



Wednesday May 15, 2024

| | | | |
|--------------------------|-------|--------------------------------|--|
| Registration | 13:00 | | |
| Opening | 14:00 | Rebecca Wade, Tilmann Gneiting | |
| Session 1 | | | |
| Session Chair | | Frauke Gräter | |
| Talk 1 | 14:15 | Sandra Luber | Excited state dynamics and beyond |
| Talk 2 | 14:55 | Mark E. Tuckerman | Synergizing enhanced sampling and machine learning strategies in molecular simulation for representing and deploying high-dimensional free energy surfaces and learning reaction coordinates |
| Short presentation | 15:40 | Andres Escorcia | Multi-scale simulations reveal a Cys-His-Water-Glu catalytic network in Cezanne-2 |
| Coffee break | 16:00 | | |
| Session 2 | | | |
| Session Chair | | Tristan Bereau | |
| Talk 1 | 16:30 | Matteo Degiacomi | Learning (from) protein dynamics |
| Talk 2 | 17:10 | Roberto Covino | Molecular Free Energies, Rates, and Mechanisms from Machine learning-guided Path Sampling Simulations |
| Short presentation | 17:50 | Aleksander Durumeric | Coarse-grained molecular dynamics for proteins with neural networks: Challenges and breakthroughs |
| Photo speaker | | | |
| Invited speakers' dinner | 19:00 | | |



| Thursday May 16, 2024 | | | |
|------------------------------|-------|---------------------------|---|
| Session 3 | | | |
| Session Chair | | Pascal Friederich | |
| Talk 1 | 09:00 | Johannes Margraf | Science-Driven Chemical Machine Learning |
| Talk 2 | 09:40 | Geemi Wellawatte | Explainable AI in Chemistry |
| Short Talk | 10:20 | Luis Itza Vazquez Salazar | Asparagus: a toolkit for automatic construction of machine-learned potential energy surfaces |
| Coffee break | 10:40 | | |
| Session 4 | | | |
| Session Chair | | Marcus Elstner | |
| Talk 1 | 11:20 | Lorenzo Cupellini | Understanding electronic excitations in complex systems with machine learning |
| Short Talk | 12:00 | Daniel Bultrini | Mixed quantum-classical dynamics for near term quantum computers |
| Discussion round table | 12:20 | | Chairs: Pascal Friederich, Fred Hamprecht |
| Lunch | 13:00 | | |
| Photo all | 14:20 | | |
| Session 5 | | | |
| Session Chair | | Rebecca Wade | |
| Talk 1 | 14:30 | Felice Lightstone | Using the Multiscale Machine-Learned Modeling Infrastructure (MuMMI) to Explore Protein Conformational Paths for RAS-RAF Activation |
| Talk 2 | 15:10 | Edina Rosta | Enhanced Sampling Simulations of Biomolecular Systems |
| Short Talk | 15:50 | Ludovico Pupito | Molecular Pathways unveiled by with Multiple Walker Supervised Molecular Dynamics |
| Coffee break | 16:10 | | |
| Session 6 | | | |
| Session Chair | | Ullrich Köthe | |
| Talk 1 | 16:40 | Julia Westermayr | Advancing excited-state simulations with machine learning |
| Talk 2 | 17:20 | Grant Rotskoff | Accelerating Biomolecular Ensemble Sampling with Generative Neural Networks |
| Short Talk | 18:00 | Stiv Llenga | Spying On Molecules: Constructing Novel Compound Spaces via Molecular Triangulation |
| Poster session | 18:20 | | |
| Workshop Dinner + Poster | 19:00 | | |



| Friday May 17, 2024 | | | |
|-------------------------------------|-------|-------------------|--|
| Session 7 | | | |
| Session Chair | | Fred Hamprecht | |
| Talk 1 | 09:00 | Boris Kozinsky | Combining data, physics and machine learning for accelerating materials computations |
| Talk 2 | 09:40 | Andrea Volkamer | Hybrid AI for Molecular Design |
| Short Talk | 10:20 | Leif Seute | Learning a State of the Art MM Force Field |
| Coffee break | 10:40 | | |
| Session 8 | | | |
| Session Chair | | Anya Grynova | |
| Talk 1 | 11:20 | Alessandro Troisi | Digital Discovery of Organic Electronics Materials |
| Short Talk | 12:00 | Anita Ragyanszki | Understanding the Origins of Life - A Machine learning approach to estimate reaction mechanisms of biotic precursors |
| Discussion round table and round up | 12:20 | | Chairs: Rebecca Wade, Rostislav Fedorov |
| Lunch | 13:00 | | |
| End | 14:30 | | |
| IBM Software Workshop ? | | | |