



# SCIENCE WITH JAZZ SEMINAR SERIES

"Where Science and Jazz combine"



25 JUNE  
Wednesday 2025



17h00



Premier Resort Cutty Sark, Scottburgh

## SPEAKER:

**Professor Andrew Forbes**

School of Physics, University of the Witwatersrand

## TOPIC:

**Sensing the invisible with quantum ghost imaging**

## JAZZ ARTIST:

**Mr Zibusiso Makhathini**

## POET:

**Dr Gcina Mhlophe**

**SYNOPSIS:** Conventional imaging, as you do with your smartphone, has remained more or less unchanged for centuries. In this talk I will outline how spooky quantum light allows us to break the rules of traditional imaging systems, including imaging without interacting with the object, high resolution photos with low resolution detectors, and making the invisible visible. Finally, I will outline how intelligence and quantum imaging can be combined for fast sensing and recognition of unknown objects.



**ANDREW FORBES** is a Distinguished Professor at the University of the Witwatersrand where he leads a laboratory that focuses on Structured Light and its applications. He is active in promoting photonics in Africa, a founding member of the Photonics Initiative of South Africa and Director of South Africa's Quantum Technology Initiative. He is a Fellow of SPIE, Optica, the South African Institute of Physics (SAIP), PIERS and an elected member of the Academy of Science of South Africa. He has won several awards, including the national NSTF Photonics award (2015), the Alexander von Humboldt Georg Forster Prize and Fellowship (2020), the SAIP Gold Medal (2020), the Sang Soo Lee award from the Korean Optical Society and OPTICA (2022) and the Physics prize by TWAS (2024).



**ZIBUSISO MAKHATHINI** is a Durban based Jazz Pianist, Composer and Music Tutor. Having grown up in a musical family, music became an inherent attribute that was noticeable throughout his childhood which later influenced him to pursue music as a career by studying and obtaining a degree in music at the University of KwaZulu-Natal.

Makhathini is currently teaching jazz piano at Durban High School and Kearsney College. Recently Makhathini made history at the 15th Unisa International Piano Competition by being the first South African to ever make it to the finals since its inception in 1982. Makhathini won 3rd place alongside Dabin Ryu (South Korea) and Tomas Jonsson (USA).

Zibusiso was profiled and featured as an artist on the Insider SA, a national television programme on SABC, under the segment called 'Defying The Norm' for his original project titled Africanva which was premiered at the National Arts Festival. Makhathini has worked with various artist namely; Linda Sikhakhane, Camille Kerani, Salim Washington, Joe Kunnuji, Ndabo Zulu, Siphephelo Mazibuko, Lwanda Gogwana and Benjamin Jephta.



**DR GCINA MHLOPHE** is a celebrated author, storyteller, and the founding director of the Gcinamasiko Arts & Heritage Trust. Her works have been translated into numerous languages, including all official South African languages, Kiswahili, French, German, Spanish, Portuguese, Japanese, and even Braille. She has directed her theatrical plays in the USA, UK, and Greenland, with her most renowned and studied work being "Have You Seen Zandile?" In addition, her poetry has been transformed into dance and classical music. Recently, she edited and self-published "Our Storytelling Tree: A South African Storytellers Directory" under GAHT, marking the first effort to archive 38 storytellers currently active in South Africa. She has received honorary doctorates from seven universities, both nationally and internationally, in recognition of her literary contributions and her impact on intangible heritage through storytelling.

## ABOUT THE SCIENCE WITH JAZZ SEMINAR SERIES:

2025 is the UNESCO year of Quantum Science and Quantum Technology. In this context the initiated Centre for Quantum Computing and Technology at UKZN presents a series of science seminars combined with Jazz concerts, that informs about relevant concepts in science and technology and their societal impacts. This monthly series intends to inspire inter-disciplinary discussions and synergies, in particular between the sciences and the arts.

We proudly present the current issue of Science with Jazz as part of a one-week workshop at the Cutty Sark Hotel in Scottburgh to forge an African Network of Quantum Science and Technology with 21 speakers and 29 more delegates from across the African continent. You can meet them at this seminar!

Professor Thomas Konrad, Director Designate: Centre for Quantum Computing and Technology, UKZN



INTERNATIONAL YEAR OF  
Quantum Science  
and Technology

Refreshments and a cash bar will be available

ENQUIRIES: Sally Frost / [frosts@ukzn.ac.za](mailto:frosts@ukzn.ac.za) / 031 260 7642

Transport provided. **RSVP HERE** by 23 June if you need a lift on the bus.

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