

SCIENCE WITH JAZZ SEMINAR SERIES

"Where Science and Jazz combine"



22 MAY
Thursday 2025



17h00



UKZN Centre for Jazz and Popular Music,
Howard College, Shepstone Building, level 2

SPEAKER:

Professor Hans Michael Lattorff, Associate Professor,
School of Life Sciences, UKZN

TOPIC:

Bees: A Model for Sociality and More

MUSICIAN: Thobekile Mbanda

STORY TELLER: Dr Gcina Mhlophe

AUTHOR: Deborah Ewing

SYNOPSIS: Bees have fascinated people since ages with the oldest records on scientific reports about bees going back to Aristotle (384-322 BC), often called the founder of scientific beekeeping. Charles Darwin realized that bees could falsify his theory of natural selection as he could not imagine how sterile workers can inherit their sterility to the next generation. This problem was solved almost 100 years later by Bill Hamilton through his theory of inclusive fitness and kin selection. Besides their fascinating social organization, which is often seen as the perfect social harmony with a queen being the mother of all other members of the hive, it is actually a battlefield of different individual interests driven by relatedness asymmetries, extreme levels of multiple mating, anarchy and police, and clonal South African Cape honeybees. Additionally, bees contribute through foraging for nectar and pollen to pollination of plants. Roughly 75% of the crop plants used for human food are dependent on insect-mediated pollination. The foraging behaviour and the navigation of bees in space and time are one of the mysteries that were resolved partially by Karl von Frisch, who received the Nobel Prize for his work in 1973, the only one ever awarded for research on bees. Central to the foraging and recruitment of other nestmates is the waggle dance of the returning bees, which encodes the direction and distance of the food source, which allows honeybees to exploit resources rapidly.



PROFESSOR HANS LATTORFF received a PhD in Biology (2005) and a Habilitation in Zoology (2013) from the Martin-Luther-University Halle-Wittenberg, Germany. Before joining UKZN in 2024, he worked for several years in Kenya at the International Centre of Insect Physiology and Ecology (icipe) and the University of Nairobi. His research focuses on various aspects of the biology of social insects, especially honeybees. He is interested in host-pathogen interactions, context-dependent activation of the immune system, and self-medication as a complementary tool to combat infections, amongst other topics. He utilizes various methods, including observational field studies, manipulative laboratory experiments, experimental evolution, and genetic/genomic techniques. His research has been published widely in peer-reviewed international journals. He regularly reviews manuscripts for international journals. He serves on the editorial boards of Arthropod-Plant Interactions, International Journal of Tropical Insect Science, Frontiers in Insect Science, and PCI Zoology. He has supervised and mentored several PhD and MSc students.



THOBEKILE MBANDA, passionately known as Ntomb'Yelanga, is an indigenous instrument maker, player of these instruments and researcher. She is a passionate author of isiZulu children's books and founder of Abancane Art Academy. Through her company, Mmaletstasi Productions, she creates cultural learning tools, crafts traditional instruments, and leads workshops that revive African heritage. Dedicated to empowering youth and preserving indigenous knowledge systems, she blends storytelling, music, and education to inspire pride, identity, and creativity in the next generation.

My work with bees began with The Humming and Hiving Project in Cape Town looking at bees - sonic sound their hums, their purpose, their resonance - then came water, its deep flowing tones mirroring that same life giving energy. I hear the elements of bees water and trees in rhythmic conversation that dialogue shaped my instruments I created, The Aqua Harp, The Water Table and The One String Bass.



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.



DEBORAH EWING is a Durban-based writer whose main focus is social justice, children's participation and inclusivity. Deborah has authored 13 books, fiction, non-fiction, and poetry, some with translations into French, Swahili, Amharic and isiZulu. She has edited international newspapers and magazines, and contributed chapters and articles to a wide range of books and journals. Her poetry has featured in several journals and anthologies, and festivals, including the Unesco Cities of Literature Poetry on the Move festival in Germany in 2024. Deborah has just published Fragments, a collection of poems and photographs with an audio described edition to make it accessible to blind audiences. Deborah is the Chairperson of the Alliance Française of Durban and of the Mdukathshani Rural Development Trust.

Much of Deborah's work with children focuses on the connections between human, animal and environmental health. She uses participatory research and poetic inquiry to explore how we interact with other living beings, especially insects. Deborah will present a short selection of poems on this topic – including bees.

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.

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: Thulile Zama / zamat1@ukzn.ac.za / 031 260 3385

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