



# 2018 CHPC National Conference

## Monday 03 December 2018

### HPC Applications - Hall C (11:00-12:30)

**-Conveners: Chair: Prof Hasani Chauke**

time	[id] title	presenter
11:00	[255] High throughput computing considerations for Public Health Genomics	Prof. CHRISTOFFELS, Alan
11:20	[193] Developing Africa's first Earth System Model on the CHPC Lengau cluster	Dr CHANG, Nicolette
11:40	[47] The role of the interface in binary polymer blends	Prof. PELLICANE, Giuseppe
12:00	[67] First-Principles Study of Semiconductor-Based Photocatalyst Materials for Environmental Remediation	Prof. GOVENDER, Penny

### HPC Applications - Hall C (13:30-15:00)

**-Conveners: Chair: Prof Penny Govender**

time	[id] title	presenter
13:30	[151] AI is impacting HPC everywhere	Mr FARBER, Rob
13:50	[163] Computational modelling and capabilities in metal and alloys	Prof. CHAUKE, Hasani
14:10	[143] Modelling Dry Flue Gas Desulfurisation in a Circulating Fluidized Bed.	Mr LE GRANGE, Louis
14:30	[131] Effects of Island Shape on Magnetostatic Interactions in Bit Patterned Media for Data Storage	Dr KALEZHI, Josephat

## Tuesday 04 December 2018

### HPC Applications - Meeting Room 11 (11:00-12:30)

**-Conveners: Chair: Prof Jeanet Conradie**

time	[id] title	presenter
11:00	[187] Advancing Computational Science in South African Academia through Social and Cyber Networks	Prof. NAIDOO, Kevin J.
11:20	[248] Next-generation DNA sequencing: why HPC is becoming a vital component of biological research	Prof. TESKE, Peter
11:40	[188] High performance computing in pyrometallurgy	Mr BEZUIDENHOUT, Driaan
12:00	[183] CORDEX projections of changing tropical cyclones in the IPCC SR1.5 report as performed on the CHPC's Lengau cluster	Prof. ENGELBRECHT, F.A. Mr MUTHIGE, Mavhungu

### HPC Applications - Meeting Room 11 (13:30-15:00)

**-Conveners: Chair: Prof Cornie van Sittert**

time	[id] title	presenter
13:30	[168] Role of High Performance Computing in the Applications of Bio-economically Important Proteins	Prof. TASTAN BISHOP, Ozlem
13:50	[162] HPC in the De Beers Marine R&D Context	Mr PARKER, Imraan
14:10	[65] On the co-operation between SAWS and CHPC for forecast continuity and Unified Model research in South Africa	Dr LANDMAN, Stephanie
14:30	[258] HPC insights into chemistry mysteries	Prof. CONRADIE, Jeanet

## Wednesday 05 December 2018

### HPC Applications - Meeting Room 11 (11:00-12:30)

-Conveners: Chair: Dr Chris Perry

time	[id] title	presenter
11:00	[156] High Performance Computing for Nature Inspired Metaheuristics	Prof. PILLAY, Nelishia
11:20	[166] The CHPC's role in key projects at Aerotherm	Mr VAN DER MERWE, Wian
11:40	[117] Untapped Potential of Computational Material Science In Kenya	Dr MANYALI, George
12:00	[77] Simulations of the COSMO model on the CHPC	Mrs MULOVEDZI, Patience Dr BOPAPE, Mary-Jane

### HPC Applications - Meeting Room 11 (13:30-15:00)

-Conveners: Chair: Dr George Manyali

time	[id] title	presenter
13:30	[157] An Overview of Modelling at Johnson Matthey	Dr PERRY, Chris
13:50	[153] Using High Performance Computing to run large-scale WRFChem Acid Deposition Modelling over the Highveld Region of South Africa	Mrs CAWOOD, Suzanne
14:10	[184] The simultaneous Optimization of the Nose and Tail Geometry of a High Speed Train for Drag and Crosswind Stability	Ms BENEKE, Andrea Prof. CRAIG, Ken
14:30	[87] An Evaluation of Galaxy and Ruffus Workflows System for DNA-seq Analysis	Mr AJAYI, Olabode