The Abdus Salam International Centre for Theoretical Physics

School and Conference on Analytical and Computational Astrophysics

Cosponsor(s): co-sponsored by EPS, European Physical Society
Organizer(s): Directors: Daniel Gomez, Swadesh Mahajan, Silvano Massaglia, Stefaan Poedts, Andria Rogava; Local Organisers: Annalisa Celotti, Ravi Sheth.
Trieste - Italy, 14 - 25 November 2011

Venue: Adriatico Guest House Giambiagi Lecture Hall

Final programme

Monday, 14 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

14 November 2011

08:30 - 09:30 (Room: Adriatico Guest House (Lower Level 1))
--- Registration and Administrative Formalities ---
Administrative Formalities after Registration (daily living allowances/travel reimbursements, bank transactions, etc.) at the E. Fermi Building - just above the Leonardo Da Vinci Bldg. PLEASE MAKE SURE YOU ARE BACK IN TIME FOR THE OPENING SESSION AT 9.30AM

09:30 - 10:20 **Zensho Yoshida**
Self-organization of Magnetospheric Vortex - 1

10:20 - 10:50 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee Break ---

10:50 - 11:40 **Zensho Yoshida**
Self-organization of Magnetospheric Vortex - 2

11:40 - 12:30 **Andrea Mignone**
Numerical Simulations of Astrophysical Fluids. Introductory Lecture

12:30 - 14:00 --- Lunch Break ---

14:00 - 14:50 **Andria Rogava**
Introduction to Accretion Phenomena in Astrophysics

14:50 - 15:20 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee Break ---

15:20 - 17:20 (Room: Adriatico Guest House Informatics Lab.)
Andrea Mignone
Numerical Simulations of Astrophysical Fluids. Computer Classes I

19:00 - 21:00 (Room: Adriatico Guest House Cafeteria)
--- Welcome Reception ---

Tuesday, 15 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

15 November 2011

09:00 - 09:50 **William H. Matthaeus**
Dynamics of the Solar Wind - 1

09:50 - 10:20 --- Coffee Break ---

10:20 - 11:10 **Daniel O. Gomez**
Dynamics of the Solar Corona - 1

11:10 - 12:00 **Sergio Dasso**
Introduction to the Interplanetary Plasma

12:00 - 14:00 --- Lunch Break ---

14:00 - 14:50 **Andria Rogava**
Introduction to Accretion Phenomena in Astrophysics - Spherical Accretion

14:50 - 15:20 --- Coffee Break ---

15:20 - 17:20 (Room: Adriatico Guest House Informatics Lab.)
Andrea Mignone
Numerical Simulations of Astrophysical Fluids. Computer Classes - II

Wednesday, 16 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

16 November 2011

09:00 - 09:50 **William H. Matthaeus**
Dynamics of the Solar Wind - 2

09:50 - 10:20 --- Coffee Break ---

10:20 - 11:10 **Daniel O. Gomez**
Dynamics of the Solar Corona - 2

11:10 - 12:00 **Sergio Dasso**
Causes and Consequences of Dynamical Evolution of Interplanetary Coronal Mass Ejections

12:00 - 14:00 --- Lunch Break ---

14:00 - 14:50 **Andria Rogava**
Introduction to Accretion Phenomena in Astrophysics. Disc Accretion

14:50 - 15:20 --- Coffee Break ---

15:20 - 17:20 (Room: Adriatico Guest House Informatics Lab.)
Andrea Mignone
Numerical Simulations of Astrophysical Fluids. Computer Classes III

Thursday, 17 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

17 November 2011

09:00 - 09:50 **Swadesh M. Mahajan**
Uncovering New Plasma Dynamics in Astrophysical and Cosmic Plasmas - 1

09:50 - 10:20 --- Coffee Break ---

10:20 - 11:10 **Swadesh M. Mahajan**
Uncovering New Plasma Dynamics in Astrophysical and Cosmic Plasmas - 2

11:10 - 12:00 **Swadesh M. Mahajan**
Uncovering New Plasma Dynamics in Astrophysical and Cosmic Plasmas - 3

12:00 - 14:00 --- Lunch Break ---

14:00 - 14:50 **Zaza Osmanov**
Pulsars - Discovery and General Properties

14:50 - 15:20 --- Coffee Break ---

15:20 - 17:20 (Room: Adriatico Guest House Informatics Lab.)
Andrea Mignone
Numerical Simulations of Astrophysical Fluids. Computer Classes IV

Friday, 18 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

18 November 2011

09:00 - 09:50 **Zaza Osmanov**
Pulsar Models and Emission Mechanisms

09:50 - 10:20 --- Coffee Break ---

10:20 - 11:10 **Nino Chkheidze**
Anomalous Pulsar and Magnetars - General Properties

11:10 - 12:00 **Nino Chkheidze**
Anomalous Pulsar and Magnetars - Emission Mechanisms

12:00 - 14:00 --- Lunch Break ---

14:00 - 17:00 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
POSTER SESSION

14:50 - 15:20 --- Coffee Break ---

Monday, 21 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

21 November 2011

09:00 - 09:50	**Stefaan Poedts** **The MHD Model (magnetic flux, conservation laws, discontinuities, model problems)**
09:50 - 10:20	--- Coffee Break ---
10:20 - 11:10	**Stefaan Poedts** **MHD Waves and Instabilities**
11:10 - 12:00	**Gianluigi Bodo** **Angular Momentum Transport in Accretion Discs**
12:00 - 14:00	--- Lunch Break ---
14:00 - 14:50	**Gianluigi Bodo** **Accretion Disc Instabilities**
14:50 - 15:20	--- Coffee Break ---
15:20 - 17:20	**Working Group Sessions** MHD of accretion columns on accreting Neutron stars and cyclotron line spectra (Dipanjan Mukherjee) 20' Hydrodynamic Simulation of Viscous Accretion Flows Around Black Holes (Kinsuk Giri) 20' The Effect of Angular Opening on the Dynamics of Relativistic Jets in Hydrodynamics (Remi Monceau-Baroux) 20' Gamma-Ray Emission from Massive Stars Interacting with AGN Jets (Annabella T. Araudo) 20'

Tuesday, 22 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

22 November 2011

09:00 - 09:50	**Carla Jacobs** **Solar Wind Modeling**
09:50 - 10:20	--- Coffee Break ---
10:20 - 11:10	**Carla Jacobs** **CME Modeling, Onset and Early Evolution**
11:10 - 12:00	**Silvano Massaglia** **Active Galactic Nuclei ? Observations and Interpretations**
12:00 - 14:00	--- Lunch Break ---
14:00 - 14:50	**Silvano Massaglia** **MHD Simulations of Astrophysical Jets. Propagation and Morphologies**
14:50 - 15:20	--- Coffee Break ---
15:20 - 17:20	(Room: Adriatico Guest House Informatics Lab.) **Working Group Sessions**

Wednesday, 23 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

23 November 2011

09:00 - 09:50	**Malgorzata Selwa** **Coronal Loop Seismology - Basics**
09:50 - 10:20	--- Coffee Break ---
10:20 - 11:10	**Malgorzata Selwa** **Coronal Loop Seismology - State-of-the-art Models**
11:10 - 12:00	**Ravi Sheth** **Galaxy Formation. Basics**
12:00 - 14:00	--- Lunch Break ---
14:00 - 14:50	**Ravi Sheth** **Galaxy Formation. Advanced Models**
14:50 - 15:20	--- Coffee Break ---
15:20 - 17:20	(Room: Adriatico Guest House Informatics Lab.) **Working Group Sessions**

Thursday, 24 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

24 November 2011

09:00 - 09:50	**Silvano Massaglia** **MHD Simulations of AGN Jets. Jet Instabilities**
09:50 - 10:20	--- Coffee Break ---
10:20 - 11:10	**Silvano Massaglia** **MHD Acceleration of Jets**
11:10 - 12:00	**Claudio Zanni** **MHD Models of Accretion-ejection Phenomena in Young Stellar Objects-1**
12:00 - 14:00	--- Lunch Break ---
14:00 - 16:00	**Working Groups Sessions**
16:00 - 16:30	--- Coffee Break ---

Friday, 25 November (Room:Adriatico Guest House Giambiagi Lecture Hall)

25 November 2011

09:00 - 09:50	**Giovanni Lapenta** **Multiscale and Multiphysics Challenge in Modeling of Space Weather - 1**

09:50 - 10:20	--- Coffee Break ---
10:20 - 11:10	**Giovanni Lapenta** **Multiscale and Multiphysics Challenge in Modeling of Space Weather - 2**
11:10 - 12:00	**Claudio Zanni** **MHD Models of Accretion-ejection Phenomena in Young Stellar Objects-2**
12:00 - 14:00	--- Lunch Break ---