Conference Programme

Renewable Energy meets High Performance Computing: Final Conference of the Energy-Oriented Centre of Excellence

Cleopatra Hotel, Nicosia, Cyprus

PROGRAM
16th of September - *21:00 - 23:00: Welcome drink*

17th of September 2018:
9:00-9:10: Prof Costas N. Papanicolas (CYI) - *Welcome*
9:10-9:20: Edouard Audit - (CEA) - *Introduction*
9:20-10:00: Steve Hammond (Computational Science Center at the National Renewable Energy Laboratory) - *Driving Advances in Energy with High Performance Computing*
10:00-10:30: Paul Gibbon (FZJ) - *Overview of EoCoE application support activities*
10:30-10:50: Massimo Celino (ENEA) - *Materials for Energy*
10:50-11:20: *Coffee break*
11:20-11:50: Henrik Madsen (Technical University of Danemark) - *How to use AI and Big Data Analytics to Accelerate the Transition to a Fossil-free Society*
11:50-12:10: Zacharia Nicolaou (CYI) - *How shortest-path algorithms accelerate weather-forecasting simulations*
12:10-12:30: Julien Bigot (CEA) - *PDI, a library to decouple applications from IO concerns*
12:30-14:00: *Lunch*
14:00-14:40: Adel El Gamma (EERA) - *The european energy research alliance*
14:40-15:10: Pietro Asinari (Politecnico di Torino) - *Multiscale simulation of the thermal properties of materials for energy applications*
15:10-15:30: Herbert Owen (BSC) - *Computational Fluid Dynamics for Wind Energy*
15:30-16:00: *Coffee break*
16:00-16:40: Mathieu Lobet (CEA) - *High-Performance Computing at Exascale: challenges and benefits*
16:40-17:00: Yvan Notay (ULB) - *The AGMG solver in EoCoE application codes*
17:00-17:20: Matthew Wolf (UBAH) -*Meso-scale modelling of charge transport in halide perovskites*
17:20-17:40: Sebastian Lührs (FZJ) - *Parallel I/O: Benchmarking and common pitfalls*
17:40-18:10: Steve Lisgo (ITER) - *Systems Analysis with Artificial Intelligence based Planet Gamification*
20:00: Social dinner.

18th of September 2018:

9:00-9:40: Jean Jacquinot (ITER) - *HPC needs on the path to controlled magnetic Fusion energy production*

9:40-10:00: Yanick Sarazin (CEA) - *Critical outcomes of turbulence and transport simulations towards ITER relevant regimes*

10:00-10:20: Bibi Naz (FZJ) - *Continental-scale high resolution terrestrial hydrologic modeling over Europe*

10:20-10:40: Jonas Berndt (FZJ) - *On the predictability of extreme wind and pv power forecast errors -an ultra large ensemble approach*

10:40-11:10: *Coffee break*

11:10-11:40: Julien Harou (University of Manchester) - *Water-Energy system simulation for infrastructure investment analysis*

11:40-12:00: Slavko Brdar (FZJ) - *Performance evaluation of various accelerator enabled linear algebra libraries and booster architectures through MiniApps*

12:00-12:20: Giorgio Giordani (CEA) - *Advanced numerical methods for plasma-edge simulations in tokamaks*

12:20-14:00: *Lunch*

14:00-14:40: Jesus Labarta (BSC) - *The POP project*

14:40-15:10: Guido Huysmans (CEA) - *Simulations of magnetohydrodynamic instabilities and their control for ITER*

15:10-15:30: Hervé Guillard (Inria) - *Flux aligned mesh generation for tokamaks*

15:30-16:00: *Coffee break*

16:00-16:20: Jeff Cumpston (FZJ) - *Formulation for Optimization under Uncertainty*

16:20-16:40: Urs Aeberhard (FZJ) - *Computational characterization of passivated contacts for silicon solar cells*

16:40-17:00: Andrea Galletti (Trento University) - *Modeling hydropower production in the Italian Alpine region: statistical vs physically-based approach*

17:00-17:20: Matteo Valentinuzzi (CEA) - *Hybrid kinetic-fluid modeling of neutral particles for ITER plasmas*