IYBSSD2022

Invitation to the International Year of Basic Sciences for Sustainable Development (IYBSSD) Roundtable

Date: Thursday, 25 August 2022
Time: 14:00 – 16:00 SAST
Venue: Online via Zoom
Register: Click here to register and receive the Zoom meeting room link

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Programme

Programme Facilitator
Prof Himla Soodyall, Executive Officer, Academy of Science of South Africa (ASSAf) (5 min)

Opening Remarks
Mr Imraan Patel, Deputy Director-General: Research Development Support, Department of Science and Innovation (DSI) (5 min)

Plenary
Interdisciplinarity between Basic Sciences and the Social Sciences and Humanities in advancing the Sustainable Development Goals (SDGs)
Prof Jonathan Jansen, President of ASSAf (25 min)

Thematic Presentations (15 min each) (45 min)
Moderator
Prof Stephanie Burton, Vice-President ASSAf Council, Royal Society of South Africa and University of Pretoria (UP)

- Using basic sciences to accelerate innovation to achieve the SDGs
  Dr Sudesh Sivarasu, Co-chair: South African Young Academy of Science (SAYAS)

- Using science to inspire the next generation of scientists (focus on equity)
  Dr Beverley Damonse, Group Executive: Science Engagement and Corporate Relations, National Research Foundation (NRF)

- Public engagement of science
  Dr Nnditshedzeni Eric Maluta, HoD and Coordinator: Vuwana Science Resource Centre, University of Venda

Q&A (20 min)

Closing Comments (10 min)
Dr Aldo Stroebel, Executive Director: Strategy, Planning and Partnerships, NRF

Way Forward & Closure (5 min)
Prof Himla Soodyall, Executive Officer, Academy of Science of South Africa (ASSAf)

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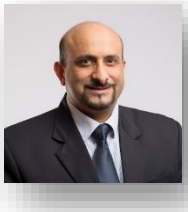
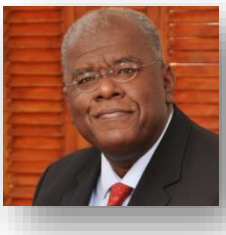
About the Speakers



Mr Imraan Patel is a public policy and strategy manager with a focus on innovation, inclusive development, sustainability, social and economic development, and public management and governance. Employed since 2006 at the Department of Science and Innovation (DSI), he is currently a Deputy Director-General and represents the department on the research development support clusters of government. He is a current member of the board of the Water Research Commission, Trade and Industrial Policy Strategies (TIPS) and a past board member of MINTEK and SASSCAL.

Prior to joining the DSI, he worked at the Centre for Public Service Innovation, an agency of government supporting innovation in the delivery of public services and the Department of Public Service and Administration. He began his working life with a five-year stint at the Workplace Information Group (WIG), a non-governmental organisation supporting trade unions followed by three years during the formative years of the National Labour and Economic Development Institute (NALEDI), a think tank to COSATU. Particular areas of focus include science and technology for sustainable development, R&D-led industrial development, green and circular economy, the science-policy interface, and the Next Industrial Revolution.



Prof Jonathan Jansen is a Distinguished Professor of Education at Stellenbosch University (SU) and President of the Academy of Science of South Africa (ASSAf). He is the immediate past Vice-Chancellor and Rector of the University of the Free State (UFS). He was a Fellow at the Center for Advanced Studies in the Behavioral Sciences at Stanford University. He is a Fellow of the American Educational Research Association, and a Fellow of The World Academy of Sciences (TWAS). He won the *Nayef Al Rodhan Prize* from the British Academy for the Social Sciences and Humanities for his book *Knowledge in the Blood* (published by Stanford University Press). In 2013, he was awarded the *Education Africa Lifetime Achiever Award* in New York and the *Spendlove Award* from the University of California for his contributions to tolerance, democracy and human rights. He holds honorary degrees from the University of Edinburgh, the University of Vermont and Cleveland State University.

Prof Himla Soodyall is Executive Officer of the Academy of Science of South Africa (ASSAf). She is a Research Professor in Human Genetics at the University of the Witwatersrand (Wits) and was Principal Medical Scientist at the National Health Laboratory Service (NHLS) previously. Soodyall has done groundbreaking genetic research into the peoples of sub-Saharan Africa in which her studies have identified some of the oldest DNA found in living people today, adding weight to the theory that modern humans evolved in the area now known as southern Africa. She was awarded the *National Order of Mapungubwe: Bronze*, by President Mbeki (September, 2005) for contribution to science. In 2005, she was appointed the sub-Saharan African principal investigator on the Genographic Project − a five-year, worldwide project undertaken by the National Geographic Society to map humanity's migratory history. In 2012, she was awarded the *Gabriel Ward Lasker Prize* for the best paper "Mitochondrial DNA Variation in the Khoe-San" published in *Human Biology* in 2012. In 2017, she was rated as one of the top-ten most visible scientists in South Africa in a study by the Centre for Research on Evaluation, Science and Technology (CREST) at Stellenbosch University (SU). An ASSAf Member since 2003, she was elected to the ASSAf Council in 2011, and appointed General Secretary in 2014 in which position she has been active in the drafting of several strategies and young scientists' activities. Soodyall is a profiled ambassador for science in South Africa and internationally, with experience in research and a knowledge of governance and public administration, as well as engagement at all levels of community in Africa and abroad.

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Prof Stephanie Burton is Professor in Biochemistry, and a Professor at Future Africa at the University of Pretoria (UP), as well as the immediate past Vice-Principal for Research and Postgraduate Education at UP, having served in that role from 2011 to 2020. Prof Burton is the President and a Fellow of the Royal Society of South Africa (RSSA), Vice-President of the Academy of Science of South Africa (ASSAf), a Research Fellow for Universities South Africa (USAf), and the Chairperson of the Future Earth Regional Office for Southern Africa (FEROSA). She holds an MSc in Organic Chemistry (1990) and a PhD in Biochemistry (1994) from Rhodes University.

Her academic career started in Biochemistry and Biotechnology at Rhodes University, and then as Professor in Chemical Engineering at the University of Cape Town. She served as Director of Postgraduate Studies and Director of the Biocatalysis and Technical Biology Group at Cape Peninsula University of Technology before her appointment to the UP Executive. Her research interests are in sustainability, applied biochemistry and biotechnology, and she has published widely and supervised numerous postgraduate students. Professor Burton has a strong interest in research ethics and integrity, and recently has given numerous colloquia in this topical area. She is recognised for her leadership and expertise in research strategy, research management, and performance, postgraduate training, innovation activities, open science and science communication initiatives, and internationalisation programmes. She is currently coordinating national projects on mentoring and capacity development for early career academics, on behalf of USAf. She serves on several national and international bodies related to research and doctoral training.

Dr Sudesh Sivarasu is a professor of biomedical engineering from the Department of Human Biology, University of Cape Town and Director of the Biomedical Engineering Research Centre (UCT – BMERC). He also holds an adjunct appointment at the North-western University, Chicago, USA, as an international lecturer in Global Health and Technology. Dr Sudesh Sivarasu is a qualified electronics and instrumentation engineer, with a master's and PhD in Biomedical Engineering from VIT University, India. His research focuses on developing appropriate medical devices with a special focus on their suitability and translation towards low resourced settings. He has supervised 43 students to completion (including 5 PhD's, 32 MSc's & 6 Hon's students). He is currently supervising 21 students (which include 7 PhDs and 14 MSc students). Dr Sivarasu has published widely in the field of medical devices and orthopaedic biomechanics. He has over 49 peer-reviewed journal publications and 51 peer-reviewed conference publications. Recently (in 2022) he published an open access peer-reviewed book titles 'Medical Device Innovation for Africa – Enabling Industrialisation'.

Dr Sivarasu is currently listed as UCT's prolific inventor with the second most active inventions portfolio across the University. He is the founding Head of UCT MedTech laboratories, which comprises of a Medical Devices Lab (MDL) and Orthopaedic Biomechanics Lab (OBL). He holds over 64 patent applications across 20 patent families of which over 22 granted patents have been granted across, USA, UK, South Africa, Europe and India. He also holds 3 open-source innovations to this credit. His innovations have led to 3 start-up companies from UCT namely reScribe Therapy, Impulse Biomedical and VAS MedTech. These companies were started by student innovators trained at the UCT MedTech comprising of MDL & OBL. Dr Sivarasu conceptualised the multi-award-winning FrugalBiodesign™, a unique medical device innovation methodology. He founded the Medical Devices Lab and co-founded the Orthopaedic Biomechanics Lab. This multi-award winning lab has produced several medical technologies such as reScribe, Laxmeter, PatRig, OpenSource Ptosis Crutches, Zibipen, Easysqueezy and the FlexiGyn platform. He also headed the COVID-19 Medical Devices Task Team which was involved in numerous innovations including the UCT ViZAR, UBUNTUBooth, UCT Hearo, FHS ChatBots, and contributed to the clinician validation of CSIR-LIFE Ventilator device: over 18,000 of these ventilators have been made and implemented across South Africa.

Dr Sivarasu is the recipient of *UCT Deputy Vice-Chancellor's award for achievement in Innovation*, *DST's Innovation Bridge Award* and *NSTF-South 32*, *TW Khambule award for Emerging Researcher* in addition to other *16 MedTech awards* across 4 continents. He is an elected member of the Global Young Academy (GYA) and the South African Young Academy of Science (SAYAS). He is also serving as the Co-Chair of the South African Young Academy of Science (SAYAS)[2021-2022].

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Dr Beverley Damonse is the Group Executive: Science Engagement of the National Research Foundation (NRF) of South Africa, driving policy and strategy development and implementation in the areas of advancement of research and technology, public communication and engagement with science, science education as well as corporate communications and stakeholder engagement. She has more than a decade of senior executive leadership experience within the South African science and education system, having been the previous Executive Director of the South African Agency for Science and Technology Advancement (SAASTA) from 2003-2012. She has well established networks and continues to represent the NRF on various international portfolios and platforms. She obtained a BSc (Microbiology and Plant Pathology), BEd and MEd from the then University of Natal (now University of KwaZulu Natal) and a doctorate degree (Education Policy and Management) from the University of Pretoria.

Dr Nnditshedzeni Eric Maluta is the coordinator for the Vuwani Science Resource Centre at the University of Venda. He is currently a Council member of the South African Institute of Physics (SAIP) and his portfolio is "Physics Teacher Development". He is also a member of the International Union of Pure and Applied Physics (IUPAP) Commission 14: International Commission on Physics Education. Dr Maluta further serves as a member of the Accreditation of Science Centres which resides under the South African Network of Science Centres (SANSC), a DSI/SAASTA initiative.

Dr Maluta holds a PhD from the University of Bath (UK), MSc from the University of Venda and a BSc Honours from the University of the North. His research fucuses on green energy - both experimental and computational. He has promoted several PhD candidates and supervised several Masters and Honours students.

Dr Aldo Stroebel is Executive Director Strategic Partnerships at the National Research Foundation (NRF) of South Africa, and Visiting Fellow at the Institute for African Development at Cornell University, USA. He serves as South Africa's National Contact Point for the ERC to H2020, and on the boards of the Water Research Commission (WRC) and the Agricultural Research Council (ARC). He is a past President of the Southern African Research and Innovation Management Association (SARIMA). In 2017, he was admitted as a Foreign Fellow of the Ugandan National Academy of Science, and is a founding member of the SA Young Academy of Science (SAYAS). Education credentials: University of Pretoria (BSc- and Hons-degrees); University of Ghent, Belgium (Masters in International Agricultural Development); University of the Free State and Cornell University, USA (PhD); Postdoctoral research at Wageningen University, The Netherlands. He has published widely in smallholder farming systems, and has been acknowledged as a leader in the internationalisation of Higher Education, and research and innovation management.