DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

DEPUTY VICE-CHANCELLOR
RESEARCH
INNOVATION &
ENGAGEMENT

Quarter 3, 2025

RESEARCH AND INNOVATION NEWS

The Newsletter of the
DVC: Research, Innovation and Engagement

TABLE OF CONTENTS

DUT WINS PRESTIGIOUS NRF AWARD FOR RESEARCH ADVANCEMENT TWO YEARS RUNNING

Picture: Supplied
DUT Deputy Vice-Chancellor: Research, Innovation and Engagement, Professor Fulufhelo Nemavhola, accepting the NRF Focused Research Advancement Award.

SIMANGELE ZUMA AND WAHEEDA PETERS

The Durban University of Technology (DUT) has once again been recognised nationally, winning the prestigious Focused Research Advancement Award at the 2025 National Research Foundation (NRF) Awards on Thursday, 7 August 2025.

DUT was honoured with the award for the second consecutive year, a recognition of its exceptional growth in research productivity and support over the past five years.

The 2025 NRF Awards were held under the theme "*Innovating for a Sustainable Future*", celebrating 25 years of research, innovation, impact and partnerships.

This accolade has further solidified DUT's position as a leading research institution, reinforcing its commitment to impactful research, innovation and collaboration as embedded in the ENVISION2030 strategic framework. ENVISION2030 highlights DUT's drive towards research excellence, innovation and societal impact, contributing to the development of KwaZulu-Natal, South Africa and the world.

Sharing his congratulatory remarks on this achievement, Deputy Vice-Chancellor: Research, Innovation and Engagement, Professor Fulufhelo Nemavhola said:

> ***CONGRATULATIONS TO ALL OUR STAFF, STUDENTS AND EVERYONE WHOSE DEDICATION MADE THIS ACHIEVEMENT POSSIBLE. DUT IS HONOURED TO HAVE BEEN RECOGNISED AS A UNIVERSITY OF TECHNOLOGY THAT HAS SHOWN THE MOST GROWTH IN RESEARCH PRODUCTIVITY OVER THE PAST FIVE YEARS. WE REMAIN FOCUSED IN PUSHING THE BOUNDARIES OF INNOVATION THROUGH FOSTERING A CULTURE OF CREATIVITY AND CRITICAL THINKING. WE STRIVE TO POSITION DUT AS A GLOBAL LEADER IN INNOVATIVE RESEARCH.***

At the 2025 NRF Awards, keynote speakers Professor Blade Nzimande, Minister of Science, Technology and Innovation, and NRF CEO Dr Fulufhelo Nelwamondo, emphasised the role of research and innovation in tackling South Africa's development challenges and fostering a sustainable future.

The event also showcased the NRF's Vision 2030, "*Research for a Better Society*", and celebrated the organisation's 25th anniversary, marking its contribution to promoting research excellence and capacity building in South Africa.

Winning the NRF Focused Research Advancement Award for the second year in a row underscores DUT's bright future in research and innovation. It stands as a testament to the dedication of DUT's researchers, faculties and administration, who continue to advance research that transforms society and drives positive change.

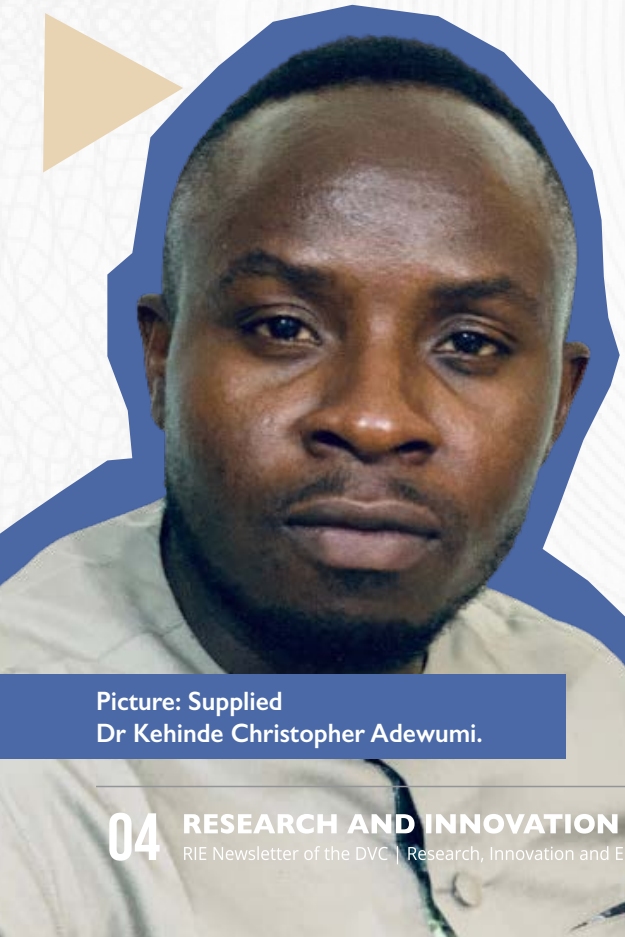
POSTDOCTORAL FELLOW WINS INTERNATIONAL EMERGING SCHOLAR AWARD

ANDILE DUBE

The Durban University of Technology (DUT) is celebrating the outstanding achievement of Dr Kehinde Christopher Adewumi, a Postdoctoral Fellow in the Department of Fine Art and Jewellery Design within the Faculty of Arts and Design. He has been honoured with the prestigious *Emerging Scholar Award* from the Common Ground Research Networks, USA.

The *Emerging Scholar Award* is granted by the Common Ground Research Networks. Founded in 1984, the organisation fosters international scholarly collaboration through conferences, journals, books, and online dialogue. Recipients are selected based on the impact and potential of their research, publications, and community engagement.

The recognition came after the Network evaluated Dr Adewumi's portfolio, which highlighted the significant contributions of his work. Following his selection, he presented a paper at the 2025 Common Ground Research Networks Conference at the Centre for the Arts in Society, Carnegie Mellon University, Pittsburgh, USA, where he officially received the award.



Picture: Supplied
Dr Kehinde Christopher Adewumi.

Commenting on his award, Dr Adewumi said: "It feels good to be recognised for your hard work, especially on such an international platform. However, I am also aware of the responsibility and demand this places on me and the quality of work and ideas I explore. Nonetheless, I feel that extra layer of conscious accountability is good for my career as I cannot afford to be less. Someone recently told me, 'Do it Great, Do it incredible'."

While academic recognition is important, Dr Adewumi's vision for his career reaches beyond citations and scholarly acclaim. "I long to see my work touch as many lives as possible. The true testament of the impact of my work will be the transformed lives and communities", he said.

As a Postdoctoral Fellow resident in the Fine Art and Jewellery Design Department, Dr Adewumi's role involves teaching, coordinating postgraduate activities, and supervising master's and doctoral students. His contributions go beyond the classroom, as he actively participates in organising the annual Faculty Research Conference and serves on committees such as the Faculty Research Committee (FRC).

Dr Adewumi's research interests span *Arts in Health*, *Arts in Society*, and *Arts and Internationalisation*, areas in which he has already made a significant impact.

He holds a PhD in Art History from Ahmadu Bello University in Zaria, Nigeria, where his academic journey began in 2018 as a Teaching and Research Assistant under the mentorship of Professor Gambo Giles Duniya. Reflecting on his beginnings, Dr Adewimi acknowledged the invaluable guidance he received during that time, which continues to shape his scholarly pursuits.

To fellow emerging researchers, he offers heartfelt advice:

> ***"DO NOT WAIT FOR THE 'RIGHT TIME'. DO NOT WAIT UNTIL YOU SEE THE FULL PICTURE BEFORE YOU ACT. SEND THE EMAIL. HAVE THE NEXT CONVERSATION. ATTEND THE NEXT MEETING. TAKE THE NEXT STEP. START WHERE YOU ARE WITH WHAT YOU HAVE. SOON ENOUGH, EVERYTHING WILL ALIGN."***

RIE LEADERSHIP STRENGTHENS FACULTY ENGAGEMENT ON RESEARCH AND INNOVATION

Picture: Supplied
Professor Fulufhelo Nemavhola, Deputy Vice-Chancellor: Research, Innovation and Engagement at DUT, is seen during one of his engagements with the Faculties of Engineering and the Built Environment and Health Sciences during the RIE Sector Faculty Board Meetings.

SIMANGELE ZUMA

Professor Fulufhelo Nemavhola, the Deputy Vice-Chancellor: Research, Innovation and Engagement (RIE) at the Durban University of Technology (DUT), met with the Faculties of Engineering and the Built Environment and Health Sciences during their RIE Sector Faculty Board Meetings. These crucial engagements were held at the Steve Biko and Ritson campuses in Durban on Tuesday, 26 August 2025.

Facilitating the Faculty of Engineering and the Built Environment session was Mr Alan Khan, Senior Director: Corporate Affairs, while Ms Phumzile Xulu, Community Engagement Practitioner in the DVC: RIE office, facilitated the Health Sciences session.

Professor Sudesh Rathilal, Executive Dean of the Faculty of Engineering and the Built Environment, commended Prof Nemavhola for clarifying concerns that had arisen from previous Town Hall Meetings. Professor Gugu Mchunu, Executive Dean of the Faculty of Health Sciences, also expressed her gratitude, noting this was the first time her faculty had the opportunity to engage directly with him.

In both sessions, Prof Nemavhola urged staff to participate actively and voice their views on pressing research and innovation matters highlighted during the Vice-Chancellor and Principal, Professor Thandwa Mthembu's Town Hall Meetings. He emphasised that the aim was to collaborate in finding practical solutions.

Sharing key statistics on research at DUT, Prof Nemavhola noted that 36% of academic staff hold doctoral degrees. He encouraged those without PhDs to register soon, as DUT is moving towards requiring all academics to hold doctorates. He further highlighted that 45% of research output is produced by non-permanent academic staff, which he found concerning. He urged permanent academics to balance lecturing with publishing.

Prof Nemavhola also pointed out that 40% of research publications are generated by staff aged 55 and older. He called on younger academics to publish actively, warning that low participation was widening generational gaps in research output. Another concern was that 18% of doctoral-qualified staff are not involved in research or supervision. He stressed that this placed an unfair burden on active

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researchers and impacted the university's ability to secure funding. Publishing, he said, was the only way to close the gap and improve DUT's global ranking.

Prof Nemavhola dedicated an hour to each faculty, allowing staff to raise concerns and suggest improvements. The Faculty of Engineering and the Built Environment flagged delays in approvals for international conferences. He assured them that processes would be streamlined, as approval responsibility now rests within their faculties.

Health Sciences staff raised frustrations over poor internet connectivity, which they felt hampered productivity. Prof Nemavhola confirmed that interim solutions were being explored while DUT upgraded its digital infrastructure.

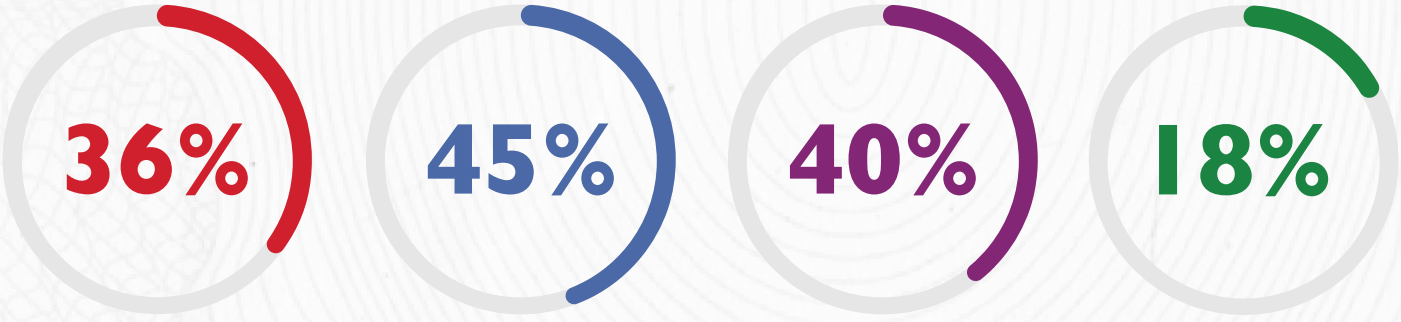
Dr Nomcembo Mthombeni, Interim Director: Research and Postgraduate Support, spoke on strengthening research, innovation and entrepreneurship at DUT. She outlined the unit's four focus areas: Ethics, Research Information Management, Grants, and Research Capacity Development. She also shared staff contacts to help academics access support. Excitingly, Dr Mthombeni announced that, as of 26 August 2025, all new academic staff joining DUT will receive automatic seed funding to launch their research.

Dr Pinkie Ntola, Interim Director: Technology, Transfer and Innovation (TTI), highlighted DUT's entrepreneurial and innovation programmes. These include the Idea to Prototype Programme, Innovation Builder Fund, Technology Development Fund and Alumni Innovators Programme. She also introduced two entrepreneurial hubs under TTI - the innobiz DUT Centre for Entrepreneurship and Innovation and the Centre for Social Entrepreneurship Rapid Incubator - both designed to help staff, students and communities build businesses that drive social and economic change.

Dr Ntola encouraged business-minded staff and students to approach her office for support, noting that TTI also assists in accessing external funding through the Technology Innovation Agency (TIA).

Closing the session, Dr Pravita Pillay, Deputy Dean of the Faculty of Health Sciences, thanked Prof Nemavhola for his openness. She described the engagement as an important opportunity to strengthen faculty support structures.

KEY STATISTICS ON RESEARCH AT DUT AT A GLANCE

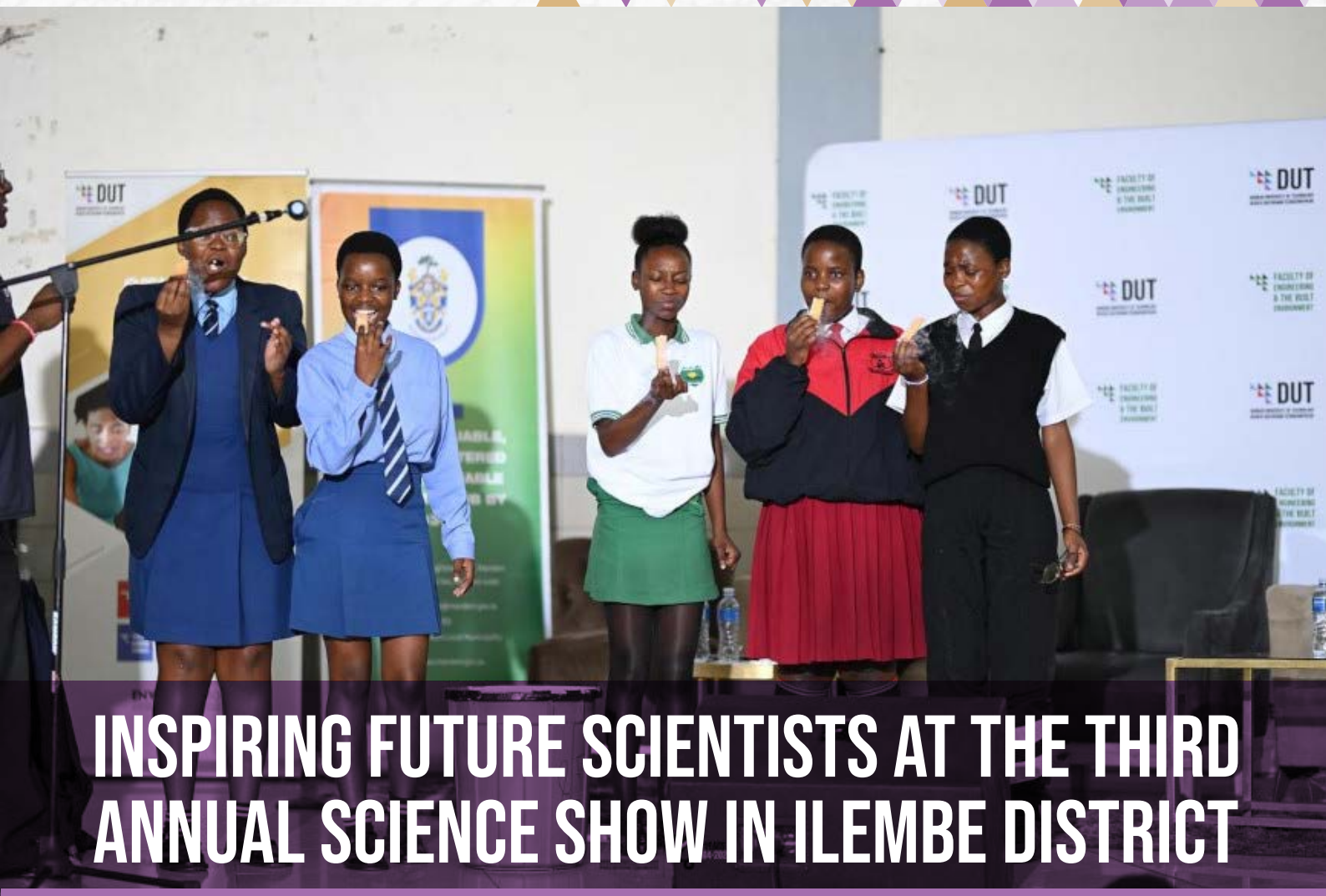


OF ACADEMIC STAFF HOLD DOCTORAL DEGREES

OF RESEARCH OUTPUT IS PRODUCED BY NON-PERMANENT ACADEMIC STAFF

OF RESEARCH PUBLICATIONS ARE GENERATED BY STAFF AGED 55 AND OLDER

OF DOCTORAL-QUALIFIED STAFF ARE NOT INVOLVED IN RESEARCH OR SUPERVISION



INSPIRING FUTURE SCIENTISTS AT THE THIRD ANNUAL SCIENCE SHOW IN ILEMBE DISTRICT

Photographer: Khulasande Tshayile
High School learners participating in Professor Megandhren Govender's practical experiments.

SINAMILE SITHOLE

The Durban University of Technology's (DUT) Student Recruitment Unit successfully hosted its Third Annual Science Show on Wednesday, 20 August 2025, at the Sibusisiwe Community Hall in Mandeni, iLembe District.

The vibrant event drew over 700 Grade 9 and Grade 12 learners from eight high schools, with the aim of encouraging young people to pursue mathematics and science by showcasing the exciting career opportunities available in STEM fields.

The Science Show was directed by Student Recruitment Officer, Mr Michael Zulu, who kept learners engaged as Master of Ceremonies. The programme opened with a welcome from iLembe District official, Mr Madele, who thanked DUT and Mandeni Municipality for hosting the event and urged learners to seize the opportunity with seriousness. Ward Councillor Mr Thwala echoed this, encouraging Grade 12 learners to remain focused on their studies to secure university admission.

Highlighting the importance of the initiative, DUT Student Recruitment Manager, Mr Alex Mdletshe, emphasised that the Science Show was a response to the decline in learners choosing science subjects.

"This does not only affect DUT, it affects industries and the entire South African economy. If fewer learners do science, it creates a chain reaction fewer science graduates, fewer skilled professionals, and eventually, higher unemployment because everyone ends up doing the same courses. We need more scientists, engineers, and innovators to balance our country's economy," Mdletshe explained. He assured

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learners that DUT was committed to guiding them toward better subject choices.

> ***"WE ARE HERE TO HELP YOU CHOOSE WISELY AND START BUILDING THE FOUNDATION OF YOUR FUTURE," SAID MDLETSHE.***

Learners were further inspired by DUT students and alumni who shared their journeys. Tayyab Mohammad, a second-year Homeopathy student, reminded them that success in science is possible with focus and hard work. Zine Fikeni, DUT alumna and Senior Manager for Environmental Health Services at King Cetshwayo Municipality, explained how a Diploma in Environmental Studies at DUT changed her life: "Environmental health is not just a career, it is about solving real problems in our communities. If you take Mathematics and Science, your chances of finding meaningful work after graduating are very high because these careers are in demand."

Adding to this, DUT alumna Dr Khanyi Khumalo (Chiropractic) reinforced the value of science-related studies, sharing how her career journey opened opportunities for professional growth.

To bring science to life, Thobelani Radebe and Thubelihle Hadebe, Chemistry students from the Faculty of Applied Sciences, performed live experiments that demonstrated chemical reactions and highlighted the practical side of Chemistry at DUT.

A highlight of the day was the lively Mathematics quiz competition, led by Professor Deonarain Brijlall from DUT's Department of Mathematics. Separate contests for Grade 9 and Grade 12 learners created an electric atmosphere as participants competed in a fast-paced challenge, cheered on by their peers. Winners proudly walked away with Samsung tablets.

Grade 12 learner Lethukuthula Malunga (Udumo Secondary School), winner of the senior quiz, said:

> ***"I AM VERY HAPPY FOR THIS OPPORTUNITY. IT WAS AN EYE-OPENING EVENT, AND I AM SO GRATEFUL FOR THE GIFT I RECEIVED. THIS HAS MOTIVATED ME EVEN MORE, AND NEXT YEAR I WANT TO STUDY ENVIRONMENTAL STUDIES AT DUT."***

Grade 9 learner Anamile Manqele (Mbuyiselo High School), winner of the junior quiz, shared:

> ***"I USED TO DOUBT MYSELF IN MATHEMATICS, BUT TODAY HAS SHOWN ME THAT I CAN DO IT. I NOW KNOW THAT NEXT YEAR I WILL CHOOSE THE SCIENCE PATH."***

Mr Zulu kept the energy high with interactive questions and spot prizes such as calculators, while Ebrahim Asmal introduced learners to the Fourth Industrial Revolution (4IR), demonstrating robotics, artificial intelligence and smart manufacturing. Learners were captivated when he revealed two humanoid robots, illustrating how STEM opens doors to advanced technology.

The event closed with an entertaining session by Professor Megandhren Govender, whose interactive science demonstrations wowed learners with humour, creativity and dramatic visual effects.

The Science Show was further supported by the Faculty of Health Sciences, Faculty of Applied Sciences, Faculty of Engineering and the Built Environment, Faculty of Accounting and Informatics, Student Admissions, and the Central Applications Office (CAO), who shared course and career information with learners.

The day ended with learners leaving inspired, motivated and excited about the possibilities that Mathematics and Science can unlock for their futures.

Photographer: Khulasande Tshayile
Mathematics quiz competition winners.

DR EMMANUEL TETTEH HONOURED WITH EMERGING RESEARCHER AWARD AT SOUTH AFRICA'S 'SCIENCE OSCARS'

SIMANGELE ZUMA AND WAHEEDA PETERS

The Durban University of Technology (DUT) is celebrating a major research achievement as Dr Emmanuel Kweinor Tetteh, Senior Researcher in the Green Engineering Research Group in the Department of Chemical Engineering, has been awarded the coveted TW Kambule-NSTF Emerging Researcher Award at the National Science and Technology Forum (NSTF) South32 Awards-widely recognised as South Africa's "Science Oscars."

Dr Tetteh's victory was announced during the NSTF Awards and Gala Dinner held on Thursday, 31 July 2025. The Emerging Researcher Award acknowledges outstanding contributions from researchers within the first six years of their careers, spotlighting those whose work demonstrates excellence, innovation and impact.

Championing Green Engineering

Driven by a passion for environmental sustainability, Dr Tetteh has made significant strides in green engineering solutions that address pressing global challenges in the water–energy nexus. His multidisciplinary research, leadership and innovative approach have positioned him as one of South Africa's most promising scientists and reinforced DUT's growing global footprint in sustainable engineering.

Over the course of his career so far, Dr Tetteh has contributed substantially to DUT's research outputs, authoring and co-authoring more than 60 journal articles, conference papers and book chapters. Beyond publications, he has also mentored and supervised several honours and postgraduate students to completion, investing in the next generation of scientists and engineers.

His research and mentorship reflect DUT's commitment to excellence, transformation and innovation in science and technology, as outlined in the university's ENVISION2030 strategy.

Words of Reflection and Gratitude

Sharing his thoughts on the honour, Dr Tetteh said the award came as both a surprise and a moment of validation:

> ***"BEING ACKNOWLEDGED AS A WINNER FOR THE EMERGING RESEARCHER CATEGORY CAME AS A SHOCK TO ME. LAST YEAR, I WAS A FINALIST IN THE SAME CATEGORY BUT I DID NOT WIN. HOWEVER, MY MENTOR AND ACTING EXECUTIVE DEAN IN THE FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT AT DUT, PROFESSOR SUDESH RATHILAL COMFORTED ME, SAYING THESE THINGS TAKE TIME. I AM EXCITED ABOUT THE RECOGNITION BUT DEEP DOWN BEING AN EMERGING RESEARCHER COMES WITH LOTS OF DEMANDS, YOU HAVE TO BE DISCIPLINED, COMMITTED AND PERSEVERE IN ORDER TO OVERCOME SOME OF THE CHALLENGES."***

He shared that winning this award also promotes the hard work, dedication and commitment of his team at the Green Engineering Research Group. Dr Tetteh expressed his gratitude to DUT for giving him the platform for his research as well as his family and friends for their consistent support.

Celebrating a DUT Milestone

Professor Fulufhelo Nemavhola, Deputy Vice-Chancellor: Research, Innovation and Engagement at DUT, expressed pride at Dr Tetteh's recognition: "Dr Tetteh's recognition at the NSTF Awards was a very proud moment for DUT and a powerful endorsement of our ENVISION2030 commitment to excellence in research, innovation and societal impact. His work exemplifies the values we seek in our emerging researchers at DUT."

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Adding to this, his mentor Professor Sudesh Rathilal, Executive Dean of the Faculty of Engineering and the Built Environment, praised Dr Tetteh's contributions: "A well-deserved accolade for a fantastic researcher. I am extremely proud of him and his achievements. He has achieved a lot for himself, the Green Engineering Research Group, the Department of Chemical Engineering, the Faculty of Engineering and the Built Environment and DUT as a whole. Well done Dr Tetteh!" said Prof Rathilal.

The recognition was also applauded by the NSTF. Ms Seipati Moleleki, speaking on behalf of the organisation, noted: "Congratulations Dr Kweinor Tetteh on winning the prestigious 2024/2025 NSTF-South32 Award in recognition of your outstanding contribution to science, engineering, technology (SET), and innovation. This is no small feat- and your excellence continues to inspire."

Driving Innovation for the Future

Dr Tetteh's ongoing research continues to break new ground in areas such as magnetic separation technology, green hydrogen production and smart water systems. These innovations have the potential to transform industries while addressing critical sustainability issues.

Looking ahead, he is committed to expanding knowledge through science, innovation, and engineering education, while empowering future generations to continue driving progress in sustainable technologies.

His vision aligns strongly with DUT's mission to produce impactful research that not only contributes to knowledge but also creates real solutions for communities, industry and society at large.

Picture: Supplied
Dr Emmanuel Kweinor Tetteh, Senior Researcher: Green Engineering Research Group in the Department of Chemical Engineering at DUT after winning the prestigious TW Kambule-NSTF Emerging Researcher Award.

DUT EMPOWERS OVER 14,000 SOUTH AFRICANS WITH FUTURE-READY AI SKILLS THROUGH MICROSOFT PARTNERSHIP

WAHEEDA PETERS

The Durban University of Technology (DUT), in partnership with Microsoft, has successfully launched a transformative digital skilling initiative that trained more than 14,000 individuals in Artificial Intelligence (AI).

Supported by a Microsoft grant, this large-scale initiative formed part of the company's global commitment to expand access to digital and AI education.

Open to all South Africans, regardless of age, experience, or background, the free programme aimed to empower participants with future-ready skills to thrive in a fast-changing, innovation-driven global economy.

The AI Skills Hub – Accessible Learning for All

The training was delivered through the AI Skills Hub, an interactive digital learning environment built on a custom learning management system developed by DUT and its partners.

The programme, designed specifically for beginners, required no prior technical knowledge. It introduced participants to AI concepts through practical, user-friendly content created by Microsoft. On completion, learners received a certificate of achievement from DUT, further adding credibility and recognition to their new skills.

Cassim Vanker, Project Coordinator and Lecturer in the Department of Information Technology, highlighted the importance of this milestone: "Artificial Intelligence (AI) is fundamentally transforming industries worldwide, and AI skills are now among the most sought-after qualifications in the workforce. For the DUT community, investing in AI training delivers measurable benefits, both in the global industry and within education," he said.

Why AI Skills Matter

Vanker pointed to global workforce data illustrating the demand for AI competency. According to Microsoft and LinkedIn's *Work Trend Index Special Report* (2024), employees trained in AI can increase productivity by up to 39%, while organisations offering comprehensive AI training report workforce efficiency improvements of up to 37%.

LinkedIn's *Jobs on the Rise Report* (2025) further confirms this trend, showing that mentions of AI in job postings surged by 56.1% this year alone. Similarly, IBM's *Global AI Adoption Index* (2024) reveals that 91% of employees worldwide want to improve their AI literacy.

> ***"THE AI SKILLS HUB MEETS THIS NEED BY PROVIDING FREE, ACCESSIBLE, AND FUTURE-FOCUSED TRAINING, ENSURING DUT STUDENTS AND STAFF CAN THRIVE IN A RAPIDLY EVOLVING, INNOVATION-DRIVEN WORLD. THIS DIRECTLY SUPPORTS ENVISION2030'S MISSION TO CULTIVATE DIGITALLY SKILLED, ADAPTIVE GRADUATES AND STAFF WHO ARE READY TO LEAD AND MAKE A POSITIVE IMPACT ON SOCIETY," EXPLAINED VANKER.***

He said the key aspects of focus in the training programme included six modules that blend theory and practice:

AI FUNDAMENTALS
Introducing the core concepts of AI and machine learning.

GENERATIVE AI
Creating content with AI-powered tools.

SEARCH TECHNOLOGY
Using AI to enhance information retrieval.

RESPONSIBLE AI
Ensuring ethical, transparent, and compliant AI use.

MICROSOFT COPILOT
Improving productivity through AI assistance.

AI AND ACCESSIBILITY
Designing technology that is inclusive for all.

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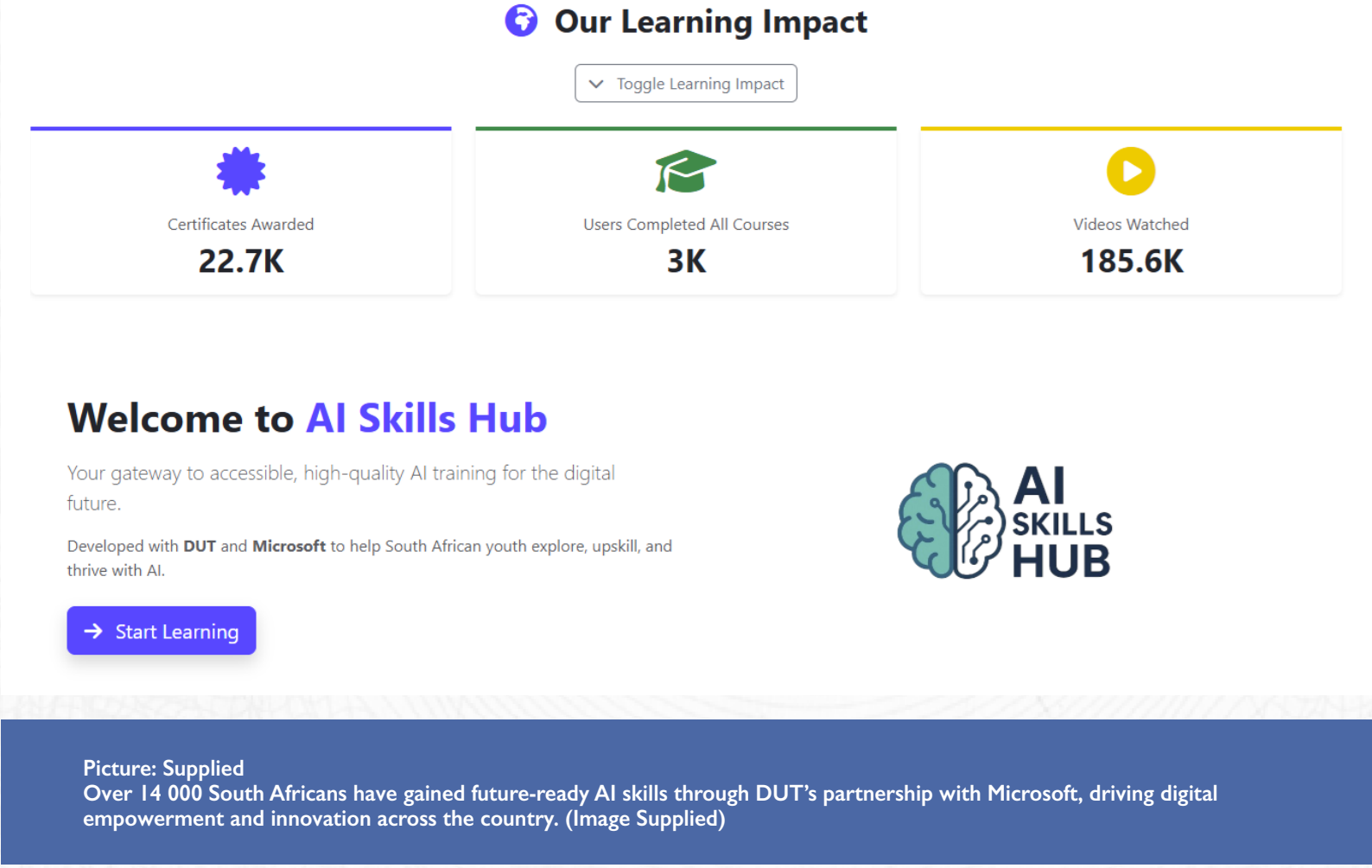
Vanker said these areas directly contribute to DUT's ENVISION2030 values of innovation, social justice, and sustainability by promoting responsible, accessible, and impactful use of technology.

"Artificial Intelligence is already reshaping the workplace by automating repetitive tasks, enabling more intelligent decision-making through data-driven insights, and freeing up time for more creative and strategic work. Studies show that AI-powered tools can boost productivity by up to 40% in specific tasks, enhance accuracy, and reduce turnaround times-advantages that are just as valuable in academic research as they are in professional environments," explained Vanker.

"By completing this programme, participants have gained a competitive edge in the job market and learned how to use AI to streamline workflows, improve research outcomes, and to tackle problems more effectively. The more AI-literate our community becomes, the stronger DUT's capacity will be to achieve ENVISION2030's vision of being an innovative, people-centred university that makes a lasting impact on society," he shared.



Picture: Supplied
Over 14 000 South Africans have gained future-ready AI skills through DUT's partnership with Microsoft, driving digital empowerment and innovation across the country. (Image Supplied)

PROFESSOR VASANTHRIE NAIDOO SELECTED FOR DISTINGUISHED PROGRAMME IN INDIA

WAHEEDA PETERS

Professor Vasanthrie Naidoo, Associate Professor in the Department of Nursing, Faculty of Health Sciences at the Durban University of Technology (DUT), is the only South African academic invited to participate in the Distinguished Professor Programme 2025 at Parul University, India, taking place from 30 August to 30 September 2025.

Parul University, located in Vadodara, Gujarat, is a leading institution renowned for its diverse international student body, which includes more than 3,500 students from over 75 countries. Each year, the Distinguished Professor Programme welcomes top academics from across the world, and in 2025 it will host 80 visiting faculty members from a wide range of disciplines and backgrounds.

This esteemed initiative provides a platform for accomplished educators, researchers, and thought leaders to engage in collaborative dialogue, exchange knowledge, and contribute to the academic enrichment of the global university community.

A CAREER OF ACADEMIC EXCELLENCE

Professor Naidoo's distinguished career spans over three decades in health sciences education, research, health services management, and critical care nursing. She has published widely on topics such as transnational nursing education, higher education, health systems strengthening, and ICU nursing.

Her role at DUT includes supervising doctoral and master's students, coordinating postgraduate research, and lecturing in advanced nursing education. Reflecting on the invitation from Parul University, she shared: "It is truly an honour to not only represent DUT in this prestigious programme but also to highlight the role of female academics in nursing. While I recognise this opportunity as a personal milestone as a female Nursing academic, it bears testament to the quality of research and academic excellence we strive for at DUT," she said.

RESEARCH THAT BRIDGES DISCIPLINES

Professor Naidoo's work is characterised by an interdisciplinary and transnational approach, often exploring the intersections of health sciences, technology, and education.

Recent projects include research into:

- Artificial intelligence in cardiology
- Stem-cell therapies for diabetes management
- Cultural diversity in healthcare systems

Her research continues to be inspired by her professional background in critical care nursing and her passion for strengthening fragile health systems. "What is significant to note is that, most of my research is inspired by my professional background in critical care and wanting to strengthen the ailing health systems we are faced with. Notably, the recent pandemic in particular, has reinforced the urgent need for responsive, innovative approaches from the healthcare sector related to health sciences education and healthcare service delivery, which now underpins much of my research projects," she explained.

ALIGNMENT WITH DUT'S ENVISION2030 STRATEGY

Professor Naidoo's research is closely aligned with DUT's ENVISION2030 strategy, which prioritises:

- Building human capacity through postgraduate supervision and mentorship
- Promoting social good by addressing inequities in health and education
- Advancing innovation through curriculum design and international collaboration

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"By integrating transdisciplinary approaches, my work supports DUT's vision of being an engaged university that makes a positive impact both locally and globally. All of this is very much a part of DUT's stewardship, systems and processes, society and sustainability strategies," she noted. Prof Naidoo emphasised that her recent research on digital inequality in African higher education institutions has highlighted the structural and pedagogical barriers faced by students in resource-limited settings. "These findings inform strategies for more equitable access to digital learning, which is crucial in shaping inclusive educational policies. Additionally, my collaborative work on the use of adipose-derived stem cells for diabetic foot ulcer treatment offers promising therapeutic possibilities that could significantly improve patient quality of life," she said.

ADVANCING GLOBAL GOALS

Professor Naidoo emphasised the importance of international collaboration in meeting the United Nations Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-Being) and SDG 4 (Quality Education). "We are fast approaching 2030 which is the deadline for global achievement of the Sustainable Developmental Goals (SDGs), and initiatives like this help us as academics to network and promote global dialogue that will help steer the world to achieving these SDGs, particularly SDG 3 and 4, which is good health and well-being and quality education respectively.

"We also know that these two goals are deeply interconnected, with progress in one significantly impacting the other. Therefore, learning from global best practices can inform future research and inspire future collaborative projects that can influence health and education policy development in South Africa and beyond," she expressed.

COLLABORATION AT THE CORE

For Professor Naidoo, collaboration is central to her research philosophy. Over the years, she has developed partnerships with institutions and researchers across South Africa, Saudi Arabia, Sweden, and India.

> ***"I HAVE REALISED LONG AGO THAT COLLABORATION IS CENTRAL TO MY RESEARCH PHILOSOPHY, ESPECIALLY IN ACADEMIA. INTERDISCIPLINARY COLLABORATION, PARTNERSHIPS WITHIN THE HEALTHCARE INDUSTRY, HEALTHCARE INSTITUTIONS AND OTHER HIGHER EDUCATION INSTITUTIONS HAVE HELPED TO ENSURE THAT MY RESEARCH REMAINS RELEVANT AND IMPACTFUL IN REAL-WORLD CONTEXTS," SHE ADDED.***

She said every research project becomes new and exciting as the aim is to try and make a difference to society. "I hope that this opportunity will help me extend these networks to strengthen research outputs, joint publications, and student and staff exchange opportunities."

She also believes that international academic exchanges are vital for both personal and institutional growth: "Whether we like it or not, we are living in an interconnected world and are continuously learning from each other and with each other. This is what helps us grow as individuals and shapes society as a whole. So, while international academic visits can expose academics and researchers to different contexts and methodologies, they also help strengthen institutional reputations," she concluded.

Picture: Supplied
Professor Vasanthrie Naidoo

FACULTY OF ARTS AND DESIGN LAUNCHES DOCTORAL ACADEMY TO SUPPORT PHD SCHOLARS

Photographer: Mphiliseni Manqele
(Left to right) are: Mr Rory van As, Dr Nathan Slabbert-Gorringe, Dr Dianna Moodley, Professor Maleshoane Rapeane-Mathonsi, Dr James Akpan and Professor Pholoho Morojele.

ANDILE DUBE AND NKOSINGIPHILE DLADLA

The Faculty of Arts and Design (FAD) at the Durban University of Technology (DUT) has launched its inaugural Doctoral Academy, providing vital support to PhD students. The academy was inaugurated at the Durban and Midlands campuses on 8 and 15 August 2025, respectively. Conceptualised by Professor Pholoho Morojele, FAD Executive Dean and seasoned researcher, the academy will be overseen by Dr Nathan Slabbert-Gorringe.

The Faculty of Arts and Design Doctoral Academy is designed to facilitate PhD completion while supporting career growth. During the event, Professor Morojele highlighted that the initiative is built on the principle that doctoral education should be transformative, dialogue-driven, and responsive to the unique rhythms of creative and performative scholarship.

"At the heart of the FAD Doctoral Academy lies a commitment to cultivating interactive and dialogical learning spaces, environments where knowledge is not simply transferred, but co-constructed. These spaces are inspired by the works of Paulo Freire (1970) and Bell Hooks (1994), who reject the traditional banking model of education. Instead, they invite both supervisors and students into a dynamic exchange, a dialogical praxis, where reflection, creativity, and critical engagement fuel not only knowledge production but self-formation," he said.

Professor Morojele emphasised that the academy is strategically aligned with FAD's DNA - a faculty that is performative, practice-led, materially engaged, and conceptually bold:

> ***"IN THE VISUAL AND PERFORMING ARTS, KNOWLEDGE IS OFTEN EMBODIED, ITERATIVE, AND EMERGENT. OUR RESEARCH JOURNEYS ARE NOT LINEAR; THEY DANCE, PAUSE, IMPROVISE, AND PROVOKE. THE ACADEMY, THEREFORE, SEEKS TO CREATE CAPACITATING ECOSYSTEMS THAT RESPECT AND EXTEND THESE MODELS OF KNOWING," SAID A JUBILANT MOROJELE.***

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The academy responds to the growing need for inclusive and context-sensitive doctoral training, recognising the specificities of arts and design disciplines. Its aim is to produce researchers who are also changemakers, equipped to disrupt, inspire, and reimagine futures.

Doctoral students will not be the sole beneficiaries. Supervisors and Postdoctoral Fellows will also gain support through workshops and practical guidance.

"When we cultivate capacitated supervision and research spaces, we accelerate student progression without compromising quality, strengthen the research cultures of departments, empower emerging scholars to see themselves as leaders, and build a faculty that is globally relevant while locally rooted," Professor Morojele noted.

Dr Slabbert-Gorringe highlighted that the academy offers rigorous proposal development, structured supervision, ongoing mentorship, and support for research enhancement. He clarified that the academy does not replace existing structures, but enhances them through:

1. Rigorous Proposal Development and Ethical Clearance
2. Monitoring, Mentoring and Thesis Completion Support
3. Supervision and Research Enhancement for Staff and Postdoctoral Fellows

Another key segment in the event included a reflection by Visual Communication Design lecturer and PhD candidate, Mr Rory van As, who spoke about the difficulties of the PhD journey, saying that it can be isolating, particularly for creatives. Van As, who will be graduating with his PhD soon, also thanked Dr Slabbert-Gorringe for encouraging him to pursue his own research journey, noting his support as both a colleague and mentor.

Postdoctoral Fellow in the Media, Language and Communication Department, Dr James Akpan, highlighted the importance of fellowship and mentorship in alleviating the pressure often placed on scholars. His sentiments echoed those of van As, highlighting the value of initiatives like the Doctoral Academy in creating spaces not only for academic growth but also for social interaction and emotional well-being. He urged scholars to celebrate their milestones, no matter how small, to remain ethically grounded and to remain flexible in their methodologies, stressing that research itself is a methodological journey.

FAD's Research Coordinator, Dr Dianna Moodley, addressed the importance of strengthening supervision and research support, warmly welcoming the Doctoral Academy into the faculty.

Media, Language and Communication's Acting Head of Department, Professor Maleshoane Rapeane-Mathonsi, applauded Professor Morojele for initiating the Academy, saying it will redeem the Faculty of Arts and Design and DUT. Professor Rapeane-Mathonsi, who also is a former Research Coordinator for the Faculty of Arts and Design, spoke about the challenges facing postgraduate students, lecturers and supervisors, citing the pivotal role the Academy will play in providing holistic support to researchers.

Building a Shared Space for Transformation

In closing, Professor Morojele extended an invitation to all stakeholders to embrace the academy as a shared space: "Let me end by inviting each of you, students, supervisors and collaborators to take full ownership of this space. Let it not be a programme that is done to you, but a community you shape and grow. For it is in such shared, embodied and imaginative spaces that true transformation begins."

The Faculty of Arts and Design currently offers three doctoral qualifications: **Doctorate in Education (DEd), Doctor of Technology in Language Practice, and Doctor of Philosophy in Visual and Performing Arts, with a PhD in Adult and Community Education** forthcoming.

PROFESSOR SAHEED CELEBRATES NRF C1 RATING AS MOTIVATION TO AIM HIGHER

Picture: Supplied
Professor Sabiu Saheed in the Department of Biotechnology and Food Science, Faculty of Applied Sciences, at DUT.

WAHEEDA PETERS

Professor Sabiu Saheed, from the Department of Biotechnology and Food Science in the Faculty of Applied Sciences at the Durban University of Technology (DUT), has been recognised for his outstanding contribution to research with a C1 rating from the National Research Foundation (NRF). This accolade not only celebrates his scholarly achievements but also motivates him to continue striving for higher recognition in the years ahead.

The NRF rating system is one of South Africa's most rigorous benchmarks of research excellence. It identifies individuals who uphold the highest standards of academic work and demonstrate great potential for future impact. Peer reviewers, drawn from both local and international institutions, examine an eight-year portfolio of research outputs to assess their quality, originality and influence.

"I felt highly elated and humbled. This was particularly so as it is a reflection of my recognition for high-quality research as an established researcher. This new C1 rating marks a significant improvement from my previous Y2 rating, and this achievement motivates me to pursue a higher rating in the future," he shared.

Building a Strong Research Profile

Professor Saheed leads the Computational and Systems Biology Research Group at DUT. Here, postgraduate students and emerging researchers are immersed in projects focused on the bioprospection of active pharmaceutical ingredients against degenerative diseases. His team applies both computational models and laboratory-based experiments to investigate plant-derived compounds, particularly those with potential against diabetes and microbial infections.

This dual approach has proven especially effective in uncovering secondary metabolites from plants, compounds often overlooked in mainstream drug discovery. Over time, the group has built a growing library of therapeutic compounds, contributing not just to academic discourse but also to potential medical applications. Publications emerging from this work consistently appear in highly ranked, accredited international journals, cementing the group's position within the global research community.

Tapping into the Potential of Southern Africa's Medicinal Plants

Professor Saheed's research is deeply inspired by the extraordinary biodiversity of Southern Africa. The region is home to more than 3,689 medicinal plant taxa, which make up about 25% of its plant life.

"Of these, 771 taxa are actively traded, with the remaining taxa hugely underutilised, offering an exceptional

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opportunity to discover novel natural products with pharmaceutical and nutraceutical applications. While a good proportion of the South African population use medicinal plants and traditional medicines to meet their primary health care needs, only a few South African medicinal plants have been exploited to their full potential in terms of commercialisation. Likewise, there is a dearth of comprehensive data on the use of bioinformatics and computational modelling technologies for bioprospection for novel therapeutics from South African flora," he explained.

This gap, combined with the growing burden of diseases such as diabetes and antimicrobial resistance (AMR), has guided his research agenda. South Africa, like many parts of the world, faces significant pressure on its healthcare system from these chronic and infectious diseases. By using computational and systems biology approaches, his team aims to accelerate drug discovery, making it faster and more cost-effective to identify promising lead compounds.

"Venturing into computational modelling has complemented and enhanced my phytopharmacology research, and this has afforded potent lead molecules that are being further explored as antibacterial and antidiabetic therapeutics through pre-clinical and clinical studies," he explained.

Research Impact and Discoveries

Professor Saheed's projects have provided groundbreaking insights into how plant metabolites interact with disease-related enzymes and proteins."Using computational strategies, I have executed projects on diabetes and AMR. These studies provided significant insights into the molecular mechanisms of interaction of plant metabolites towards the binding domains of key enzymes/proteins in disease pathogenesis. In addition to availing more novel compounds that will either be patented or added to the current over 100 therapeutic compounds in my library of metabolites, these two projects are significant and will contribute towards addressing the menace of diabetes and AMR, which constitute major threats to South Africa's population, and adversely influence its economy through increase in healthcare costs to treat their associated primary and secondary complications," he noted.

His work on corn silk (CS), a natural material often discarded as agricultural waste, is particularly notable. Through metabolomics and computational analysis, his team revealed that corn silk metabolites may hold potential in personalised medicine, especially in relation to signalling pathways and genes implicated in diabetes.

"In appreciation of this approach, another project was executed, where six sunflower seeds cultivars were similarly profiled. These two projects involved capacity development with two MSc students supervised to completion and had fruitful collaborations with the Agricultural Research Council, Stellenbosch University, and the North-West University," he divulged.

Collaboration and Global Partnerships

Professor Saheed's work has also been enriched by international collaboration. Over the years, he has partnered with scholars and institutions in the USA, Sweden, India, China and Canada. These collaborations have not only produced high-quality joint publications but also facilitated mobility programmes that allow DUT students and early-career researchers to gain exposure abroad.

Such partnerships amplify the impact of his research while embedding DUT within a global knowledge network.

"Our research findings are targeted at microbial infections and diabetes mellitus, which are major health concerns in South Africa," added prof Saheed.

The NRF rating system categorises researchers based on their research outputs and impact, with categories including A, B, C, P, and Y, each with specific sub-categories.

"Being awarded with a C1 rating within the C sub-categories signifies recognition as an established researcher with some international footprint in the field of computational and systems biology," he shared.

Looking Ahead

Prof Saheed will continue to train and mentor postgraduate students and emerging researchers as a way of knowledge transfer and human capacity development in computational and systems biology for new molecule therapeutic targets against microbial infections and diabetes.

"Besides contributing towards the South African national imperatives on bio-economy, transformation and Indigenous Knowledge Systems, as well as addressing 'Good health and well-being' of the Sustainable Development Goals (SDG 3), the mentorship will constitute knowledge transfer and human capacity development within the niche of global digital transformation that will inspire innovation and mentees to be competitively relevant in generating new knowledge and solutions in this digital era as enshrined in the DUT ENVISION2030," he said.

FROM BLUEPRINT TO BREAKTHROUGH, NGUBANE'S DIGITAL PLATFORM TRANSFORMS CONSTRUCTION

PHIWAYINKOSI SIBIYA

Hlengiwe Mbalenhle Ngubane, a PhD student in Architecture at the Durban University of Technology (DUT) and founder of Project X, is reimagining the construction industry through her innovative digital platform. With a passion for blending traditional African building knowledge with modern technology, she is driving change towards transparency, efficiency and sustainability in construction across Africa.

Ngubane's journey began with her entrepreneurial spirit and determination to create solutions for industry challenges. Supported by DUT's innobiz Entrepreneurship Centre, she developed Project X, a construction management platform that enables real-time site monitoring, material tracking and document coordination.

"Being selected as a finalist in the 2025 Alliance Urban Innovation and Entrepreneurship Competition, it is truly an honour to be recognised as a finalist. This competition validates the hard work and vision behind Project X and reaffirms my belief that innovation in construction can have a meaningful impact on both industry and community," she said.

Project X has the potential to transform the construction industry across Africa. With its advanced features such as AI-driven risk alerts, BIM integration, and circular economy tools for waste reduction, the platform is poised to make a significant impact.

Ngubane also sees entrepreneurship as a vital way for students to complement their academic journey: "Empowerment enables students to gain the confidence and skills necessary to proactively create opportunities. Entrepreneurship and academics complement each other, allowing students to apply their knowledge in practical ways and develop resilience through initiatives like innobiz DUT," she explained.

Dr Pinkie Ntola, Interim Director of Technology, Transfer and Innovation at DUT, underscored the importance of the Global Innovation and Entrepreneurship (GISU) competition: "This competition will offer a platform to enhance the brilliance of student innovators and entrepreneurs who are aiming to solve some of the world's most urgent urban challenges."

With the event taking place from 30 to 31 October 2025, Ngubane is focused on refining her solution, building partnerships, and preparing to implement Project X at a pilot scale. Her goals are clear: to complete her PhD research, expand Project X into a market-ready platform, and advocate for sustainable, technology-driven construction practices across Africa.

For students aspiring to enter similar competitions, she offers practical advice. "Believe in your idea and don't be afraid to share it. Use these opportunities to learn, get feedback, and connect with others who can support your journey. The exposure and experience are as valuable as the competition outcome," Ngubane shared.

She affirmed the potential of Africa's youth to address critical challenges: "Competitions like these prove that Africa's youth have the creativity and drive to solve pressing challenges. I am grateful to DUT innobiz and the organisers for giving us the space to showcase our vision," said Ngubane.

Picture: Supplied
Hlengiwe Mbalenhle Ngubane

DUT WOMEN RESEARCHERS HONOURED AS NATIONAL TRAILBLAZERS IN SCIENCE AND INNOVATION

Picture: Supplied
DUT's rising research leaders, Dr Riona Indhur and Ms Caressa Munien celebrate being honoured as NRF Next Generation Researchers.

WAHEEDA PETERS

Durban University of Technology (DUT) researchers, Dr Riona Indhur and Ms Caressa Munien have, through their creative, distinctive and impactful research work, demonstrated an unwavering commitment to driving change as rising research leaders of the next generation.

Both the charismatic young women researchers have proven their mettle by not only being recognised for their vital contributions to the field of scientific research but also by serving as role models who inspire more young women at DUT to pursue careers in STEM (science, technology, engineering and mathematics).

Dr Riona Indhur, a biotechnologist and postdoctoral research fellow at the Institute for Water and Wastewater Technology (IWWT), and Ms Munien, a Chemical Engineer and Doctoral Researcher with the Green Engineering Research Ground under the Department of Chemical Engineering at the Durban University of Technology (DUT), were both winners at the 2025 National Research Foundation (NRF) Awards.

They triumphed in the Research Excellence Award for Next Generation Researchers category, announced at a ceremony held at the NH Johannesburg Sandton Hotel in Gauteng on 7 August 2025.

Dr Indhur, who completed her PhD in Biotechnology in May 2025, specialises in nanomaterials, advanced oxidation processes and sustainable wastewater treatment technologies. Her doctoral research focused on the synthesis and application of superparamagnetic iron-oxide-functionalised 2D nanocomposites for microplastic removal from drinking water and wastewater. Her work bridges chemistry, materials science and environmental

science, aiming to deliver cost-effective and high-efficiency solutions to global water challenges.

When the news of her win broke, Dr Indhur said it was surreal - a mix of pure joy, gratitude, and pride.

> ***"THIS AWARD REPRESENTS NOT ONLY THE COUNTLESS LATE NIGHTS IN THE LAB, BUT ALSO THE UNWAVERING BELIEF THAT RESEARCH CAN DRIVE REAL-WORLD CHANGE. IT'S AN INCREDIBLE HONOUR TO BE RECOGNISED AMONG THE TOP EMERGING SCIENTISTS IN SOUTH AFRICA AND TO BE CONSIDERED PART OF THE NEXT GENERATION OF RESEARCHERS WHO WILL SHAPE THE FUTURE OF SCIENCE IN OUR COUNTRY. THIS RECOGNITION REAFFIRMS MY COMMITMENT TO ADVANCING RESEARCH WITH TANGIBLE SOCIETAL IMPACT, AND I FEEL DEEPLY GRATEFUL TO THE NRF, MY MENTORS, COLLEAGUES, AND FAMILY FOR THEIR UNWAVERING SUPPORT," SHE SAID JUBILANTLY.***

Dr Indhur highlighted that the NRF Research Excellence Award for Next Generation Researchers is among the most prestigious accolades for early-career scientists in South Africa, spanning disciplines from the humanities to cutting-edge STEM fields.

"Only five researchers nationwide are selected each year, based on exceptional academic performance, research excellence, and societal impact. The calibre of competitors is extremely high, with each nominee representing the best in their respective fields. It was an incredibly humbling experience, as I stood alongside some of the most innovative and dedicated young researchers in the country," she shared.

In 2024, she was recognised as DUT's Top Published Doctoral Student and also received a Top Achiever Award and Mentorship Award. She contributes actively to outreach and community engagement. To date, she has published four peer-reviewed articles, with three more accepted in high-impact international journals, as well as a book chapter and a conference proceeding.

Currently, Dr Indhur's research focuses on advanced, sustainable nanomaterial-based systems for wastewater treatment, targeting contaminants of emerging concern such as microplastics and persistent organic pollutants.

"The two systems I am currently working on are photocatalytic and photofenton heterojunction hybrid oxidation systems. I am working on integrating advanced oxidation processes with low-cost, scalable treatment technologies that can be deployed in both urban and rural settings. This involves designing multifunctional catalysts, studying their performance under real environmental conditions, and ensuring that the solutions are not only effective but also environmentally safe and economically viable. Ultimately, the goal is to bridge cutting-edge scientific innovation with practical applications that improve water security and public health," she explained.

Professor Faizal Bux, Director of the Institute for Water and Wastewater technology (IWWT), praised her achievement: "Her enquiring mind and research skills will complement her ability to develop into a scientist of note. Being recognised at the national level is certainly an accolade for Dr Indhur and IWWT. We are confident that she will make a meaningful contribution and further expand the boundaries of science in her field of research. We do wish her all the best in her research endeavours."

Her PhD supervisor, Professor Sheena Kumari, echoed this, saying: "This award is a powerful testament to her exceptional hard work and unwavering commitment, qualities that make her an inspiration to all who have the privilege of working with her. Her tireless efforts not only produced exceptional research but also allowed her to complete her PhD in record time. She is the kind of scholar every supervisor dream of working with. Her research has already made a significant impact, and I am immensely proud of everything she has accomplished as a rising scholar," she said.

Dr Indhur added that the award has elevated the visibility of her work, opening doors to collaborations, networks and potential partnerships with leading scientists and institutions.

Turning to Ms Munien, her passion for engineering shone through in her reflections on the award: "Having been given this opportunity is a magical blessing to me from God, and reaffirms that I am indeed on my righteous path in my journey called life. It reflects who I am, my values, principles, strengths, my career triumphs thus far, and drives me to greater heights. This prestigious award and my professional career path collectively give me deep satisfaction and peace of mind, knowing that I am contributing to assisting the planet, the environment, and aquatic life to heal from all the sickness that mankind has spread over their anthropogenic activities towards remediation and sustainability. I wish to continue to positively influence the world while nourishing

Mother Nature and her beautiful creations. I will forever praise God for this blessing," she said triumphantly.

With industrial experience as a process engineer at SAPREF Refinery and Nalco Water, and as a project manager at Brainnest Germany Management Consultancy, Ms Munien has bridged theory and practice, collaborating globally in water treatment and petrochemical projects.

At DUT, she contributes to the Green Engineering Research Group, focusing on water and wastewater treatment and advanced oxidation processes, critical for tackling the water-energy nexus crisis. She has published in leading journals and presented at conferences, where she earned Platinum Awards. Her vision is to continue advancing water and energy sustainability in line with the African Union's Agenda 2063 and the United Nations Sustainable Development Goals (SDGs).

She holds a Master of Engineering in Chemical Engineering (Cum Laude), has presented at five conferences, and published three DHET-accredited papers. Several more manuscripts are under review. As a Doctor of Engineering student, she is pursuing impactful publications and international conference presentations that contribute to achieving near-zero greenhouse gas emissions by 2050.

Her doctoral research, "Evaluation of a Solar Photoreactor for the Degradation of Emerging Contaminants from Industrial Effluent Using Modified Photocatalysts," pioneers solar-driven photocatalytic technology for water treatment.

"This work directly addresses South Africa's urgent need for energy-efficient and sustainable solutions to combat water contamination and scarcity," she said.

Her research contributes directly to SDG 6 (Clean Water and Sanitation) and SDG 7 (Affordable and Clean Energy), offering practical solutions that promote environmental and societal well-being.

Reflecting on how her work connects with ENVISION2030, she said:

"This research aligns with the Global Sustainable Development Goals (SDGs) set forth by the United Nations for affordable and clean energy (#7), and clean water and sanitation (#6), which states that there must be universal and equitable access to safe and affordable drinking water for all by 2030. The photocatalysis treatment process utilises (UV/Solar) light energy, which renders it economically viable. Therefore, the development of solar-driven photocatalytic technology for the treatment of wastewater and its industrial commercialisation has the potential to significantly limit the environmental impact on terrestrial and aquatic life, reduce human health risks, increase job creation, contribute to the knowledge base of water and energy sustainability, and assist in the agricultural farming economy which would elevate the availability of food sources. The adoption of this green technology into the water sector is very promising due to it being sustainable, nontoxic, energy-efficient, and environmentally beneficial," she indicated.

She emphasised that the award not only aligns with her academic work but also with her personal values and long-term goals of preserving ecosystems and society while advancing sustainable development in Africa.

Ms Munien expressed heartfelt gratitude to her supervisor, Dr Emmanuel Tetteh, Senior Researcher in the Green Engineering Research Group:

> ***"I ACKNOWLEDGE YOU, RESPECT YOU, APPRECIATE YOU, AND THANK YOU FOR YOUR SUPPORT, GUIDANCE, ENCOURAGEMENT, AND BLESSINGS. I WISH WE CONTINUALLY PROGRESS TOWARDS EXCELLENCE IN EVERYTHING TO DESIRE AND PURSUE. YOU WERE INSTRUMENTAL IN ACHIEVING THIS SUCCESS," SHE SAID.***

Dr Tetteh praised her dedication: "Her achievement marks a significant milestone not only in her academic journey but also for the Green Engineering Research Group under the Department of Chemical Engineering, as she becomes the fourth recipient of this award from our team. This continued success highlights the innovative strength and impact of our research community within the Faculty of Engineering and the Built Environment at DUT. Your hard work and perseverance are truly inspiring. We are proud of you and look forward to your continued contributions to the field."

Finally, Ms Munien acknowledged her family, friends and loved ones for their unwavering positivity, love and care. "You all were instrumental in achieving this success," she said warmly.

FROM STUDENT TO SCHOLAR: NESHIKA MUNSHI'S PATH TO IMPACT

WAHEEDA PETERS

For Neshika Munshi, completing her Degree of Doctor of Philosophy (PhD) in Health Sciences at the Durban University of Technology (DUT) in record time is both a personal milestone and a stepping stone toward contributing meaningfully to society through research, teaching, and service.

Munshi, who lectures at a tertiary institution, is from Reservoir Hills, Durban. Beyond her research she is passionate about teaching and mentorship, and envisions a career in academia where she can contribute to knowledge creation while also nurturing the next generation of scholars. "I pride myself on working with diligence and holding steadfast in my pursuit of excellence," she said.

Her academic journey at DUT began in 2014, when she enrolled for a National Diploma in Child and Youth Care in the Faculty of Health Sciences. In 2016, she completed her Bachelor of Honours in Child and Youth Care, followed by a Master's in Health Sciences in 2019. With each qualification, she graduated cum laude and received the Dean's Merit Award for Academic Excellence. On Thursday, 18 September 2025, she will celebrate her PhD achievement at the Spring Graduation Ceremony.

> ***"I AM TRULY OVERJOYED, DEEPLY THANKFUL, AND ADMITTEDLY A LITTLE IN DISBELIEF THAT MY ACADEMIC JOURNEY, WHICH BEGAN IN 2014, HAS NOW REACHED THIS INCREDIBLE MILESTONE. PURSUING A PHD IS A JOURNEY OF RESILIENCE, DISCIPLINE, AND SACRIFICE, AND COMPLETING IT WITHIN THE FOUR-YEAR TIME FRAME WAS NO EASY TASK. I WORKED DILIGENTLY AND WITH DETERMINATION TO FINISH IN RECORD TIME AND STANDING ON THE VERGE OF GRADUATION FEELS BOTH HUMBLING AND REWARDING," SHE EXPRESSED.***

Munshi acknowledged her supervisors, Professor Raisuyah Bhagwan and Dr Moeti Kgware.

"Their support not only sharpened my academic skills but also nurtured my growth as a researcher and scholar. Equally, I am profoundly thankful to my family, my father, Deepak Munshi, my fiancé, Priyen Lutchmiah, my sisters, Urisha Chetty and Isheksha Lala, along with their spouses for their unconditional love, encouragement, and constant motivation. Their sacrifices and unwavering support have been my anchor throughout this journey," she said euphorically.

For Munshi, this moment is not just the closing of one chapter, but the opening of another, as she looks forward to contributing meaningfully to academia, research, and society.

She said her journey has been one of growth, filled with opportunities, networking, character building, and overcoming challenges. While it demanded many sacrifices, she would not change the experience, as both the highs and lows have shaped her and contributed significantly to her personal and professional development.

Her doctoral research, titled *Childhood Cancer Within a Family and Medical Context in eThekwini: Strengthening Psychosocial and Spiritual Interventions to Enable Coping and Healing*, explored the effects of childhood cancer on patients and families within a healthcare system often marked by disparities.

"This study aimed to explore the multifaceted effects of childhood cancer on paediatric patients and their families and the support systems and interventions available to them in a medical context. The study sought to gather insights into how paediatric cancer not only impacted children but the family system. For families caught up in a system fraught with health disparities and lack of access to care, the diagnosis of paediatric cancer was found to be overwhelming and painful for all. Whilst research was found

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to prioritise clinical interventions, the study found an acute need for doctors, oncologists, nurses to be more empathic and compassionate towards the family," she explained.

She emphasised the importance of psychosocial and spiritual support within medical settings. "By expanding on mental health interventions and support in clinical care and treatment in health settings, coping and healing can be enabled," she said.

Munshi shared that her doctoral study on childhood cancer has been both a personal passion and an academic pursuit. "Conducting research has revealed what children and families encounter because of paediatric cancer and research on paediatric cancer is limited especially in the context of eThekwini. This choice was not only about pursuing a qualification, but also about living out a purpose, to contribute to knowledge, advocate for vulnerable groups, and influence change in both policy and practice," she shared.

In addition to teaching, she is equally passionate about research.

> ***"I ASPIRE TO CONTINUE DEVELOPING AND EXPANDING MY RESEARCH ON CHILDREN AND FAMILIES AND WELL-BEING. THROUGH THIS, I HOPE TO CONTRIBUTE TO NEW KNOWLEDGE, INFLUENCE POLICY AND PRACTICE, AND BUILD INTERNATIONAL COLLABORATIONS THAT STRENGTHEN HOLISTIC CARE IN MEDICAL AND COMMUNITY CONTEXTS. ULTIMATELY, MY GOAL IS TO ESTABLISH A CAREER IN ACADEMIA THAT BALANCES BOTH TEACHING AND RESEARCH," SHE SAID.***

Munshi also offered advice to students starting their own journeys.

"One of the most valuable lessons I learned is the importance of open communication with lecturers and supervisors. Never be afraid to ask questions, seek guidance, or share your struggles. If you love what you do and remain consistent, this career path will not only shape you professionally but also enrich you personally in ways you never imagined."

Picture: Supplied
Neshika Munshi

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