



# UKMHD 2014 University of Exeter

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Thursday 22nd May, Harrison Building, Lecture Theatre 004

09:00 – 10:30	Registration
10:30 – 10:45	Welcome
	<b>Mathematical Aspects of the Structure and Strength of Magnetic Fields</b> Chair: A. Hood
10:45 – 11:45	<b>Invited Talk: David Gubbins (University of Leeds)</b> <i>Effects of High Thermal and Electrical Conductivities on Theories of the Geodynamo</i>
11:45 – 12:00	A Three-Dimensional Kinematic Dynamo Model Anthony Yeates (Durham University)
12:00 – 12:15	Modulated Cycles in an Illustrative Solar Dynamo Model with Competing Alpha Effects Laura Cole (Newcastle University)
12:15 – 12:30	Influence of the Mass Distribution on the Magnetic Field Topology Raphaël Raynaud (LRA - ENS)
12:30 – 12:45	Interpreting the Helicity of Open Magnetic Fields Christopher Prior (Durham University)
12:45 – 13:00	The Distribution of Galactic Magnetic Field Strengths Dr Luiz Felipe S. Rodrigues (Newcastle University)
13:00 – 14:00	Lunch
	<b>Solar Physics</b> Chair: S. Tobias
14:00 – 14:15	Magnetohydrostatic Modelling of the Solar Atmosphere Fred Gent (Sheffield University)
14:15 – 14:30	Elementary Heating Events due to Rotational Footpoint Motions Jennifer O'Hara (University of St-Andrews)
14:30 – 14:45	Observational Signature of Buffeting-Induced Waves in Solar Magnetic Elements Marco Stangalini (INAF/OAR National Institute for Astrophysics)
14:45 – 15:00	Numerical Modelling of MHD Wave Generation in the Solar Photosphere Stuart Mumford (University of Sheffield)
15:00 – 16:00	<b>Poster Session (with refreshments)</b> Chair: R. Hollerbach
19:00	Conference dinner at The Rougemont Thistle, Queen St, Exeter

	<b>Geophysical and Planetary Fluid Dynamics</b> Chair: A. Soward
09:00 – 10:00	<b>Invited Talk: Paul Roberts (University of California Los Angeles)</b> <i>Some Thoughts about Geomagnetoastrophysics</i>
10:00 – 10:15	Gravitational Signatures from the Equatorial Jets of Jupiter Dali Kong (University of Exeter)
10:15 – 10:30	Activities of Jupiter's Inner Radiation Belt Yu-Qing Lou (University of Tsinghua)
10:30 – 11:00	Refreshments
	<b>MHD Flows, Instabilities and Convection</b> Chair: J. Mason
11:00 – 11:15	Interactions Between Large-Scale Vortices and Magnetic Fields in Rotating Rayleigh-Bénard Convection Celine Guervilly (University of Leeds)
11:15 – 11:30	Incorporating Velocity Shear into the Magneto-Boussinesq Approximation Jordan Bowker (University of Leeds)
11:30 – 11:45	A Mechanistic Interpretation for MHD Shear Instabilities Julian Mak (Tel Aviv University)
11:45 – 12:00	Anomalous Dispersion in Boussinesq MHD Convection J. Pratt (University of Exeter)
	<b>Numerical Modelling of MHD Physics</b> Chair: D. Tsiklauri
12:00 – 12:15	Data Assimilation in Tokamak MHD Wayne Arter (Culham CCFE)
12:15 – 12:30	Odin: A Two Dimensional Arbitrary Lagrangian Eulerian MHD Code Tom Goffrey (University of Exeter)
12:30 – 13:30	Lunch
	<b>MHD Waves</b> Chair: G. Sarson
13:30 – 13:45	Waves in Shallow Water Magnetohydrodynamics Sam Hunter (University of Leeds)
13:45 – 14:00	3D Surface Waves in MHD Dr Mat Hunt (University College London)
14:00 – 14:15	3D MHD Simulation of Alfvén Wave Dynamics in ABC Magnetic Field (arXiv:1405.0587) Dr David Tsiklauri (Queen Mary University of London)
14:15 – 14:25	Short Break
	<b>Astrophysical Flows and Magnetic Fields</b> Chair: L. Silvers
14:25 – 14:40	Hall MHD in Neutron Star Crusts Rainer Hollerbach (on behalf of Toby Wood, University of Leeds)
14:40 – 14:55	MHD Simulations of Stellar Winds as a Method to Compute Angular Momentum Loss from Stars Sean Matt (University of Exeter)
15:00	<b>Awards and Close</b> Chair: P. Roberts