













NITheCS

National Institute for Theoretical and Computational Sciences

COLLOQUIUM

Coding Our Now and Future: Africa's Voice, Values and Vision in Al

Dr William Vambe (Walter Sisulu University)

DATE: Monday, 20 October 2025 | 16h00-17h00 SAST

VENUES:

- Stellenbosch University: Neelsie Cinema
- North-West University: Seminar Room K310, Physics Building G5
- University of the Witwatersrand: Room P215, 2nd Floor, Physics Building
- Online

--- A recording of the talk will be published on the NITheCS YouTube channel afterwards ---

ABSTRACT

There is a critical danger in depending on AI systems trained predominantly on non-African and non-BRICS data. Such models often fail to represent our languages, medical realities, social structures, and cultural nuances. Western-trained systems, even in fields like medicine and education, can misinterpret African/BRICS behaviours and health patterns due to a lack of contextual data. It is, therefore, imperative that we understand that the present and future of AI belong to us. Our people must develop AI solutions and innovations for Africa and BRICS nations with our data, for our contexts, and rooted in our realities to ensure relevance and sovereignty. Our broader goal should be to call for a paradigm shift in how Africa/BRICS nations approach AI, promoting:

- Curation of African/BRICS-owned datasets, especially those integrating Indigenous Knowledge Systems and local languages.
- Investment in local AI and ethics talent, ensuring our youth are not merely users but architects of innovation.
- $\bullet \quad \text{Infrastructure development that enables equitable digital participation and sustainability}.$
- Embedding values of equity, dignity, participation and inclusion in every technological framework.

In essence, our mission should be to ensure that Africa/BRICS nations recognise that AI is not neutral – it reflects the world it is trained on. If African/BRICS country data is missing, so too is our future. We must therefore not only adopt AI but shape it, proving that Africa/BRICS nations do not merely need AI – AI needs Africa/BRICS nations.

BIOGRAPHY

Dr William Vambe is a Senior Lecturer in the Department of Mathematical Sciences and Computing at Walter Sisulu University. He holds a PhD in Computer Science from the University of Fort Hare, and was a visiting fellow at the University of Tartu's Mobile and Cloud Lab in Estonia. He has served at the University of Fort Hare, University of Mpumalanga, Tshwane University of Technology, and Belgium iTVersity Campus. His research spans AI, ICT for Development, Fog and Cloud Computing, the Internet of Things, Data Science for Social Impact, and the Fourth Industrial Revolution. A NITheCS Associate, member of the South African ICT Association, and participant in the InSPiR2eS Research Network, he also serves on the Editorial Review Board of the *International Journal of Fog Computing*. He was a semifinalist in the InSPiR2eS Global Pitching Research Competition in 2023 and the winner of the African Science Entrepreneurship Program's Business Model Pitching contest (2024–2025). He also represented South Africa at the 10th BRICS Young Scientist Forum 2025 in Brazil.



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