ACES 2017
Workshop on Advanced Computing for Earth Sciences

http://aces17.dcc.fc.up.pt

Monday 18th December 2017

9:20 - 9:45	Opening
9:45 - 10:30	João Borges de Sousa, University of Porto, FEUP *Data challenges in multi-vehicle coordination for ocean observation*
10:30 - 11:00	Coffee Break
11:00 - 12:30	Patrick Heimbach, University of Texas at Austin, USA *Ocean state and parameter estimation in support of an Atlantic Ocean Observing System*
12:45 - 14:00	Lunch
14:00 - 15:00	Carla Gomes, Cornell University, USA *Computational Sustainability*
15:00 - 15:30	Gianmaria Sannino, ENEA, Italy *A very high-resolution integrated Mediterranean and Black Sea ocean circulation model*
15:30 - 16:00	Pedro Jorge, INESC TEC *GeoLIBS: Advanced spectroscopy for real-time identification, classification and quantification of complex minerals.*
16:00 - 16:30	Coffee Break
16:30 - 18:00	Vipin Kumar, University of Minnesota, USA *Big Data in Climate: Opportunities and Challenges for Machine Learning*

9:00 - 10:30	**Chris Hill**, MIT, USA *Modeling the Atlantic ocean at internal wave admitting resolutions*
10:30 - 11:00	Coffee Break
11:00 - 12:30	**Stefano Castruccio**, University of Notre Dame, USA *Stochastic Approximations of Climate Modes: How can Statistics Save Computational and Storage Resources*
12:30 - 14:00	Lunch
14:00 - 15:30	**Omar Ghattas**, University of Texas at Austin, USA *Learning from data through the lens of models: Scalable algorithms for Bayesian inverse problems*
15:30 - 16:00	**Fernando Lima**, CIBIO *Climate change and biogeographic patterns along the European coast: a multi-scale and multidisciplinary approach*
16:00 - 16:30	Coffee Break
16:30 - 17:15	**Manuel Heitor**, Minister for Science, Technology and Higher Education AIR Center initiative
17:15 - 18:00	*Panel Session on the AIR Center Initiative* Moderator: **José Manuel Mendonça**, INESC TEC

Wednesday 20th December 2017

9:00 - 9:45	**Arvind**, MIT, USA *An accelerator to aggregate key-value pairs for graph analytics using NAND flash storage*
9:45 - 10:30	**Ignacio Lopez**, CESGA, Galicia, Spain *Advance Computing in Galicia for a wide R&D&I community*
10:30 - 11:00	Coffee Break
11:00 - 12:30	**Bill R. Magro**, Intel@Urbana-Champaign *Toward Exascale: Key Challenges and Requirements*
12:45 - 14:00	Lunch
14:00 – 14:30	**Orfeu Bertolami**, University of Porto, FCUP *On Small Satellites for Oceanography*
14:30 - 15:00	**Bruno Vilaça dos Anjos**, IPMA IP Sentinel – A national Source of Satellite Data
15:00 - 15:30	**Eduardo Silva**, ISEP/INESC TEC *Localization and Mapping in dynamic underwater environments*
15:30 - 16:00	**José da Silva**, University of Porto, FCUP *Internal Solitary Waves in the Ocean: a synergistic study with satellite ocean sensing, in situ measurements and advanced numerical simulations*
16:00 - 16:30	Coffee Break
16:30 - 17:00	**Pedro Camanho**, University of Porto, FEUP *The role of Computational Mechanics in the development of a new generation of advanced materials and structures for space applications*
17:00 – 17:30	**Nuno Catarino**, Deimos Engenharia *Earth Observation data systems in support of the Sustainable Development Goals*
17:30 - 18:00	**Miguel Bessa**, TU Delft *Design of ultra-thin composite structures by Bayesian machine learning and genetic optimization*

Venue:

Auditorium Professor Ferreira da Silva, FC6
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