

7th ITER school - High performance computing in fusion science

25th-29th August 2014

Location

Monday

On the first day, the lectures will take place in the ITER premises.

A bus will be available for the participants from Aix-en-Provence to ITER: meeting at 7:20am, 6 Avenue des Belges, 13100 Aix-en-Provence, in front of the EUODIF shop.

Remember that you will need your passport/ID to enter the ITER site: no passport/ID means no entrance!!

Tuesday-Friday

The lectures will take place at the IMGPT of Aix-Marseille University, 21 rue Gaston de Saporta in the center of Aix-en-Provence

Poster session

A poster session will be organized on Wednesday afternoon.

The requested format for the posters is A0, landscape or portrait, at your preference.

Access and public transport

The airport is connected to Aix-en-Provence by buses running until 00:25

<http://www.marseille-airport.com/access-car-parks/access/shuttle-buses/aix-en-provence>

Note that the same bus stops at the train station Aix-TGV.

A useful website (with an English version) for public transportation in Aix and Marseille:

www.lepilote.com

Accommodation

The university residence is located Rue de Cuques, Aix-en-Provence (20min walk from the general bus station).

The keys of your room will be available at the lodge (opened until 8:30pm).

Banquet

The banquet is offered to all participants and will take place on the 27th of August, 8pm in the Hotel/Restaurant Aquabella, 2 rue des Etuves, Aix-en-Provence

Lectures

- *Nonlinear Modelling of Fast Ion Driven Instabilities in Fusion Plasmas*
S. Pinches, ITER Organization
- *Monte Carlo implementation of a guiding-center Fokker-Planck kinetic equation*
T. Kurki-Suonio, Aalto Univ. (Finland)
- *Plasma Physics via Vlasov simulations*
F. Califano, Univ. Pisa (Italy)
- *Introduction to kinetic theory*
G. Hammett, PPPL (USA)
- *Numerical methods Used in Fusion Science Numerical Modelling*
M. Yagi, JAEA (Japan)
- *Plasma dynamics simulation in the tokamak scrape-off layer*
P. Ricci, CRPP (Switzerland)
- *Computational methods for fluid models of plasma*
G. Fuhr, Aix-Marseille Univ. (France)
- *Wavelets and their applications for ITER*
M. Farge, ENS-Paris (France)
- *Numerical methods for the gyrokinetic model*
E. Sonnendrücker, IPP (Germany)
- *Introduction to particle-in-cell methods for the simulation of the Vlasov-Maxwell gyrokinetic equations*
A. Bottino, IPP (Germany)
- *Integrated Tokamak Modelling: current status and future direction for ITER operation*
X. Litaudon, CEA (France)
- *Integrated Modelling and Simulation of Toroidal Plasmas*
A. Fukuyama, Kyoto Univ. (Japan)
- *On the possible contributions of wave propagation simulations for improving the wave heating systems of fusion devices*
S. Heuroux, Univ. Lorraine (France)
- *Immersed boundary methods for numerical simulation of confined fluid and plasma turbulence in complex geometries*
K. Schneider, Aix-Marseille Univ. (France)
- *Task-based linear solvers for modern architectures*
E. Agullo, INRIA (France)
- *Electromagnetic gyrokinetic simulations of plasma turbulence*
A. Ishizawa, NIFS (Japan)
- *Exascale needs and bottlenecks for semi-lagrangian gyrokinetic simulations of turbulence in tokamak plasmas*
V. Grandgirard, CEA (France)
- *Multi-Species Kinetic Simulations of Neoclassical Transport in Tokamak Plasmas*
E. Belli, General Atomics (USA)
- *MHD simulations for ITER*
G. Huysmans, ITER Organization

ITER school 2014

	Monday		Tuesday	Wednesday	Thursday	Friday
07h15	Bus to ITER (departure Aix)					
08h15 – 09h00	Registration & Welcome					
09h00 – 09h30	Opening Ceremony					
09h30 – 11h00	Pinches	09h00 – 10h30	Hammett	Sonnendruecker	Litaudon	Ishizawa
11h00 – 11h20	Coffee Break	10h30 – 11h00	Coffee Break	Coffee Break	Coffee Break	Coffee Break
11h20 – 12h50	Kurki-Suonio	11h00 – 12h30	Yagi	Bottino	Fukuyama	Grandgirard
13h00 – 14h00	Lunch	12h30 – 14h00	Lunch	Lunch	Lunch	Lunch
14h00 – 15h30	Califano	14h00 – 15h30	Ricci	Poster Session	Heuraux	Belli
15h30 – 17h45	ITER visit	15h30 – 16h00	Coffee Break	Poster Session & Coffee Break	Coffee Break	Coffee Break
		16h00 – 16h45	Fuhr		Schneider	Huysmans
		16h45 – 17h30	Farge		Agullo	
18h30	Arrival in Aix			Banquet		