

Centre for High Performance Computing 2023 National Conference

Tuesday 05 December 2023

Special: Quantum Computing (Chair: Prof Yin-Zhe Ma) - 1-1-2+4 - Ndaou + Nari (11:00-12:30)

time	[id] title	presenter
11:00	[156] ® Roadmap of Quantum Computing in a South African Context	Prof. PETRUCCIONE, Francesco
11:20	[157] NGEI's Initiatives from DSI Regarding the Sovereign Quantum Computing Decal Plan	Ms FEATHERSTONE, Coral
11:40	[144] Leveraging Quantum Machine Learning for Enhanced Biophotonics Applications	Dr MPOFU, Kelvin
12:00	[46] Materials research within the Excalibur Project: Is it time to exploit Quantum Computers?	Prof. WOODLEY, Scott
12:20	[166] Questions	QUESTIONS

Special: AI and Machine Learning (Chair: Prof Scott Woodley) - 1-1-2+4 - Ndaou + Nari (13:30-15:00)

time	[id] title	presenter
13:30	[18] Machine Learning in Cosmology	Prof. MA, Yin-Zhe
13:50	[203] ® Next DC Design for Generative AI workloads & HPC	Mr VENKATESH, Pramod
14:10	[54] ® Building a Knowledge Democracy: The Deep Learning IndabaX Story	Ms DE LANGE, Lydia
14:20	[56] From Grassroots to Greatness: Unleashing HPC Potential in Africa	Mr JAIN, Nilesh
14:30	[117] ® Distributed Deep Learning in HPC: Challenges and Opportunities	Dr KAHIRA, Albert
14:50	[168] Questions	QUESTIONS

Wednesday 06 December 2023

Special: Digital Earth (Chair: Mr Andrey Debolskiy) - 1-1-2 - Ndau (11:00-12:30)

time	[id] title	presenter
11:00	[49] Land surface model TerM: design, applications and HPC aspects	Dr STEPANENKO, Victor
11:15	[40] ® The Development of An Adaptive Mesh Atmospheric Model - Fluidity-Atmosphere	Dr LI, Jinxi
11:30	[233] ® Investigating machine learning techniques for precipitation forecast in Brazil	Dr PORTO, Fabio
11:45	[234] ® Integrating WRF and Hydrology Models for Improved Urban Flood Forecasting in Pune using HPC: A Comprehensive Approach for the Indian Metropolis	Dr KHARE, Manoj
12:00	[47] Numerical simulation of atmospheric boundary layer turbulence on HPC systems	Dr MORTIKOV, Evgeny
12:15	[178] ® South Africa's Operational Ocean Forecasting Developments	Dr FEARON, Giles

Special: Storage & IO (Chair: Dr Jay Lofstead) - 1-1-2 - Ndau (13:30-15:00)

time	[id] title	presenter
13:30	[198] ® Enable Fundamental Cacheability for Distributed Deep Learning Training	BUTT, Ali
13:50	[199] ® Mango-IO: I/O Metrics Consistency Analysis	LIEM, Radita
14:10	[200] ® I/O behavior of scientific deep learning workloads	DEVARAJAN, Hariharan
14:30	[201] Data Management on HPC Workloads: Accelerating outcomes while preserving data for future examination and collaboration	Mr CASTRO, Miguel
14:50	[217] Questions	

Special: Digital Leadership (Chair: Dr Samuel Mabakane) - 1-1-2 - Ndau (15:30-17:00)

time	[id] title	presenter
15:30	[22] Emerging Leadership Practices in deploying Digital Research Infrastructure in Africa	Mr CHRISTOFFELS, Mervyn
15:50	[112] The influence of national culture dimensions on Agile roles in the South African Software Development Context	Mr MATTHEWS, Kirwin
16:10	[158] A multifaceted framework of understanding and syntheses of the digital artefacts and its impact on the ICT ecosystem	Dr HARRY, Ricardo
16:30	[159] Questions	QUESTIONS

Thursday 07 December 2023

Special: Vendors (Chair: Mr Mervyn Christoffels) - 1-1-2 - Nda (11:00-12:30)

time	[id] title	presenter
11:00	[193] Dell - Bringing AI to your Data	Mr RAUTENBACH, Ryan
11:20	[194] Boost Performance with Accelerated HPC and AI	Mr POLLA, Claudio
11:40	[195] Supermicro Vendor Talk (Title to be confirmed)	Mr CRIGHTON, Roger
12:00	[197] Questions and Discussion	Q&A

Special: Vendors (Chair: Dr Jay Lofstead) - 1-1-2 - Nda (13:30-15:00)

time	[id] title	presenter
13:30	[196] Simplifying HPC/AI Storage Using Industry Standard Protocol	Mr HOWARD, Scott
13:50	[219] Build diversified computing infrastructure, unleash data value, promote scientific, technological, and economic development	Mr ZHANG, Zekelman
14:10	[235] ® The Cambridge Open Zettascale Lab is hosting Dawn, the UK's fastest artificial intelligence (AI) supercomputer	Dr CALLEJA, Paul
14:30	[221] Question and Discussions	Q&A