

UK MHD 2009 Meeting Programme

3rd June, 2009

9:00 – 9:45 Registration and coffee

9:45 – 10:00 Opening, Prof. Sergei Molokov

Session 1 – Dynamo

Chairman – Dr Janis Priede (Coventry University)

10:00 – 10:15	Prof Keke Zhang	An EBE finite element spherical dynamo model
10:15 – 10:30	Dr Dhrubaditya Mitra	Oscillatory migrating magnetic fields in helical turbulence in spherical domains
10:30 – 10:45	Miss Katy Richardson	α-effect Fluctuations in $\alpha\Omega$ Dynamo Models
10:45 – 11:00	Dr Nicolas Leprovost	Dynamo with flow shear and magnetic shear

11:00 – 11:45 Coffee break and posters

Session 2 – Convection

Chairman – Prof Michael Proctor (University of Cambridge)

11:45 – 12:00	Dr Paul Bushby	Isolated plumes in compressible magnetoconvection
12:00 – 12:15	Miss Christina Davies	The Electromotive Force Generated by the Magnetic Buoyancy Instability
12:15 – 12:30	Mr Nikolai Berkoff	The Anelastic Approximation: Magnetic Buoyancy and Convection
12:30 – 14:00	Lunch	
14:00 – 14:45	Keynote lecture, Prof Malcolm Haines	Ion viscous heating in a magnetohydrodynamically unstable Z-pinch at over 2 billion Kelvin

Session 3 - Liquid Metals I

Chairman – Dr Valdis Bojarevics (University of Greenwich)

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| 14:45 – 15:00 | Prof John Allen | The Plasma Boundary in a Magnetic Field |
| 15:00 – 15:15 | Prof Sergei Molokov | Linear stability of Hunt's flow |
| 15:15 – 15:30 | Prof Bernard Knaepen | Instabilities and transition in magnetohydrodynamic flows in ducts with electrically conducting walls |
| 15:30 – 15:45 | Dr Alex Pedcenko | Experimental results on instability in aluminium reduction cells |
| 15:45 – 16:00 | Mr Vincent Dousset | 3D numerical simulations of the flow past a truncated cylinder |
| 15:00 – 16:15 | Dr Vitali Dymkou | Spectral methods based on the least dissipative modes for wall bounded MHD flows |
| 16:15 – 16:45 | Coffee break and posters | |

Session 4 – Astrophysics I

Chairman – Dr David Tsiklauri (University of Salford)

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| 16:45 – 17:00 | Mr Graeme Cook | Solar Cycle Variations of Coronal Null Points and Magnetic Breakout Configurations |
| 17:00 – 17:15 | Dr Youra Taroyan | Alfven instability in a compressible flow |
| 17:15 – 17:30 | Mr David MacTaggart | The emergence of toroidal flux tubes |
| 17:30 – 17:45 | Prof Valery Nakariakov | The possible role of vortex shedding in the excitation of kink-mode oscillations in the solar corona |
| 17:45 – 18:00 | Mr Robert Chin | Self- Organization in thermally unstable plasmas |
| 19:00 | Conference dinner: meeting in front of the Cathedral at 19:00 sharp | |

4th June, 2009, Thursday

8:45 – 9:15 Coffee

Session 5 - Astrophysics II

Chairman – Prof Valery Nakariakov (University of Warwick)

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| 9:15 – 9:30 | Dr David Tsiklauri | A new fast reconnection model in a collisionless regime |
| 9:30 – 9:45 | Dr Chris Wareing | Forward and inverse cascades in decaying two- and three-dimensional electron MHD turbulence |
| 10:00 – 10:15 | Dr Rhona Maclean | Is null-point reconnection significant for solar flux emergence? |
| 10:15 – 10:30 | Dr Antonia Wilmot-Smith | Non-local effects and the onset of magnetic reconnection in braided magnetic fields |

10:30 – 11:00 Coffee break

Session 6 - Liquid Metals II

Chairman – Dr Alban Potherat (Coventry University)

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| 11:00 – 11:15 | Mr Rico Klein | An experiment on the transition between quasi two-dimensional and three-dimensional forced MHD turbulence |
| 11:15 – 11:30 | Dr Valdis Bojarevics | MHD stability of aluminium cells with the channel effect |
| 11:30 – 11:45 | Dr Alan Roy | Magnetic Damping of Levitated Liquid Droplets in AC and DC Field |
| 11:45 – 12:00 | Mr Stuart Easter | Droplet Oscillations in a High DC Magnetic Field |
| 12:15 – 12:30 | Dr Janis Priede | Nonaxisymmetric oscillations of liquid metal droplet in a strong magnetic field |
| 12:30 – 12:45 | Mr Andrew Kao | Thermoelectric MHD of the Growing Crystal |

13:00 – 14:30 Lunch

Session 7 - Astrophysics III

Chairman – Prof David Hughes (University of Leeds)

14:30 – 14:45	Mr Andrew Newton	Numerical Investigation into sheared MHD turbulence
14:45 – 15:00	Mr Fayyaz Rashid	Hydrodynamic instabilities in the solar tachocline
15:00 – 15:15	Dr Rekha Jain	Energy flux of magnetic flux tube waves
15:15 – 15:30	Mr Andrew Gascoyne	The Role of Magnetic Fields in the Scattering of p-modes
15:30	Closing of the meeting and coffee	

Poster presentations (during sessions' breaks):

Dr Claire Foullon	Ultra-long-period oscillations in EUV filaments near to eruption: two-wavelength correlation and seismology
Mr Jamie Douglas	An examination of the linear structure of the CUTIE plasma turbulence code
Miss Jennifer Harris	The Hilbert-Huang transform in the analysis of quasi-periodic pulsations in solar flares
Mr. Min-Kai Lin	Three-layer magnetoconvection
Mr Peter Mann	Competing α Effects for Babcock-Leighton Type Dynamos
Dr Gert Botha	Current sheet collapse in the upper solar chromosphere