

Dynamics and turbulent transport in plasmas and conducting fluids
Ecole de Physique, Les Houches. 28.02.2011 – 11.03.2011

Date	Time	Lecture or talk
Monday 28th February	17h00	Welcome and details about the school
	17h30	Annick Pouquet (1h30) : MHD Turbulence
	19h00	End of session
	19h30	Dinner
Tuesday 1st March	9h00	W. Mueller (1h30) : Advanced turbulence phenomenology: combining statistical closure theory, Lagrangian statistics, and funny ideas.
	10h30	Coffee break
	11h00	Benjamin Favier (20min) : Dynamo action in rotating compressible convection
	11h20	Jane Pratt (20min): Lagrangian Statistics of 3D MHD Convection
	11h45	Igor Rogachevskii (45min) : Formation of Inhomogeneous Magnetic Structures in MHD Turbulence and Turbulent Convection.
	12h30	End of this session
	12h30	Lunch
	14h30	Thierry Passot (1h30) : Extended MHD: simulations with the FLR-Landau fluid model
	16h00	Daniel Lecoanet (20min) : Linear and Nonlinear Investigation of Magneto-Shear Flow Instabilities in a Stratified Medium
	16h30	Coffee break
	17h00	Franck Plunian (1h30) : MHD Shell model
	18h30	G. Verhille (20min) : Influence of large scale magnetic field on von Karman flows
	19h00	Welcome drink
	19h30	Dinner
Wednesday 2th March	9h00	Roland Grappin (45 min) : Turbulence and large structures in the solar and heliospheric context
	9h45	Patrick Hennebelle (45 min): Turbulence and star formation in the interstellar medium
	10h30	Coffee break
	11h00	Alexandros Alexakis (20 min) : The transition from anisotropic MHD to 2D turbulence
	11h20	Claude Cambon (20 min): Anisotropic MHD with strong external magnetic field (part 1)
	11h40	Fabien Godeferd (20 min) Anisotropic MHD with strong external magnetic field (part 2)
	12h00	End of the session
	12h30	Lunch
		FREE AFTERNOON

Date	Time	Lecture or talk
	17h00	François Rincon(1h30) : MHD and plasma turbulence in accretion disks
	18h30	break
	18h45	Ludovic Petitdemange (20 min): Modified version of the Magnetorotational Instability (MRI) can develop in the outer liquid core of the Earth, in the presence of a background shear.
	19h30	Dinner
	21h	POSTER SESSION
Thursday 3th March	9h00	Gerard Belmont (1h30): Reconnection in space plasmas: collisionless features
	10h30	Coffee break
	11h00	Fouad Sahraoui (1h30): Cascade and dissipation of solar wind turbulence from MHD to electron scales: observations and theoretical modeling
	12h30	End of this session
	12h30	lunch
		FREE AFTERNOON
	17h	Alessandro Retino (20 min) : In situ observations of magnetic reconnection in turbulent plasmas
	17h30	Pablo Mininni (1h30): Hall MHD
	19h00	Marc-Etienne Brachet (20min) : Dynamo action in the Taylor-Green vortex: the effect of symmetries is revisited.
	19h30	Dinner
Friday 4th March	9h00	Sebastien Aumaitre (1h30): Liquid Metal dynamos experiments
	10h30	Coffee break
	11h00	Yannick Ponty (1h30): Numerical liquid metal dynamos
	12h30	End of the session
	12h30	lunch
	13h30	Cary Forest (1h30) : Plasma Dynamo Experiment
	15h00	break
	15h15	Stirling Colgate (45 min) : High Magnetic Shear Gain in Liquid Sodium Couette Flow and Ekman-driven
	16h00	End of session
	19h30	Dinner

Date	Time	Lecture or talk
Monday 7th March	9h00	Pat Diamond (1h30): Drift waves turbulence and flows
	10h30	Coffee break
	11h00	Ulrich Stroth (1h30): On the interaction of turbulence and flows in toroidal plasmas
	12h30	End of this session
	12h30	Lunch
	17h30	Laure Vermare (45min) : Impact of collisionality on fluctuation characteristics of micro-turbulence
	18h15	Yusuke Kosuga (20min) : A theory of the efficiency of the plasma flow generation
	18h35	End of session
	19h30	Dinner
Tuesday 8th March	9h00	Pat Diamond: Momentum and Intrinsic Rotation (Xavier Garbet) (1h30): Mesoscale dynamics and turbulent transport
	10h30	Coffee break
	11h00	Lu wang (20min) : Kinetic Theory of the Heat Pinch in Tokamak Plasmas
	11h20	Guillaume Boussetin (20min) : Investigation of cross-field transport and non-linear mode coupling in a linear magnetized plasma
	11h40	Wouter Bos (45min) : Lagrangian statistics in drift-wave turbulence
	12h25	End of this session
	12h30	Lunch
	17h30	Chris McDevitt (20 mn) : Turbulent mean flow generation
	17h50	George Tynan (1h30) : Turbulent Transport Studies in a Laboratory Plasma: Zonal Flows, Intrinsic Rotation & Critical Gradient Phenomena
	19h20	End of session
	19h30	Dinner
	21h	POSTER SESSION
Wednesday 9th March	9h00	Frank Jenko (1h30) : Introduction to gyrokinetics
	10h30	Coffee break
	11h00	Hauke Doerk (20 mn) : Field line breaking and microtearing turbulence
	11h20	Özgür Gürçan (45 min) : On efficient renormalization of the ITG mode.
	12h05	Alejandro Banon Navarro (20 min) : Free energy analysis of gyrokinetic turbulence
	12h25	End of the session
	12h30	
	17h30	Pierre Morel (20min): Gyrokinetic Large Eddy Simulations
	17h50	Ivo Furno (1h30) : A comprehensive experimental study of electrostatic turbulence in a

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		simple magnetized plasma device
	19h30	Dinner
Thursday 10th March	9h00	Rainer Grauer (1h30): Puzzles in Lagrangian and Eulerian fluid and plasma turbulence
	10h30	Coffee break
	11h00	Troy Carter (1h30): Laboratory studies of Alfvén waves and magnetic turbulence
	12h30	End of this session
	12h30	Lunch
	17h30	Guido Ciraolo (45min) : A stochastic model for the dynamics of transport barrier crossing by turbulent bursts
	18h15	Hugo Bufferand (20 mn) : Study of transport regimes in divertor scrape-off layer using numerical tool SOLEDGE2D
	18h35	Nathalie Tronko (20min) : Barriers for the reduction of transport due to the EXB drift in magnetized plasmas
	19h00	End of Session
	19h30	Dinner
Friday 11th March	9h00	Pascale Hennequin (1h30): Turbulence in Tokamak plasmas : observations by Reflectometry and EM wave scattering.
	10h30	Coffee break
	11h00	Bouchra Bensiali (20 mn) : Nonlinear subdivision schemes for particle tracking in turbulent fields
	11h20	Loic de Guillebon (20min) : Intrinsic reduction of plasma dynamics in a strong external magnetic field
	11h40	David Coulette (20min) :
	12h00	End of the session
	12h30	Lunch