NOBEL SYMPOSIA SERIES

Rise and Take Your Position

Thifhelimbilu Daphney Bucher

Lecturer and Researcher at Cape Peninsula University of Technology

Universe

Neil Turok

Higgs Chair of Theoretical Physics, University of Edinburgh
Emeritus Director, Perimeter Institute for Theoretical Physics, Canada
Founder and Board Chair, African Institute for Mathematical Sciences

NOBEL IN AFRICA
A STIAS INITIATIVE

Friday, 21 October 2022 | 16:30-19:00
Auditorium, Inkanyezi Building, South Campus, Nelson Mandela University

BIOGRAPHY

Thifhelimbilu Daphney Bucher, born in Limpopo Province, South Africa, is a Lecturer and researcher at the Cape Peninsula University of Technology at the Department of Electrical Electronics and Computer Engineering (CPUT).

She conducts research in the field on experimental nuclear physics and focuses on understanding the structures of the excited nuclei in the transitional region. As a result of understanding such phenomena, she believes that we can gain a lot of insight into our origin and how our universe works.

Neil Turok's lecture:

ABSTRACT

Recent observations of the universe on very large and very small scales have revealed an astonishing simplicity in its structure and basic laws. Meanwhile, fundamental theory has trended in the opposite direction, predicting a profusion of extra particles, dimensions of space and even a "multiverse," none observed. In this talk, I will outline a radically minimal and far more predictive theory which provides new explanations for the cosmos's extraordinary symmetry on large scales, for the nature of the dark matter and the role of dark energy, as well as predicting the fluctuations which seeded the formation of galaxies. It also gives us a picture of the big bang itself. I will also outline the theory's predictions, several of which will be tested in the decade ahead.

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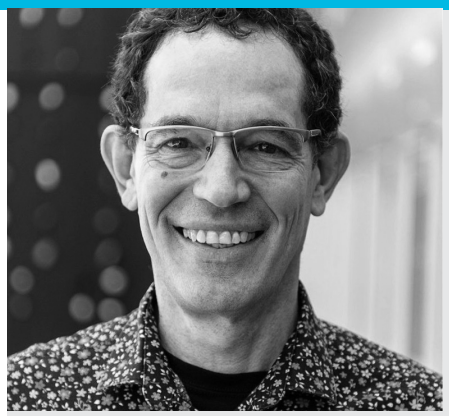

BIOGRAPHY

Neil Turok was born in South Africa. He founded the African Institute for Mathematical Sciences (AIMS) in 2003.

Neil's research focuses on testing and developing theories of the universe. Formerly a Professor of Physics at Princeton and of Mathematical Physics at Cambridge, he currently serves as the inaugural Higgs Chair for Theoretical Physics at the University of Edinburgh. He is also Emeritus Director of the Perimeter Institute for Theoretical Physics in Canada and Chair of AIMS International Governing Board.

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