

Computational Methods in High Energy Density Plasmas: Tutorials

Tuesday March 13, 2012

- 8:00–8:45 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:45–9:00 *Welcome and Opening Remarks*
- 9:00–10:00 **Frank Graziani** (Lawrence Livermore National Laboratory)
Taxonomy
- 10:00–10:30 *Break*
- 10:30–12:00 **Kieron Burke** (University of California, Irvine (UCI))
The ABC of DFT
- 12:00–2:00 *Lunch (on your own)*
- 1:45–2:30 *Core Orientation with IPAM Staff*
- 2:45–4:30 **Kieron Burke** (University of California, Irvine (UCI))
The EFG of DFT

Wednesday March 14, 2012

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:15 **Michael Murillo** (Los Alamos National Laboratory)
Molecular Dynamics: Basics
- 10:15–10:45 *Break*
- 10:45–12:00 **Russel Caflisch** (Institute for Pure and Applied Mathematics)
Kinetic Equations 1
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:15 **Stephanie Hansen** (Sandia National Laboratories)
Physical data and transport: incorporating the atomic scale in HEDP simulations
- 3:15–3:45 *Break*
- 3:45–5:00 **Ronald Waltz** (General Atomics)
Gyrokinetic simulations of turbulence in magnetized fusion plasmas



Thursday March 15, 2012

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:15 **Michael Murillo** (Los Alamos National Laboratory)
Molecular Dynamics: High Energy Density Physics Applications
- 10:15–10:45 *Break*
- 10:45–12:00 **Russel Caflisch** (Institute for Pure and Applied Mathematics)
Kinetic Equations 2
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:15 **Leslie Greengard** (New York University)
Fast Multipole Methods for Large-Scale Particle Simulations
- 3:15–3:45 *Break*
- 3:45–5:00 **Ronald Waltz** (General Atomics)
Gyrokinetic simulations of turbulence in magnetized fusion plasmas

Friday March 16, 2012

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:15 **Allan Langdon** (Lawrence Livermore National Laboratory)
'Particle-in-Cell' Simulation of Plasmas
- 10:15–10:45 *Break*
- 10:45–12:00 **Leslie Greengard** (New York University)
Fast Solvers for Boundary Value Problems in Complex Geometry
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Samuel Trickey** (University of Florida)
The HIG of TDDFT
- 3:00–3:30 *Group Discussion*

