

# NITheCS

National Institute for  
Theoretical and  
Computational Sciences

## NITheCS Colloquium

Monday, 28 June 2021, 16h00

Prof Francesco Petruccione | NITheCS Interim Director

### “Transition from NITheP to NITheCS”



#### ABSTRACT

The National Institute for Theoretical Physics (NITheP) is widening its scope to become the National Institute for Theoretical and Computational Sciences (NITheCS).

The novel institute will support research, training and engagement for the following themes:

- Astronomy and Astrophysics
- Data Science
- Earth System Modelling
- Mathematics
- Quantitative Biology
- Quantitative Finance
- Statistics
- Theoretical Physics

The talk will describe the roadmap and the implementation plan of NITheCS. Find out how the transition can benefit you and your university.

#### BIOGRAPHY

Francesco Petruccione studied Physics at the University of Freiburg i. Br. and received his PhD in 1988 and the “Habilitation” degree (Dr. rer. nat. habil.) in 1994. In 2004 he was appointed Professor of Theoretical Physics at the University of KwaZulu-Natal (UKZN), in Durban (South Africa). In 2007 he was granted the South African Research Chair for Quantum Information Processing and Communication. At present, he is the interim Director of the National Institute for Theoretical and Computational Sciences, Pro Vice-Chancellor Big Data and Informatics of UKZN, and Professor Extraordinary at the Department of Physics of Stellenbosch University.

Prof Petruccione is an elected member of the Academy of Sciences of South Africa, a Fellow of the Royal Society of South Africa and a Fellow of the University of KwaZulu-Natal. He has published about 250 papers in refereed scientific journals. He is the co-author of a monograph on “The Theory of Open Quantum Systems” (more than 9000 citations according to Google Scholar), that was published in 2002, reprinted as paperback in 2007, and translated in Russian. Recently, he published a monograph (with Maria Schuld) on “Supervised Learning with Quantum Computers” that was already translated into Japanese. He is the editor of several proceedings volumes and of special editions of scientific journals. Prof Petruccione is a member of the Editorial Board of the journals “Open Systems and Information Dynamics”, “Scientific Reports”, “Quantum Machine Intelligence”, and “EPJ Quantum Technology”.

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