

Ultrafast Magnetism Meets Terahertz Photonics

26-27 October 2026 | Institute of Physics, London

37 Caledonian Road, London N1 9BU | All times GMT

Monday 26 October

- 09:00 Registration and coffee
- 09:30 Intro CRIM - Rostislav Mikhaylovskiy
- 09:40 Intro AFMNET - Robert Hicken
- 09:50 Intro THz Network+ - Marco Peccianti

Sound and spin waves

- 10:00 **Femtosecond laser-driven magneto-acoustics**
Vasily Temnov | Ecole Polytechnique Paris, France
- 10:30 **Light-Driven Antiferromagnetic Magnonics**
Peter Kim | Radboud University, Netherlands

11:00 Break

Ultrafast switching

- 11:30 **Ultrafast switching and creation of magnetization by terahertz photons**
Carl Davies | Radboud University, Netherlands
- 12:00 **All-optical control of spins in 2D van der Waals magnets**
Maciej Dabrowski | University of Exeter, UK

12:30 Lunch

Advanced THz techniques meet magnetism

- 13:30 **Spintronic Terahertz Emitters: challenges and opportunities**
Darren Graham | University of Manchester, UK
- 14:00 **THz spin current generation from compensated ferrimagnets**
Guillermo Nava Antonio | University of Cambridge, UK
- 14:15 **Strong dynamic coupling of spins and orbitals in an antiferromagnet**
Oleksandr Kovalenko | Lancaster University, UK
- 14:30 **Ultrabroadband Terahertz Photonics for Probing Ultrafast Spin and Lattice Dynamics**
Binbin Zhou | Technical University of Denmark

15:00 Break

Orbitronics, anti- and altermagnets

- 15:30 **Orbital Currents: Generation, Detection and Interaction with Magnetic Order**
Yuri Mokrousov | University of Mainz/ Forschungszentrum Julich, Germany
- 16:00 **Thermal conductivity in 2D antiferromagnets through spin-flip and spin-flop**
Joe Barker | University of Leeds, UK
- 16:30 **Imaging altermagnetic domains**
Oliver Amin | University of Nottingham
- 17:00 Poster session and refreshments
- 19:00 Day one closes

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Terahertz Quantum Devices

- 09:00** **Quantum-Enhanced Time-Domain Spectroscopy**
Matteo Clerici | University of Insubria, Italy
- 09:30** **THz Landau polaritons and cavity-driven attractive interactions in single and bilayer graphene**
Giacomo Scalari | ETH Zurich, Switzerland
- 10:00** **EPSRC contribution - title to be confirmed**
Natalia Sawicka | EPSRC
- 10:30** Break

Magnetization dynamics at THz frequencies

- 11:00** **Atomistic spin-lattice dynamics for ultrafast magnetism**
Mara Strungaru | University of Manchester, UK
- 11:30** **Insights from Spin-Lattice Dynamics Modelling into Magnetization Switching Driven by Linear and Chiral THz Phonons**
Oksana Chubukalo-Fesenko | Instituto de Ciencia de Materiales de Madrid, Spain
- 12:00** **From spin-Hall magnetoresistance at THz frequencies to ultrashort spin-wave packets in altermagnets**
Peter Kubaščík | Charles University, Prague, Czech
- 12:30** Lunch

Nanoscale Imaging and Quantum Material

- 13:30** **Terahertz microscopy at its ultimate limits**
Tom Siday | University of Birmingham, UK
- 14:00** **Probing the ion implantation 3D profile via scattering-type near-field microscopy**
Xinyun Liu | University of Manchester, UK
- 14:15** **Accurate Terahertz Combs from Microcombs**
Luke Peters | Loughborough University, UK
- 14:30** **THz photonics for the control of quantum systems**
James Seddon | University College London, UK
- 14:45** **Coherent coupling between microwave photons in superconducting resonators and van der Waals antiferromagnets**
Chenghao Yang | University College London, UK
- 15:00** **Engineering Photoconductive Antennas for Enhanced Terahertz Detection**
Stephanie Adeyemo | University of Cambridge, UK
- 15:15** **Quantifying the Spin Hamiltonian of Non-Collinear Antiferromagnetic Mn₃Ge Thin Films through Magnetometry and Magnetotransport**
Servet Ozdemir | University of Leeds, UK
- 15:30** Break
- 16:00** Breakout groups and discussion
- 17:00** Closing Remarks