M4QN PhD Summer School 2025

Date: 2-5 June 2025

Location: Henry Royce Institute, Royce Hub Building, University of Manchester

Format: In-person

Overview

The M4QN Summer School is a four-day residential event designed to bring together PhD researchers working on quantum materials and technologies. Taking place in June 2025, the school will explore the latest advances in quantum devices, optoelectronics, spin systems, and materials science, while also addressing policy, reproducibility, and careers in quantum technologies.

Participants will engage with leading academics, industry experts, and policymakers through a mix of lectures, workshops, and interactive sessions. The programme also includes networking and outreach activities to foster collaboration and broaden the impact of quantum research.

The school aims to build a vibrant community of early career researchers and equip them with the technical insight, professional skills, and interdisciplinary awareness needed to shape the future of quantum networks.

Audience

The workshop is aimed at PhD students working in fields related to quantum materials and technologies. This includes those focused on quantum devices, spin systems, nanomaterials, optoelectronics, and materials characterisation, as well as those exploring the societal, industrial, or policy dimensions of quantum research.

Participants from across disciplines and institutions are encouraged to attend, particularly those looking to broaden their understanding of the quantum research landscape, expand their professional networks, and explore career pathways within and beyond academia.

Learning outcomes

The school participants should expect to:

- Gain a broad, interdisciplinary understanding of current challenges and innovations in quantum materials and technologies.
- Develop practical knowledge through workshops on policy, open research practices, and commercialisation in the quantum field.
- Build connections with peers, leading researchers, and industry stakeholders across the UK quantum landscape.
- Enhance communication, collaboration, and presentation skills through interactive sessions and student-led activities.

Programme

Day1 – Monday 02/06/2025

Time	Session	Speaker
12:00-13:00	Arrival, registration, and refreshments	
13:00-13:05	Welcome and orientation	Tom Hancocks
13:05-13:30	Introduction to the M4QN summer school	Rich Curry
13:30-14:00	Quantum Engineering (Devices) - Invited Keynote 1	Jessica Boland
14:00-14:30	Quantum Technologies (Computing) - Invited Keynote 2	Winfried Hensinger
14:30-15:00	Optical Techniques for studying materials - Invited Keynote 3	Enrico Da Como
15:00-15:30	Break on the Mezzanine	
15:30-17:30	Quantum Untanglement - Networking activity	Royce Training, academics and M4QN industry contacts
17:30-19:00	Welcome event	Royce

Day2 – Tuesday 03/06/2025

Time	Session	Speaker
09:00-09:30	Arrival and registration	
09:00-11:00	Leading with Heart: Emotional Intelligence in the Entrepreneurial Journey	Ilana Wisby
11:00-11:30	Break on the Mezzanine	
11:30-13:00	Open and reproducible research	Juliana Morbec
13:00-14:00	Lunch on the Mezzanine	
14:00-15:30	Quantum Policy: Influencing the Future Landscape	Joe Willis Natalie Fenton
15:30-16:00	Break on the Mezzanine	
16:00-17:30	Career Panel: Navigating Quantum Careers	Joe Willis Ilana Wisby Enrico Da Como Max Attwood
18:30-22:00	Course dinner at HOME Manchester	

Day3 – Wednesday 04/06/2025

Time	Session	Speaker
09:00-09:30	Arrival and registration	
09:30-11:00	Spin, Topology, and Quantum Phenomena	Yusuf Karli Evgeny Chekhovich Michael Baker
11:00-11:30	Break on the Mezzanine	
11:30-13:00	Quantum devices and sensors	Oleg Makarovskiy Feiran Wang Lyudmila Turyanska
13:00-14:00	Lunch on the Mezzanine	
14:00-15:30	Molecular and Optoelectronic Quantum Materials	Andreas Thurn Luca Sapienza Jan Mol
15:30-17:30	Quantum Café - Student-led Interactive Session	Students

Day 4 – Thursday 05/06/2025

Time	Session	Speaker
09:00-09:30	Arrival and registration	
09:30-10:15	IP and patents for quantum materials	Pawel Piotrowicz
10:15-11:00	Outreach in Quantum Materials: Public Engagement and Education	Royce
11:00-11:30	Break on the Mezzanine	
11:30-12:00	IoP Publishing: Materials for Quantum Technology	Aswathy V. Girija
12:00-13:00	M4QN Roadmap and Futures Reflections	Royce
13:00-14:00	Lunch on the Mezzanine	
14:00-15:00	Closing session	Rich Curry

Speakers

- Prof. Richard Curry, University of Manchester (M4QN and Roadmap)
- Dr. Enrico Da Como, University of Bath (Keynote & Networking)
- Dr. Juliana Morbec, Keele University (Open Research & Reproducibility)
- Dr. Max Attwood, Imperial College London (Career Panel & Networking)
- Dr. Joe Willis, Department for Science, Innovation and Technology (Policy & Careers)
- Dr. Ilana Wisby, Moth Quantum (Entrepreneurship Workshop)
- Dr. Oleg Makarovskiy, University of Nottingham (Quantum Devices)
- Dr. Lyudmila Turyanska, University of Nottingham (Quantum Materials)
- Dr. Feiran Wang, University of Nottingham (Additive Manufacturing)
- Dr. Luca Sapienza, University of Cambridge (Quantum Optics)
- Dr. Jan Mol, Queen Mary University of London (Molecular Quantum Materials)
- Dr. Andreas Thurn, University of Cambridge (Quantum Materials)
- Dr. Yusuf Karli, University of Cambridge (Quantum Engineering)
- Dr. Evgeny Chekhovich, University of Sussex (Spin Control)
- Dr. Jess Boland, University of Manchester (Functional Quantum Materials)
- Prof. Winfried Hensinger, University of Sussex (Quantum Technologies)
- Dr. Micheal Baker, University of Manchester (Spin and Topology)
- Dr. Limeng Ni, Oxford Instruments (Industry and Knowledge Transfer)
- Dr. Aswathy V. Girija, IOP Publishing (Subject Commissioning Editor)
- Dr. Pawel Piotrowicz, Vinner Shipley (Patent Attorney)
- Tom Hancocks, Henry Royce Institute (Training and Skills)
- Natalie Fenton, University of Manchester (Policy@Manchester)

Organisers

- Tom Hancocks, Henry Royce Institute (Training and Skills)
- Dr. Juliana Morbec, Keele University (Open Research & Reproducibility)
- Tarek Haloubi, Henry Royce Institute (Training and Skills)