

Agenda

Monday, August 26, 2024 (Main Lecture Room)		
16:00	18:00	Registration
17:30	18:00	Opening Ceremony
18:00	18:45	PL1 Elastic design and large deformations of pollen grains <i>Antonio Šiber (Institute of Physics, Zagreb, HR)</i>
18:45	21:00	Welcome Reception
Tuesday, August 27, 2024 (Main Lecture Room)		
Session 1		Membranes and membrane proteins <i>Chairs: Miklós Kellermayer, Kata Sara Haba</i>
9:00	9:45	PL2 Uncoupling in mitochondria: the role of SLC25 superfamily proteins <i>Elena Pohl (University of Veterinary Medicine Vienna, AT)</i>
9:45	10:10	IL1 The revival of UV-Vis spectroscopy in lipid membrane research <i>Danijela Bakarić (Ruđer Bošković Institute, Zagreb, HR)</i>
10:10	10:35	IL2 Structural insights into the mechanism of store-operated calcium channels <i>Rainer Schindl (Medical University of Graz, Graz, AT)</i>
10:35	11:00	Coffee Break
11:00	11:25	IL3 Transport phenomena at liquid-crystal-water interfaces <i>Uroš Tkalec (University of Ljubljana, Ljubljana, SI)</i>
11:25	11:50	IL4 Targeting microorganisms with PDI <i>Stefania Abbruzzetti (Università di Parma, Parma, IT)</i>
11:50	12:05	SO1 Molecular basis for the nitric oxide sensitivity of a blue fluorescent protein <i>Cristiano Viapiani (Università di Parma, Parma, IT)</i>
12:05	12:20	SO2 Molecular insight into bacterial membrane disruption by dendritic nanoparticles - a pathway for antibacterial proteins <i>Karol Ciepluch (Jan Kochanowski University in Kielce, Kielce, PL)</i>
12:20	12:35	SO3 Microscopic techniques in the study of interactions between nanomaterials and nanoparticles and the outer bacterial membrane <i>Małgorzata Łysek-Gładysińska (Jan Kochanowski University in Kielce, Kielce, PL)</i>
12:35	12:50	SO4 Understanding the molecular origin of the effect of surfactants on enveloped viruses: the case of SARS-CoV-2 <i>Jordi Farado (ICMAB-CSIC, Barcelona, ES)</i>
12:50	13:05	SO5 Modulation places for ATP binding – possible targets for allosteric activation <i>Magdalena Majekova (Centre of Experimental Medicine v.v.i. SAS, Bratislava, SK)</i>
13:05	14:00	Lunch
Session 2		Biomechanics and mechanobiology <i>Chairs: Ranieri Bizzarri, Milan Žižić</i>
14:10	14:55	PL3 Exploring viruses by single-molecule biophysics <i>Miklós Kellermayer (Semmelweis University, Budapest, HU)</i>
14:55	15:20	IL5 Twisting and Turning: Fluorescent Molecular Rotors as Viscosity Sensors <i>Antonella Battisti (CNR and Scuola Normale Superiore, Pisa, IT)</i>
15:20	15:45	IL6 Mechanobiology of the Mitotic Spindle <i>Nenad Pavin (University of Zagreb, Faculty of Science, Zagreb, HR)</i>
15:45	16:15	Coffee Break
16:15	18:15	Poster Session A (P1 – P27)
Wednesday, August 28, 2024 (Main Lecture Room)		
Session 3		Bio(inspired) materials & Computational approaches and machine learning <i>Chairs: Rainer Schindl, Miljan Barić</i>
9:00	9:45	PL4 The different perspective of the Brownian scale and how biophysics targets it <i>Ranieri Bizzarri (University of Pisa, Pisa, IT)</i>
9:45	10:10	IL7 Microfabricated structures to solve biological problems <i>Tamás Fekete (HUN-REN, Institute of Biophysics, Szeged, HU)</i>
10:10	10:35	IL8 Integrating Machine Learning in Photonics: Advancements in Signal Analysis and Optical Data Interpretation <i>Andrej Korenić (University of Belgrade, Belgrade, RS)</i>
10:35	11:00	Coffee Break
11:00	11:15	SO6 Biocompatible reconstructed marine based vesicles as an alternative drug delivery system <i>Nadica Ivošević DeNardis (Ruđer Bošković Institute, Zagreb, HR)</i>
11:15	11:30	SO7 Nanoplastics and microalgae: nanostructural, nanomechanical, and antioxidant response of marine diatom <i>Cylindrotheca closterium</i> <i>Tea Mišić Radić (Ruđer Bošković Institute, Zagreb, HR)</i>
11:30	11:45	SO8 Enzymatic organization studied by the Maximum Entropy Production Principle <i>Andrej Dobovišek (University of Maribor, Maribor, SI)</i>

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11:45	12:00	SO9 Stable substructures in proteins and the principle of minimum frustrations <i>Gabriel Žoldák (CIB, TIP-UPJS, Košice, SK)</i>
12:00	12:15	SO10 Machine Learning-Assisted Optimization of Guideline-Directed Therapy for Heart Failure <i>Jan Zmazek (University of Maribor, Maribor, SI)</i>
12:15	12:30	SO11 Multicellular Dynamics in Beta Cell Networks: Insights from Multicellular Imaging, Phenomenological Models, and Network Analyses <i>Marko Gosak (University of Maribor, Maribor, SI)</i>
12:30	13:00	Short talks – Bursaries
13:00	14:00	Group Photo & Lunch
14:10	14:55	RBC Advisory Board Meeting
15:00	22:00	Excursion and conference dinner
Thursday, August 29, 2024 (Main Lecture Room)		
Session 4		Molecular biophysics 1 <i>Chairs: Srdjan D. Antić, Anais Biquet Bisquert</i>
9:00	9:45	PL5 Physics of Biological and Artificial Cilia <i>Andrej Vilfan (Jožef Stefan Institute, Ljubljana, SI)</i>
9:45	10:10	IL9 DNA origami-based crystals for photonics <i>Gregor Posnjak (Ludwig-Maximilian-University Munich, Munich, DE)</i>
10:10	10:35	IL10 Design of alternative genetically encoded photosensitizers <i>Erik Sedlák (Pavol Jozef Šafárik University, Košice, SK)</i>
10:35	11:00	Coffee Break
11:00	11:25	IL11 Crosstalk between nucleotide and substrate binding in ABCB1 and ABCG2 <i>Katalin Goda (University of Debrecen, Debrecen, HU)</i>
11:25	11:50	IL12 A lever-like anti-Aβ fibrils potential of azobenzene molecules <i>Zuzana Bednarikova (Slovak Academy of Sciences, Košice, SK)</i>
11:50	12:05	SO12 α-lactalbumin amyloid fibrillization dependence on Hofmeister anions in acidic pH <i>Andrea Antošova (Slovak Academy of Sciences, Košice, SK)</i>
12:05	12:20	SO13 Let's cut things short: A comparative study of short- and long-chain DNA in the presence of manganese cations <i>Kristina Serec (University of Zagreb, School of Medicine, Zagreb, HR)</i>
12:20	12:35	SO14 Modelling the role of cyclic guanosine monophosphate (cGMP) in modulating the contractility of vascular smooth muscles <i>Aleš Fajmut (University of Maribor, Maribor, SI)</i>
12:35	12:50	SO15 Structural motif stability of bacteriophage MS2 RNA pack-aging signals upon changes in their flanking sequence <i>Veronika Bukina (Jožef Stefan Institute, Ljubljana, SI)</i>
13:00	14:00	Lunch
Session 5		Neurobiophysics <i>Chairs: Andrej Vilfan, Katarina Meštrović</i>
14:10	14:55	PL6 Glutamate-Mediated Dendritic UP States in Cortical Pyramidal Neurons – Voltage Imaging and Biophysical Model <i>Srdjan D. Antić (University of Connecticut School of Medicine, CT, USA)</i>
14:55	15:20	IL13 Photoactive Organic Semiconductors for Neurostimulation: In Vivo Application and Mechanistic Insights <i>Tony Schmidt (Medical University of Graz, Graz, AT)</i>
15:20	15:45	IL14 Diffusion tensor imaging in investigation of changes in brain infrastructure in neurological diseases <i>Marko Daković (University of Belgrade, Belgrade, RS)</i>
15:45	16:00	SO16 Neural Cross-Frequency Coupling Functions: An Application to Sleep <i>Tomislav Stankovski (Cyril and Methodious University in Skopje, MK)</i>
16:00	16:30	Coffee Break
16:30	18:30	Poster Session B (P28 – P51)
Friday, August 30, 2024 (Main Lecture Room)		
Session 6		Molecular biophysics 2 <i>Chairs: Magdalena Majekova, Nevena Preradović</i>
9:00	9:45	PL7 Emerging ryanodine receptor function under the light of its molecular structure <i>Alexandra Zahradníková (Slovak Academy of Sciences, Bratislava, SK)</i>
9:45	10:10	IL15 Free energies from molecular dynamics simulations: acceleration of sampling in conformational and chemical space <i>Chris Oostenbrink (BOKU University, Vienna, AT)</i>
10:10	10:40	Coffee Break
10:40	11:00	Awards
11:00	11:20	Closing Ceremony