



DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE



PARTICIPATION IN THE
SCIENCE FORUM
SOUTH AFRICA (SFSA)
2025



21 YEARS
2004-2025



science, technology
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CELEBRATING 21 YEARS OF IMPACT: DUT'S VISION FOR INNOVATION AND EXCELLENCE

THIS year, the Durban University of Technology (DUT) proudly celebrates 21 years as a dynamic force in South African higher education.

Since its formation in 2002, through the merger of ML Sultan Technikon and Technikon Natal, DUT has grown into a trailblazer in research, innovation and teaching, with seven campuses across Durban and Pietermaritzburg.

DUT offers diverse programmes across six faculties: Accounting and Informatics, Applied Sciences, Arts and Design, Engineering and the Built Environment, Health Sciences, and Management Sciences. The DUT Business School, part of the Faculty of Management Sciences, is accredited by the Council for Higher Education (CHE) and is a member of the South African Business School Association (SABSA). Its applied curriculum is designed to produce socially responsive business leaders.

At the heart of DUT's mission is a deep commitment to innovation and cutting-edge research. With 20 dedicated research focus areas, from biotechnology to energy sustainability, the university continues to earn national and global recognition, including the prestigious Focused Research Advancement Award from the National Research Foundation (NRF).

Guided by the strategic framework ENVISION2030, launched in 2020, DUT is shaping a creative, entrepreneurial and globally responsive academic community. The strategy outlines a bold vision for transforming lives and livelihoods through education, innovation and community engagement.

The university's tagline "Creative. Distinctive. Impactful." reflects its holistic approach to education. Through platforms like the innobiz Centre for Entrepreneurship and Innovation, students receive both theoretical and hands-on training, equipping them to become change-makers in their fields.

DUT's pursuit of excellence continues to gain international traction. In 2024, the institution was ranked 11th in the Times Higher Education (THE) Sub-Saharan Africa University Rankings, securing its place as South Africa's top university of technology and fifth overall in the country.

As part of its 21st year celebration, DUT is inviting applications for its 2026 Masters and Doctoral programmes, with full scholarships available for qualifying candidates, on its website: <https://onlineapps.dut.ac.za>.

Undergraduate students wishing to apply for 2026 can do so via the Central Applications Office. For more details on all DUT offerings, visit www.dut.ac.za

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FOREWORD

It is my pleasure to introduce this publication, which reflects Durban University of Technology's (DUT) commitment to our institutional strategy, ENVISION2030, and its bold aspiration to cultivate an engaged, innovative, and entrepreneurial university. At DUT, we recognise that the world our graduates enter is rapidly changing, requiring not only disciplinary knowledge but also the ability to think creatively, solve real-world problems, and contribute meaningfully to society. ENVISION2030 positions us to meet these demands by placing engagement, innovation, entrepreneurship, and transformative education at the heart of our work.

An engaged university does more than produce graduates; it partners with communities, industry, government, and global networks to co-create knowledge and solutions. Through our ENVISION2030 Perspectives of Stewardship, Systems and Processes, Sustainability, and Society, DUT anchors innovation in relevance, ensuring that our intellectual work responds to societal needs while uplifting the communities we serve. These Perspectives guide our decisions and actions, ensuring intentionality, accountability, and a long-term vision that benefits both the institution and the public.

A defining feature of DUT's transformation is our revolutionary philosophy of education. This philosophy challenges the traditional mantra of universities of technology, "educating and training for the workplace" and instead positions DUT as an institution that creates workplaces through research, innovation, and entrepreneurship. Our aim is to cultivate graduates who are creators, inventors, problem-solvers and leaders, individuals capable not only of participating in the economy but of shaping and expanding it.

To achieve this, DUT has embraced an educational approach rooted in creativity, innovation and entrepreneurial thinking. Divergent and Design Thinking are nurtured through the Universal Design Learning (UDL) framework, providing a robust foundation for teaching-learning methodologies such as Project-Based Learning (PBL), Problem-Based Learning, and Design Thinking. This evolution in curriculum design directly reflects ENVISION2030, and ongoing work ensures that our programmes fully embody this forward-looking philosophy. Once fully adopted, this approach will further cement DUT's position as a university committed to producing graduates prepared for the complexities, opportunities and challenges of a rapidly changing world.

Our participation in the Science Forum South Africa (SfSA) 2025 exemplifies this commitment. SfSA provides a strategic platform for DUT to showcase our innovations, research strengths and community-engaged initiatives. It affirms our role in the national and international science and innovation landscape and highlights the dynamic link between creative inquiry, engaged scholarship, entrepreneurial thinking and social impact, the core elements that drive DUT's mission and strengthen our global presence.

As we move towards 2030, we continue to build a university that is transformed, future-focused, and grounded in the belief that knowledge must serve humanity. Our graduates remain at the centre of this vision: adaptive, empowered, socially conscious, resilient, and ready to shape the world in transformative ways.

I trust this publication will inspire further dialogue, collaboration, and action as we advance the ideals of ENVISION2030 and reaffirm our commitment to innovation, entrepreneurship, and impactful engagement.

Professor Fulufhelo Nemavhola

Deputy Vice-Chancellor: Research Innovation and Engagement
Durban University of Technology



MESSAGE OF SUPPORT FROM THE INTERIM EXECUTIVE DEAN OF THE FACULTY OF MANAGEMENT SCIENCES

The Faculty of Management Sciences proudly extends its message of support to the colleagues and students from the Department of Entrepreneurial Studies and Management and the Department of Marketing and Retail Management, who will be representing both the Faculty and the University at the Science Forum South Africa (SFSA). This prestigious platform provides an opportunity for scholars, researchers and practitioners to engage in meaningful dialogue on science, innovation and education themes that align closely with the faculty's commitment to driving academic excellence and societal transformation.



Their presentation, titled "Breaking Silos: Cultivating Entrepreneurial Thinking through Design, Collaboration and Real-World Learning," epitomizes the faculty's vision of promoting innovative and interdisciplinary approaches to education. The presentation highlights a transformative pedagogical model designed to equip both students and educators with the essential tools, competencies and mindsets required to address contemporary urban and societal challenges.

Grounded in the integration of Design Thinking (DT), Problem-Based Learning (PBL), and stakeholder collaboration, this approach encourages critical reflection, creativity and solution-oriented thinking. It offers a practical, scalable framework that moves beyond conventional academic boundaries, inspiring collaboration between disciplines and fostering real-world impact. This initiative resonates deeply with the faculty's strategic objectives of nurturing future-ready graduates who can contribute meaningfully to a rapidly changing global landscape.

As the Faculty of Management Sciences, we take immense pride in our esteemed colleagues Dr. S. Mkhize, Dr. T. Reddy, Dr. T. Mofokeng, and Dr. N.P. Zungu whose collective expertise, dedication, and innovation continue to elevate the faculty's academic standing. Their participation in this forum exemplifies the faculty's ongoing pursuit of excellence in teaching, research and community engagement. Through their work, they demonstrate the power of collaboration and thought leadership in shaping education that is both impactful and socially relevant.

This milestone reflects not only the faculty's commitment to interdisciplinary collaboration but also its dedication to positioning the University as a hub of innovation and transformative scholarship. It underscores our shared belief that higher education must evolve beyond the classroom, integrating theory with practice to address the complex challenges facing society today.

On behalf of the Faculty of Management Sciences, I extend my heartfelt congratulations and best wishes to our colleagues and students as they take the stage at the Science Forum South Africa. We are confident that their presentation will not only showcase the faculty's academic excellence but also inspire meaningful dialogue and partnerships that contribute to building a more innovative and inclusive society. Let us continue to break silos, inspire change and cultivate the entrepreneurial spirit that lies at the heart of transformative education.

Professor Melanie Lourens

Interim Executive Dean
Faculty of Management Sciences
Durban University of Technology

DUT EXCITED TO PARTICIPATE IN THE PRESTIGIOUS SFSA 2025

The much-anticipated Science Forum South Africa 2025 (SFSA 2025) is from 24 to 28 November 2025 at the Council for Scientific and Industrial Research International Convention Centre (CSIR ICC), Tshwane, South Africa.

The objective for such a forum is to create a platform for a vibrant debate on the role of science, technology and innovation in society; to promote international science, technology and innovation partnerships; and to create a platform for key science, technology and innovation actors, including senior government leaders, academics, scientists, industry, civil society, and students to interact.

The event is co-hosted by the DSTI together with the CSIR through the Science Diplomacy Capital for Africa (SDCfA). SFSA2025 will comprise of opening and closing plenaries igniting conversations and discussions by and involving leading South African and international scientists, experts and thought leaders. The programme brings together more than 4 500 participants for discussion and debate, and includes an exhibition and public outreach activities.

In relation to the themes under discussion, other aspects pertaining to financing for science, technology and innovation, building research capabilities for Africa, the role of science diplomacy, and entrepreneurship and innovation where discussions on grassroots and innovation for social development will be explored, as well as what can be better enhanced within the ecosystem in support of entrepreneurship both nationally and internationally.

An exciting highlight of SFSA 2025 is the highly sought-after exhibition, in which DUT has been granted the opportunity to participate alongside partners from the National System of Innovation as well as international exhibitors. In addition to being part of this dynamic exhibition, DUT is also hosting a panel session during the Science Forum South Africa (SFSA) 2025, showcasing the University's contribution to this important national platform.



This year, 13 TTI's Incubation Programme Beneficiaries will participate in the SFSA 2025 and showcase their innovations. The innovators play a crucial role by demonstrating the DUT's ENVISION2030 and Living values that speaks to an engaged university, innovation and entrepreneurship and adaptive graduates. The innovators will enhance the DUT community by pioneering the DUT perspective on society that views a society as premised on a dynamic and innovative solutions-focused interaction with, and impact on, society at both local and global levels. This DUT strategic perspective frames the point of impact of the work at the University, as aspirational as it is outcomes-and impact-oriented. These innovators are thus bearers of DUT three strategic objectives: An Engaged University; Innovation and Entrepreneurship and adaptive graduates.

The intention is to expand the programme to incorporate all innovation ideas coming from curriculum content, academic research and problem solving through PBL initiatives. DUT TTI does not push an isolated agenda in its operation, rather it augments interdisciplinary and multifaceted initiatives run by academic departments and administrative units and divisions especially the Research, Innovation and Engagement (RIE) Unit. It intertwines teaching and learning with research all in technology transfer, innovation, and entrepreneurship development for an Engaged University with Adaptive graduates.

The panel session, coordinated by academics from the Faculty of Management Sciences (FMS), features speakers and panellists from DUT as well as partner institutions such as the University of South Africa (UNISA) and the Council for Scientific and Industrial Research (CSIR). The session aims to empower educators, students, and stakeholders by promoting an integrated, real-world learning framework that fosters entrepreneurial thinking, interdisciplinary collaboration, and measurable social impact.

The panel is titled "Breaking Silos: Cultivating Entrepreneurial Thinking through Design, Collaboration and Real-World Learning." The session forms part of a series of panel discussions at SFSA 2025 and is aligned with this year's overarching forum theme.

The focus of the panel session is on the Project-Based Learning and Design Thinking as a teaching and learning that equips students not only with academic knowledge but with the creative confidence to design solutions that respond to real community and industry challenges. It is about shaping graduates who can think differently and act with purpose.



PANEL SESSION PROGRAMME

SESSION TITLE:

BREAKING SILOS: CULTIVATING ENTREPRENEURIAL THINKING THROUGH DESIGN, COLLABORATION, AND REAL-WORLD LEARNING

Time: 08h00 – 09h30

Date: 26 November 2026

Venue: Onyx, CSIR ICC

Moderator: Dr Tessa Reddy, DUT

ITEM	SPEAKER	TIME
1. Opening and Welcoming	A brief introduction to the session goals and relevance to the Entrepreneurship and Innovation subtheme. Dr Sandile Mkhize Academic: Marketing & Retail Management Durban University of Technology (DUT)	10 Min
2. Keynote Speaker	DUT's ENVISION2030's strategic alignment to Innovative Engagement and Entrepreneurship Prof Molusiwa Ramabodu Acting Executive Dean: Faculty of Engineering and the Built Environment Durban University of Technology (DUT)	20 Min
3. Panel Discussion	Case Studies: Bringing the Framework to Life Real-world examples illustrating the Application of Design Thinking, Problem-Based Learning, and Stakeholder Engagement Reflection on Student-led Interventions and their Impact Dr Siyabulela (Siya) Ntutela Business Development Specialist, University of South Africa (UNISA) Ms Anne Gabathuse Executive Manager: Business Development & Commercialization, Council for Scientific and Industrial Research (CSIR) Dr Thuli Mofokeng Academic: Entrepreneurship Studies & Management, Durban University of Technology (DUT)	40 Min
4. Q&A Session		10 Min
5. Closing Reflections and Takeaways	Dr Tessa Reddy Academic: Marketing & Retail Management, Durban University of Technology (DUT)	10 Min





The Durban University of Technology (DUT) is a trailblazer in higher education, innovation, and societal impact. With seven campuses across Durban and Pietermaritzburg, DUT stands at the forefront of academic excellence and real-world relevance. Its six dynamic faculties offer a range of forward-thinking, market-aligned programmes that prepare students to lead in a rapidly evolving world.

Guided by its bold ENVISION2030 strategy, DUT is cultivating a generation that is creative, distinctive, and impactful. Students and staff are empowered to think innovatively, act entrepreneurially, and shape solutions for global and local challenges.

At the heart of DUT's identity is a deep commitment to research, innovation, and community engagement. With nationally and internationally recognised research centres, institutes, and focus areas, DUT is more than a place of learning, it's a hub of transformation.

Whether you're driven by purpose, passion, or progress, DUT offers more than just a qualification, it offers a journey of growth, leadership, and impact.

RESEARCH INSTITUTES

- Institute for Systems Science
- Institute for Water and Wastewater Technology

RESEARCH CENTRES

- Centre for African Governance and Development
- International Centre of Nonviolence

RESEARCH FOCUS AREAS

- African Indigenous Knowledge
- Systems Research
- Composite Research Group
- Computational Modelling and Bioanalytical
- Chemistry
- Energy
- Enzyme Technology
- Food & Nutrition Security
- Gender Justice and Human Health Development
- Global Health and Sustainability
- Green Engineering
- Management Studies
- Maternal Health
- Plant Biotechnology
- Smart Grid
- ICT and Society
- Space Science
- Transformation Through the Arts and Design

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SPEAKERS AND PANELISTS BIOGRAPHIES

DR SIYABULELA (SIYA) NTUTELA

Business Development Specialist at University of South Africa (UNISA)

Siya joined the UNISA Directorate for Innovation, Technology Transfer & Commercialization at UNISA in 2025 to facilitate the commercialization of technologies and research outputs.

He is also the Managing Director & Founder of Intini Research and Consulting, bringing expertise in innovation and business strategy. His background reflects a strong focus on biotechnology and leadership roles across diverse sectors.

Dr. Ntutela served as the Executive Vice President and as CEO at AfricaBio, an independent, non-profit biotechnology stakeholders association focused on providing accurate information and creating awareness of biotechnology and biosafety in South Africa and the African region. During his tenure at AfricaBio he launched the BIO Africa Convention.

Dr. Ntutela's experience extends to the international stage, having served as the Deputy Chair at The International Council of Biotechnology Associations, in Washington DC, USA. This is an international council promoting and advocating for biotech innovation in human health, agriculture and industrial and environmental sectors. He also served as an Ambassador for Life Sciences Queensland, a life sciences industry body in Australia, fostering growth within the life sciences sector.

Prior to his roles in biotechnology, Ntutela served as Chief Operating Officer & Interim Chief Executive Officer at iThemba Pharmaceuticals. Earlier in his career, he was the Senior General Manager Operations at the Technology Innovation Agency (TIA) and Chief Operations Officer at PlantBio, one of the founding entities that were merged into forming TIA. Ntutela also held Non-Executive Director positions in a number of biotechnology startups such as Xsit and Capelands.

Dr. Ntutela is a Fogarty Fellow, held at Public Health Research Institute, UMDNJ, USA. He holds a Doctor of Philosophy in Pharmacology from the University of Cape Town.



MS ANNE GABATHUSE

Executive Manager: Business Development & Commercialisation

Anne Gabathuse currently serves as the Executive Manager for Business Development and Commercialisation at CSIR Smart Society. With a career spanning over 13 years in the field of technology transfer, her vast wealth of experience has equipped her with an impressive skillset for managing and commercialising intellectual property. Anne's academic background features a BSc (Hons) in biochemistry and an MSc in chemical engineering, both earned at the prestigious University of Cape Town. Her thirst for knowledge also led her to obtain a Master of Business Administration from the University of KwaZulu-Natal.

Anne's proficiency in technology transfer and intellectual property management plays an integral role in shaping business development and commercialisation strategies. Beyond her professional accomplishments lies an individual who is deeply passionate about pushing boundaries within the tech industry. Under her stewardship, the division continues to carve its niche as a forward-thinking player within the research, development and innovation sector, amidst rapid advancements in innovation.

Anne's unique blend of passion, expertise, leadership qualities and constant drive for improvement makes her a forerunner in her field. She not only brings value to Smart Society with her extensive experience but is also set on shaping its future direction with great foresight.



PROF. MOLUSIWA STEPHAN RAMABODU

Acting Executive Dean, Faculty of Engineering and the Built Environment

Prof. Molusiwa Stephan Ramabodu is an accomplished academic and professional quantity surveyor with over two decades of experience spanning higher education, professional consultancy and leadership in the built environment. He currently serves as Acting Executive Dean, Faculty of Engineering and the Built Environment. He is also an Associate Professor and Head of the Department of Construction Management & Quantity Surveying at the Durban University of Technology (DUT), South Africa.

He holds a PhD in Quantity Surveying from the University of the Free State, where his research focused on procurement strategies and cost planning success. His academic career includes progressive roles at the University of Pretoria, University of Johannesburg, and University of the Free State, where he has taught and developed undergraduate and postgraduate programmes, many of which received accreditation under his leadership.

Beyond academia, Prof. Ramabodu is the founder and director of QS-Online Quantity Surveyors, and he has held leadership roles in private practice and national professional bodies, including serving as President of the Association of South African Quantity Surveyors (ASAQS). He also chaired the ASAQS Fees Committee and held council chair positions for peer-reviewed journals. A prolific researcher, Prof. Ramabodu has published over 30 peer-reviewed journal articles and 33 international conference papers, making significant contributions to topics such as sustainable construction, construction robotics, procurement systems, and professionalization in the built environment. His work is widely cited and reflects a commitment to both scholarly excellence and practical industry impact.

His achievements have been recognised with awards such as the Pentad Best Academic Paper and substantial external funding for research conferences and public lectures. He is also an active contributor to national policy and industry development through partnerships with bodies such as the CIDB, CETA, and the Council for the Built Environment.



DR THULILE MOFOKENG

Academic: Entrepreneurship Studies & Management

Dr Thulile Promise Mofokeng is an award-winning academic with over 12 years of higher education experience. She holds a PhD and Master of Management Sciences (Hospitality & Tourism), where her research focused on entrepreneurship development in ecotourism as a key economic sector in South Africa. Her areas of specialisation include ecotourism, sustainable development, tourism, entrepreneurship and work-integrated learning.

She was the national 1st place recipient of the Entrepreneurship Development in Higher Education (EDHE) Teaching Excellence Award in 2023, the first ever recipient of the Faculty of Management Sciences Emerging Teaching Excellence Award at DUT (2023), and won Best Presenter at the 4th International Conference on Robotics, Automation, and Artificial Intelligence (RAAI 2024) in Singapore. The case study from her EDHE win is set to be published in the prestigious SCOPUS database, solidifying its global impact and visibility.

Her international academic engagements include a staff mobility training programme on Entrepreneurship and Design Thinking at JAMK University of Applied Sciences in Finland (2024), further broadening her expertise in global higher education innovation. Dr Mofokeng is recognised for pioneering curriculum design that integrates sustainability, applied methodologies and entrepreneurship. She lectures and supervises postgraduate students up to PhD level, publishes in accredited journals and contributes to international scholarly communities. Beyond teaching and research, she is a sought-after keynote speaker and facilitator on platforms such as the G20 Women Leaders initiative, advancing inclusive and entrepreneurial approaches in higher education.



DR TESSA REDDY

Academic: Entrepreneurship Studies & Management

Dr Tessa Reddy is a Lecturer and Work-Integrated Learning (WIL) Coordinator in the Department of Marketing and Retail Management at the Faculty of Management Sciences at the Durban University of Technology (DUT). She holds a PhD in Management Sciences (Marketing) and is deeply committed to transforming teaching and learning through innovation, design thinking and project-based learning-focused pedagogy.

Her teaching philosophy is grounded in experiential and design-thinking methodologies that empower students to become empathetic, creative, confident, adaptable, and work-ready graduates. As WIL Coordinator, she forges strong partnerships with industry leaders such as TFG, Jam Clothing, NMI-DSM, to name a few, ensuring that students gain authentic, hands-on learning experiences.

Dr Reddy's research interests include Omnichannel retailing, digital and social media marketing, the Fourth Industrial Revolution, marketing communications and graduate employability. She has co-authored several journal articles and book chapters and continues to advance research that bridges marketing theory and real-world practice.

Recognised for her excellence in teaching and curriculum innovation, Dr Reddy has received multiple institutional awards, including the Innovative Teaching and Learning Award from both DUT's Centre for Excellence in Learning and Teaching (CELT) and the Faculty of Management Sciences.

Beyond academia, Dr Reddy is passionate about mentorship, leadership development and personal growth. Guided by her personal ethos, "Knowledge on the Move", she continues to inspire students and colleagues to think differently, lead purposefully and design their own success stories.



DR SANDILE MKHIZE

Academic: Marketing & Retail Management

Dr Sandile Mkhize is a Lecturer and Departmental Research Chair (DRC) in the Department of Marketing and Retail Management at the Faculty of Management Sciences at the Durban University of Technology (DUT). He lectures at both undergraduate and postgraduate levels, teaching modules such as Strategic Brand Management, Marketing Research Theory, Product Management and Applied Research Proposal Writing. He holds a Doctor of Philosophy (PhD) in Marketing Management from the University of KwaZulu-Natal (UKZN) and is deeply committed to transforming teaching and learning through innovation, design thinking and project-based learning-focused pedagogy.

Dr Mkhize's research bridges marketing, sustainability and education, with particular interest in sustainable consumer behaviour, organic food adoption, SDG awareness among youth, and the Scholarship of Teaching and Learning (SoTL). His work aligns closely with Sustainable Development Goals (SDG), Agenda 2063 and the Fourth Industrial Revolution (4IR), focusing on how innovation and interdisciplinary learning can enhance employability and social impact in higher education.

In addition to his academic career, Dr Mkhize brings over 14 years of industry experience from organisations such as Deloitte Consulting, Amalgamated Beverage Industries, KZN Wildlife, and Sasfin Commercial Solutions. This blend of academic expertise and professional practice informs his applied, industry-relevant teaching and research approach.

Dr Mkhize is deeply committed to advancing sustainability-driven marketing scholarship and fostering graduate employability through Design Thinking and Project-Based Learning (PBL) approaches in higher education.



DUT Students Selected to be Part of the Prestigious SFSA 2025

“Being selected to participate in the Science Forum South Africa (SFSA) 2025 is an incredible honour that affirms my commitment to advancing sustainability and scientific innovation. I look forward to engaging with researchers, policymakers and fellow students to exchange ideas and to explore how science can drive positive change,” said an elated **LERATO TSOKA**, an Advanced Diploma in Marketing student at the Durban University of Technology (DUT).

Tsoka will be part of the prestigious Science Forum South Africa 2025 (SFSA2025) which will be held from 24 to 28 November 2025 at the Council for Scientific and Industrial Research International Convention Centre (CSIR ICC), Tshwane South Africa.

The event, co-hosted by the DSTI together with the CSIR through the Science Diplomacy Capital for Africa (SDCfA), will bring together more than 4 500 participants for discussion and debate, and includes an exhibition and public outreach activities. One of the objectives for such a forum is to create a platform for a vibrant debate on the role of science, technology and innovation in society.

For Tsoka, being selected to participate in the Science Forum South Africa (SFSA) 2025 is an incredible honour that affirms her commitment to advancing sustainability and scientific innovation.

She indicated that students benefit greatly from events like SFSA 2025 because they encourage teamwork, critical thinking and exposure to many viewpoints that motivate young people to effect change. “My objective is to keep supporting community-based initiatives and research that support South Africa’s sustainability agenda after this event. ENVISION2030 and SFSA 2025 share a common purpose – to accelerate progress toward inclusive innovation and the Sustainable Development Goals. I am proud to be part of this journey towards a more sustainable and equitable future,” she emphasised.

Another dynamic student chosen to represent at the Science Forum South Africa 2025 is **SINOTHILE LUTHULI**, an Advanced Diploma in Marketing student at DUT. She said she is honoured to be selected to represent DUT at the Science Forum South Africa 2025.

“I feel grateful and excited to be part of a national platform that celebrates innovation, collaboration and the exchange of ideas among young thinkers. I look forward to engaging with diverse perspectives and learning how science and marketing can work together to create meaningful and sustainable solutions.

Luthuli, who is passionate about creative problem-solving and sustainability in marketing, recently worked on a Design Thinking project focused on developing an eco-friendly packaging solution for Zak’s Fast-Food, which deepened her interest in using innovation to address real-world challenges.



Lerato Tsoka



Sinothile Luthuli

Luthuli believes that events like the Science Forum South Africa 2025 are vital for students because they promote critical thinking and allow for engaging in discussions that influence the future. Her goal is to build a research-focused career that examines consumer behaviour, market dynamics and sustainable practices aiding in data driven decision-making in marketing.

“For me, ENVISION2030 and the Science Forum South Africa 2025 have a shared objective, to foster innovation, inclusivity and sustainable growth in alignment with the United Nations Sustainable Development Goals. I am both motivated and honoured by this chance to represent DUT, aspiring to encourage fellow students to think creatively and drive positive change in their fields,” she highlighted.

Commenting on the selection of students, Dr Tessa Reddy, a lecturer in the Marketing and Retail Department at DUT, said: “As part of the selection process, students were required to submit a short video explaining their design thinking journey and why they should be chosen.

Ms Tsoka impressed us with her innovative thinking, leadership, and clear communication, while Ms Luthuli stood out for her creativity, resilience, and community-focused approach. These are two exceptional young women who have consistently demonstrated passion, purpose and leadership in their academic journeys. Both ladies are shining examples of the future of Management Sciences, young, dynamic and ready to make their mark on national and global platforms. Their selection is a testament to their hard work, courage and ability to inspire others throughout their academic journey,” said Dr Reddy.

She explained further that their participation will enhance the faculty’s visibility, showcase DUT’s commitment to research and innovation, and inspire fellow students to engage more actively in research, design thinking and public discourse.

“It will also highlight that Management Sciences is a critical part of the broader scientific conversation, worthy of being showcased at national platforms such as Science Forum South Africa (SFSA) 2025,” she said.





DUT Innovator to Showcase her Business Tech4tomorrow at the Science Forum South Africa 2025

A student entrepreneur from the Durban University of Technology (DUT), Ms Sibongakonke Mdladla is looking forward to showcasing her creativity and business, Tech4Tomorrow, at the upcoming Science Forum South Africa (SFSA2025). This prestigious event themed: Igniting Conversations about Science – Placing Science, Technology and Innovation at the Centre of Government, Education, Industry and Society – will be held at the Council for Scientific and Industrial Research International Convention Centre (CSIR ICC) in Tshwane from Monday, 24 November 2025 to Friday, 28 November 2025.

Ms Mdladla (20) from KwaMashu is a third-year Business Administration student at DUT. She has a passion for Marketing, Public Relations and Operations. "When I'm not hitting the books, you can find me drawing, editing, painting or writing. Nature is my happy place," she said.

Sharing her excitement on being selected as one of the student exhibitors for the SFSA2025, Ms Mdladla said: "I'm thrilled and honored to be selected for SFSA2025. It's a dream come true to be part of this prestigious event and I'm



eager to learn from the best minds in science and beyond. I'm looking forward to engaging with like-minded individuals, learning from industry experts and exploring innovative ideas that can shape the future."

For Ms Mdladla the highlight of the SFSA2025 will be the networking opportunities, hands-on experiences and gaining insights into the latest scientific advancements.

She believes it is crucial for students to participate in events like SFSA 2025 as it provides a platform to explore their interests, gain knowledge and network with professionals in their desired fields. She is honoured to be part of the SFSA2025 which she believes is aligned to DUT's ENVISION2030 strategy which encourages students to be creative, innovative and entrepreneurial.

"I aim to leverage my Business Administration skills and kickstart my corporate career while developing Tech4Tomorrow. DUT's ENVISION2030 aligns perfectly with the spirit of SFSA 2025. Both emphasise innovation, excellence and making a positive impact. As a student I'm excited to embody these values and contribute to shaping a brighter future for our community. ENVISION2030's focus on producing adaptive graduates who can contribute to societal development resonates with SFSA 2025's goal of advancing science for the empowerment of society," shared Ms Mdladla.

Providing insight on her business Tech4Tomorrow, Ms Mdladla said it is a student-driven initiative which she indicated exemplifies how science and technology can be harnessed to address real societal challenges, including bridging the digital divide in underserved communities.

"By establishing computer labs in disadvantaged schools across KwaZulu-Natal, Tech4Tomorrow places technology and innovation directly into the hands of learners, empowering them with digital literacy, coding as well as software development skills. It reflects the SFSA's vision of science for humanity, where inclusive access to technology becomes a catalyst for education and community upliftment," added Ms Mdladla.

Dr Thulile Mofokeng, Lecturer in the Department of Entrepreneurial Studies and Management congratulated Ms Mdladla for being selected to be part of the SFSA2025 and for her ability to move beyond theoretical understanding and translate learning into meaningful impact.

"Their initiative, Tech4Tomorrow, emerged as an actionable solution to a pressing societal challenge, the digital divide in rural education. Their commitment to inclusivity, their collaborative spirit made them ideal candidates. They demonstrated leadership, empathy and a deep sense of purpose which are qualities that align perfectly with the values of the Science Forum South Africa," shared Dr Mofokeng.

She believes their participation at SFSA 2025 positions the Faculty of Management Sciences and DUT as a hub of socially responsive innovation. By showcasing Tech4Tomorrow on a national platform, Dr Mofokeng said they will elevate the visibility of student-led research and entrepreneurship and reinforce DUT's commitment to community engagement and transformative education.

"The initiative directly contributes to Sustainable Development Goal (SDG) 4: Quality Education by promoting inclusive and equitable access to digital learning resources in disadvantaged schools, empowering learners with the skills needed for the future. Simultaneously, it advances SDG 9: Industry, Innovation and Infrastructure by fostering grassroots technological innovation and laying the foundation for digital infrastructure in underserved communities," added Dr Mofokeng.

Additionally, she said Tech4Tomorrow's work inspires a culture of active citizenship and interdisciplinary collaboration, enhancing the faculty's reputation as a space where science, technology and innovation are harnessed for real-world change.



DUT's Dr Vimla Paul to Showcase her Innovative Biodegradable Sanitary Pad

A staff member at the Durban University of Technology (DUT), Dr Vimla Paul will be showcasing her innovative project, Biodegradable Sanitary Pad at the Science Forum South Africa (SFSa2025), to take place at the Council for Scientific and Industrial Research International Convention Centre (CSIR ICC) in Tshwane from Monday, 24 November 2025 to Friday, 28 November 2025. This year's event is themed: Igniting Conversations about Science – Placing Science, Technology and Innovation at the Centre of Government, Education, Industry and Society.

Elaborating on her project, Dr Paul indicated she was inspired by the intersection of two pressing issues: menstrual hygiene challenges faced by rural girls and the environmental impact of plastic-based sanitary products. Seeing how banana farming generates large amounts of fiber waste, Dr Paul saw an opportunity to turn this agricultural byproduct into something meaningful and sustainable.

"We are making eco-friendly sanitary pads using banana plant waste. These pads are biodegradable, safe and affordable, especially for girls in rural areas who often lack access to proper menstrual products. Natural banana fibres from the pseudostem are cleaned washed and processed into pulp, which is dried and fluffed. The hydrogel is added for moisture absorption. Antimicrobial and antifungal reagents are added, and the fibers are moulded into a pad with a semi-porous top layer and an impermeable bottom layer," explained Dr Paul.

Through this project, Dr Paul said they aim to address the lack of access to affordable and hygienic menstrual products for rural girls. She said they also aim to eliminate environmental pollution caused by non-biodegradable sanitary pads.

Sharing the methods used in developing this product, Dr Paul said they extracted banana fiber from agricultural waste, tested its absorbency, softness, and biodegradability and then prototyped pad designs using natural binders and layers.

Dr Paul indicated that it was challenging to make the fiber soft and comfortable, which meant they had to be creative and experiment with natural treatments like binders and steam softening. Another challenge was ensuring the pads were absorbent enough, they had to experiment with layering the banana fiber pulp with other biodegradable materials like cotton. They also faced the cultural stigma around menstruation, they plan to partner with local educators to run awareness workshops.

Dr Paul said she has always had a love for chemistry growing up, as she was curious about how things worked, especially in nature. She shared that chemistry fascinated her because it explained everyday phenomena, from cooking to cleaning to medicine.

"I love how science can solve real-world problems. It's empowering to take a concept from the lab and turn it into something that improves lives. Through this project, I have learnt that banana fibre, which is usually discarded, has amazing properties, it's strong, absorbent, and biodegradable. Nature truly offers elegant solutions," added Dr Paul.

She extended her gratitude to her doctoral supervisor Prof. K Kanny who she said has been a guiding force in her academic journey. "His dedication to research and mentorship has deeply influenced my approach to science and education," reiterated Dr Paul.

Dr Paul hopes to continue developing sustainable solutions through chemistry and education and eventually establish a community-based innovation hub that empowers young scientists, especially girls in rural areas.



TempSense Advancing Smart Environmental and Occupancy Monitoring for Modern Spaces

As the world continues to embrace digital transformation, buildings across sectors from education and healthcare to business and public services are becoming increasingly dependent on technology to improve comfort, productivity and safety. In this rapidly changing landscape, the need for intelligent indoor monitoring solutions has intensified. Responding to this growing demand, TempSense emerges as an innovative system designed to provide real-time environmental and occupancy insights for smarter, more efficient indoor spaces.

TempSense developed by Saneloisekile Nqabeni, was conceived to solve every day but often unnoticed problems that negatively affect indoor environments. Many rooms become too warm, too cold, poorly ventilated, or overcrowded without anyone realizing the change until discomfort arises. These issues not only reduce the quality of the indoor environment but also lead to energy waste as heating, cooling and ventilation systems operate inefficiently. TempSense confronts this challenge by combining advanced temperature monitoring with occupancy detection, offering instant feedback that helps users adjust their environment before it becomes uncomfortable or energy ineffective.

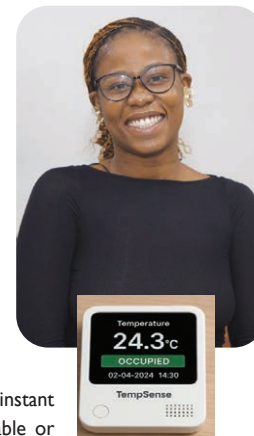
At the core of the TempSense system is the Portenta H7 industrial microcontroller, a powerful processing unit designed to support complex, high-performance applications. Motion and temperature sensors feed live data into the device, which then displays information through a clean, intuitive digital interface. Users can easily understand the status of a room immediately, enabling quicker decision-making regarding ventilation, energy use and overall environmental management. The development process involved detailed attention to sensor calibration, accuracy testing, hardware-software integration and interface design, ensuring that the system remains reliable, user-friendly and efficient.

The journey of building TempSense included numerous stages of learning, collaboration and problem-solving. Initial prototypes required careful testing to ensure that temperature readings remained stable under varying conditions and that motion sensors could accurately detect human presence without false triggers. Over time, improvements were made to the display system, enabling clearer visual outputs and smoother interaction. These continuous refinements reflect the core value of innovation iterating, testing, and improving until the technology performs seamlessly.

TempSense is also rooted in a deeper passion for STEM innovation and community-oriented problem-solving. The project draws inspiration from global advancements in the Internet of Things, automation, and sustainable technology fields that continue to influence the direction of the system as it evolves. The vision behind TempSense extends beyond the technical solution itself; it reflects a commitment to creating technology that enhances people's daily experiences and contributes to more sustainable, healthier environments.

Looking to the future, TempSense holds exciting potential to grow into a fully intelligent building-management tool. With the integration of artificial intelligence, the system could predict environmental changes before they occur, prompting automated adjustments to maintain optimal conditions. Cloud-based analytics could allow building managers to access long-term trends, improve energy planning, and anticipate maintenance needs. Such future advancements would position TempSense not just as a monitoring device, but as a powerful tool for smart building automation.

TempSense is more than a technological innovation – it is a forward-thinking solution that responds to real-world challenges faced by modern indoor environments. By merging creativity, engineering and user-centered design, the project aims to inspire other young innovators to develop technologies that make meaningful contributions to society. As TempSense continues to evolve, it stands as a testament to what can be achieved when passion meets purposeful innovation.



The Vision and Journey of Mavutha in Commercialising the Apparel Technology Department at DUT

Winiswa Mavutha, a lecturer in the Department of Textile Science and Apparel Technology at the Durban University of Technology (DUT), is leading a bold initiative that is reshaping the future of apparel education. With her academic grounding in Entrepreneurship and Small Business Management, paired with hands-on retail and e-commerce experience at the Mr Price Group, Ms. Mavutha brings a rare and powerful blend of theory, practice and industry insight into her work.

Her idea to commercialise the Apparel Technology Programme was sparked by a desire to bring learning closer to real-world industry demands. As she explains, "Our students are talented and creative, but the gap between classroom learning and practical industry experience is still too wide. I wanted to build something that transforms education into opportunity." This vision also responds to the pressing issue of youth unemployment in South Africa, positioning education as a platform for empowerment rather than a pathway with uncertain outcomes.

Central to her mission is the creation of a self-sustaining commercial unit within the department, a space where students can engage with the full value chain of apparel production. The flagship project focuses on the manufacture of DUT-branded academic gowns and merchandise. Through this initiative, students participate in hands-on activities such as product development, manufacturing, quality control, marketing and client engagement.

Ms. Mavutha describes the project as "a living classroom where learning is not just observed but experienced". Her aim is to cultivate graduates who are not only employable but capable of creating employment. By fostering entrepreneurial thinking, creativity and adaptability, she hopes to prepare students to become drivers of innovation in the South African apparel sector.

A key partner in turning this vision into a scalable reality has been DUT's Technology Transfer and Innovation (TTI) office. TTI has provided mentorship, commercialisation guidance and assistance in refining the business model. They have also supported the process of securing startup funding and aligning the initiative with the broader innovation ecosystem of the university. Reflecting on this support, Ms. Mavutha stated: "TTI helped transform an idea into a structured, achievable plan. Their support ensured that this initiative is not just inspiring but sustainable."

Ultimately, Mavutha's journey demonstrates how academic programmes can evolve into dynamic business ventures with meaningful social impact. Her work embodies DUT's commitment to innovation, entrepreneurial education and community engagement. By merging teaching, industry practice and enterprise, she is helping shape a generation of students who are equipped not only to participate in the world of work but to transform it.

Her story stands as a testament to what becomes possible when passion, expertise and purpose intersect creating opportunities, empowering youth and reimagining the future of apparel technology in South Africa.



Turning Vision into Tech Innovation with Jon-Thabsie Class

Born and raised in the vibrant province of Limpopo, Cheyeza Shikwambana is a young trailblazer whose journey reflects resilience, purpose and unstoppable ambition. At only 25 years of age, she is already shaping a future defined by technological innovation and empowerment.

Cheyeza is a proud alumnus of the Durban University of Technology (DUT), who is currently advancing her studies at Business School, driven by an enduring commitment to curiosity, courage and continuous learning.

For Cheyeza, opportunity is not something to wait for, it is something to create. As a young black woman with a powerful vision, she is determined to break barriers, close gaps and turn challenges into catalysts for progress.

She embodies the spirit of a new generation of leaders. Every step she takes is guided by personal growth, social impact, and a deep desire to uplift her community. Her greatest inspiration is her father who is her lifelong supporter and motivator. His unwavering belief in her dreams shaped her path in technology.

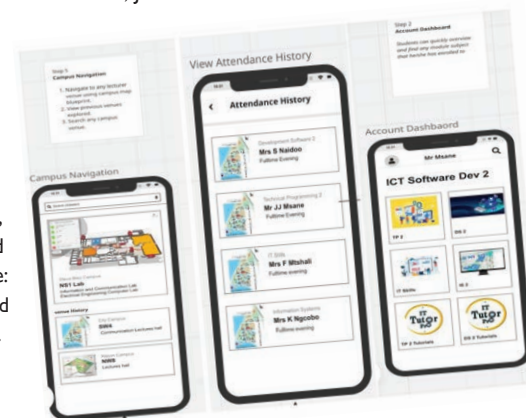
A defining moment came in 2011, when her father (John) survived a serious car accident, and he had to wait eight long hours for help in a remote area. From that moment, Cheyeza made a promise that whenever a problem causes delay or hardship, she will build a technological solution to fix it.

"My father is my greatest supporter and lifelong confidant, he has always encouraged every dream I have ever had, even when others thought I was being delusional," she expressed.

That promise gave birth to Jon-Thabsie Class, an innovative mobile application dedicated to making campus life smarter, simpler and more connected. Designed for both students and lecturers, the platform offers powerful features such as a GPS venue locator, digital attendance system and secure digital notes that remain safe and accessible even if a device is lost or damaged.

Developed through extensive research and student feedback, Jon-Thabsie Class tackles real challenges: navigating large campuses, resolving attendance disputes, and protecting academic data during disruptions. It enhances productivity, strengthens learning communities, and ensures that technology truly serves the needs of students.

Guided by her father and her mentor, Dr. Faria, Cheyeza continues to grow as a leader and innovator. Her message to dreamers is simple: "Your vision is yours, protect it, nurture it, and turn the impossible into reality," she concluded.



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