



National Science and
Technology Forum



Advanced manufacturing and automation

11 - 13 September 2019, Cape Town Stadium, Cape Town

#automation #AM

Biographies of Speakers: Day 1

	<p style="text-align: center;">Mr Yanesh Naidoo</p> <p>AS a 12-year-old boy, Yanesh Naidoo sold eggs and curry leaves to earn pocket money. Later, he moonlighted as a DJ to finance his BSc Engineering studies in Mechatronics at the University of Cape Town. Today, as Jendamark’s director of digital strategy, he has a much more interesting product to offer – the ever-evolving technology landscape of Industry 4.0.</p> <p>Yanesh started his career as a project engineer for Volkswagen South Africa, where he was responsible for managing all aspects involved in sourcing equipment for VW’s production facilities. It was this interest in automation that saw him join Jendamark as a business development engineer in 2004, serving various sectors including the automotive, pharmaceutical and packaging industries. After the global economic crash of 2008, when many other industries turned inwards and diversified their interests locally, Jendamark took the bold step of seeking out new international markets and focusing solely on the automotive sector.</p> <p>By then a company director driving this new vision, Yanesh was key in establishing new markets in Europe, Asia, Africa and North America. Under his guidance, Jendamark’s technology exports have grown to over 95% of the company’s annual turnover.</p> <p>Today, he continues to identify opportunities for accelerated growth and aims to stay ahead of industry requirements by developing software solutions and using technologies such as augmented reality and virtual reality to create industry-leading assembly facilities.</p>
	<p style="text-align: center;">Dr Hein Möller</p> <p>Hein Möller obtained his PhD in Metallurgical Engineering at the University of Pretoria in 2011. He was a senior researcher at the Materials Science and Manufacturing operating unit at CSIR, with a research interest in semi-solid metal casting. Thereafter he spent 2 years at the National Laser Centre, where he was involved in the Aeroswift project, which is the world's largest metal powder bed 3D printer. He is currently a co-director of Tiziri Advanced Manufacturing Technologies, a part-time senior lecturer at University of Pretoria's department of Materials Science and Metallurgical Engineering, as well as an affiliated Professor at Jönköping University in Sweden</p>
	<p style="text-align: center;">Mr Gerrie Booyesen</p> <p>Gerrie Booyesen is the director of the Centre for Rapid Prototyping and Manufacturing (CRPM) at Central University of Technology, Free State, in Bloemfontein for the past 11 years. The CRPM was established in 1997 as a research centre offering a service to industry, academia and post graduate students and has approximately 750 clients on its database.</p> <p>Booyesen obtained his PhD degree from Stellenbosch University (Industrial Engineering) and his project focus was on developing a certification framework for 3D printed titanium implants. He is the author/co-author of several articles on AM and product development in accredited academic journals and has read more than 45 papers on AM at local and international conferences.</p>

Ms Ilse Karg



Ilse Karg has a background in serving the National South African government for more than 30 years. Her experience has been in the National Treasury, Public Finance and for the past four years in Trade and Industry. Prior to her appointment in the department of Trade and Industry (the dti), Ilse was responsible for public finance, programme/project financing and national budgets. Her scope of work also included legal work, governance and compliance as well as policy reviews and evaluation, dealing mostly with departments of Trade, Industry, Labour and Education, Small Business, Economic Development, Science, Technology, Environment, Tourism, Science Councils and State Owned Companies.

In June 2017, Ilse was appointed and tasked to establish a new chief directorate for Future Industrial Production Technologies, and to scope the Industry 4.0 and 4th Industrial Revolution (4IR) work through national and international stakeholder engagement forums. The focus areas of Ms.

Karg's current work are developing the South African Digital Industrial Policy and Strategy, contributing to the SA 4IR country strategy, building industrial capacity and skills for Industry 4.0, identify enabling technological change, knowledge diffusion and data governance, and promoting innovation and knowledge intensification in the context of the 4th Industrial Revolution. Her experience in corporate governance, public policy and strategic planning has earned her several appointments on Steering Committees and Boards. Ilse has been re-appointed by Cabinet as a council member of the National Advisory Council on Innovation and is an Executive board director and Deputy Chair of the Intsimbi Future Production Technologies Initiative, a 4IR flagship programme governed by a successful partnership between the South African Government and Industry. She has also been appointed by the Minister of Higher Education to serve on the 4IR task team on Skills for the Future.

Mr John McEwan



John McEwan is the Chief Executive Officer of the Production Technologies Association of South Africa (PtSA). The mission of PtSA is to promote, protect and support the collective interests of the production technologies industry of South Africa.

'Production Technologies provides the means that enables the manufacture of all goods or how we make things.

John McEwan has over 40 years' experience in the engineering industry at an executive level and studied both in South Africa and the United States. Prior to joining PtSA he headed up the Western Cape's region of the National Tooling Initiative, an industry government partnership established to rehabilitate the South African tooling industry for the benefit of the manufacturing sector.

Dr Trudi-Heleen Joubert

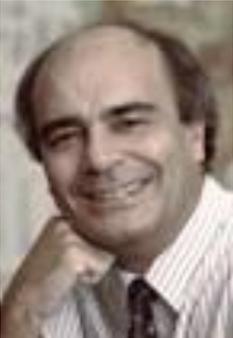


Dr Trudi-Heleen Joubert is registered as a professional engineer with the Engineering Council of South Africa (ECSA), and has been active in integrated circuit design since 1987. She holds a PhD in Electronic Engineering from the University of Pretoria, and her core pursuit is CMOS and BiCMOS mixed signal circuit design, mainly (but not exclusively) in readout and signal processing for imaging arrays, biologically inspired electronic circuit applications, and specialized devices for analog IC design. The most recent endeavour in this field is paper-based printed electronics biosensors at the Material Science and Manufacturing unit of the CSIR. Prior to the CSIR, she consulted to industry through a closed corporation Solid State Technology (SST), and even earlier was employed as an Associate Professor at the Department of Electrical, Electronics and Computer Engineering at the University of Pretoria. The contributions of her work to the South African innovation system spans university teaching, applied research, and leading industrial development of prototypes and products. She has published 10 journal papers, presented and co-authored 23 peer-reviewed conference papers, and supervised several graduate students, while also acting as external examiner for the University of Pretoria and the Cape Peninsula University of Technology. She has lectured 10 short courses to industry in her field of specialization, worked on 27 projects for the South African industry, writing 122 technical reports in the process, and contributing to 30 integrated circuits.

Biographies of Speakers: Day 2

	<p style="text-align: center;">Mr Johan Maartens</p> <p>Johan Maartens is a Professional Engineer with a B.Sc. degree in Mathematics and Physics as well as an engineering degree, B.Sc. (Electrotegniek) from the University of the North West. He is also a PADI Open Water Scuba instructor and a NAUI Divemaster.</p> <p>He is a Director of the SAIMC NPC as well as MESA Africa NPC and a member of the Automation Federation board.</p> <p>Johan started as an electrical engineer at Sasol 1 and later became Instrumentation Manager. He then joined the design team of Mossgas (now PetroSA) and later became the IT Manager. He then joined Siemens Business Services where he established the Enterprise Program Management Office and retired at Siemens as a Senior Project Manager.</p> <p>Johan is currently assisting the Automation Federation to roll out Automation as a separate discipline world-wide and working with ECSA in the registration of Professional Engineers.</p>
	<p style="text-align: center;">Mr Dirk van Dyk</p> <p>Dirk van Dyk is the Chief Executive Officer of the National Technologies Implementation Platform (NTIP), the implementation agency for the Intsimbi Future Production Technologies Initiative Programme. The Initiative is a partnership between industry and government to reposition the South African manufacturing industry for the 4th Industrial Revolution. Dirk is a mechanical engineer with 35 years' experience in specialty areas of manufacturing such as tooling, plastics processing and metal forming technologies.</p>
	<p style="text-align: center;">Mr Sarel Havenga</p> <p>Sarel Havenga is an Idea2Product (I2P) facilitator and academic researcher. He has been involved in additive manufacturing since 2013, when he commenced with 3D printing polymer researching at the Vaal University of Technology. He currently has an Honours degree in Fine Arts, a Masters' degree in Design and is enrolled for a PhD in Education. He is affiliated with various conference and journal bodies as a published presenter and academic peer reviewer in the field of entry level 3D printing and education. At present, he is a principle investigator on the European DiCoMI research project. Mr Havenga was nominated as an emerging researcher in the NSTF-South32 Awards during 2018/2019, participated in the BRICS 3D Printing educators training programme in China, for 4IR during 2017 and was awarded an Erasmus Mundus study grant for educator training in 2015. He holds various publications of which the latest was in the South African Journal of Industrial Engineering and was a speaker for the Fourth Industrial Revolution, change for education (S2M) summit in Manchester, UK. Currently, Mr Havenga is working at the Vaal University of Technology, in Southern Gauteng, where they introduce 3D printing into FET schools and perform pedagogical research to adapt and augment the existing technology curricula.</p>

Biographies of Speakers: Day 3

	<p style="text-align: center;">Prof Paul Nex</p> <p>Paul obtained a first-class BSc. Honours degree in Earth Science from Oxford Brookes University in 1991 and a PhD for his research on uranium mineralization in sheeted leucogranites in Namibia from the National University of Ireland in 1997. His current research interests are in critical metals, particularly antimony, germanium, lithium, tin and rare earth elements, uranium mineralization in Namibia and mineralization in the Bushveld Complex. Prior to joining Wits University as a Professor of Economic Geology in early 2014, Paul worked for Umbono Capital as Senior Geologist since 2007, evaluating natural resources projects including oil and gas, coal, diamonds, PGE's, magmatic Ni-Cu sulphides, gold, rare earth elements, uranium, dimension stone, and industrial minerals.</p>
	<p style="text-align: center;">Prof Dave Reid</p> <p>Dave Reid received his Bachelor of Science degree (BSc.), Honours and MSc in Geology and Geochemistry from Victoria University of Wellington, New Zealand in 1970-73. He obtained his PhD in Geochemistry in 1977 from the University of Cape Town, South Africa where he is Professor Emeritus in the Department of Geological Sciences, after his retirement in 2013. He was a recipient of the Distinguished Teacher Award from UCT in 2000. He is a Fellow and Life Member of the Geological Society of South Africa since 1973 and has three times been awarded their Jubilee Medal in recognition of published research in South African geology and geochemistry. He is a Fellow of the Society of Economic Geologists since 1998. David Reid has published, lectured and consulted widely on topics related to economic geology and geochemistry, with particular emphasis on mineralization in Namaqualand, Bushmanland, Namibia and the Bushveld Complex. He has held Directorships in mineral exploration companies listed on the JSE.</p>
	<p style="text-align: center;">Mr Brent Jellicoe</p> <p>Brent is an independent Geological Consultant who works in the Exploration and Mining community to provide senior geological expertise and project management experience including integration of drilling and geoscience specialist investigations. His career accomplishments include successful execution of multi-disciplinary, multi-year, multi-million-dollar exploration programs for mineral resource delineation and evaluation and reporting. In particular, he was responsible for the resource evaluation and extension of the Steenkampskraal high-grade rare earth deposit in the Western Cape, during 2011 to 2014.</p> <p>He is a recognized Qualified/Competent Person in terms of implementing CIM Best Practices in exploration project design including resource evaluation drilling, sampling, and data collection programs, as well as code-compliant reporting for REEs, diamond, selected industrial minerals. Brent holds a B.Sc. (Hon.) in Geology from the University of Saskatchewan. He is a professionally accredited mineral exploration and evaluation Geologist (P.Geol. (APEGS); Pr.Sci.Nat.; and MGSSA) with 27 years of diverse domestic and international mineral exploration experience in the field as well as in executive management positions.</p>
	<p style="text-align: center;">Mr Davis Cook</p> <p>Davis is the CEO of RIIS, an innovation consulting firm that assists organisations to tackle difficult and complex issues of long-term market relevance and sustainability. He has a long history of working in extractive industries, as well as banking and finance.</p> <p>He has a diverse career history, including strategy, risk and management consulting for various global consultancies in both the UK and SA. He worked as a civil servant for several years, including as advisor to the MEC for Economic Development in Gauteng, focusing on innovation and growth policies for Gauteng. He has also started (and failed) several businesses in SA and the UK. His academic background includes a BSc Physics, BA. PPE, MSc Development Studies, and MBA.</p>