

2025 CoSeC Conference Programme

Slot	Title	Speaker	Affiliation
09:50-10:00	Introduction	Stephen Longshaw (CoSeC Director)	UKRI STFC
10:00-10:20	Exploiting Physics for Efficient Computation	Sampreet Kalita	University of Strathclyde / CCP-QC
10:20-10:40	Interpreting Neural Networks: Physical Insight from Supervised Commitor Prediction	Hubert Naguszewski	University of Warwick / CCP5
10:40-11:00	CCC-ParaSolS and the cross-cutting challenges in particulate solids simulations	Kevin Hanley	The University of Edinburgh / CCC-ParaSolS
11:00-11:30	Coffee		
11:30-11:50	CCP-DCM Finite Element simulation of PDEs on GPU	Chris Richardson	University of Cambridge / CCP-DCM
11:50-12:10	Porting Microsoft Aurora to Dawn	Rosie Wood	The Alan Turing Institute
12:10-12:30	High-Order Splitting of Non-Unitary Operators on Quantum Computers	Peter Brearley	The University of Manchester / CCP-QC
12:30-12:40	Climate Impact: Building a Sustainable Digital Future	Edoardo Pasca	UKRI STFC
12:40-12:50	Announce Posters and Theme Structure		
12:50-13:40	Lunch		
13:40-14:10	CCP-volumeEM: Making modern computational technologies accessible for volume electron microscopy	Martin Jones	Francis Crick Institute / CCP-VolumeEM
14:10-14:30	RO-Crate: Capturing FAIR research outputs for reproducibility across domains	Stian Soiland-Reyes	The University of Manchester
14:30-14:50	Automating Metadata Capture for FAIR Data Pipelines	Laura Crawford	The Rosalind Franklin Institute
14:50-15:20	2025 CoSeC Fellows		
15:20-15:40	Coffee		

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15:40-16:00	Towards Exascale First-Principles Materials Modelling with CASTEP	Phil Hasnip	University of York / UKCP
16:00-16:20	ExaGRyPE: Numerical Relativity Solvers Based upon the Hyperbolic PDEs Solver Engine ExaHyPE	Han Zhang	Durham University / CCP-UKNR
16:20-16:40	Modelling sub-grid turbulence in simulations of neutron stars	Miquel Miravet-Tenes	University of Southampton / CCP-UKNR / 2025 CoSeC Fellow
16:40-17:00	Development of CHAPSim2 for Modelling Magnetohydrodynamic Turbulence	Alex Old	The University of Sheffield / CCP-NTH
17:00-17:20	OPS-HLS: Automated Code-Generation for FPGA-Accelerated Stencil Solvers	Beniel Thileepan	University of Warwick
17:20-17:30	Wrap-up and Summary	Martin Turner (Chair of Conference Organising Committee)	The University of Manchester / CCPi
17:30-20:00	Social networking event - The Gas Works Brew Bar, 5 Jack Rosenthal St, Manchester M15 4RA (Open to all registered CIUK attendees and exhibitors - CIUK lanyard and badge required for entry)		