

UKMHD 2021

Wednesday 19/05

9:25 – 9:30	Conference welcome
9:30 – 10:15	Invited talk: Caroline Nore (Université Paris Saclay) “Flows in liquid metal batteries”
10:15 – 10:30	Alex Hindle (Newcastle) “Hotspot reversals in hot Jupiter atmospheres”
10:30 – 10:45	Alexander Kimbley (Leeds) “Axisymmetric instabilities of equatorial flows in planets and stars”
10:45 – 11:00	Patrick Lewis (Leeds) “Instabilities of a shear generated magnetic layer”
11:00 – 11:30	Break
11:30 – 11:45	James McLaughlin (Northumbria) “MHD wave propagation in the neighbourhood of coronal null points”
11:45 – 12:00	Giulia Murtas (Exeter) “Plasmoid formation in partially ionised plasmas”
12:00 – 12:15	Fabian Laakmann (Oxford) “An augmented Lagrangian preconditioner for the magnetohydrodynamics equations at high Reynolds and coupling numbers”
12:15 – 12:30	Ben Snow (Exeter) “MHD shocks and turbulence in the Orszag-Tang vortex”
12:30 – 12:45	Andrei Igoshev (Leeds) “Magnetic fields shape observational manifestations of neutron stars”

Thursday 20/05

9:30 – 9:45	Tony Arber (Warwick) "MHD from the solar surface to Earth for space weather"
9:45 – 10:00	Jack Reid (St Andrews) "Curved magnetic flux tubes: supporting the spread of an MHD avalanche"
10:00 – 10:15	Thomas Howson (St Andrews) "The effects of driving time scales on energy release in the solar corona"
10:15 – 10:30	Prantika Bhowmik (Durham) "Two classes of eruptive events during Solar Minimum"
10:30 – 10:45	Peter Wyper (Durham) "Linking flare ribbon features to fine structure in the flare current sheet"
10:45 – 11:00	Callum Boocock (Queen Mary University London) "The effects of oscillations and collisions of emerging bipolar regions on the triggering of solar flares"
11:00 – 11:30	Break
11:30 – 11:45	Simon Lance (Exeter) "Dissipation in rotating convection"
11:45 – 12:00	Michael Proctor (Cambridge) "Magnetoconvection in a Maxwell–Cattaneo fluid"
12:00 – 12:45	Poster session (on gather.town)
12:45 – 14:00	Lunch
14:00 – 14:15	David Hughes (Leeds) "Magnetic layering"
14:15 – 14:30	Devika Tharakkal (Newcastle) "Non-linear magnetic buoyancy instability in galaxies"
14:30 – 14:45	Fryderyk Wilczynski (Leeds) "Magnetic buoyancy instability in the anelastic approximation"
14:45 – 15:00	Lorenzo Maria Perrone (Cambridge) "The magneto-thermal instability in galaxy clusters"
15:00 – 15:15	John Moss (Newcastle) "Validity of sound-proof approximations for magnetic buoyancy"
15:15 – 15:30	Jane Pratt (Georgia State University and Exeter) "Diffusion and dispersion in anisotropic magnetohydrodynamic turbulence"

Friday 21/05

9:30 – 10:15	Invited talk: Julien Aubert (IPG Paris) "Modelling the geodynamo, a strongly (time)-scale separated MHD system"
10:15 – 10:30	Colin Hardy (ETH Zurich) "The inherent instability of axisymmetric magnetostrophic dynamo models"
10:30 – 10:45	Stephen Mason (Newcastle) "Magnetoconvection with a uniform axial magnetic field in a rotating spherical shell"
10:45 – 11:00	Stefano Maffei (Leeds) "Plesio-geostrophy for the Earth's core"
11:00 – 11:30	Break
11:30 – 11:45	Daniel Johnson (University of Central Lancashire) "Numerical simulation of sunspot rotation"
11:45 – 12:00	Breno Raphaldini (Durham) "Magnetic winding in observations of solar active regions"
12:00 – 12:15	Anthony Yeates (Durham) "Revisiting Taylor relaxation"
12:15 – 12:30	Simon Candelaresi (Glasgow) "Vortex reconnection and the role of topology"
12:30 – 12:45	David MacTaggart (Glasgow) "Magnetic winding: what is it and what is it good for?"
12:45 – 14:00	Lunch
14:00 – 14:15	Adrian Barker (Leeds) "New results on the interaction between tidal flows and turbulent convection"
14:15 – 14:30	Aurélie Astoul (Leeds) "Non-linear simulations of tides in an adiabatic convective shell"
14:30 – 14:45	Anna Guseva (Leeds) "Nonlinear dynamos: a data-driven approach"
14:45 – 15:00	Kuan Li (Leeds) "Reservoir Computing for Prediction of Fluid and MHD systems"
15:00 – 15:15	Student Prizes

Posters:

- **Azza Algaatheem** (Exeter) "Jets and instabilities in forced magnetohydrodynamic flows"
- **Craig Duguid** (Newcastle) "Convective turbulent viscosity acting on equilibrium tidal flows"
- **Parag Gupta** (Glasgow) "Effects of shell thickness on cross-helicity generation in convection-driven spherical dynamos"
- **Konstantinos Karampelas** (Northumbria) "Oscillatory reconnection of a 2D magnetic X-point for systems with different base temperatures"
- **Oliver Rice** (Durham) "Equilibrium solutions of the magneto-frictional model with solar wind outflow"
- **Liam Watts** (Exeter) "The scaling laws of flux expulsion"