List of lectures

Monday

- S. Pinches, *ITER Organization* :
  Nonlinear Modelling of Fast Ion Driven Instabilities in Fusion Plasmas (lecture slides)
- T. Kurki-Suonio, *Aalto Univ. (Finland)* :
  Monte Carlo implementation of a guiding-center Fokker-Planck kinetic equation (lecture slides) (examples)
- F. Califano, *Univ. Pisa (Italy)* :
  Plasma Physics via Vlasov simulations (lecture slides)

Tuesday

- G. Hammett, *PPPL (USA)* :
  Introduction to kinetic theory (lecture slides)
- M. Yagi, *JAEA (Japan)* :
  Numerical methods Used in Fusion Science Numerical Modelling (lecture slides)
- P. Ricci, *CRPP (Switzerland)* :
  Plasma dynamics simulation in the tokamak scrape-off layer (lecture slides)
- G. Fuhr, *Aix-Marseille Univ. (France)* :
  Computational methods for fluid models of plasma (lecture slides)
- M. Farge, *ENS-Paris (France)* :
  Wavelets and their applications for ITER (lecture slides)

Wednesday

- E. Sonnendrücker, *IPP (Germany)* :
  Numerical methods for the gyrokinetic model (lecture slides)
- A. Bottino, *IPP (Germany)* :
  Introduction to particle-in-cell methods for the simulation of the Vlasov-Maxwell gyrokinetic equations (lecture slides) (video)

Thursday

- X. Litaudon, *CEA (France)* :
  Integrated Tokamak Modelling: current status and future direction for ITER operation (lecture slides)
- A. Fukuyama, *Kyoto Univ. (Japan)* :
  Integrated Modelling and Simulation of Toroidal Plasmas (lecture slides)
- S. Heuraux, *Univ. Lorraine (France)* :
  On the possible contributions of wave propagation simulations for improving the wave heating systems of fusion devices (lecture slides)
- K. Schneider, *Aix-Marseille Univ. (France)* :
  Immersed boundary methods for numerical simulation of confined fluid and plasma turbulence in complex geometries (lecture slides)
- E. Agullo & P. Ramet, *INRIA (France)* :
  Task-based linear solvers for modern architectures (E. Agullo lecture slides) (P. lecture slides)

Friday

- A. Ishizawa, *NIFS (Japan)* :
  Electromagnetic gyrokinetic simulations of plasma turbulence (lecture slides)
- V. Grandgirard, *CEA (France)* :
  Exascale needs and bottlenecks for semi-lagrangian gyrokinetic simulations of turbulence in tokamak plasmas (lecture slides)
- E. Belli, *General Atomics (USA)* :
  Multi-Species Kinetic Simulations of Neoclassical Transport in Tokamak Plasmas (lecture slides)
- G. Huysmans, *ITER Organization* :
  MHD simulations for ITER