

SCIENCE WITH JAZZ SEMINAR SERIES

"Where Science and Jazz combine"



28 OCT 2025
Tuesday



16h30



Coastlands Hotel Musgrave,
Suite 1-3

SPEAKER:

Professor Thomas Konrad,
Director: CQCtec, UKZN

TOPIC:

The Present and Future of Quantum Technology

MUSICIANS

Linda Sikhakhane
(saxophone)

Paras Dlamini
(vocal)

SYNOPSIS: When Paul Dirac received the Nobel Prize for his contribution to Quantum Physics in 1933, he claimed when asked that the new theory would never have a technological application. Subsequently, it essentially contributed to the development of computers, lasers and electron microscopes, nuclear weapons, power plants, atomic clocks and X-rays, MRI and PET scans, among other inventions, in what is known as the first quantum revolution. What can we expect from the second quantum revolution, which is still in its infancy? This talk presents the new paradigm of Quantum Information, and its potential impact on computation, communication and sensing/imaging technologies. How do we understand it? What should we do with it at UKZN? What may we hope for in Africa? The talk is combined with music to give a holistic picture of the subject.



PROFESSOR THOMAS KONRAD holds a Master of Science from the Eberhard-Karls University in Tübingen (Germany) with a dissertation in celestial mechanics, a Master of Science of the University of London (Imperial College) in quantum field theory and a doctorate in theoretical physics from the University of Konstanz. He joined UKZN in 2006, served on the Council of the South African Institute of Physics (SAIP), on Senate of UKZN, as editor of the SAIP online journal Physics Comment from 2012 to 2017 and as editor of the New Journal of Physics (IOP) since 2023. He is a Research Professor in the School of Agriculture and Science at UKZN and Director of the UKZN Centre for Quantum Computing and Technology (CQCtec). Thomas Konrad pioneers research in quantum information processing and communication. He is an internationally recognised researcher with a NRF B-rating. Konrad promotes the interplay between science and arts.



LINDA SIKHAKHANE IS a South African Composer and Saxophonist, who began his musical journey at the Siyakhula Music Centre under the gentle guidance of the late Dr Brian Thusi. His determination led to a relentless work schedule performing live and also in the studio with Nduduzo Makhathini and the H3 horn ensemble. Emerging victorious at the SAMRO Overseas Scholarship competition, he utilized the prize money to fund his degree programme at The New School in New York. Here, he was mentored by greats such as Billy Harper, Reggie Workman, David Schnitter and Charles Tolliver. Linda Sikhakhane has worked with a broad array of artists: Sibongile Khumalo, Khaya Mahlangu, Nduduzo Makhathini, Gregory Porter, Rodney Kendrick, Rhonda Ross Kendrick, Logan Richardson, Derrick Hodge, Ted Daniel, Thandiswa Mazwai, Herbie Tsoaeli and more. His 2022 release under Ropeadope is titled Isambulo, which translates from Zulu to revelation.



PARAS "SIBALUKHULU" DLAMINI is an internationally acclaimed South African singer and songwriter. His discography spans a plethora of musical genres but majors in Jazz and world music. He draws inspiration from his African paradigm and his personal spiritual journey. His debut album, "Ingoma Busuku" has received widespread media coverage and critical praise. Born and raised in KwaMashu and Ulundi he discovered his musical talent through Church, where he learnt how to play the drums. His sound he calls "Ubuntu Music" (world music). He has made an appearance on several platforms including TV and radio and has toured internationally and collaborated on stage. Singing in his native isiZulu, his voice carries an authenticity and emotional resonance, with soulful melodies and rhythmic improvisations, offering a fresh, globally relevant perspective on South African jazz.

ABOUT THE SCIENCE WITH JAZZ SEMINAR SERIES:

2025 is the UNESCO year of Quantum Science and Quantum Technology. In this context the 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 interdisciplinary discussions and synergies, in particular between the sciences and the arts.

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



INTERNATIONAL YEAR OF
Quantum Science
and Technology

Refreshments will be available

ENQUIRIES: Sally Frost / frosts@ukzn.ac.za / 073 160 1409

INSPIRING GREATNESS