

Second Edition - Symposium  
Artificial Intelligence, machine learning and deep learning  
approaches in theoretical/ computational chemistry  
biochemistry, physical-chemistry and material sciences

June 4th 2024

Institut de Chimie Physique, CNRS, Université Paris-Saclay  
Salle Magat, building 349, Orsay

<https://www.icp.universite-paris-saclay.fr/comment-venir-a-licp/>

8h30 Welcome at ICP

9h Introduction words

9h05 Antoine Taly

*Exploring the structure and dynamics of membrane proteins with a combination of AI tools and molecular dynamics*

9h30 Benjamin Bouvier

*Interpreting biomacromolecular structure and dynamics using machine learning*

9h55 Pascal Pernot

*Negative impact of heavy-tailed uncertainty and error distributions on the reliability of calibration statistics for machine learning regression tasks*

10h30 Coffee break

11h Markus Meuwly

*Machine Learning Molecular Interactions for Atomistic Simulations*

11h40 Thomas Plé

*FeNNol: an efficient and flexible library for building force-field-enhanced neural networks*

12h05 Lunch - Buffet

14h Eric Brémont

*Applying Machine Learning to Save Computational Effort: Chemically-Relevant Examples in Density-Functional Theory*

14h25 Raphaël Vangheluwe & Milica Ritopecki

*Comparison of two machine learning interatomic potentials for metallic nanoparticles*

14h50 Aël Cador

*Hydrolysis barriers in nuclear wastes by molecular simulation and machine learning*

15h15 Coffee break

15h45 Elise Duboué-Dijon

*Improving the accuracy of QM/MM-MD mechanistic explorations with ML corrections*

16h10 Shoeb Atar

*Data-driven discovery of efficient thermoelectric materials using interpretable machine learning*

16h35 Dounia Zamiaty

*Machine Learning-based Clustering of FLIM - Microscopy Data for Automatic Detection of Membrane Contact Sites in Live Cells*

16h45 Conclusions