NSTF
National Science & Technology Forum

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NSTF-SFSA panel session

Science for all: whose role is it to make it happen?

26 November 2025

09:35 - 11:05

SPEAKERS' BIOGRAPHIES:

09:40- 09:55

Approaches to bridge existing gaps and overcome challenges in enhancing public understanding and awareness of the role of science and technology in relation to the natural environment



Dr Nqobile Xaba is a researcher at the Mapungubwe Institute for Strategic Reflection (MISTRA) in the Knowledge Economy and Scientific Advancement faculty. Her work focuses on the just energy transition in South Africa (SA), mineral resource beneficiation and the broader climate change issues. Prior to joining MISTRA, she was a chemistry lecturer at Tshwane University of Technology (TUT). She previously worked as researcher at the Council of Scientific and Industrial Research (CSIR) for half a decade in the energy materials group. Her research works focused on energy conversion and storage technologies (fuel cells

and rechargeable batteries). She holds a BSc degree in pure and applied chemistry (cum laude) from the University of KwaZulu-Natal (UKZN), and BSc honours degree in chemistry, an MSc degree in chemical engineering science from the University of North-West (NWU), and a PhD in chemistry from the University of the Western Cape (UWC). She is an alumnus of the 72nd Lindau Nobel Laureate meeting.

Dr Xaba's current work includes conducting research on SA's implementation for a just transition framework in SA, and beneficiation of SA's minerals for the energy transition. She works with diverse teams in the African continent and globally, researching Africa's energy needs in the context of an evolving climate landscape and the socio-economic implications for SA's energy transition. She has published her work in renowned scientific journal articles, has contributed book chapters and opinion editorial articles in leading South African publications. She is the co-editor and contributing author to the MISTRA volume, A Just Transition to a Low Carbon Future in SA.

Dr Xaba holds a senior research fellow appointment with the Foundation for Renewable Energy and Environment, and at the University of Johannesburg (UJ). She is also an advisory board member of Enzi-Ijayo Africa Initiative.

09:55-10:10
Humaneising Innovation



Dr Komane 'Lebs' Mphahlele's academic qualifications include: D.Ed. (University of South African (Unisa)), M.Ed. (University of the Witwatersrand (Wits)), B.Ed., U.E.D. and B.Sc.in Biochemistry (Hons) (University of the North (UNIN)) and B.Sc. in Chemistry and Biochemistry (University of Fort Hare). His Certificates of Competence are Mentoring and Coaching, Assessor, Sign Language and Advanced Project Management (ETDP-PSETA).

His teaching career covered: physical science, biology and mathematics teacher at high school and chemistry tutor in the College of Science at Wits. His appointments in the Public Service covered: Chief Education Specialist at the former Department of Education (DoE), Director and Acting Chief Director in the Department of Science and Technology (DST) (now known as DSTI), Director at the former Public Administration Leadership and Management Academy (PALAMA) and the National School of Government (NSG) as well as the Deputy Director General at the Limpopo Department of Education (LDOE). His non-

governmental organisation (NGO) experience included consultancy work as well as an appointment as Commissioning Editor in the Newspaper Education Supplement (NES) Division of SACHED (South African Council for Higher Education). His responsibilities in the latter covered editing Newspaper Education Supplement Materials that were published in the following daily and weekend Newspapers: New Nation, Star, Sowetan and City Press.

His Ministerial appointments were: National Curriculum Coordinator of SYSTEM (Students and Youth into Science, Technology, Engineering and Mathematics), three Ministerial Project Committees to design National Curriculum Statements for the Schooling System, Board Memberships of the FEST (Foundation for Education, Science and Technology) and HSRP (Historic Schools Restoration Project).

In recognition of his excellent contributions to society, Dr Mphahlele received the following awards and rewards:

1. the NSTF (National Science and Technology Forum) Awards Scroll of Honour as runner-up of the category for an "Individual: Activities other than research and innovation",
2. the PSTF's (Public Sector Trainers Forum) "Training Design and Development's Award",
3. the Men's Health Best Man Award (Runner-up trophy),
4. the Joint Education Trust Research Scholarship, and
5. the Chinese Academy of Governance Certificate.

He is well published. Some of his publications include chapters in books, journal articles, newspaper articles, as well as presentations in conference proceedings. He also self-published two of his own autobiographies. These include: *Ngwamorei* and *Humaneistic Learnings from My Six Decades Long Journey*. His latest autobiography entitled *My Humaneistic Codes: Keys to Unlock my Afrikan Future* will be published by Empore Publishers in 2025.

Dr Mphahlele is currently retired and is appointed by the following institutions: Research Associate at the University of Limpopo (UL), Independent Trustee by the Limpopo Province Education Development Trust, Chairpersonships of Mafori family Trust/Mafori Legacy Project and Limpopo Pensioners Association

10:10-10:25

Accident, Murder, or Suicide? How Science Reveals the Truth



Prof Ryan Blumenthal, MBChB (Pretoria), MMed (Med Forens) Pretoria, FC For Path (SA) Dip For Med (SA) PhD (Wits) - Senior specialist forensic pathologist and associate professor at the University of Pretoria (UP)'s Department of Forensic Medicine.

He has published widely in the fields of electrocution, suicide and other areas involving the pathology of trauma. His chief mission in life is to help advance Forensic Pathology Services both nationally and internationally. Prof Blumenthal has published 45 articles in peer-reviewed Journals. He has contributed Chapters to seven (7) international textbooks. He has written four books for the public. He is currently an NRF-C2 rated scientist.

His book '*Autopsy - Life in the trenches with a forensic pathologist from Africa*' (Jonathan Ball Publishers) launched August 2020 became a non-fiction best-seller in SA. It is currently in its thirteenth (13th) print and has been translated into Afrikaans ("*Outopsietafel – Stories van 'n Geregtelik Geneesheer in Afrika*" - 2025) and Russian ("вскрытие блюменталя вскрытие блюменталя").

His eight-part documentary "Lightning Pathologist" (Channel 180 DSTV) aired on 9 November 2020 to 20 November 2020 and was viewed by over 2.2 million people.

His book – '*Risking Life for Death – Lessons for the Living from the Autopsy Table*' (Jonathan Ball Publishers) launched July 2023 and is currently in its second print.

- On the 31st of August 2023, Ryan Blumenthal won the NRF Award for the Public Engagement in Research
- On the 22nd of October 2023, Ryan Blumenthal won the Absa Professional Excellence Award
- On the 31st of July 2025, Ryan Blumenthal won the NSTF Science Communication Award

10:25-10:40

10 Reasons Why Universities Must Make Science Visible



Curious about the world and passionate about communication, **Ms Shirona Patel**, the Head of Communications at Wits University, blends these two advantages to change the world, for good.

She loves to tell a good story, and over the course of her career, has led hundreds of successful science communication campaigns with leading academics and researchers - translating complex scientific research into accessible, engaging narratives across multiple platforms. Under her leadership, the Wits Communications team was awarded the prestigious NSTF-South32 Awards Communication Award in 2017 for advancing awareness of science, engineering and technology (SET) in SA. Ms Patel has also delivered public presentations on science communication trends, such as “How does science become news?”, demonstrating her thought-leadership in this field.

With over 25 years of experience in strategic communications, media engagement and institutional reputation-building, Ms Patel’s skills set spans strategic narrative development, stakeholder engagement (including media, government, alumni and industry), digital and multimedia innovation, and integrated campaigns aligned with institutional research and transformation goals. She played a central role in the University’s Centenary Campaign, ensuring that communications are not just reactive but proactively shape the University’s place in society. She is passionate about new technologies, creative tools, and innovation.

In her current role, she leads a dynamic communications unit within the Advancement Division, charged with positioning Wits as a leading research-intensive university both in SA and on the global stage. She holds a Master’s degree in Journalism and Media Studies from Wits University.