramics | Umut Savaci, Ceren Aşkın, H. Şule Tetik, İsmail Şahin, Gürol Özarlan, A. Murat Avcı, Servet Turan, Ender Suvacı | MS4-3 |
| Nina Daneu | EBSD and STEM analysis of cyclic twins in SnO_2 ceramics doped with CoO and Nb_2O_5 | Nina Daneu, José Alberto Padrón Navarta, Fabrice Barou, Goran Dražić, Sara Tominc, Aleksander Rečnik | MS4-4 |
| Emmanuel Gadzama Hamatu | Optimization of Carbon Nanotube Content of Asphalt Nano composites with Regard to Resistance to Permanent Deformation | Emmanuel Gadzama Hamatu | MS4-5 |

MS5 - Polymers, biomaterials, and soft materials

Chairpersons: Cristiano Albonetti, Suzana Šegota

Wednesday, 18.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|-------------------|---|
| 14:00 | Invited lecture: Nanomechanics of biomaterials: vesicles and biopolymers | Francesco Valle | Institute for the Study of Nanostructured Materials (ISMN)-CNR, Bologna, Italy |
| 14:30 | Invited lecture: Mechanical properties on cellular and molecular level, AFM study. | Jan Pribyl | CEITEC MU, Masaryk University, Brno, Czech Republic |
| 15:00 | Direct visualization of lipid-polymer structures by cryo-TEM | Aleksander Forjś | Centre of Polymer and Carbon Materials, Polish Academy of Sciences, Zabrze, Poland |
| 15:15 | Polymerization shrinkage-stress-related dental cusp deformation assessed by digital holography | Evgenije Novta | University of Novi Sad, Faculty of Medicine, School of Dentistry, Novi Sad, Serbia |
| 15:30 | Formation of calcium phosphates on TiO ₂ nanotubes in the presence of albumine: insight in formation of multifunctional nanocomposites | Ina Erceg | Laboratory for Biocolloids and Surface Chemistry, Ruđer Bošković Institute, Zagreb, Croatia |

Wednesday, 18.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|---------------------|---|--|-----------|
| Karolina Vocetkova | Polyesteramide Nanofibrous Scaffolds for Bone Tissue Engineering | Radek Divin, Vera Sovkova, Veronika Blahnova, Vera Lukasova, Evzen Amler, Karolina Rehakova, Jiri Brozek, Eva Filova | MS5-1 |
| Věra Sovková | Polyesteramide nanofibers for skin tissue engineering | Karolína Vocetková, Radek Divín, Karolína Řeháková, Jiří Brožek4, Eva Filová, Evžen Amler | MS5-2 |
| Veronika Blahnová | Collagen type I scaffold coated with nature inspired polymer | Katarína Kacvinská, Lucy Vojtová, Eva Filová | MS5-3 |
| Vladislav Krzyzanek | Examining Hydrogel Structure Using Freezing Methods, CryoSEM Imaging and Image Analysis | Katerina Adamkova, Kamila Hrubanova, Monika Trudicova, Petr Sedlacek | MS5-4 |
| Marco Casinelli | Nanoscale characterization in a multiphase polymeric system - morphology@mechanical property@chemical composition complementary studies | Marco Casinelli | MS5-5 |
| Darja Feizpour | Transmission-Electron-Microscopy Characterization of Nanodebris Particles from the Wear of a Biocompatible Ceramic-On-Ceramic Artificial Hip Part | Darja Feizpour, Monika Jenko, Borut Pompe, Boštjan Kocjančič, Matjaž Godec, Drago Dolinar | MS5-6 |
| Vera Lukasova | Porous ceramic scaffolds with bioactive compounds for bone tissue engineering | University Centre for Energy Efficient Buildings of Czech Technical University in Prague, Czech Republic | MS5-7 |

MS6 -Semiconductors, devices, and magnetic materials

Chairpersons: János Lábár, Roberto Balboni

Monday, 16.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|--------------------------|--|
| 14:00 | Invited lecture: Confinement effects in semiconducting nanostructures revealed with STEM-EELS | Giovanni Bertoni | CNR - Istituto Nanoscienze, Modena, Italy |
| 14:30 | Analysis of extended defects in high dose proton bombarded GaAs using Cs-corrected STEM | Johannes Neethling | Centre for HRTEM, Nelson Mandela University, Port Elizabeth, South Africa |
| 14:45 | Dynamic acoustic modulation of quantum light emission from GaN/InGaN nanowire quantum dots | Snežana Lazić | Departamento de Física de Materiales, Instituto 'Nicolás Cabrera' and Instituto de Física de Materia Condensada (IFIMAC), Universidad Autónoma de Madrid, Spain |
| 15:00 | Segregation of Ca Towards the Compressive Strain Interface of an Epitaxial Grown Bismuth Ferrite Thin Film | U. Haselmann | Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria |
| 15:15 | Direct atomic identification of cation migration induced gradual cubic-to-hexagonal phase transition in Ge ₂ Sb ₂ Te ₅ | Yonghui Zheng | State Key Laboratory of Functional Materials for Informatics, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Shanghai, China |
| 15:30 | Role of Dy diffusion in sintered Nd-Fe-B hard magnets | Kristina Žagar Soderžnik | Jožef Stefan Institute, Ljubljana, Slovenia |
| 15:45 | Analytical electron microscopy of Half-Heusler thermoelectric alloys | Jiří Buršík | Institute of Physics of Materials of the Czech Academy of Sciences, Brno, Czech Republic |

MS7 - Materials for energy harvesting, production, storage, and catalysis

Chairpersons: Peter Karnthaler, Sandra Kurko

Friday, 20.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|--|----------------------|---|
| 10:30 | Invited lecture: Investigation on the effect of hydrogen on dislocation patterns in high-strength steels using electron channeling contrast imaging in the scanning electron microscope | Stefan Zaeferrer | Max Planck Institute for Iron Research, Düsseldorf, Germany |
| 11:00 | Invited lecture: Electrochemical approaches to design materials for potential sensing and energy related applications | Lidija D. Rafailović | CEST, Centre of Electrochemical Surface Technology, Wr. Neustadt, Austria |

| | | | |
|-------|--|--------------|---|
| 11:30 | TEM characterization of some sensitive materials based on MgH ₂ and nanoporous carbons | Pavel Markov | Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, Acad. Sofia, Bulgaria |
| 11:45 | TEM methods for characterization of encapsulated metal nanoparticles within zeolites framework via 2D to 3D transition | Michal Mazur | Department of Physical and Macromolecular Chemistry, Faculty of Science, Charles University, Prague, Czech Republic |
| 12:00 | Calcium manganite coatings from chemically synthesized powders | Jelena Macan | University of Zagreb, Faculty of Chemical Engineering and Technology, Zagreb, Croatia |
| 12:15 | Electron Microscopy as an Essential Tool in Electrochemistry: Assessing the Surface Morphology of Al Electrodes | David Moser | Institute of Electron Microscopy and Nanoanalysis, Graz University of Technology, Graz, Austria |

Tuesday, 18.09.2019. at 16h, Room: Session 2

Poster presentations

| Presenting author | Title | All authors | Poster ID |
|----------------------------|--|--|-----------|
| J. Ramírez-Castellanos | Structural study by Cs-Corrected Electron Microscopy of Luminescent Indium-Zinc Oxides | J. García-Fernández, A. Torres-Pardo, J. Bartolomé, A. Cremades, J. Ramírez-Castellanos, J. M. González-Calbet | MS7-1 |
| Francisco Ruiz-Zepeda | Identical location TEM for the study of catalyst materials: from single atoms to nanoparticles | Francisco Ruiz-Zepeda, Matija Gatalo, Primož Jovanovič, Davide Menga, Tim-Patrick Fellinger, Léonard Jean Moriau, Andraž Pavlišič, Nejc Hodnik, Marjan Bele, Goran Dražič, Miran Gaberšček | MS7-2 |
| Aurea Varela | Role of lattice oxygen content in the CO oxidation activity of the Ba-Fe-O system | Aurea Varela, Isabel Gómez-Recio, Achraf el Hadri, María Hernando, Marina Parras, Juan J. Delgado, José J. Calvino, José M. González-Calbet | MS7-3 |
| M. Parras | Structural singularities in 2H-related BaNiO phases | D. Gutiérrez-Martín, M. Hernando, A. Torres-Pardo, J. M. González-Calbet, A. Varela, M. Parras | MS7-4 |
| Andreja Gajović | Surface decorated TiO ₂ nanotubes for photocatalytic application | Vedran Kojić, Marko Rukavina, L. Radetić, Ivana Grčić, Andreja Gajović | MS7-5 |
| Radenka Krsmanović Whiffen | Electron Microscopy study of nanocrystalline wurtzite ZnS produced via a co-precipitation technique and its pyroelectric ceramics processed by 2-step-pressureless sintering | Radenka Krsmanović Whiffen, Loris Pietrelli, Luciano Pilloni, Giuseppe Magnani, Elena Salernitano, Selene Grilli, Francesca Mazzanti, Amelia Montone | MS7-6 |
| Tijana Pantic | Microstructure and thermal behavior of Mg-V thin films for solid state hydrogen storage | T. Pantic, K. Zagar Soderznic, S. Sturm, S. Drev, A. Mitrovic, S. Kurko, B. Paskas Mamula, N. Novakovic, J. Grbovic Novakovic, I. Milanovic, S. Milosevic Govedarovic | MS7-7 |
| Tijana Pantic | Electrochemical sensors based on phyropyilite | A. Mitovic, T. Patnic, S. Dimitrijevic, A. Ivanovic, N. Novakovic, S. Kurko, S. Milosvic Govedarovic, J. Grbovic Novakovic | MS7-8 |

MS8 - Emerging and miscellaneous topics in material sciences

Chairpersons: Alena Michalcova, Servet Turan

Tuesday, 17.09.2019., Room: Session 2

Oral presentations

| Time: | Title | Presenting author | Presenting author affiliation |
|-------|---|--------------------|--|
| 15:00 | Photocromic molecular probes for photoacoustic microscopy | Francesco Garzella | Istituto Italiano di Tecnologia, Genova, Italy |

Late breaking posters

Tuesday, 17.09.2019., Room: Session 2

Poster presentations

| | | | |
|----------------|---|--|-------|
| Milica Budimir | Reduced graphene oxide-chitosan flexible nanocomposite for efficient bacteria capture and photothermal ablation | Milica Budimir, Alexandre Barras, Duska Kleut, Rabah Boukherroub, Biljana Todorovic Markovic | MS2-7 |
| Milica Budimir | Reduction of graphene oxide and graphene quantum dots using nascent hydrogen: investigation of morphological and structural changes | Svetlana Jovanovic, Olaf C. Haenssler, Milica Budimir, Duška Kleut, Jovana Prekodravac, Biljana Todorovic Markovic | MS2-8 |

LUNCH WORKSHOPS and MEETINGS

| Time/Room | Mon 16 Sep | Tue 17 Sep | Wed 18 Sep | Thu 19 Sep |
|-------------------|-----------------------|-----------------------------|-----------------------------|-----------------------------|
| Time | | 12:30 | 12:30 | |
| Session 1 | | Nanomegas Workshop | EMS General Assembly | |
| Time | | 12:30 | | 12:30 |
| Session 2 | | ThermoFisher MS Workshop | | ThermoFisher LS Workshop |
| Time | 12:30 | 12:30 | | 12:30 |
| Session 3 | JEOL Workshop | Zeiss Workshop | | SSM General Assembly |
| Time | | 16:00 | 16:00 | |
| Session 3 | | MCM Board Meeting | SISM General Assembly | |
| Time | 13:30-17:00 | 16:30 | | |
| Meeting room 1 | Chipscope Workshop | EMS Board Meeting | | |

Notice: Board meetings are close sessions for Board members only;
 General Assembly are for all members of appropriate society

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MS workshop – Tuesday 17th September

Speaker: Daniel Stroppa

Title: Recent advancements in TEM technology

Speaker: Daniel Phifer

Title: Advanced DualBeam sample preparation with AutoTEM 5 – the next revolution in automated TEM sample preparation

LS workshop Thursday 19th September

Speaker: Max Maletta

Title: Cryo EM workflows for Single Particle Analysis and Tomography of hydrated, intact cells



IT Workshop, Monday 16th of September

Speaker Guillaume Brunetti

Title: Latest JEOL developments on SEM and TEM



IT workshop – Tuesday 17th September

Speaker: Athanassios S. Galanis
Title: Precession Electron Diffraction in TEM: From Structure Determination to Orientation & Strain Mapping at nm scale



Seeing beyond

IT workshop – Tuesday 17th September

Speaker: Vladan Milosavljević
Title: “ZEISS – achieve more with Electron and X-Ray Microscopy”

PUBLIC WORKSHOP



Micro-nano technologies for integrated microscopy.

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| | Sun 15 Sep | Mon 16 Sep | Tue 17 Sep | Wed 18 Sep | Thu 19 Sep | Fri 20 Sep |
|-------------|---|--|--|---|---|---|
| 8:00-9:00 | | Registration | Registration | Registration | Registration | Registration |
| 9:00-10:00 | | Plenary lecture: Dr. Vincenzo Grillo | Plenary lecture: Prof. Dr. Saverio Cinti | Plenary lecture: Dr. Andrés Kovács | Plenary lecture: Prof. Dr. Igor Weber | Plenary lecture: Prof. Dr. Goran Dražić |
| 10:00-10:30 | | Coffee break | Coffee break | Coffee break | Coffee break | Coffee break |
| 10:30-12:30 | | IT1 LS1 MS1 | IT2 LS2 MS2 | IT3 LS3 MS3 | IT4 LS4 MS4 | IT5 LS5 MS7 |
| 12:30-14:00 | | Lunch/Meetings/ Workshops | Lunch/Meetings/ Workshops | EMS General Assembly | Lunch/Meetings/ Workshops | Closing session |
| 14:00-16:00 | | IT6 LS6 MS6 | LS7 14:00 MS1 15:00 MS8 | LS8 MS5 | | |
| 16:00-18:00 | | Poster session/ IT6, LS1, LS4, LS6, MS1 Mini oral presentations/ Refreshments | Poster session/ LS2, LS7, MS2, MS4, MS7 Mini oral presentations/ Refreshments | Poster session/ LS3, LS8, MS3, MS5 Mini oral presentations/ Refreshments | Guided walk around Belgrade | |
| 18:00-19:30 | 17:00 Registration | | | | | |
| 19:30-21:00 | Opening ceremony Keynote lecture: Prof. Dr. Velimir R. Radmilović Welcome reception | | | | Conference gala dinner | |