

Centre for High Performance Computing 2019 National Conference

Monday 02 December 2019

HPC Applications (11:00-12:30)

-Conveners: Chair: Prof Mahmoud Soliman

time	[id] title	presenter
11:00	[212] High Performance Computing for Medical Interventional Planning Applications	Dr NGOEPE, Malebogo
11:20	[93] Next Generation Sequencing: where big data and high-performance computing meet	Dr GLANZMANN, Brigitte
11:40	[150] Field-induced exotic electronic phases in spin-filter tunnel junctions	Dr UKPONG, Aniekan

HPC Applications (13:30-15:00)

-Conveners: Chair: Dr Malebogo Ngoepe

time	[id] title	presenter
13:30	[174] Research highlights from the Molecular Bio-computations and Drug Design Research Group at UKZN	Prof. SOLIMAN , Mahmoud
13:50	[15] Computational Fluid Dynamics: from solar thermal receivers and collectors to sub-antarctic island wind simulation	Prof. CRAIG, Ken
14:10	[108] Predicting Thermodynamic Properties of Ionic Liquids—from Molecular Simulation to Machine Learning	Dr VENTER, Gerhard
14:30	[164] Interaction between <i>S. mansoni</i> Universal stress G4LZ13 protein and selected polyphenols: a bioinformatics investigation.	Prof. KAPPO, Abidemi Paul

Tuesday 03 December 2019

HPC Applications (11:00-12:30)

-Conveners: Chair: Dr Mary-Jane Bopape

time	[id] title	presenter
11:00	[195] Design of selective reagents and functional materials: A theoretical and experimental approach	Prof. TSHENTU, Zenixole
11:20	[190] SAVIME - Simulation Analysis and Visualization in-Memory	Dr PORTO, Fabio
11:40	[77] Advancing the understanding of interactions between plasma arcs and power electronics with high performance computing	Dr REYNOLDS, Quinn
12:00	[82] Convective scale modelling on the CHPC: ICON vs COSMO models	Mrs MULOVHEDZI, Patience

HPC Applications (13:30-15:00)

-Conveners: Chair: Dr Quinn Reynolds

time	[id] title	presenter
13:30	[151] The research benefits of improving equity, diversity and inclusion	Dr COLLIS, Toni
13:50	[168] Benchmarking off-the-shelf radio astronomy software on Lengau	Dr FEBRUARY, Sean
14:10	[169] BIOPERIANT12, a regional high-resolution model configuration towards developing the South African VrESM Earth System Model	Dr CHANG, Nicolette
14:30	[191] The adoption of Deep Learning in Weather Forecast	Dr MOLINA SOUTO, Yania

Wednesday 04 December 2019

HPC Applications (11:00-12:30)

-Conveners: Chair: Prof Cornie van Sittert

time	[id] title	presenter
11:00	[73] High throughput in silico screening for tailored catalytic reactivity and selectivity	Dr KRAUTER, Caroline M.
11:20	[37] Smoke and ventilation simulation using the CHPC	Dr ALLEN, Kenneth
11:40	[86] In-silico investigations of metal coordinating enzymes: From Biofuel production to Antimicrobial drug resistance	Dr MOSES, Vuyani
12:00	[99] Use of high-throughput sequencing to uncover resistance mechanisms in sugarcane	Mrs JACOB, Robyn

HPC Applications (13:30-15:00)

-Conveners: Chair: Dr Vuyani Moses

time	[id] title	presenter
13:30	[165] Computational Catalysis @ NWU	Prof. VAN SITTERT, Cornie
13:50	[59] Speech data harvesting and factorized deep neural network development for the low-resource indigenous languages of South Africa	Dr BADENHORST, Jaco
14:10	[103] Computational Modelling Study on Stability of Li-S/Se System	Dr CLIFFTON, Masedi
14:30	[130] Finite volume modelling of dense granular flow in rotary kilns	Dr BOGAERS, Alfred