## Program, Hybrid Workshop in Hünfeld, April 19-20, 2024 "COMPUTER SIMULATION AND THEORY OF MACROMOLECULES"

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2024-04-05

Friday, April 19, 2024 Times given in CEST: Central European Summer Time (UTC+2)	
11:00 - 13:00	Arrival, registration and lunch
13:00 - 13:05	Welcome
13:05 – 13:30	<b>Rita Ann Roessner</b> (University of Montpellier, France) Exploring the Conformational Landscape of a Class A G Protein-Coupled Receptor with Biased Molecular Dynamics Simulations and Markov State Modeling
13:30 – 13:55 online	Saha Satvati (Instituto Italiano di Tecnologia, Genoa, Italy) Molecular Dynamics Simulations of Bacterial Membrane Interaction with Double and Tetra Branched Antimicrobial Peptides
13:55 – 14:20	Katharina Spies (Karlsruhe Institute of Technology, Germany) Proton Coupled Electron Transfer in Biomimetic Peptides
14:20 - 14:45	Daniel Szöllösi (Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany) Simulation of Ion Mobility Spectrometry Experiments
14:45 – 15:10	Saumyak Mukherjee (Ruhr University Bochum, Germany) Microscopic Dynamics of an Intrinsically Disordered Protein in a Condensate
15:10 – 15:25	Coffee break
15:25 – 15:50	Sanjoy Paul (Max Planck Institute of Biophysics, Frankfurt, Germany) Delineating the Shape of COPII Coated Membrane Bud
15:50 – 16:15	Arya Changiarath Sivadasan (Johannes Gutenberg University, Mainz, Germany) Condensate Coexistence in Gene Transcription: Molecular Dynamics Insights
16:15 – 16:40	Aleksandr Zlobin (Leipzig University, Germany) Charges and Boundary Terms: Easy Ways to Spoil Your QM/MM(MD) Results
16:40 – 17:05	Isabell Louise Grothaus (University of Bremen, Germany) The Third Dimension of the Sugar Code under the Computational Microscope
17:05 – 17:30	Marius Trollmann (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany) One Ring to Rule Them All: Lugdunin's Disruptive Effects
17:30 – 17:55	Patrick Quoika (Technical University of Munich, Germany) Evaporation Behavior of Common Water Models in Molecular Dynamics Simulations
18:00 - 19:00	Dinner
19:30 –20:30	Poster Presentations: odd numbers/ Beer
20:30 - 21:30	Poster Presentations: even numbers/ Beer

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Saturday, April 20, 2024	
	CEST: Central European Summer Time (UTC+2)
8:00 - 8:50	Breakfast
8:55 – 9:35	Invited Speaker: Pavel Jungwirth (IOCB Prague, Czech Republic) Charge Scaling Force Fields for Biomolecular Simulations: Do Free Lunches Exist?
9:35 – 10:00	<b>Steffen Schultze</b> (Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany) Bayesian Electron Density Determination from Single-Molecule X-ray Scattering
10:00 - 10:25	Leif Seute (Heidelberg Institute for Theoretical Studies, Germany) Learning a State of the Art MM Force Field
10:25 - 10:45	Coffee break
10:45 - 11:10	Sudarshan Behera (Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany) Understanding Errors in Relative Binding Free Energy Calculations
	Alejandro Martínez-León (Saarland University, Saarbrücken, Germany)
11:10 - 11:35	Absolute Binding Free Energy Calculations: A Systematic Force Field Comparison by a Newly Designed Computational Pipeline
11:35 – 12:00	Ahmed Ali (University of Freiburg, Germany) Allosteric Communication in PDZ3 Studied by Nonequilibrium Simulations and Markov State Model
12:00 - 13:00	Lunch
13:00 - 13:25	Mislav Brajković (Heidelberg Institute for Theoretical Studies (HITS), Heidelberg, Germany) Investigation of Effect of Loop Motion on the Residence Time of Histamine-1-Receptor (H1R) Antagonists by τRAMD
13:25 – 13:50	<b>Chenggong Hui</b> (Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany) <i>Effects of Charge Scaling on Potassium Channel Simulations, Conductance, Ion</i> <i>Occupancy, Voltage Response, and Selectivity</i>
13:50 - 14:15	Lisa Sophie Kersten (Heinrich Heine University, Düsseldorf, Germany) Atomistic Mechanism of Copper Transfer to Plant Receptor ETR and Structural Receptor Dynamics after Binding of Ethylene and 1-Methylcyclopropene
14:15 - 14:40	Jonathan Hungerland (Carl von Ossietzky University, Oldenburg, Germany) Introducing the Automated Ligand Searcher
14:40 - 15:05	Sara Gabrielli (Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany) Rest Assured: Programmed Translational Stalling Studied by Means of MD Simulations
15:05 – 15:20	Coffee break
15:20 - 15:45	<b>Chetan Poojari</b> (Saarland University, Saarbrücken, Germany) Molecular Mechanisms Unveiling Virus-Host Interactions Steering Membrane Fusion
15:45 – 16:10	Yanna Gautier (CNRS, Paris, France) High-Pressure Response of the Coupled Dynamics of Lipids and Membrane Proteins
16:10 - 16:35	Beatrice Caviglia (Université de Paris Cité, University of Perugia, Paris, France) Investigation on the Protein Dynamics at Extreme Temperatures
16:35 – 17:00	<b>Gustavo Enrique Olivos Ramirez</b> (Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw, Poland) Accessing the Conformational Space of Viral Protein Models by GōMartini 3 Approach
17:00 - 17:25	Balázs Fábián (Max Planck Institute for Biophysics, Frankfurt am Main, Germany) Molecular Modeling of the SARS-CoV-2 Nucleocapsid Protein Using Martini
17:30 – 17:55	Poster prize, final remarks
18:00	Departure