

**Quarter 2, 2025**

# **RESEARCH AND INNOVATION NEWS**

The Newsletter of the  
**DVC: Research, Innovation and Engagement**



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# DUT RESEARCH DIRECTOR TO LEAD STREAM AT PRESTIGIOUS WATER AND SANITATION DIALOGUE

Alan Khan

Pictured: Dr Nomcebo Mthombeni,



The Durban University of Technology (DUT) is proud to announce that Dr Nomcebo Mthombeni, Interim Director: Research and Postgraduate Support, has been nominated as a Stream Lead for the prestigious AWSISA Africa & Global South Water and Sanitation Dialogue, scheduled to take place in Johannesburg from 09 to 12 November 2025. More than 1 500 delegates are expected to attend the three day symposium.

This high-level Association of Water and Sanitation Institutions of South Africa (AWSISA) event will convene thought leaders, policymakers, researchers and practitioners from across Africa and the Global South to engage in strategic dialogue, share ground-breaking innovations and accelerate collaborative solutions in the water and sanitation sector.

Dr Mthombeni's nomination as a Stream Lead recognises her expertise, leadership and significant contributions to the field. In this role, she will be instrumental in helping to shape the dialogue's agenda and steering critical conversations within her designated thematic stream.

Dr Asif Alli from AWSISA said, "Dr Mthombeni's leadership is not just beneficial, it is essential. I believe that the Durban University of Technology will bring valuable insight and professionalism to the role of convenor in the dialogue, Women in Water. By aligning with us, DUT will amplify its leadership in the water sector and gain unparalleled visibility among an audience of industry influencers and decision-makers."

Chairperson of the AWSISA Board, Mr Ramateu Monyokolo said, "This Dialogue is not just another event, it's a space where ideas meet action." He added, "Through our pan-African and Global South approach, AWSISA convenes a powerful coalition of voices, expertise and experience. By working together, we can tackle complex challenges with collective ingenuity and accountability, driving meaningful impact that transforms lives and communities."

For more information on the Dialogue, please visit <https://www.awsisa-watersan-dialogue.org>.





Dr Lavern Samuels and Dr Divinia Jithoo

**Pictured:** DUT at the Global Sustainability Development Congress in Istanbul Turkey. Left to Right: Mr Alex Mngenge, Dr Lavern Samuels, Dr Nomcebo Mthombeni, Professor Fulufhelo Nemavhola (Deputy Vice-Chancellor: Research, Innovation and Engagement) and Professor Colin Stanley (NUST).

**D**urban University of Technology (DUT) has once again demonstrated its international leadership and commitment to sustainable development by participating as a partner and exhibitor in the Times Higher Education 2025 Global Sustainable Development Congress (GSDC), held in Istanbul, Turkey, from 16 to 19 June 2025. The congress served as a global platform for universities to forge partnerships, exchange knowledge, and advance the United Nations Sustainable Development Goals (SDGs). DUT's delegation, led by Deputy Vice-Chancellor: Research, Innovation and Engagement, Professor Fulufhelo Nemavhola, included Acting Director: Research and Post Graduate Support, Dr Nomcebo Mthombeni; Director: Data Analytics: IT Support Services, Alex Mngenge; International Education and Partnerships Director, Dr Lavern Samuels; and International Education and Partnerships Manager, Dr Divinia Jithoo.

The GSDC provided DUT with a unique opportunity to strengthen collaborations with universities in Turkey and to expand south-south cooperation by networking with institutions from the Philippines, Morocco, China, Australia, India, Central Asia and the Middle East. These engagements are central to DUT's ENVISION2030 strategy, which emphasises international engagement, research and curricular excellence through innovation,

sustainable development and green ecosystems.

A significant outcome of DUT's participation was the formalisation of new partnerships through the signing of Memoranda of Understanding (MOUs) with five leading universities:

- Ibn Tofail University, Morocco
- Universidad Tecnológica Empresarial de Guayaquil, Ecuador
- Karadeniz Technical University, Turkey
- Gedik Universitesi, Turkey
- Gebze Teknik Universitesi, Turkey

These agreements will enable academic and research cooperation and will include staff and student mobility programmes, collaborative online international learning (COIL), research seminars, lecture series, and the internationalisation of DUT's programme advisory boards. The MOUs also open the door for postgraduate joint degrees, further enhancing DUT's global academic influence

In addition to the agreements signed in Istanbul, DUT has initiated partnership engagements with 42 other universities. Notably, MOUs with institutions such as Kayseri University and Ondokuz Mayıs University (Turkey), Visayas State University, Cavite State University,

Central Philippine University and Marioano Marcos State University (Philippines), as well as Binus University (Indonesia), which will be formalised through online forums in the coming months. Specifically, DUT will foster cooperation with at least five universities in the Philippines.

During the congress, the DUT delegation also conducted strategic visits to KOC University, Gedik Üniversitesi, and Gebze Teknik Üniversitesi, all located in Istanbul. These on-site engagements provided an invaluable opportunity to move beyond initial discussions and begin activating tangible collaborations between DUT and its Turkish counterparts. The face-to-face meetings allowed for deeper exploration of mutual interests, the identification of specific areas for joint research, and the planning of staff and student mobility initiatives. By visiting these leading Istanbul-based universities, DUT has laid a strong foundation for ongoing academic exchange, collaborative projects, and the implementation of the newly signed MOUs, ensuring that partnerships move swiftly from agreement to action.

While DUT's international footprint continues to expand, the university remains deeply committed to advancing intra-African academic collaboration. During the conference, DUT and the Namibia University of Science and Technology (NUST) had discussions to advance an already strong partnership, while identifying new specific areas of collaboration.

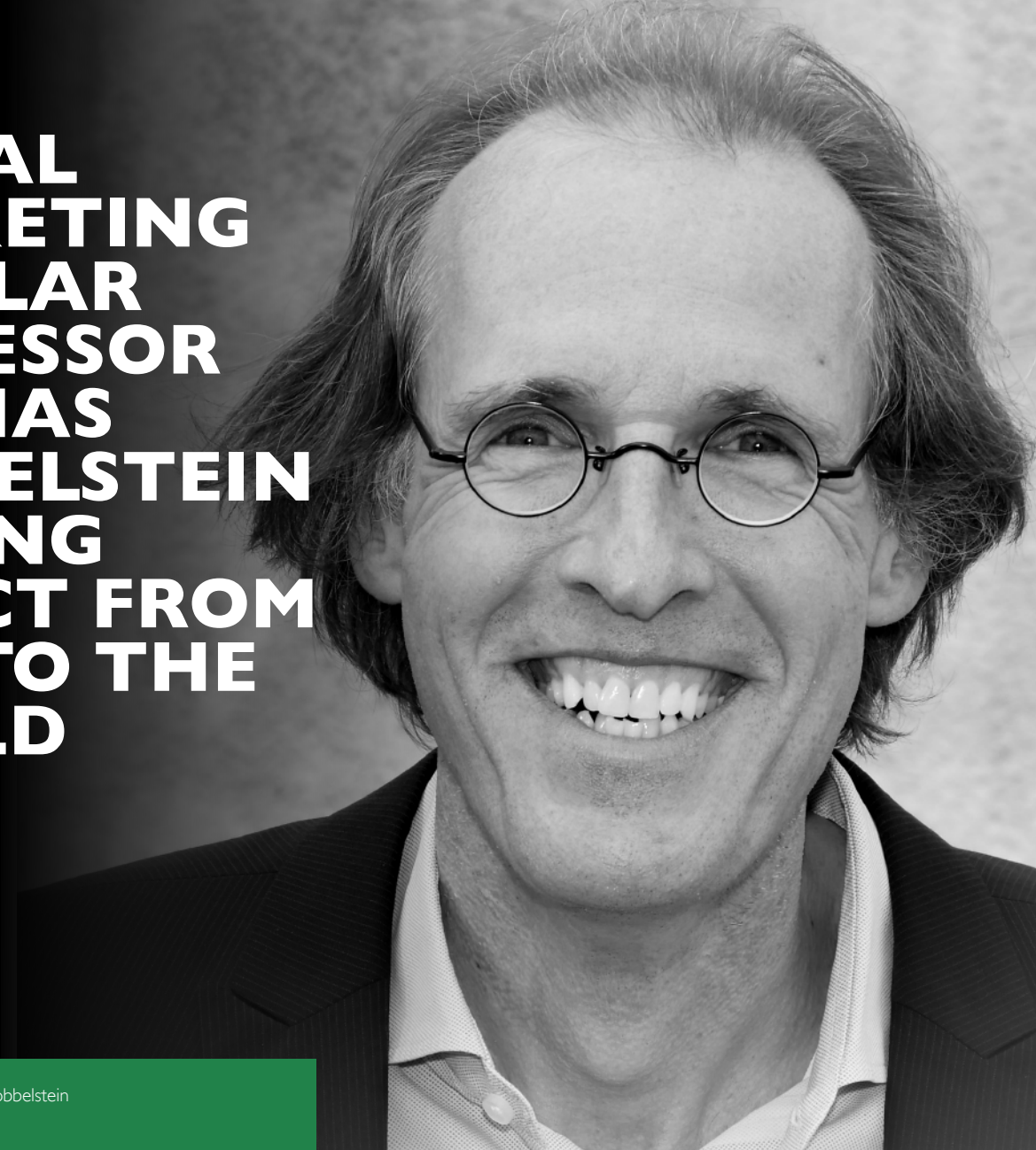
Building on this momentum, DUT and NUST have planned a series of upcoming visits. DUT will send a delegation to NUST for the opening of their Luderitz campus and NUST will reciprocate with a visit to DUT in July 2025, for the DUT International Week. These exchanges are set to further strengthen the strategic partnership. This intra-African cooperation is a key pillar of DUT's internationalisation strategy, which prioritises African-led collaboration, innovation and research excellence.

At the GSDC, DUT also took the opportunity to promote the African Partnership Universities Alliance (APUA), a collaborative initiative that brings together leading African universities to advance Africa-centred internationalisation and strengthen research and innovation networks. APUA, which is led by DUT, is driving the development of sustainable, mutually beneficial partnerships that prioritise African knowledge systems and address local, continental and global challenges.

DUT's participation in the Times Higher Education 2025 Global Sustainable Development Congress has yielded significant results with numerous opportunities for DUT faculties to engage in activities that help advance ENVISION2030. DUT is well-positioned to advance its core business through innovative curricular and research and contribute meaningfully to the achievement of the SDGs and future global sustainability.

# GLOBAL MARKETING SCHOLAR PROFESSOR THOMAS DOBBELSTEIN DRIVING IMPACT FROM DUT TO THE WORLD

Alan Khan



**Pictured:** Professor Thomas Dobbelstein

In an era where the boundaries of knowledge, geography and technology are increasingly blurred, few embody the spirit of international collaboration like Professor Thomas Dobbelstein.

As Honorary Research Professor and Chairperson of the Durban University of Technology (DUT) Business School, Professor Dobbelstein stands at the intersection of global insight and local impact. Based at the Baden-Württemberg Cooperative State University in Ravensburg, Germany, he is a prolific researcher, academic and strategist who is helping shape the future of marketing across continents.

As far as Professor Dobbelstein is concerned, the power of research lies not only in discovery but in its application. "Research is meaningful when it informs how people live, work and think. That's the type of impact we aim for at DUT," he says. And his impact is undeniable.

In collaboration with Professor Khathutshelo Makhitha, he recently examined the recycling behaviours of township consumers in South Africa, offering practical

insights into what drives sustainable behaviour in emerging economies. The paper will be presented at the American Marketing Association Summer Academic Conference in Chicago in August 2025, adding an African lens to a global sustainability conversation.

His work is deeply engaged with some of the most relevant challenges facing business and society today. At the upcoming Global Marketing Conference in Hong Kong, Professor Dobbelstein will explore a pressing issue in digital commerce: why do consumers drop out of gamified promotions? His research uncovers what keeps customers engaged, or drives them away.

His other work cuts to the heart of the Artificial Intelligence (AI) debate. At a retail science conference in Croatia, he and his co-authors will present findings on how customers react when service is delivered by a chatbot instead of a human being, particularly during service failures.

One of his more provocative ideas emerged earlier this year, when he explored what marketers call "The



Vampire Effect.” It is a trap many creative teams fall into, when a campaign is so funny, visually stunning or clever, that people remember the advert but forget the brand. Professor Dobbelstein’s research reminds marketers that being memorable isn’t enough; the memory has to lead somewhere strategic.

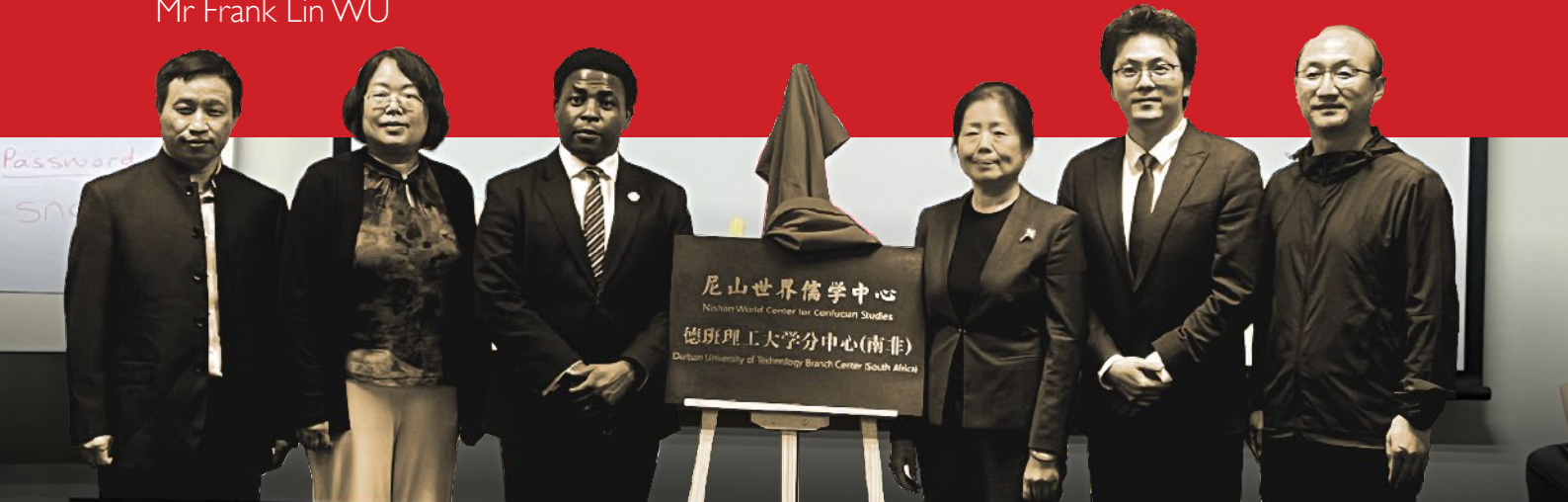
Most recently, in the Journal of Service Management (click here to read the story), he and colleagues published a study on gamified promotions in shopping apps. The takeaway? Adding a layer of playfulness and interactivity to discounts not only boosts engagement but also taps into deeper psychological motivators like effort justification and anticipated regret. In simpler terms, when customers work for something, even in a playful way, they value it more.

What is particularly meaningful about Professor Dobbelstein’s connection to DUT is how his global perspective aligns with the university’s philosophy of education, where “creativity and innovation shapes adaptive graduates who transform society.” His presence and research enriches DUT’s academic community while providing scholars and students a direct bridge to international thinking and networks.

DUT is proud to count Professor Thomas Dobbelstein among its thought leaders. In the months ahead, Professor Dobbelstein will provide follow-up insights and reflections from the three major international conferences he’s participating in, being hosted in Chicago, Hong Kong and Zagreb. These updates will offer DUT students, researchers and partners a front-row view of emerging global trends and how they relate to the South African and African context.

# DUT LAUNCHES AFRICA'S FIRST CONFUCIAN STUDIES CENTRE IN LANDMARK CHINA-SA PARTNERSHIP

Mr Frank Lin WU



**Pictured:** Professor Fulufhelo Nemavhola, Deputy Vice-Chancellor: Research, Innovation and Engagement at DUT, welcoming the high-level Chinese delegation.

**D**urban University of Technology (DUT) has established Africa's premier branch of the prestigious Nishan World Centre for Confucian Studies. The Centre was built on the strong foundation laid by the DUT Confucius Institute (CI) and was inaugurated on 13 June 2025, during a visit by a high-level Chinese delegation led by Ms Guo Chengyan, Deputy Director of the Nishan World Centre for Confucian Studies and Vice-Chairman of the China Confucius Foundation.

Professor Fulufhelo Nemavhola, Deputy Vice-Chancellor: Research, Innovation and Engagement at DUT, welcomed the delegation and hailed the partnership as "a strategic alignment with DUT's ENVISION2030 strategy." In his address, Professor Nemavhola committed to providing full institutional support for the initiative, stating: "We will support our Confucius Institute to drive this Centre's mission, establishing the Confucius Culture Exhibition Centre at DUT, facilitating deep scholarly exchanges between Chinese and African indigenous cultures and co-hosting impactful international conferences."

Ms Guo Chengyan framed the collaboration through the Confucian principle of "Harmony in Diversity, Shared Progress." She emphasised the Centre's unique mandate: "The Durban branch will pioneer African-contextualised

Confucian studies, creating dialogue between the Confucian ethos and Africa's Ubuntu philosophy. This fusion offers new pathways for multicultural coexistence."

Mr Wu Lin, Chinese Director of the DUT Confucius Institute, noted: "Confucianism is central to understanding China. As KwaZulu-Natal's flagship Chinese education hub for a decade, DUT CI will help African communities engage authentically with Chinese thought, promoting mutual learning and innovative cultural fusion."

As one of only four global branches of Nishan World Centre for Confucian Studies, the DUT Branch will focus on four core areas designed for tangible impact: Groundbreaking research on African-engaged Confucianism, Building Sustainable Mechanisms for China-Africa civilisational dialogue, Cross-border professional development for young scholars, Innovating Chinese Language and Culture Courses tailored to local contexts and needs.

"This partnership transcends academia," concluded Professor Nemavhola. "It positions DUT at the nexus of Global South knowledge systems, empowering our scholars to reshape transnational dialogue."



## INNOBIZ DUT MAKES WESTERN SYDNEY UNIVERSITY SMART AGRI HUB BENCHMARKING TRIP

Samkelo Mtshali

As part of DUT's ENVISION2030 vision for the DUT community to be engaged and productive global citizens that establish mutually beneficial partnerships and leveraging new knowledge and solutions for societal impact, the innobiz DUT Centre has embarked on a benchmarking exercise in Australia.

DUT is embarking on an ambitious project to establish a Smart Agri facility at the DUT Riverside Campus, with the Agri Tech Precinct at Western Sydney University being the standard bearer.

This initiative, at DUT, involves the development of a 4,500m<sup>2</sup> diffused polyethylene-covered multi-span greenhouse, designed to serve as both a commercial production facility for high-value vegetable crops and a dynamic learning hub for our student entrepreneurs.

Professor Fulufhelo Nemavhola, DVC: Research, Innovation and Engagement at DUT, said that the University and the Centre's vision was to integrate advanced technologies to provide sophisticated work-integrated learning opportunities, foster agripreneurship, and promote sustainable peri-urban farming practices.

"This project aims to bridge the gap between industry and academia, driving research, innovation, and the

commercialization of solutions to address local food production and distribution challenges in our region.

"We have been deeply impressed by the success of the Agri Tech Precinct at Western Sydney University, particularly in their application of cutting-edge technologies and efficient operational models. We believe a benchmarking visit to your facility will provide invaluable insights as we develop our Smart Agri project," explained Prof Nemavhola.

Delving more into the visit to Australia, Ms Nontokozi Ngcobo, the innobiz DUT Centre Manager, who has made the trip across the Indian Ocean alongside Ms Senamile Dlangalala, the innobiz DUT Centre Secretary, said that the visit was also about re-establishing and strengthening the relationship with the colleagues from Western Sydney University.

"The main purpose of the visit was to benchmark the Smart Agri, since the University has established the Agri Hub and now the Smart Agri will focus on the research development in agriculture and its impact in the region and the DUT community, training of the entrepreneurs and community in the agriculture space, and using the produce for commercialisation," Ms Ngcobo elaborated.

Furthermore, Ms Ngcobo highlighted that it was significant to benchmark with the partners at Western Sydney University as they already boast a state-of-the-art Smart Agri facility, and critically to exchange knowledge and best practices.

“We also visited their Launch Lab, which serves as their entrepreneurship and innovation centre, which is like innobiz, focusing on developing entrepreneurs, researchers, spin-offs. We’ll be signing a Memorandum of Understanding (MOU) to be presented to the seniors at DUT.

“Having this MOU will allow us to explore other areas of collaboration besides what we came here, including staff and student exchange programmes, academic exchange programmes, research programmes.

Additionally, Ms Ngcobo explained that the MOU would also see DUT and Western Sydney University engaging in collaborations in various areas such as entrepreneurship development, formalize and share best practices with colleagues, and to initiate and establish various projects. The DUT team also visited Hawkesbury Campus where they met with 3 departments, including the Institute for the Environment which places more focus on research and agriculture including the Agri Tech Precinct (bringing agriculture indoors), Forestry (resilient pastures and grazing), decarbonization, and the Innovation Hub. They also paid visits to the Food Science and the Operations and Commercial departments.

# MAKING YOUR BOOK CHAPTER COUNT FOR A GOOD OUTPUT UNIT

Dr Olusegun Adigun Afolabi



**D**r Olusegun Adigun Afolabi, currently an NRF-postdoctoral researcher in Industrial Engineering Department at the Durban University of Technology (DUT), is under the helm of Professor Oludolapo Olanrewaj. His research aim is to share with future researchers his insight into writing a well-researcher book chapter.

His research focus areas are composite materials, nanocomposites, material characterizations, hybrid nanocomposite, additive manufacturing, ergonomics, and material science engineering. He has authored several research papers, including journal articles, conference proceedings, and book chapters. He has presented his research work at both local and international conferences.

He emphasised the importance of writing is to sensitise researchers on how to publish book chapters that would be of great impact to their research output unit (ROU). The fewer the chapters in a book, the better the research output unit to the researcher and this will increase one's productivity as a potential NRF researcher.

Before accepting to contribute a book chapter, kindly ask for the number of the chapters in such a book. If the book will contain more than 12 chapters, reconsider one's decision.

The maximum point of a book chapter is 1 unit. While the whole book is 10 units

The calculation is as follows:

A book = 10 units

**Case 1.**

If there are 10 chapters, each chapter is  $10/10 = 1$  unit

**Case 2.**

If there are 12 chapters, each chapter is  $10/12 = 0.833$  unit.

**Case 3.**

If there are eight chapters, each chapter is  $10/8 = 1.25 \approx 1$  unit max .

**Case 4.**

If there are 15 (or more) chapters, each chapter is  $10/15 = 0.667$  unit.

Contributions made by as an author will be the "unit" in each case above divided by the number of authors.

An example for case 1 is:

2 authors =  $1/2 = 0.5$  unit each.

4 authors =  $1/4 = 0.25$  unit each.

The number of authors will determine the fraction of the unit each one gets in any of the cases above.

If one is considering a book chapter as part of one's output, especially for "unit" purposes, and not just as part of a publications, one needs to do their research homework well.



# BONGEKA MAPHUMULO SAYS AI COURSE HELPED HER TO BRIDGE THE GAP BETWEEN ACADEMIC KNOWLEDGE AND INDUSTRY EXPECTATIONS

Waheeda Peters

Pictured: Bongeka Maphumulo



**O**n partnership with Microsoft, the Department of Information Technology at the Durban University of Technology (DUT) has launched a digital skilling initiative to embark on training 33,000 individuals in Artificial Intelligence (AI) skills.

The curriculum comprises six comprehensive courses: AI Fundamentals, Generative AI, Search Technology, Responsible AI, Microsoft Copilot, and AI and Accessibility. These modules cover various topics, from AI and machine learning basics to ethical considerations, productivity tools, and inclusive technologies. The learning journey is designed to equip users with theoretical knowledge and practical applications of AI in real-world scenarios.

Speaking of her sterling experience on completing the AI course was Bongeka Maphumulo, a final-year PhD student in Entrepreneurial Studies at the Faculty of Management Science.

“I was quite enthusiastic about the DUT and the

Microsoft AI Skills Navigator course. It represented a forward-thinking initiative that prepares participants with essential AI competencies, aligning well with current and future workforce demands. I saw it as a valuable venture in professional growth and digital literacy.

Maphumulo, who is from Imbali, Pietermaritzburg, said her journey at the Durban University of Technology (DUT) has been both challenging and rewarding. “Throughout this journey, I have gained valuable academic knowledge, administration skills, research skills, and personal growth. My studies have deepened my understanding of entrepreneurship, especially in the context of informal economies, and have allowed me to contribute to meaningful research in my field,” she said.

“What I appreciated most about the course was its practical, hands-on approach to AI concepts. The blend of theoretical foundations with real-world applications made the learning experience both engaging and relevant. I particularly valued the modules on machine learning



and data ethics, as they not only enhanced my technical understanding but also deepened my appreciation for responsible AI development. This practical focus helped bridge the gap between academic knowledge and industry expectations,” she emphasised.

In today’s rapidly evolving digital landscape, Maphumulo said it was essential for staff to stay current with emerging technologies like artificial intelligence. “Engaging in courses such as the DUT and Microsoft AI Skills Navigator enables us to better understand the opportunities and challenges AI presents. For staff members, this knowledge not only enhances our ability to make informed decisions but also empowers us to contribute more meaningfully to innovation, efficiency, and digital transformation within our institutions. Staying ahead in AI literacy ensures we remain relevant and capable in a data-driven world,” she explained.

Maphumalo’s PhD research focuses on the factors inhibiting the growth of the informal sector in the South African economy, with a particular emphasis on street vending. She indicated that the AI Skills Navigator course enhances her research in several meaningful ways.

“Firstly, it equips me with analytical tools and data-driven methodologies that can be applied to better understand patterns, behaviours, and structural constraints within the informal economy. Secondly, exposure to AI concepts allows me to explore how emerging technologies can be leveraged to support informal traders such as through predictive modelling for market trends, mobile-based AI solutions for financial inclusion, or digital platforms that improve access to customers and resources,” she echoed.

Maphumalo shared that this intersection between AI and informal economy research opens innovative pathways for sustainable development and inclusive policy design.

Her primary career aim is to contribute meaningfully to policy development, academic research, and advocacy focused on the informal economy in South Africa.

“I intend to use my PhD research as a foundation to influence more inclusive and evidence-based approaches to economic planning, particularly for marginalised and informal sector communities.

As a researcher and ethics coordinator, she places strong emphasis on the importance of ethical integrity in both academic and applied research.

“Research ethics go beyond compliance they serve as the foundation for respectful, responsible, and credible scholarship. My role as an ethics coordinator involves reviewing research proposals to ensure they adhere to ethical standards concerning informed consent, confidentiality, the protection of vulnerable populations, and the responsible use of data. It also includes educating researchers about ethical principles, fostering a culture of accountability, and promoting rigorous review processes,” she explained.

In the long term, Maphumalo aspires to work in a leadership or advisory capacity either within academia where she can bridge research, policy, and practice to promote sustainable livelihoods and socio-economic equity.



Phiwayinkosi Sibiya

**Pictured:** Mr. Frank Lin WU and DUT Language Practice staff with the cohort of six Chinese exchange students.

# MANDARIN AND ISIZULU MEET: DUT BIDS FAREWELL TO VISITING CHINESE STUDENTS

**O**n Tuesday, 10 June 2025, the Durban University of Technology (DUT) Language Practice Department, in collaboration with the Confucius Institute at DUT, hosted a farewell ceremony for six exchange students from the Beijing University of Foreign Studies. The students were part of an intercultural language programme focused on isiZulu language acquisition.

Mr. Frank Wu, Co-Dean of the Confucius Institute at DUT, addressed members of the Faculty of Arts and Design, emphasising the institute's commitment to fostering cultural and linguistic exchange between China and South Africa.

“Our main responsibility is trying to promote mutual understanding and exchange between China and South Africa by offering various Chinese language programmes to DUT and the local community—particularly for those

who have a strong desire to learn the Chinese language and culture,” said Mr Wu.

He explained that the Confucius Institute project was driven by a vision of enabling people to access opportunities in both countries through language education. He also shared the historical context behind the exchange programme's development.

“In the meantime, we also want to see more Chinese youth to learn about South Africa and other Africa countries. Therefore, in 2018, we connected DUT with Beijing Foreign Studies University, one of China's top universities for multilingual education and the first and only university to offer isiZulu as a degree programme” Mr. Wu said.

This collaboration laid the foundation for the “isiZulu Summer Camp,” a unique programme that enables

Chinese students studying isiZulu to immerse themselves in KwaZulu-Natal's language and culture.

"They came here for five months to study and deepen their knowledge of isiZulu. I believe all six of our Chinese students have performed exceptionally well in learning the language and have thoroughly enjoyed their time in KZN. I am very proud of them" he added.

Mr Wu, an academic from Fujian Agriculture and Forestry University in Fuzhou, China, was appointed Co-Dean of the DUT Confucius Institute by Centre for Language Education and Cooperation (CLEC), Ministry of Education of the People's Republic of China.

Tasneem Seedat, lecturer in the Department of Media, Language and Communication at DUT and a member of the Faculty of Arts and Design, spoke about the department's ongoing dedication to internationalisation and academic exchange.

"Our programme is committed to educational exchanges, especially those advancing shared language learning and cultural understanding. It is core to how we approach internationalisation. This partnership reflects directly with our commitment to promoting African linguistic heritage and developing globally competent graduates," said Seedat.

She noted that the department has a long history of sending students to China, and celebrated this milestone, the first time DUT hosted a cohort of Chinese students studying isiZulu.

"This year, we are pleased to have hosted our inaugural cohort of six Chinese exchange students (February–June 2025), who successfully completed intensive isiZulu and intercultural studies, a significant milestone for our department," she said.

Each student was awarded a certificate and given an isiZulu name, marking their cultural immersion. Yimei Wei is now 'Amahle,' Chenwei Zhu is 'Olwethu,' Yijia Zhao is 'Zamile,' Xia Wu is 'Hlengiwe,' Wanting Wang is 'Nkanyezi,' and Jingyun Yu is 'Phaphama.'

"Beyond formal classes, we paired them with our Language Practice students for daily cultural exchange. Watching them navigate real-world isiZulu conversations and cultural exchanges together was easily one of the programme's highlights, so much so that this peer-learning model will remain central for future cohorts. We are already looking ahead to welcoming the next group and deepening this partnership," Seedat concluded

Wang said, "Having an opportunity to visit places I dream of, like Johannesburg, Pretoria, and Bloemfontein, was special. I think South Africa is very special because it has so many official languages, and every time people hear that I can speak isiZulu, they feel surprised and proud."

Nombuso Shandu, a third-year Language Practice student, highlighted the importance of having exchange students, stating that it's about exchanging cultural understanding and origins, as well as sharing their own with ours. Shandu appreciated the student's openness and friendliness, which enabled them to have meaningful experiences together outside of class.

Mrs Ntombezinhle Cele, the students' Translation Lecturer and the Programme Coordinator of Language Practice Programme, reflected on the students' journey before handing over certificates. She praised their enthusiasm and unmatched work ethic and hoped that their students took great lessons from the Chinese students. She promised that future exchange students would have more time for practical Zulu experiences, like cooking over an open fire and the experience of watching and participating in the traditional Zulu dance.

The language practice students showed great interest in having Chinese students as peers, having learned much from them. They expressed a desire for a similar programme that would teach them Mandarin, recognising that learning a language also means learning about the culture and daily practices.

Minenhle Khumalo a lecturer in Language Practice who has first-hand experience of studying in abroad highlighted the importance of these exchanges. "As someone who has studied in China and speaks Chinese, I found the experience of teaching isiZulu to this group of Chinese students particularly rewarding. My ability to codeswitch between Chinese and isiZulu made it easier to bridge language gaps and create a dynamic learning environment. This approach allowed students to grasp isiZulu concepts more effectively while fostering deeper cultural connections. Seeing them gain confidence in real-world isiZulu conversations was one of the most fulfilling aspects of the experience."

He continued, "One of the most memorable moments was witnessing the students confidently engage in isiZulu conversations with Dr Nobuhle Nkabane, the Minister of Higher Education. Seeing them apply their language skills in such a significant setting was truly exciting and reaffirmed the impact of this exchange programme. This initiative reflects our DUT's living values of excellence and commitment-ensuring the highest standards in language education, global collaboration, cultural exchange, inclusivity and internationalisation"

# DUT ALUMNUS SAYS HIS LOVE FOR STATS AND SCIENCE LED HIM TO DATA SCIENCE

Waheeda Peters



Pictured: Dr Yaseen Khan

Being an analytical thinker paved the way for Durban born Dr Yaseen Khan to embark in his academic studies in the field of statistics, mathematics, leading him to the fascinating world of data science.

The focused, logical thinker recently graduated with his Doctor of Philosophy in Information Technology from the Durban University of Technology (DUT) during the 2025 Autumn Graduation Ceremony, held at the Olive Convention Centre in Durban.

Currently, Dr Khan is a researcher at the DUT Short Course Unit at DUT as well as works with ad hoc data science projects with external stakeholders. He has also expressed that he is applying for postdoctoral positions, and he hopes to be successful in this arena.

Dr Khan, also known as the #FeesMustFall researcher, previously received Cum Laude and obtained the esteemed Dean's Merit award when he graduated for his master's degree in Information Communication Technology (MICT) from DUT in June 2020.

Dr Yaseen Khan's title of PHD thesis is: A Data Science Analysis of the South African COVID-19 Infodemic on Twitter.

"The COVID-19 pandemic triggered not only a health crisis but also an 'infodemic phenomenon'-which is

an overwhelming spread of both accurate and false information. In South Africa, Twitter emerged as a key platform for sharing pandemic-related news and opinions, while also becoming fertile ground for misinformation and disinformation," said Dr Khan.

His PhD study adopted a comprehensive data science approach to analysing the South African COVID-19 infodemic on Twitter employing machine learning (ML), natural language processing (NLP) and change point analysis (CPA) to achieve three primary goals: detecting Fake News, tracking sentiment shifts and identifying social bots. "This research contributes to a deeper understanding of the dynamics of online misinformation spreads and provides practical tools to support policymakers, researchers and digital platforms in addressing infodemics. It represents a significant step forward in leveraging African-developed computational approaches to respond to region-specific challenges and in promoting more informed public discourse," he explained.

With Artificial Intelligence (AI) speedily becoming immersed into the new way of working, looking ahead in terms of his research, Dr Khan shared that he is looking to incorporate that into his study, for example, he will look at either focusing on the elections, study the discourse on social media or on politics, or whatever the industry requires of him.



# DUT'S RESEARCH OFFICER AIMS TO CONTINUE HIS PROFESSIONAL DEVELOPMENT WHILE CONTRIBUTING TO IMPACTFUL RESEARCH

Simangele Zuma



**Pictured:** Garreth August during his master's degree graduation.

**G**rowing up in the drug-afflicted Sydenham Heights flats in Durban did not deter Garreth August from pursuing his academic ambitions.

Now a Research Officer at the Durban University of Technology (DUT) Business School, August recently obtained his master's degree in Human Resource Management at the DUT 2025 Autumn Graduation Ceremony, held at the Olive Convention Centre in Durban.

August explained that he has never seen his background as a barrier to education, drawing strength from others in his community who also overcame adversity to achieve academic success.

"Many individuals from areas considered even more disadvantaged have gone on to accomplish remarkable things. So, I have never really viewed my background as an obstacle. You cannot keep away from what is happening around you in a close-knit community like Sydenham Heights. I've had close friends who sadly couldn't avoid being affected by it. But for me, it was about making a conscious choice not to get involved. I set clear goals for myself early on and was intentional about surrounding myself with people who supported that path," he said.

His research focused on examining the effect of career advancement on job satisfaction and employee loyalty,

using DUT as a case study.

"My inspiration for pursuing this study stemmed from a deep interest in understanding the dynamics that influence employee motivation and retention within higher education institutions. Working in an academic environment, I observed how opportunities for career growth or the lack thereof could significantly impact how satisfied employees felt in their roles and how committed they remained to the institution. I was particularly curious about how these factors played out within the context of the Durban University of Technology," explained August.

He added that he has always been curious about understanding people in the workplace and how organisational practices impact both individual and institutional success.

In his current role, August supports students at the DUT Business School as they complete their research projects. His responsibilities include organising capacity-building workshops to strengthen students' research skills, ensuring that all required research-related forms comply with institutional guidelines, and assigning supervisors to students to facilitate effective academic support throughout their research journey.

Reflecting on his journey at DUT, August shared that it began several years ago as an undergraduate student in

Human Resource Management. He then completed his postgraduate studies. He said throughout his academic path, he was supported by dedicated lecturers and praised his Master's supervisor, Dr Reward Utete, whom he described as an "incredible supervisor" instrumental in both his academic and personal development.

August credited his success to careful planning, prioritisation, and effective time management, which enabled him to balance work, study, and personal commitments. He also attributed his success to having a strong support system, at work, home and in his academic environment.

"As a student, one of the main challenges I faced was managing multiple responsibilities at the same time and balancing academic deadlines with work commitments and personal life. However, I overcame these challenges by staying disciplined, seeking support when needed, and breaking tasks into manageable steps. I also leaned on the guidance of my supervisor and the encouragement of peers, which helped me stay motivated," reiterated August.

Looking ahead, he aims to continue his professional development while contributing to impactful research.

To students aspiring to follow a similar path, August offers simple but powerful advice: stay curious, stay committed.

"Always be open to learning, both inside and outside the classroom and don't be afraid to seek help or mentorship when you need it. Time management and discipline are key, especially when juggling multiple responsibilities. Also, building strong relationships with mentors, peers, and colleagues is invaluable. I encourage students to invest in these connections, they often open doors and provide support when needed the most," added August. He believes adaptability, a willingness to learn from both successes and setbacks, and maintaining a positive attitude can help one to progress in life.

# DUT SEEKS INNOVATIVE CANDIDATES FOR POSTDOCTORAL FELLOWSHIPS

Waheeda Peters

Pictured: Dr Maleni Thakur



**T**he University's ultimate goal is to contribute towards improving the lives and livelihoods of all its people, both internal and external. DUT consistently strives towards excellence and greatness in teaching-learning and in research-innovation.

DUT is seeking vibrant candidates who are interested in working on innovative solutions to problems, to position the university as an anchor institution located firmly within the region, and to transfer knowledge and research outputs for the benefit of society and its quad-helix partners.

The Durban University of Technology (DUT) has 20 new postdoctoral fellowships for the 2025 academic year.

Postdoctoral fellows at the Durban University of Technology (DUT) are researchers who support academic activities, often within specific faculties or research centres. They are mentored by established staff members and are expected to contribute to research outputs, potentially including publications and student supervision.

- The Postdoctoral Fellowships will be awarded on a competitive basis, considering the candidate's academic achievements, potential as an independent researcher and the extent to which she or he meets the requirements of the call. Candidates are expected to have strong research and a good

record of high-quality publications; have the ability to generate new novel research ideas and to produce innovative research and the ability to write proposals for external funding.

- Applicants should have a Doctorate that was obtained within the last five years.
- Commit to two years at DUT when appointed into a position.
- Successful candidates will be expected to contribute to DUT's research productivity and impact in multidisciplinary research involving the multiple academic entities that are aligned to the university's strategic vision ENVISION2030.

Speaking about her current role as a postdoctoral fellowship (PDF) into the International Centre of Non-Violence (ICON) at DUT was Dr Maleni Thakur.

She had completed her PhD in Public Management (Peace Studies) and was looking for meaningful ways to continue her research. She applied for a postdoctoral fellowship (PDF) and was accepted into the International Centre of Non-Violence (ICON) at DUT, with Prof Geoffrey Harris as her host. "I have not looked back since. The postdoctoral fellowship became a natural extension of my academic growth. Being based at ICON has enabled me to pursue interdisciplinary research that connects peacebuilding with the pressing challenges of climate change - particularly how communities adapt to and are impacted by environmental stress," she explained.

Dr Thakur conveyed that one of the greatest advantages of a postdoctoral fellowship is the dedicated time and academic space it offers to deepen one's research, refine your scholarly voice, and develop a clear focus. "It also allows you to grow professionally through publishing, teaching, postgraduate supervision, and mentoring. For me, this journey has been both an academic and personal transformation, reinforcing my commitment to socially relevant, community-engaged research," she shared.

For Dr Thakur, the postdoctoral fellowship has played a pivotal role in shaping the direction and depth of her research. Her focus is on how climate change is impacting water sustainability and household waste management, particularly in communities that are already grappling with social and economic vulnerabilities. "These are not just abstract issues, they affect people's everyday lives. It gave me the time and support to investigate these topics critically, to ask better questions, and to draw connections between climate resilience, sustainable living, and peacebuilding. What has made the journey truly enriching is the balance between independent inquiry and meaningful academic engagement. I've been able to publish in peer-reviewed journals and contribute to conversations that bridge research and real-world relevance. My work is grounded in real-life situations, shaped by the experiences of the people I've listened to and learned from, and it's driven by a desire to find solutions that make a genuine difference in everyday lives," she explained. Dr Thakur indicated that the structure of the postdoctoral fellowship also encourages academic service and mentorship, which has broadened her engagement beyond research. Through co-supervising Master's and PhD students, she has seen the transformative power of research from multiple perspectives. These mentoring relationships have been mutually enriching and have further sharpened my approach to inquiry and supervision.

"Overall, the PDF hasn't just supported my research, it's expanded it. It has helped me move from focused doctoral work to broader interdisciplinary exploration, where climate change, water, waste, and peace intersect in meaningful, socially relevant ways," she said.

Her words of encouragement to would-be fellowship researchers at DUT is that a postdoctoral fellowship is a chance to deepen one's expertise not just as a researcher, but as a contributor to a wider academic community. "You'll have the space to explore your research deeply, but also the opportunity to share what you know. For example, I've had the chance to train postgraduate students in NVIVO, helping them make sense of qualitative data - something I've found deeply fulfilling. Also, being part of Departmental Research Committee (DRC) meetings has also helped me understand how research is shaped, supported, and reviewed within the institution. These experiences remind me that the fellowship is more than a title, it's a platform to collaborate, mentor, and contribute meaningfully. If you're passionate about your work and want to make a difference through research, this is the kind of opportunity that can truly elevate your path," she shared.

For more information, go to <https://www.dut.ac.za/postdoctoral-research-fellows-2025/>



# MATHEMATICS STARS SHINE AT SYMMETRIES AND DIMENSIONS WORKSHOP 2025

Silindile Buthelezi

**Pictured:** Professor Megandhren Govender, Dr Sifiso Ngubelanga, and Dr Byron Brassel



Three distinguished staff members from the Department of Mathematics at the Durban University of Technology recently showcased their advanced research at the prestigious Symmetries and Dimensions (SyMDiM) Workshop 2025, held at the scenic Cathedral Peak Hotel in the Drakensberg. Hosted by the Astrophysics Research Centre at the University of KwaZulu-Natal, the workshop brought together a formidable assembly of South African mathematicians, physicists, and theoreticians, alongside internationally acclaimed scholars such as Professor Naresh Dadhich, a fellow of the Inter-University Centre for Astronomy and Astrophysics, and Professor Dawood Kothawala of the Indian Institute of Technology Madras.

Dr Sifiso Ngubelanga captivated the audience with his presentation on models with polytropes in isotropic coordinates incorporating charge and a barotropic equation of state. His work focused on uncovering new solutions to the Einstein–Maxwell system of equations, key to constructing realistic models of compact astrophysical objects like neutron stars. Dr Ngubelanga's innovative algorithm for generating solutions to the Einstein field equations provided a fresh approach to navigating the complex system of nonlinear, coupled partial differential equations.

Dr Byron Brassel, a senior lecturer in the department, engaged the delegates with his exploration of Lovelock gravity, a compelling extension of Einstein's general relativity into higher dimensions. Named after South African physicist David Lovelock, the theory integrates

higher-order curvature terms while astonishingly maintaining second-order quasi-linear differential equations. Dr Brassel's talk provoked stimulating questions around whether phenomena such as dark matter and dark energy might emerge from these additional dimensions or curvature constructs.

Adding to the intellectual depth of the workshop, Professor Megandhren Govender presented a thought-provoking analysis of stellar energy production and the end-states of continuous gravitational collapse. His discourse on stellar complexity generated lively discussions during tea breaks, as he delved into the fate of collapsing stars, whether their end-state is a black hole with a hidden singularity, a naked singularity, or perhaps a Buchdahl ultra-compact object. Professor Govender's broader research includes modelling compact stellar bodies like pulsars and strange stars within the framework of modified gravity theories.

The SyMDiM Workshop 2025 formed part of an ongoing series dedicated to fostering collaboration and knowledge exchange among postgraduate students, emerging scholars, and seasoned academics in fields such as gravity, mathematical modelling, differential equations, and quantum physics. The contributions from DUT's mathematicians not only highlighted the university's growing prominence in theoretical physics but also affirmed its commitment to advancing the frontiers of knowledge in the mathematical sciences.

# DUT STUDENT ENTREPRENEUR SCOOPS THIRD PLACE AT GREEN YOUTH INDABA

Samkelo Mtshali

**Pictured:** DUT student entrepreneur, Luyanda Majozi, who is the founder of Enigmatic Cotton.



**E**nigmatic Cotton founder Mr Luyanda Majozi, an incubatee of the innobiz DUT Centre for Entrepreneurship and Innovation, is a name fast becoming synonymous with podium finishes at entrepreneurial competitions across the province and the country.

The 22 year-old Mr Majozi is a dedicated fashion designer, who is a Durban University of Technology (DUT) Clothing Management graduate. He is currently pursuing his Advanced Diploma in Apparel Technology at DUT.

His increasingly popular brand Enigmatic Cotton, a brand churning out stylish garments for a young and vibrant audience, saw its humble beginnings at DUT through its entrepreneurial nerve centre, the innobiz DUT Centre for Entrepreneurship and Innovation.

Mr Majozi is quickly becoming a decorated figure in the entrepreneurial awards circuit, with the latest piece of silverware on his mantelpiece being a proud third place finish at the annual Green Innovators Pitch Competition 10.0 brought by the 10th annual Green Youth Indaba at the Inkosi Albert Luthuli International Convention Centre on Friday, 20 June 2025.

The Green Youth Indaba describes the annual competition as a platform to amplify the impact of youth-led innovations, contributing to the growth of the green economy and sustainable development.

It was not the first time that the innobiz DUT Centre for Entrepreneurship and Innovation was on the winners podium at the prestigious event, with Mr Luvo Gugwana, the founder of Green Arch Innovations and an alumni of the Centre, secured first position in the Green Innovators Pitch 8.0 Competition at the 8th Annual Green Youth Indaba in July 2023.

Never one to miss opportunities to showcase his business to a wider audience, Mr Majozi seized the chance to apply for entry into the competition through the Green Youth Indaba's online platforms, a decision that then saw him being shortlisted into the top 50 cohort.

"After being shortlisted the 50 members of the cohort were given training sessions on how to pitch their businesses, including the business model canvas and other various training sessions online. We then attended a pre-pitching competition and I emerged as one of the top five finalists from the cohort of 50, against a group of entrepreneurs in the green ecosystem across South Africa who are really pushing well in their businesses," Mr Majozi said.

He said that his concept in pitching Enigmatic Cotton at the Green Youth Indaba was to position his brand as an eliminator of fast fashion which is often low quality produced products which are quickly worn out and end up in the landfill sites thus creating land pollution.

“As Enigmatic Cotton, what we are saying is that it’s time to reverse the cycle and create products that are of a higher quality, but not only that but to upcycle and recycle clothing into the value chain again. Therefore, the concept was based on recycling old clothes and off-cuts that usually end up in the landfill sites by bringing them into the value chain once more become renewable products that can be worn again,” Mr Majozi explained.

He goes on to explain, with an immense sense of pride, that having been up against the aforementioned entrepreneurs in the green ecosystem, he felt ecstatic to have emerged as one of the top three winners walking away with a whooping R50 000 which will be handed to him in the form of equipment and infrastructure development for his business.

“I also received several gadgets and electronic devices, including a laptop, earphones, power bank and a Samsung tablet. Significantly, this funding will assist us with scaling our business and the acquisition of more equipment and infrastructure development that will also open more opportunities for employment. It will also assist us to be able to supply large corporates and school wear, as we’ve recently launched a school wear division in our business and we’ve already completed matric jackets for one of the Durban based high schools,” Mr Majozi explained.

Additionally, he said that this would greatly aid his capacity to produce and supply more of his trendy streetwear fashion.

“The experience at the Green Youth Indaba 2025 was beneficial because I connected with a lot of stakeholders in the green ecosystem field. I also gained mentors, partners that I will be collaborating with in the future and I also gained experience that will drive Enigmatic Cotton towards become a sustainable fashion brand and a sustainable movement,” Mr Majozi asserted.

Ms Nontokozo Ngcobo, the innobiz DUT Centre, hailed Majozi’s success on the national stage as another proud moment for the entrepreneur and the Centre, describing it as a testament of the student entrepreneur’s dedication to his craft and ability to soak in the multifaceted information imparted upon him by the Centre.

“It is a joy to see Luyanda’s upward trajectory over the past few years, particularly having first seen him walk through our doors as a shy young man with an idea that he wanted to make work but didn’t know how to go about it. That’s where we have come in as a Centre to help him, and many others like him, to become fully rounded entrepreneurs who are able to sell their businesses confidently to competition judges and potential investors and his success in the past number of years shows just how important that work is,” Ms Ngcobo said.

Taking pride of place on Mr Majozi’s honours list is being selected as a National Finalist in the 2023 Entrepreneurial Development in Higher Education (EDHE) National Finals in 2023, securing the first runner-up prize in the Start-Up category at the Guangzhou International Sister- Cities Universities (GISU) 2024 Global Start-Up competition in China.

To top it all off, he was also named runner-up at the National Presidential SMME Awards 2024, under the Department of Small Business Development and Finance Agency (SEDFA) which landed him another R100 000 towards developing his business.

# DUT DOCTORAL STUDENT JOINS PRESTIGIOUS GLOBAL RESEARCH PROGRAMME TO TACKLE BREASTFEEDING GAPS IN RURAL COMMUNITIES

Zandile Precious Mahlobo

**Pictured:** Simba Magaisa



**S**imba Magaisa, a doctoral student in the Department of Public Management and Economics at the Faculty of Management Sciences, Durban University of Technology (DUT), has secured an offer to participate in the GUNI Summer Student Research Programme (GUNI-SSRP) at Ganpat University in India. This is “a prestigious research initiative designed to provide undergraduate and postgraduate students with hands-on experience in cutting-edge research.”

Magaisa will be conducting a study titled, “A Comparative Study to Assess Knowledge and Practice of Lactating Mothers Regarding Exclusive Breast Feeding in Selected Rural Areas of Mehsana District, Gujarat, India and Edenvale, South Africa.”

The decision to conduct this study was motivated by the continued low rates of exclusive breastfeeding observed in both urban and rural areas, despite numerous health awareness campaigns. “I was particularly motivated by the health implications for infants and the socioeconomic factors influencing mothers’ feeding choices. This topic is vital, as exclusive breastfeeding for the first six months is proven to reduce infant mortality and improve long-term health outcomes. Understanding mothers’ knowledge, attitudes, and barriers allows for more targeted, culturally sensitive interventions that can improve child health and development,” explained Magaisa.

The study will focus on two distinct regions, Mehsana in India and Edenvale in South Africa to explore factors affecting exclusive breastfeeding (EBF). Mehsana, a semi-rural district, struggles with low EBF rates due to cultural beliefs, limited education, and poor support services. Edenvale, a semi-urban area with peri-rural communities, faces challenges like socio-economic inequality, misinformation, and healthcare access issues. These settings provide valuable insights into how cultural, systemic, and community-level factors influence breastfeeding practices.

According to Magaisa, by selecting these two locations, the study aims to highlight specific context-related barriers and common global challenges in promoting exclusive breastfeeding in middle-income countries. This comparison will facilitate the identification of effective practices and policy recommendations that can be adapted for implementation in similar rural or peri-rural contexts worldwide.

“The geographical, socio-economic, and health system differences between Mehsana and Edenvale offer a unique opportunity to explore how local contexts influence maternal knowledge, attitudes, and behaviour, yielding actionable insights for public health planning,” he said.

The study aims to address critical gaps in current research and public health practices related to exclusive



breastfeeding in rural communities. Magaisa notes that while global health guidelines emphasize the benefits of exclusive breastfeeding, there is limited comparative data on the knowledge, attitudes, and practices of lactating mothers in rural regions like Mehsana (India) and Edenvale (SA).

“These areas often lack targeted interventions due to insufficient context-specific research. The study seeks to uncover cultural, educational, and systemic barriers that hinder optimal breastfeeding and highlight the need for localised health education, stronger community support systems, and policy responses tailored to rural populations.”

Magaisa, under the supervision of FMS's award-winning NRF-rated Professor Nirmala Dorasamy, explained that this study strongly aligns with his wider academic and career aspirations, particularly as it complements and enriches the focus of his PhD research titled “Enhancing South African Maternal Care within the Public Health System: A Case of Stillbirths in the Lejweleputswa District Municipality.”

“My academic trajectory is deeply rooted in advancing maternal and child health outcomes, particularly in underserved and rural communities,” he said.

Magaisa plans to share the study findings through a multi-layered approach to maximize academic, policy, and community impact. This includes publishing in peer-reviewed journals, presenting at conferences such as the FIGO World Congress, scheduled for October in Cape Town, and creating policy briefs for local health stakeholders. Community engagement will also be prioritised through workshops and feedback sessions in the study areas, ensuring participants are informed and involved in shaping practical solutions.

“I hope that my research will have a transformative and sustainable impact on both the local communities involved in the study and broader maternal healthcare systems,” concludes Magaisa.