

NBIA Summer School on Computational Astrophysics

Monday, August 19, 2013 - Friday, August 23, 2013

School Programme

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The school will cover basic theoretical aspects and the state-of-the-art in computational astrophysics, emphasizing both the physical foundations and the numerical techniques. The primary lectures will cover fluid dynamics, magnetohydrodynamics (MHD), plasma kinetics, and radiative transfer, as well as modern trends in high performance computing. The program is complemented with exercise tutorials.

School Lecturers

Axel Brandenburg (Nordita)
Klaus Galsgaard (NBI)
Rony Keppens (Leuven)
Wilhelm Kley (Tuebingen)
Andrea Mignone (Torino)
Åke Nordlund (NBI)

The school syllabus and lecture schedule will be posted soon. Mornings will predominantly consist of lectures of numerical methods and applications, and afternoons will be taken up with exercises and discussions. Session topics will include:

Astrophysical Fluid Dynamics
MHD Turbulence and Dynamos
Kinetic Plasma Processes
Multi-scale Plasma Modelling
Accretion Disks, Jets, and Winds
Planet-Disk Interactions

Students can earn ECTS points in two ways. All the students attending the lectures and actively participating in the exercise tutorials will earn a minimum of 2.5 ECTS points. The most ambitious participants will have the possibility to obtain an extra number of ECTS points upon the successful completion of a research project on the subjects of the school.

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