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*