

Tutorials Program - Sunday 14th July



#SSI24

09:00 - 09:30	Registration		
09:30 - 10:00	Coffee Break - Redgrave		
Theme 1: From Fundamentals to Devices			
	S.1	Fundamentals	LT1
			Module leader: Prof. Roger de Souza
10:00 - 10:45	T1.1	Defect notation to Brouwer diagrams	Dr. George Harrington (Bath University)
10:45 - 11:30	T1.2	Space-charge zones at extended defects	Prof. Roger De Souza (RWTH Aachen University)
10:45 - 11:30	T1.3	Ion migration in solids	Prof. Martin Wilkening (Graz University of Technology)
12:15 - 13:30	Lunch		
	S.2	Devices	LT1
			Module leader: Dr. Ann Huang
13:30 - 14:15	T1.4	Fuel cells and electrolysers	Dr. Shubhashish Mukerjee/Dr. Robert Leah (Ceres Power)
14:15 - 15:00	T1.5	Batteries	Prof. Yang Xu (University College London)
15:00 - 15:30	Coffee-Tea - Redgrave		
15:30 - 16:15	T1.6	Iontronic Devices	Dr. Francesco Chiabrera (IREC - Institut de Recerca en Energia de Catalunya)
16:30-17:00	Wrap up session / Feedback		
Theme 2: Advanced Techniques			
	S.1	Nanoscale analysis	LT2
			Module leader: Prof. John Kilner
10:00 - 10:45	T2.1	Atom Probe Tomography (APT)	Dr. James Douglas (Imperial College London)
10:45-11:30	T2.2	Low Energy Ion Scattering (LEIS)	Mr. Philipp Brüner (IONTOF GmbH)
11:30-12:15	T2.3	In-situ, In-Operandi electrochemical techniques	Dr. Tobias Huber (Huber Scientific)
12:15 - 13:30	Lunch		
	S.2	AI/Machine learning for materials Science	LT2
			Module leader: Dr Sam Cooper and Dr Ieuan Seymour
13:30-14:15	T2.4	Fundamentals of machine learning: Neural networks, CNNs, transformers and foundation models	Mr. Ronan Docherty (Imperial College London)
14:15-15:00	T2.5	Efficient modelling of atomistic transport in solids: from first principles calculations to machine learning force fields	Dr. Ieuan Seymour (University of Aberdeen)
15:00 - 15:30	Coffee-Tea - Redgrave		
15:30-16:15	T2.6	Characterisation and design of microstructure using generative AI	Dr. Steve Kench (Polaron Ltd.)
16:30-17:00	Wrap up session / Feedback		