

***International Astronomical Union (IAU) Symposium 271 on
"Astrophysical Dynamics: From Stars to Galaxies"
Grand Hotel Aston, Nice, France, June 21-25, 2010***

<http://irfu.cea.fr/Projets/IAUSymp271>

CONFERENCE PROGRAM

Monday 21st of June 2010

9:00 - 9:30 Conference welcome

The Sun and Stars: observational constraints, theories and models

9:30 - 10:15 Invited Lecture: J.-P. Zahn "Juri and the art of modelling convection zones"

10:15 - 10:35 Contributed Talk: F. Hill "Helioseismic observations of solar convection zone dynamics"

10:35 - 10:55 Contributed Talk: B. Hindman "Using eigen fct phases to measure deep meridional circulation"

10:55 - 11:20 25 min Coffee Break + Posters

11:20 - 11:50 Invited Talk: J.F. Donati "Magnetic fields of low-mass stars: the many faces of dynamo"

11:50 - 12:20 Invited Talk: S. Tsuneta "Solar Magnetism as revealed by Hinode satellite"

12:20 - 12:50 Discussion

12:50 - 14h30 Lunch Break

14:30 - 15:15 Invited Lecture: D. O. Gough "Some recent and future helioseismological inferences about the solar convection zone"

15:15 - 15:45 Invited Talk: J. Christensen-Dalsgaard "Stellar hydrodynamics caught in the act: asteroseismology with CoRoT and Kepler"

15:45 - 16:05 Contributed Talk: M.S. Miesch "Probing Solar Internal Dynamics with Numerical Simulations"

16:05 - 16:30 25 min Coffee Break + Posters

16:30 - 17:00 Invited Talk: Alan Title "Magnetic Fields and Convection - A chicken and egg problem"

17:00 - 17:20 Contributed Talk: M. Thompson "Asteroseismic results for the evolved solar-type star KIC 11026764 (Gemma)"

17:20 - 17:40 Contributed Talk: M. DeRosa "The Evolving Photospheric Magnetic Field: A Spherical Harmonic."

17:40 - 18:30 General Discussion led by J.-P. Zahn & D. O. Gough

Tuesday 22nd

Galaxies: observational constraints, theories and models

- 9:30 - 10:15 Invited lecture: A. Toomre "TT72 and later developments"
10:15 - 10:35 Contributed Talk: Yu-Ting Wu "On the formation of ring galaxies"
10:35 - 10:55 Contributed Talk: J. Wolf "Modeling mass independent of anisotropy: a new advancement in galactic dynamics"
10:55 - 11:20 25 min Coffee Break + Posters
11:20 - 11:50 Invited Talk: F. Combes "Galaxy dynamics: secular evolution and hierarchical scenario"
11:50 - 12:10 Contributed Talk: P. Repetto "Pair galaxy observations with PUMA"
12:10 - 12:50 Discussion
- 12:50 - 14:30 Lunch Break
- 14:30 - 15:15 Invited Lecture: E. Zweibel "Origin and Evolution of Galactic Magnetic Fields "
15:15 - 15:35 Contributed Talk: A. Curir "N-body simulations of the formation of the galactic stellar halo"
15:35 - 15:55 Contributed Talk: R. Levine "Large-dynamic range simulations of a galaxy hosting a supermassive black hole"
15:55 - 16:20 25 min Coffee Break + Posters
16:20 - 16:50 Invited Talk: F. Bournaud "Gas dynamics and star formation in galaxy collisions"
16:50 - 17:20 Invited Talk: K. Ferriere "Interstellar magnetic fields near the Galactic center"
17:20 - 18:20 General Discussion led by A. Toomre & E. Zweibel

Wednesday 23rd

Nonlinear Astrophysics

- 9:00 - 9:45 Invited Lecture: U. Frisch "Doubly curl-free flows and MAK reconstruction"
9:45 - 10:05 Contributed Talk: H. Muthsam "Simulations of stellar convection, pulsation and semiconvection"
10:05 - 10:35 Invited Talk: P. Padoan "From turbulence to star formation"
10:35 - 10:55 Contributed Talk: P. Bushby "Influence of stratification upon small scale convectively-driven dynamos"
10:55 - 11:20 25 min Coffee Break + Posters
11:20 - 11:50 Invited Talk: D. Hughes "Self-consistent mean field MHD "
11:50 - 12:10 Contributed Talk: D. Arnett "Convection in stars: a new perspective"
12:10 - 13:00 General Discussion led by D. Hughes and U. Frisch

Free Afternoon / [Social Event](#) boat trip: departure by bus at 14:30

19:30 - 22:30 [Conference Dinner](#)

Thursday 24th

Cosmic Magnetism

- 9:30 - 10:15 Invited Lecture: H.K. Moffatt "Some topological considerations in relation to cosmic magnetism "
- 10:15 - 10:35 Contributed Talk: R. Arlt "Dynamo effect from Tayler instability in stellar radiative zone"
- 10:35 - 10:55 Contributed Talk: L. Silvers "Double diffusive magnetic buoyancy instability"
- 10:55 - 11:20 25 min Coffee Break + Posters
- 11:20 - 11:50 Invited Talk: C. Parnell "3 dimensional magnetic reconnection"
- 11:50 - 12:20 Invited Talk: M. Proctor "Large scale dynamo action influenced by velocity shear and convection"
- 12:20 - 12:50 Discussion
- 12:50 - 14h30 Lunch Break
- 14:30 - 15:15 Invited Lecture: N. O. Weiss "Solar and stellar dynamos"
- 15:15 - 15:35 Contributed Talk: B. Brown "Global scale dynamos in stellar convection zones"
- 15:35 - 15:55 Contributed Talk: S. Mathis "MHD relaxation of fossil magnetic fields in stellar interiors"
- 15:55 - 16:20 25 min Coffee Break + Posters
- 16:20 - 16:50 Invited Talk: A. Brandenburg "From large-scale dynamos to magnetic helicity"
- 16:50 - 17:10 Contributed Talk: L. Jouve "Magnetic buoyancy as an origin of the solar cycle variability"
- 17:10 - 17:40 Invited Talk: D. Galloway "Nonlinear Dynamos"
- 17:40 - 18:40 General Discussion led by H.K. Moffatt & N. O. Weiss

Friday 25th

Astrophysical Turbulence

- 9:30 - 10:15 Invited Lecture: A. Pouquet "Selected issues in MHD turbulence, and how to cope with them"
- 10:15 - 10:35 Contributed Talk: T. Rogers "2.5D simulations of the solar radiative interior"
- 10:35 - 10:55 Contributed Talk: M. Browning "Rotation and magnetism in fully convective stars"
- 10:55 - 11:20 25 min Coffee Break + Posters
- 11:20 - 11:50 Invited Talk: B. Dubrulle "Dynamo in Turbulent fluids: Theory and Experiments "

11:50 - 12:20 Invited Talk: C. Forest "A plasma dynamo experiment and laboratory tests of solar dynamo processes"

12:20 - 12:50 Discussion led by A. Pouquet

12:50 - 14h15 Lunch Break

14:15 - 14:45 Invited Talk: K. Chan "Overshooting above a convective zone"

14:45 - 15:15 Invited Talk: S. Tobias "Astrophysical fluids via cumulant expansions"

15:15 - 15:40 25 min Coffee Break + Posters

15:40 - 16:30 Remarks and Prospectives: J. Toomre

End of Symposium

Note:

Invited Lectures are 45 min long (5-10 mn questions)

Invited Talks are 30 minutes long (25 + 5)

Contributed Talks are 20 minutes long (15 + 5)

General Discussions of 30 minutes each led by Invited Lecturers

Overall number of Oral Presentations:

8 Invited Lectures

17 Invited Talks

21 Contributed Talks