Computational Molecular Science 2024

CMS 2024								
	Wed	icouay		suay	Fri	day		
Time	FAB0.03	FAB0.08	FAB0.03	FAB0.08	FAB0.03	FAB0.08		
9-10	9-10 0-11		Keynote talk (FAB0.03) Noa Marom		Keynote talk (FAB0.03) Marjolein Dijkstra			
			Contributed talk	Contributed talk	Contributed talk	Contributed talk		
10-11			Edgar Olehnovics Contributed talk Roel van de Ven	Roya Ebrahimi Viand Contributed talk James Middleton	Federico Hernandez Invited talk:	Florian Dietrich Invited talk		
			Coffee break		Coffee break			
			Invited talk	Invited talk	Contraction II.	Contraction of the Pro-		
11-12	Regist	ration	Carla de Tomas	Karen Johnston	Contributed talk	Contributed talk		
			Contributed talk	Contributed talk	Hugh Burton	Pablenne bachtiger		
			Vincent Fletcher	George Marchant	Invited talk	Invited talk		
12-13	Lunch (Rootes Restaurant) Welcome		Lunch (Rootes Restaurant)		Lunch (Rootes Restaurant)			
13-14	Keynote talk (FAB0.03) Keynote talk (FA Sarah Harris Michele Cerio							
			lk (FAB0.03) e Ceriotti					
	Break		Break					
14-15	Invited talk Daniel Cole	Invited talk Rachel Crespo-Otero	Invited talk Grant Hill	Invited talk Clotilde Cucinotta				
	Contributed talk	Contributed talk	Contributed talk	Contributed talk				
	Hesam Makki	Tim Hele	Hatem Helal	Zsuzsanna Koczor-Benda				
15-16	Contributed talk Elliot Chan	Contributed talk	Contributed talk	Contributed talk				
	Coffee break		Coffee break		RSC Gradate Student Meeting			
16-17	Invited talk Antonia Mey Contributed talk	Invited talk Ralf Tonner-Zech Contributed talk	Keynote taik (FAB0.03) Karsten Reuter					
	Kakali Sen Lukas Hörmann		De	ook				
	Matteo Degiacomi	A. Muthuperiyanayagam	Bri	еак				
17-18	J. Goncalves de Abrantes	Akash Hiregange						
	J. Gonçaives de Abrantes Akasin hiregange		Early Career Networking event					
18-19	Poster Session & Buffet Dinner/Drinks (Panorama Suite, Rootes Building)							
19-21			Din (Rootes R	iner estaurant)				

Wednesday

12.00	Lunch					
13:20	Welcome					
13:30	Multiscale Simulations of Biomolecular Motors (Sarah Harris)					
14:20	Break					
14:30	DE-FF and MACE-OFF: Data-driven interatomic potentials for molecular simulations (<i>Daniel Cole</i>)	Modelling Excited State Processes in Molecular Crystals (<i>Rachel Crespo-Otero</i>)				
15:00	Digital Discovery of Semiconducting Polymers: from Chemical Drawing to Electronic Properties (Hesam Makki)	Designer lighting: a radical approach to improving organic light-emitting diodes (<i>Tim Hele</i>)				
15:20	Electrostatic embedding of machine learned potentials for accurate and efficient simulation of enzyme catalysis (<i>Elliot Chan</i>)	Ab initio molecular dynamics modelling of the dissociation of hydrofluorocarbon molecules after electron impact in plasma (Dmitry Makhov)				
15.40	Coffee Break					
16:10	Can we learn 'the best' Markov Model? (Antonia Mey)	Learning from fundamental surface science for atomic layer deposition – an ab initio endeavour (<i>Ralf Tonner-Zech</i>)				
16:40	Combined experimental and computational approaches to characterising the active site structure of cytochrome P460 (<i>Kakali Sen</i>)	Atomic-scale insights into frictional energy dissipation mechanisms (Lukas Hörmann)				
17:00	The effect of hydration and dynamics on the mass density of single proteins (<i>Matteo Degiacomi</i>)	The impact of Cu amorphous structure on CO2 electrocatalysis: A combined machine learning and DFT modelling approach (Akshayini Muthuperiyanayagam)				
17:20	Tunnelling in methylated DNA using NEO-DFT (Juliana Gonçalves de Abrantes)	Computational Insights into the Stability and Phase Transition of Cobalt Oxide Nanoparticles for Fischer-Tropsch Catalysis (Akash Hiregange)				
18.00	Poster session and buffet Dinner					

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Thursday

09:00	Computational Discovery of New Materials for Singlet Fission in the Solid				
	(Noa Marom)				
09:50	Break				
10:00	Assessing the accuracy and	Charge transport simulation using kinetic			
	efficiency of lattice free energy	Monte Carlo with fast update rules			
	differences obtained from	(Roya Ebrahimi Viand)			
	reweighted flow-based probabilistic				
	generative models				
	(Edgar Olehnovics)				
10:20	Finding a needle in a needle stack:	Exploring Triboelectric Charging Mechanisms			
	Leveraging vibrational spectra and	with Density Functional Theory			
	machine learning to guide	(James Middleton)			
	conformational search				
	(Roel van de Ven)				
10:40	C	offee Break			
11:10	Accelerating the prediction of large	Probing Structural Subtleties in Anti-			
	carbon clusters combining structure	Perovskite Solid Electrolytes			
	search and machine-learning	(Karen Johnston)			
	interatomic potentials				
	(Carla de Tomas)				
11:40	Thermodynamically Informed Phase	Determining phase transitions in magnetic			
	Space Exploration for Optimal	materials from first principles: Case study of			
	Autonomous MLIP Dataset Building	MnAl			
	(Vincent Fletcher)	(George Marchant)			
12:00		Lunch			
13.30	ntegrated machine-learning models for				
10.00	materials (Michele Ceriotti)				
14:20		Break			
14:30	Machine learning of Gaussian basis	Exploring the Pt(111)-Electrolyte Interface			
	sets for use in molecular	Under Applied Potentials with Ab Initio			
	applications	Molecular Dynamics			
	(Grant Hill)	(Clotilde Cucinotta)			
15:00	MESS: Modern Electronic Structure	Ab-initio simulation of electron transfer			
	Simulations	processes of adsorbate-surface systems with			
	(Hatem Helal)	ground-state density functional theory			
		(Zsuzsanna Koczor-Benda)			
15:20	Machine learning the electric field	Computational modelling of oxygen-			
	response of condensed phase	functionalized graphene: structure-property			
	systems using perturbed neural	relationship and application in phosphate			
	network potentials (Kit Joll)	sensing (Natalia Martsinovich)			
15:40	C	Coffee Break			
16:10	Beyond Crystallinity and Throughput: Machine Learning Accelerated Materials				
10:10	Discovery for Energy Conversion and Storage (Karsten Reuter)				
17:00		Break			
17:10	Early Career Networking Event				

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Friday

09:00	Accelerating the design of Soft Materials using Machine Learning (Marjolein Dijkstra)				
09:50	Break				
10:00	Atomistic photodynamics	Machine Learning Order Parameters in			
	materials (Federico Hernandez)	(Florian Dietrich)			
10:20	Predicting and Interpreting	Reversible simulation to train classical and			
	Femtosecond X-ray spectroscopy	machine learning potentials			
	(Tom Penfold)	(Joe Greener)			
10:50	Coffee Break				
10:20	Mapping the landscape of electronic	Efficient calculation of nucleation rates from			
	structure theory	equilibrium molecular dynamics and a state			
	(Hugh Burton)	correspondence principle			
		(Fabienne Bachtiger)			
10:40	Surface-Specific Spectroscopy	Coatings for Corrosion Protection: Insights			
	through Machine Learning	from Molecular Simulations			
	(David Wilkins)	(Flor Siperstein)			
12:10	Closing Remarks & Lunch				

