CHPC Session on Quantum Computing

13:30–15:00 Monday 2 December in *Heathrow* room (*International Centre*)

The recent publication of a paper by Google claiming to have achieved quantum supremacy is a milestone for the field of quantum computing: a quantum computer has outperformed for the first time a classical computer in the evaluation of a specific task. It is now expected that this "spooky" quantum technology will soon be ready for real-world applications.

The South African quantum computing and quantum technology community has been snowballing over the last few years. What started with a first SARCHI Chair in Quantum Information Processing and Communication in 2007 at UKZN has now grown to a vibrant and engaged community that wants to exploits the potential of these novel technologies to solve problems relevant to our context. Earlier this year Wits University partnered with IBM to give access to South African academics and the Universities of the African Research Universities Alliance (ARUA) to the IBM Q Quantum Computers in the cloud.

The Department of Science and Innovation launched a National Working Group on Quantum Computing and Quantum Technology that is tasked with the development of a national roadmap and a framework for quantum computing and quantum technology driven research and innovation in South Africa.

Programme:

Convener: Francesco Petruccione

Opening:

- Daniel Adams (DSI): **The DSI and Quantum Computing**
- Happy Sithole (NICIS): **The CHPC and Quantum Computing**

Speakers:

- Francesco Petruccione (UKZN): **A Quantum Computing Roadmap for South Africa**
- Andrew Forbes (WITS): **A Quantum Technology Roadmap for South Africa**
- IBM Speaker: TBC