

GENERAL INFORMATION

This Summer School is open to PhD students, post-docs, researchers and engineers, from both academia and industry interested in the catalysis field.

REGISTRATION

Online applications:

<https://schoolcat2022.sciencesconf.org/>

Deadline registration : April 30th, 2022.

Please note that the number of participants is limited and the selection will be on a first-come-first-served basis.

FEES

Seniors from industry: 650 €

Seniors from academia: 450 €

PhD, post-docs, master students: 275 €

The registration fees include Summer School accommodation, electronic book of abstracts, list of participants, food (breakfasts, lunches and dinners) and beverages during the Summer School.

CANCELLATION AND REFUNDS

Cancellations are only accepted by e-mail and refunds before May 31st, 2022.

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VENUE

Ecole des Mines d'Albi-Carmaux
Campus Jarlard

81013 Albi, France

<https://www.imt-mines-albi.fr/plan-du-campus>

ACCOMMODATION

The conference will benefit from the on-site residence for students of the Ecole des Mines d'Albi-Carmaux. Apartments (20 m²) are equipped with the standard facilities.

ORGANISERS

Group of Catalysis in Toulouse (C@T)

<http://cat.ups-tlse.fr/>

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CONTACT

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Catalysis: from understanding to applications



June 20-24, 2022

Albi, France

<https://schoolcat2022.sciencesconf.org/>

Heterogeneous, homogeneous and enzymatic catalysis

Mechanism and understanding
Part 1 - Kinetics

Mechanism and understanding:
Part 2 – Operando techniques

Mechanism and understanding:
Part 3 - Modeling

Application:
Small molecules activation – N₂

And also flash presentations, posters, panel discussion, etc...



Catalysis in Toulouse



SUMMER SCHOOL 2022 - CATALYSIS		SUMMER SCHOOL 2022 - CATALYSIS		SUMMER SCHOOL 2022 - CATALYSIS	
PROGRAMME		PROGRAMME		PROGRAMME	
Monday, 20 June 2022		Wednesday, 22 June 2022		Thursday, 23 June 2022	
11:00 – 12:00	Reception	8:30 – 09:30	<i>Non-quantum based modeling: What insights to expect on catalysis and recognition?</i> J-D. Maréchal, Univ Barcelona	MECHANISM UNDERSTANDING - Part 3	
12:00 – 14:00	Lunch	09:30 – 10:00	Coffee break	14:00 – 15:30	<i>Introduction to Machine Learning for Chemists: Visualization, Data Processing, Analysis, and Modeling</i> R. Poteau, LPCNO, Toulouse
14:00 – 14:15	Welcome – General information	10:00 – 12:30	<i>Practical work - Non-quantum based modeling: What insights to expect on catalysis and recognition?</i> J-D. Maréchal, Univ Barcelona	15:30 – 16:00	Coffee break
INTRODUCTION TO CATALYSIS		12:30 – 14:00	Lunch	16:00 – 19:00	Visit of Trifyl
14:15 – 15:30	<i>From molecular to solid catalysis: a contextualization</i> P. Serp (LCC, Toulouse), S. Bozonnet (TBI, Toulouse)	MECHANISM UNDERSTANDING - Part 2		20:00 – 23:00	Friendly diner
15:30 – 16:00	Coffee break	14:00 – 15:30	<i>A Deep Insight in Chemical Reaction by NMR</i> M. Pennestri, Bruker BioSpin	Friday, 24 June 2022	
16:00 – 17:00	Flash presentations	15:30 – 16:00	Coffee break	APPLICATIONS: SMALL MOLECULE ACTIVATION – N₂	
17:00 – 18:30	Poster session	16:00 – 17:30	<i>Solid-state NMR as a Tool for Characterizing Heterogeneous Catalysts and their Kinetics</i> G. Buntkowsky, Tech Univ Darmstadt	8:30 – 10:00	<i>Mechanistic considerations for heterogeneously catalysed ammonia synthesis</i> J. Hargreaves, Univ Glasgow
19:30 – 21:00	Diner	17:30 – 19:00	<i>Soft X-ray photoemission spectroscopy applied to chemistry and photochemistry in operando conditions</i> M. Silly, Synchrotron-Soleil	10:00 – 10:30	Coffee break
Tuesday, 21 June 2022		19:30 – 21:00	Diner	Thursday, 23 June 2022	
MECHANISM UNDERSTANDING - Part 1		MECHANISM UNDERSTANDING - Part 2/3		10:30 – 12:00	<i>Homogeneous nitrogen fixation: Inspiration from the Haber-Bosch process</i> N. Mézailles, LHFA, Toulouse
8:30 – 10:00	<i>Global analysis of kinetic data as a tool for detecting reaction intermediates and studying their reactivity</i> M. Garcia Basallote, Univ Cadiz	8:30 – 10:00	<i>In situ and operando studies of catalytic reactions: pitfalls, benefits and applications of IR spectroscopy</i> F. Meunier, IRCELYON	12:00 – 13:30	Lunch
10:00 – 10:30	Coffee break	10:00 – 10:30	Coffee break	13:30 – 15:00	<i>Homogeneous nitrogen fixation: Inspiration from Nature</i> A. Simoneau, CNRS, Toulouse
10:30 – 12:00	<i>Enzyme kinetics: Theory and practice</i> C. Dumon, TBI, Toulouse	10:30 – 12:00	<i>Modeling catalytic reaction mechanisms with porous materials</i> M. A. Ortuño, Univ Santiago de Compostela	15:00 – 16:00	Feedback from participants - Concluding remarks
12:00 – 14:00	Lunch	12:00 – 14:00	Lunch		
14:00 – 15:30	<i>Kinetics in heterogeneous catalysis. Design of reactors</i> C. Julcour, LGC, Toulouse				
15:30 – 16:00	Coffee break				
16:00 – 17:00	Flash presentations				
17:00 – 18:30	Poster session				
19:30 – 21:00	Diner				