

Computational sciences expert the new NITheCS Steering Committee Chairman

Dr Happy Sithole has been elected the new Chairman of the Steering Committee of the National Institute for Theoretical and Computational Sciences (NITheCS).

His aims in leading the organisation are clear: 'The main goals will be to ensure we get the various role players around the country in the identified thematic areas of NITheCS. Then, the next steps will be to identify the areas that require development in each specific thematic area, and provide support for those areas so that they can start producing skills and tools. It will also be very important to emphasise collaboration across the various domains, as the problems of today are multi-disciplinary and can only benefit from well-designed collaborative projects.'

Importantly, Dr Sithole adds: 'As we do this, we also have to ensure that we develop the necessary human capital to drive the developments in these areas. We should thus have a long-term sustainable funding model, that will ensure continuity and impact.'

The Interim Director of NITheCS, Prof Francesco Petruccione, expressed his delight at Dr Sithole's appointment and added: 'The entire NITheCS team and members will enthusiastically support Dr Sithole in terms of driving the organisation forward to achieve its goals and support scientific endeavour in the country.'

Dr Sithole comments on the evolution of the National Institute for Theoretical Physics (NITheP) into NITheCS: 'Expanding the role of the organisation was very important to bring in as many as possible science domains that can benefit from computing to develop, and thus open doors for not only physicist, but also finance, biologists, earth scientists, etc. It will also enable solving societal grand challenges, which are at heart of the Department of Science and Innovation Decadal plan. Hence, this is the right time to expand the domains and contribute to the national strategy of advancing the basic sciences and skills in computational sciences.'

Since 2019, Dr Sithole has also been the Centre Manager of the National Integrated Cyber Infrastructure System (NICIS), and responsible for the overall cyber-infrastructure initiatives in the country and SADC Region. The NICIS promotes scientific and industrial development through the provision of high-performance computing capability, high-speed network capacity and a national research data infrastructure integrated into globally-connected systems. It is a national initiative of the Department of Science and Innovation implemented by the Council for Scientific and Industrial Research (CSIR), and has three pillars: the Centre for High Performance Computing (CHPC) providing parallel processing capabilities and services to researchers in industry and academia, the South African National Research Network (SANReN) providing high-speed connectivity and advanced networking services, and the Data Intensive Research Initiative of South Africa (DIRISA) implementing services that enable sound data management practices and support data-driven scientific and engineering discoveries.

Dr Sithole's extensive experience in this area is of major importance: 'The computational sciences are very important and developing algorithms and tools that will enable scientists to model systems that will otherwise be complex to model or even dangerous to try in practice.' He adds that computational sciences 'help to produce knowledge and tools that can be used in the fast-improving computational infrastructure. This makes it possible for the virtual

systems to closely represent the physical systems: it is thus very important that developing these capabilities in South Africa should be supported in all thematic areas such as climate, health, finance etc.'

He adds: 'The success of NITheCS will be evaluated among others by how much computational sciences are advanced in the country, and the new software tools that we can produce. South Africa's contribution globally to new algorithms will be very important, as this will be one of the key areas of national competitiveness.'

He also stresses that it is an outstanding characteristic of the NITheCS to provide support for young scientists and empower those who need opportunities to progress in their careers through the organisation's intern programme as well as the NITheCS bursaries: 'This is a very important part of sustainability for NITheCS, as bringing in new researchers who will have multidisciplinary approach right from the beginning. At the same time the training of young scientists in scientific programming and software development, will help South Africa to produce new skills and tools.'

End

Issued by the National Institute for Theoretical and Computational Sciences (NITheCS):
www.nithecs.ac.za | 087 702 9364 | info@nithecs.ac.za

Media enquiries:

René Kotze: rene.kotze@nithecs.ac.za or

Lia Labuschagne: lia.sciencewriter@nithecs.ac.za