

# Science Summit at the 78<sup>th</sup> United Nations General Assembly

## NSTF panel session: Pitfalls of Artificial Intelligence

15 September 2023, 10:00-12:00 (EDT) / 16:00-18:00 (CAT)

### Speakers' Biographies:



*What are the implications of the development of AI for leadership in government, business, research, and society?*

**Prof Fulufhelo Nelwamondo** is the CEO of the National Research Foundation (NRF) of South Africa. He holds a PhD in Electrical Engineering, with specialisation in Computational Intelligence from the University of the Witwatersrand (Wits). He was a Postdoctoral Fellow at the Graduate School of Arts and Sciences at Harvard University, and was the youngest South African to receive the prestigious Harvard-South Africa Fellowship. Fulufhelo is a registered Professional Engineer, a Senior Member of the Institute of Electronic and Electrical Engineers (IEEE), and a senior member of the Association of Computing Machinery (ACM), amongst others. Prior to his current role, he held executive positions at the Council for Scientific and Industrial Research (CSIR), and has served in several boards, councils, ministerial task teams and advisory committees. Fulufhelo is passionate about the Fourth Industrial Revolution, particularly in the potential impact its research and technologies can bring in the advancement of humankind, thereby addressing the social ills of poverty, unemployment and inequality. He has been a recipient of many awards, for his contribution to science, engineering and technology. In 2017, he was awarded the Order of Mapungubwe in Silver, the highest civilian honour bestowed by the President of the Republic of South Africa. Fulufhelo has worked in areas of advanced modelling, information security, data science, and artificial intelligence, and is a Visiting Professor at the University of Johannesburg's Institute of Intelligent Systems. *He received the [NSTF Award](#) for an Emerging Researcher in 2010 when he was at the CSIR.*



*Human centred AI Systems for scientific knowledge discovery and sustainable development in South Africa*

**Prof Deshen Moodley** is an Associate Professor in the Department of Computer Science at the University of Cape Town (UCT) and the co-director and co-founder of South Africa's national Centre for Artificial Intelligence Research (CAIR). He joined the UCT in July 2016 after serving 13 years as an academic in the Computer Science department at the University of KwaZulu-Natal (UKZN). He currently leads the Adaptive and Cognitive Systems Lab in the AI Research Unit at UCT. His research explores adaptation and cognition in AI systems. In particular, he explores different artificial intelligence techniques to create augmented AI systems where the human user works interactively and cooperatively with the AI system. He has explored AI systems across diverse domains, including the health, energy, finance and earth observation domains. He is currently researching the design of human centred AI systems for scientific knowledge discovery and interactive decision making.



*In the context of AI generated academic outputs, what is the purpose of the university?*

**Prof Sioux McKenna** is the director of the Centre for Postgraduate Studies at Rhodes University, South Africa, and Visiting Research Professor in the Center for International Higher Education, Boston College, USA. Her research focuses on the purpose of higher education in society. She has a particular interest in doctoral education and postgraduate supervision and is increasingly concerned with the affordances and constraints of artificial intelligence in higher education. Sioux is a B rated researcher and manages a number of international collaborative projects looking at the nature of postgraduate environments in spaces as diverse as South Africa, Kenya, The Netherlands, Turkey, and beyond.



*Establishment of the AI Institute of South Africa (AIISA) and its role in building AI capacity in South Africa*

**Prof Anish Mathew Kurien** received his DTech in Electrical Engineering from the Tshwane University of Technology (TUT), Pretoria, South Africa in 2012, and his PhD in Computer Science (Joint Degree) from the University of Paris-Est, Champs-sur-Marne, France in 2012. He is currently the Node Director of the French South African Institute of Technology (F'SATI), TUT, and is responsible for Postgraduate programmes, Research & Innovation in the Department of Electrical Engineering. He was recently appointed as TETA Research Chair focusing on the development of an Agile and Open Transport Industry. His research interests include feature extraction and pattern recognition, mobile and wireless networks, and application of AI & ML approaches to various sectors of industry.