October 2022 Faculty of Engineering & the Built Environment Vol. 18 Issue 3

# Faculty Newsletter



## Message from the Acting Dean

It is hard to believe that we are near the end of the year and that December graduation is around the corner.

This year we say farewell to ten staff members who are retiring. Some will return to continue their research work, and others will start a new chapter in their lives. They have made significant contributions to the faculty, and we are grateful for all they have done. We wish them all the best in their future endeavours.

Congratulations to the staff members who received their Ad Hominem promotion. These promotions acknowledge their outstanding contributions to teaching, research, social responsiveness, management leadership and administration.

We acknowledge that staff who have received their long service awards. We are grateful for your dedication and commitment to the faculty.

Congratulations to EBE staff and students who have received prestigious awards, grants and scholarships. Your hard work and dedication are truly commendable, and we are proud of your achievements.

**Acting Dean: Professor Abimbola Windapo**

# Research grant from Mathworks—first in Africa

A/Professor Amir Patel has received a research grant of US$125 000 from Mathworks, which specialises in mathematical computer software. Its major products include MATLAB and Simulink, which support data analysis and simulation. It is the first time Mathworks has awarded a grant to an African researcher.

The grant is over three years and was awarded to Amir for his research project on the Inverse Approach to Understanding Cheetah Locomotion.

"I've wanted to do this investigation for a while and just needed someone to take a chance on this exciting but risky research proposal," Amir said. "Studying the biomechanics of manoeuvrability is critical for the design of future mobile robotic systems which will need to react quickly in an unstructured, dynamic world."

Amir has recently reached 1000 citations on Google Scholar.

# Outstanding scholars recognised

Professor Aubrey Mainza (Chemical Engineering) and Professor Pilate Moyo (Civil Engineering) were inaugurated as new members of the Academy of Science of South Africa (ASSAf). The ASSAf membership honours and recognises the country's most outstanding scholars. New members are elected each year by the full membership of the Academy in recognition of scholarly achievement.

# EBE researchers among world's top 2%

**Researchers at the University of Cape Town (UCT) hold 135 positions on the University of Stanford's Top 2% Scientists in the World. That's according to the latest version of the list published in September. It features 195 605 researchers who make up the top 2% worldwide based on citations over their full careers.**

Of these, 615 are from South Africa, with 135 being UCT researchers (14 being from EBE). Twelve UCT researchers are among the top 100 in their fields (5 from EBE)

"Researchers at the University of Cape Town are world leaders," said Professor Sue Harrison, the UCT deputy vice-chancellor for Research and Internationalisation. "They are doing research that is important, influential and of a high standard, and, as such, are helping to set the research agenda globally. Read more

**EBE amongst the top 100 in their fields:**

**Mining & Metallurgy:**

- Late Emeritus Dee Bradshaw
- Professor Sue Harrison
- Emeritus Professor Cyril O'Connor
- Professor Jochen Petersen

**Urban & Regional Planning**

- Late Emeritus Professor Vanessa Watson

**The other EBE researchers to make the list are:**

**Building & Construction**

- Emeritus Professor Mark Alexander

**Mining & Metallurgy**

- Professor Dave Deglon
- Late Emeritus Professor Geoff Hansford

**Environmental Engineering**

- Emeritus Professor George Ekama

**Energy**

- Emeritus Professor Trevor Gaunt

**Chemical Engineering**

- Professor Alison Lewis

**Mechanical Engineering and Transport**

- Emeritus Professor Gerald Nurick
- Emeritus Professor Daya Reddy

**Civil Engineering**

- Professor Alphose Zingoni

# Honoured for his work in biomedical design

**Emeritus Professor George Vicatos has been recognised with an Innovation Award by the ARGO-Brussels Hellenic Network in the body's annual awards for his innovative work in biomedical design.**

A policy think tank and business do-tank, ARGO aims to cultivate and disseminate a positive message about Greece to its social and business network. Its annual awards recognise individuals from the Greek diaspora for their contribution to excellence in their profession in the fields of science, innovation, entrepreneurship, arts and culture, public affairs, sport, and philanthropy.
In a note about Emeritus Professor Vicatos' accomplishments, ARGO executive committee president, Spyros Pappas, pointed out that Vicatos was not only chosen for his outstanding work in designing and developing orthopaedic devices, but also the passion he shows for his craft.

"The committee paid special attention to … the quality and magnitude of your scientific innovative contribution, its consistency and the love with which you have accomplished it," wrote Pappas. Read more

# Recognised by the NRF for outstanding achievements

**Two EBE researchers were recognised for their outstanding achievements and contributions to society at the NRF Awards event held on 1 September.**

The awards are held annually to recognise and celebrate South African research excellence and its impact on society. Researchers and research groups are nominated by their peers at their representative institutions.


**Jessica Fell from the Future Water Institute received the Research Excellence Award for next generation researchers. The award recognises outstanding academic performance by final year doctoral students.**

Jessica's current research as part of the 'Pathways to water resilient South African cities' project contributes to the global research agenda on water-sensitive city transitions as well as the UN Sustainable Development Goals for clean water and sanitation, and sustainable cities and communities.

**A/Professor Amir Patel received the Research Excellence Award for Emerging Researchers** which recognises outstanding research excellence by current Thuthuka grant-holders. Thuthuka is central to the NRF's human capital development strategy and aims to redress historical imbalances among South African researchers.


Amir's research focuses on solving problems with an African perspective. He uses robotics to understand the locomotion of animals, as well as techniques such as sensor fusion, optimal control and physical experiments to understand the neuromechanics of manoeuvrability.
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# UCT team leads way in study of how waves affect Antarctic ice formation

A University of Cape Town-led team recently returned from a research trip that is set to provide much-needed data about how waves affect Antarctic sea ice formation during winter – information that could help improve the accuracy of **Southern Hemisphere and global climate forecasting**.

The July 2022 expedition – on the SA Agulhas II icebreaking polar supply and research ship to the Southern Ocean marginal ice zone **nearly 3000 km south of Cape Town** – collected high-frequency wave and ice drift data from ice-tethered and open-water buoys **fitted with onboard sensors**. This data, along with unique high-resolution imaging of ice floes and waves using LiDAR (Light Detection and Ranging, an active remote sensing system), stereo and thermal cameras, will help researchers better understand **how waves impact** the structural, textural, and mechanical properties of sea ice.

"Cape Town's winter rainfall is actually the tail end of giant stormfronts which form in the Southern Ocean," explained Robyn Verrinder, Senior Lecturer in UCT's Department of Electrical Engineering in the Faculty of Engineering and the Built Environment, who was Principal Investigator and Onboard Team Leader of the **11-person** research group. "Understanding the dynamics of these storms **– and their role in the formation of sea ice** – will not only help us improve our ability to predict local weather, but also provide valuable data that improves predictability models for the entire region and, ultimately, global weather patterns."

The ice-tethered buoys used in the research were designed and built by a team **from UCT's Department of Electrical Engineering** – led by Verrinder – while the open water buoys were developed by Tallinn University of Technology and prototyping firm WiseParker OÜ in Estonia.

The research group, known as the SCALE-WIN22 Bouys Team, included researchers and students from several institutes including UCT, Nelson Mandela University, University of Melbourne, University of East Anglia, and the Finnish Meteorological Institute.

*Image credit: © Kurt Martin*

SCALE (Southern oCean seAsonaL Experiment) is a collective made up of researchers from around South Africa and several other countries, who do research in the southeast Atlantic Southern Ocean. National partners include UCT, the Department of Environmental Affairs, the University of the Western Cape, and the South African Weather Service. International partners include the University of Gothenburg (Sweden) and Florida State University.

"South Africa has one of the top polar research vessels in the world, and Cape Town is one of the key gateways to the Antarctic region. It is very exciting to work with people from around the world, in a region and a time – winter – when it has always been very difficult to conduct research," Verrinder said.

# Ad hom promotions

Congratulations to the staff members who were successful with their application for ad hominem promotion. These promotions acknowledge the outstanding contributions they have made in teaching, research, social responsiveness, management leadership and administration.

### Research Officer to Senior Research Officer

- **Dr Rike Sitas**
  African Centre for Cities

### Lecturer to Senior Lecturer

- **Dr Christine Price**
  Landscape Architecture
- **Ms Simone Le Grange**
  Architecture
- **Dr Paul Amayo**
  Electrical Engineering
- **Ms Alison Gwynne-Evans**
  Professional Communication
- **Dr Gabrielle Nudelman**
  Professional Communication Studies

### Senior Lecturer to Associate Professor

- **Dr Marijke Fagan-Endres**
  Chemical Engineering
- **Dr Simon Winberg**
  Electrical Engineering
- **Dr David Oyedokun**
  Electrical Engineering
- **Dr Corinne Shaw**
  Mechanical Engineering
- **Dr Bruce Kloot**
  Mechanical Engineering

### Associate Professor to Professor

- **Associate Professor Niyi Isafiade**
  Chemical Engineering
- **Associate Professor Steve Chung Kim Yuen**
  Mechanical Engineering

# Falling Walls Lab South African finalist

PhD candidate Emma Horn is set to contest at the **Falling Walls Lab** world finals in Berlin in November. Emma's 'green' bio-tile innovation won the South African finals of the competition. Her research into bio-tiles is set to shake up the fossil-fuel-reliant ceramic tile and construction industries.

Emma is co-supervised by A/Professor Dyllon Randall from the Future Water Institute, and Dr Rob Huddy from the Research Office.Her presentation "Breaking the Wall of Sustainable Tile Manufacturing", underpins her goal of developing innovative, energy-efficient tile production methods that have a minimal environmental impact.

The Falling Walls Lab is an international network and forum for young innovators in science, technology, medicine and other fields. It includes top academic institutions from more than 60 countries and is a platform for creative thinkers to introduce their "breaking walls" ideas to the public. Read More

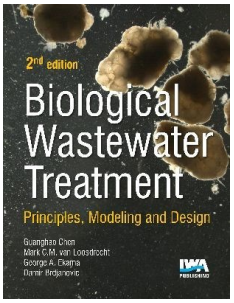
# Staff news in brief

A/Professor Francois Viruly from the Urban Real Estate Research Unit ( URERU) in the Department of Construction Economics and Management, wrote an opinion piece for the Business Day titled, *Unleashing Opportunities in the built environment*. Francois comments on how the real-estate sector can aid in the development of prosperous, inclusive and sustainable cities—if government creates an appropriate regulatory environment.

Senior Researcher in the African Centre for Cities, Liza Rose Cirolia has received a UCT College of Fellows' Young Researcher Award 2022. The Young Researcher Award is offered annually in recognition of outstanding scholarly work by young academics who have made significant independent contributions to research in their field.

In August, A/Professor Kathy Michell was appointed to the International Council for Research and Innovation in Building and Construction Board of Directors. The board is a powerhouse of individuals and consists of 20+ members that hold senior leadership positions within their countries' research and academic communities. Kathy was recently elected to the RICS World Governing Council. These positions are significant for putting UCT and South Africa on the map.

Emeritus Professor George Ekama, and his co-authors Mr Chen, Mr Loosdrecht and Mr Brdjanovic received the IWA Best Scientific Book prize for 2022. IWA publishing is a leading international publisher of water, wastewater and environmental publications.




Professor Abimbola Windapo has been appointed as an Associate Editor for the Journal of Engineering, Design & Technology on Emerald Publishing. The journal explores the interface between academic research and practical applications and serves all practitioners, professionals and clients in the engineering, design and technology sectors.

Professor Aubrey Mainza has been invited to become a member of the European and African Editorial Board of KONA, a refereed scientific journal that appears annually and publishes articles on powder and particle sciences and technology. The Hosokawa Powder Technology Foundation Osaka, Japan has been publishing KONA annually since 1983 in Japan. There are two other boards – American, and Asia and Oceanian.

Emeritus Professor George Ekama and Professor Alison Lewis were named as water legends in the Water Research Commission's book entitled 'Legacy' that celebrates South Africa's water pioneers, pathfinders and mavericks .

# Reimagining a sustainable future for UCT

In August, the third-year architectural studies tech studio held a poster exhibition on the students' work titled "Reimagining a Sustainable Future for UCT."

The group partnered with the Future Water Institute to work on UCT's sustainable campus initiative. They looked at how to improve current campus conditions to be more sustainable, more ecologically responsible, more water, energy and resource efficient, less wasteful, and more circular, better for people, prosperity and the planet.

Using the UN Sustainable Development Goals, regenerative thinking, and the circular economy as guiding frameworks, they mapped, investigated, analysed, critiqued and proposed design interventions or solutions to UCT's upper campus through the lenses of


Blue-Green Networks and Waste/ Carbon/Energy/Resource networks to establish a more holistically sustainable, systemically focused campus.

The sustainable campus initiative posed the following core questions to the students:

- What changes need to be made to transform upper campus into UCT's vision of a sustainable campus? What does a holistically sustainable campus look like?
- How can architects change their current approaches to architectural design to reduce our ecological, carbon, waste footprints and shift the construction industry's destructive patterns towards more sustainable practices?
- How do we create buildings that have a positive, regenerative impact on our planet – how could buildings benefit both people and the planet?
- How can we become 'architectural gardeners' – working acupuncturally, planting carefully considered design 'seeds' so that our buildings form part of much larger, living networks?

# Off to Berlin

Dr Amber Abrams of the Future Water Institute has been named one of twenty winners in the Falling Walls Engage competition which looks at science engagement initiatives that engage the public actively with science.

Amber submitted her work on the Cape Town Museum of Watery Relations and the Water Map which draws on transdisciplinary water values-related research to map and co-produce knowledge around various relations with water. The project aims to collaboratively develop an online interactive map of water users, sources and uses. Alongside workshops, they provide a repository for submitting water samples, and accept virtual submissions (stories, images linked to local water sites) to develop an understanding of local water users and their perceptions of their water sources.

Amber was selected out of fifty outstanding finalists and many more applications. The twenty winners are invited to present their project in Berlin on 7 November during the Falling Walls Engage Pitches to compete for the title of Falling Walls Science Breakthroughs of the Year in the Science Engagement category. Read more

*Amber Abrams is a Carnegie/DEAL research fellow at Future Water Institute*

# Polar engineering team publish first paper

**UCT's engineering scientists are taking the lead in a transdisciplinary research endeavour to unpack the annual cycle of sea ice advance and retreat in the Antarctica marginal ice zone from an engineering perspective.**


*Professor Sebastian Skatulla (right) and Dr Keith MacHutchon from Civil Engineering.*

Due to the uniqueness of the collected field data, the very first paper by the recently established polar engineering team was accepted for publication in *The Cryosphere* – the highest-ranked journal in its field – focusing on all aspects of frozen water and ground on Earth and on other planetary bodies.

The 15-member team – led by Professor Sebastian Skatulla and Dr Keith MacHutchon of UCT's Department of Civil Engineering, and Professor Marcello Vichi of the Department of Oceanography – travelled to the Antarctic ice edge at the Good Hope Line, nearly 3 000 km south of Cape Town, to study Antarctic sea ice formation in order to better predict annual and long-term changes in sea ice extent, and thus improve the accuracy of global climate-modelling predictions.

"Generally, field observations of Antarctic sea ice in winter are extremely scarce due to the challenging access and its remoteness," said Professor Skatulla. "And the study of Antarctic sea ice has long been the domain of oceanographers, climatologists and geologists. But besides the influence of temperature, sea ice formation in winter and its break-up in spring is the result of interaction with the rough Southern Ocean surrounding the Antarctic continent. The sea ice dynamics due to its interaction with waves and wind, and the collision and fracture of ice sheets, can only be accurately modelled and predicted by means of fluid and solid mechanics principles. These models, however, require as input the mechanical properties of sea ice which can only be obtained in the field." Read more

# 50 years celebration for CME

This year, the Centre for Materials Engineering (CME) is celebrating its 50th anniversary. To commemorate the occasion, they have arranged a seminar series from invited speakers who have contributed to the materials science and engineering field and have close ties with the Centre.

The Centre started as the Department of Metallurgy and Materials Science in 1972 under the leadership of Professor Tony Ball. The department formally changed its name to the Department of Materials Engineering in 1984. At the beginning of 2000, the department was merged into the Department of Mechanical Engineering, and the CME was established under the leadership of Rob Knutsen with full accreditation from the University Research Committee. Rob stepped down after leading the CME for 22 years, and in January 2022, Thorsten Becker, who joined in October 2021, became the director.

To learn about the seminar series and the history of the Centre, visit the website.

# 8th International SEMC conference

The Eighth International Conference on Structural Engineering, Mechanics and Computation took place in Cape Town in September. A total of 350 participants attended the conference, with 250 attending face-to-face and 100 joining remotely. Participants represented 45 countries and 137 universities worldwide (+ 30 other organisations). The top 15 countries in terms of the number of participants were Germany, South Africa, Italy, the UK, Japan, China, Poland, the USA, Canada, Belgium, Sweden, France, Australia, Netherlands and Czech Republic.

A total of 330 peer-reviewed papers were delivered, and these have been published by CRC Press (Taylor & Francis) as both a printed book of short papers an e-book of full papers. The content may be seen on the publisher's website.

"It was a pleasure to see South African postgraduate students and young academics interacting with their counterparts from overseas and rubbing shoulders with international leaders in the field. The inspirational value of such interactions can never be underestimated, " said Professor Zingoni.

# *we were here: 40 voices* exhibition

On 24 September, Dr Philippa Tumbuweinee, from architecture, partnered with Erik Dippenaar, the artistic director of the Cape Town Baroque Festival, and visual artist, Jaco van Schalkwyk, to present an exhibition titled *we were here: 40 voices.*

In 2022, the grounds and buildings of St Andrews Presbyterian Church in Green Point became the stage for a learning process for the first-year Bachelor of Architectural Studies students. Dr Tumbuweinee said, "The students' work was a creative reflection on how and what they experienced, saw, and felt in this learning environment."

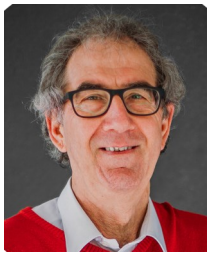
*Dr Philippa Tumbuweinee and Jaco van Schalkwyk*

The students' work was exhibited in spaces in the Church and formed part of the Baroque Festival. Jaco van Schalkwyk curated the exhibition and created banners of the student's work, which hung outside the St Andrew's building. On arrival, guests attended a performance by forty choral singers from various Cape Town-based choirs who performed Thomas Tallis's legendary 40-part motet, *Spem in alium*. The eight choirs of five voices each were spread throughout the interior of the Church, supported by several historical keyboard instruments.

# Retirees

Professor Keith Cattell
Department of Construction Economics &Management

Mr Mark Massyn
Senior lecturer in the Department of Construction Economics & Management



Mrs Sue Jobson
Admin and Finance Manager in CeBER in the Department of Chemical Engineering

Adjunct Professor Jeremy Mann
Department of Chemical Engineering

Mr Shafiek Matthews
Technical Officer in the School of Architecture, Planning & Geomatics.

Mrs Kehinde Awodele
Senior Lecturer in the Department of Electrical Engineering

Mrs Avril Courie
Finance & operations in the Department of Civil Engineering

Ms Mary Hilton (early retirement)
Faculty marketing and communication

Associate Professor Ramesh Kuppuswamy (early retirement)
Department of Mechanical Engineering

Mr Dirk Findeis (early retirement)
Senior Lecturer in the Department of Mechanical Engineering

Mr Mark Neutt (early retirement)
Departmental assistant in the Department of Construction Economics and Management

# Obituary

After a long battle with illness, Emeritus Professor Martin Braae died on 31 August at the age of 72.

Martin joined the Department of Electrical Engineering in July 1985 as an Associate Professor in the field of control engineering. In 2013 he was the head of the department before retiring at the end of 2014 as an Emeritus Professor. During his time at UCT, he lectured to third and fourth-year electrical and mechanical engineering students and taught a postgraduate course that included chemical engineering students. His research group of talented postgraduate students produced many national and international publications over the years, including a book issued by the prestigious Elsevier publishers. Colleagues in the department said his calm demeanour and fairness were the hallmark of his tenure at UCT. The department will remember him for his gentle, soft-spoken, friendly and respectful nature.

# Long Service awards

## 25 Years

Charles May
Zwelixolile Mafunga
**Civil Engineering**

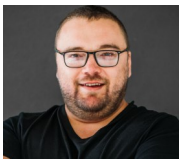
Gary Groenmeyer
**Chemical Engineering**

## 15 years

Angus Rule
Avril Courie
**Civil Engineering**

Dillon Jacobs
Gavin Doolings
**Mechanical Engineering**

Roshan Bhurtha
Ralph Schroder
**Geomatics**



Shafiek Matthews
**Architecture**
Waldo Koorts
**Chemical Engineering**

## 10 years

Rachel Cupido
**Chemical Engineering**

Mignon Wells
**Geomatics**

Sharon Blair
**Chemical Engineering**
Carmelita Jonker
**Mechanical Engineering**

## NEW STAFF

- In August, Nico Wyngaard joined the undergraduate team in the Faculty Office as a junior admin assistant.
- In September, Suraya Azam joined the postgraduate team in the Faculty Office, where she is responsible for the PhD candidates, COA and the Ethics Committee.
- Dr Robin Abrahams joined the Department of Chemical in August as a senior lecturer.
- Dr Hermie Delport joined the School of Architecture, Planning & Geomatics in September as a senior lecturer.
- Dr Gideon Wiid joined the Department of Electrical Engineering as a senior lecturer in October.
- Ms Stacey Shield joined the Department of Electrical Engineering in October as a lecturer. She will be graduating in December with her PhD.
- Mr Boitumelo Dikoko joined the Department of Electrical Engineering in October as an assistant lecturer.

## RESIGNATIONS

- Carlyn Hewitson from the postgraduate team in the Faculty Office left on 7 October.
- Lee-Anne Kallam, the finance and operations manager from the Institute of Catalysis Research, left in August.
- Mrs Clare Pomario from the Centre for Minerals Research in the Department of Chemical Engineering left in October.
- Ms Natalie Bent, postgrad admin assistant in CERECAM left at the end of September.
- Dr Jessica Chamier from Hy/SA Technology Development left in August.
- Dr Michael Louw from Architecture has resigned and will leave at the end of December 2022.

## Meet Noncedo Mpololo (Abby)

Noncedo Mpololo joined Supercare at UCT in 2007. She worked in buildings all over campus before being allocated the Leslie Commerce Building in 2011. In February 2022, she moved to the New Engineering Building, where she is responsible for the 5th level.

Noncedo was born in Cape Town but grew up in the Eastern Cape. She is the mother of eleven-year-old Sinaye and 20-month-old Nothando. During the school week, Noncedo is up at 4 am every morning to get her children ready before the transport arrives at 5 am to take them to school and daycare.

Over the years, Noncedo has been keen to develop herself and has done several courses to improve her skills. In 2013, she did a Damelin professional receptionist and assistant course, followed by a computer course in 2015. In 2017, while working in Management Studies and Accounting, she won a voucher for a GetSmarter professional communication and office management online course. The department staff realised she could not participate without a laptop, so they kindly donated one to her. To gain experience, Noncedo was allowed to sit at the reception while the staff member was at lunch.

Noncedo is busy doing a refresher computer course. She hopes one day to secure a job in an office where she can use her skills.

# Student News


*Leila Fourie (Group CEO of the JSE), Megan Greggor, Shreya Gopaulsingh, Vuyo Lee (JSE marketing and corporate affairs director), and Mpho Pops (MC)*

Shreya Gopaulsingh and Megan Greggor, second-year mechanical engineering students, known as “Queen of Mechanics”, participated in the JSE Investment Challenge, and received second place in the University category. Earlier this year they received the monthly prizes for March and April.

The JSE Investment Challenge is a game that aims to teach students about investing on the JSE and the larger role that such investment plays in the country's economy. Participants test their share trading skills through an ongoing annual simulated "ghost trading" programme. Each team is given an imaginary sum of R1 000 000 to invest in JSE-listed shares. Their performance is tracked and measured in a competition against other teams taking part in the Challenge.

Craig Tanyanyiwa and Rachelle De Charmoy were nominated for the CoCreate Design School and Dutch Embassy Award for their work that form's part of the 'Pathways to Water resilient Cities (PaWS)' project.


Naoya Muramatsu is one of two UCT PhD candidates selected for the Microsoft Research PhD Fellowship, a global programme that identifies and empowers the next generation of exceptional computing research talent. Naoya is in the African Robotics Unit in the Department of Electrical Engineering. He is studying the neuromechanics of the cheetah under the supervision of A/Professor Amir Patel.

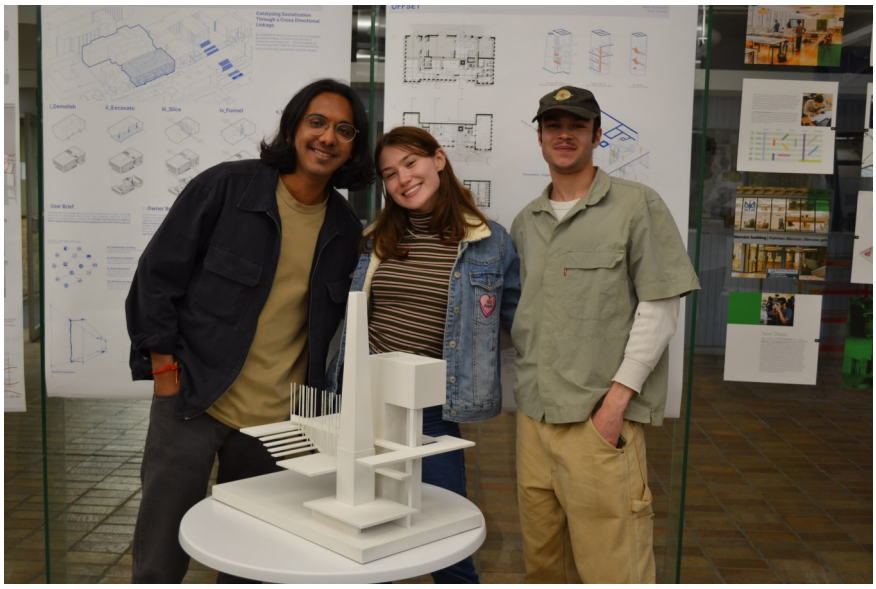

*Mac Mokobane with the Registrar, Royston Pillay at the UCT Student Leadership award event*

Mack Mokobane from EBE postgrad student council received a UCT Student Leadership award. Mack is responsible for the transformation portfolio and was actively involved in organising events and campaigns for the postgraduate students.

Matimba Mabonda, an MSc chemical engineering student, continues to win awards for his startup, LolaGreen. He was one of eight to present their business ideas to a panel of judges at the Pitch. This student-led competition encourages undergraduates and graduates to participate in the entrepreneurial ecosystem. Matimba received first place for LolaGreen, where he plans to use plastic waste to produce eco-friendly, fire-resistant bricks. He also won the Western Cape EDHE Intervarsity Regionals in the New Business Category and will be presenting at the national on 17 November.

# EBE Infrastructure Think Tank Report

Industry partners, university staff and students attended an event on 27 September for the report back on the work of the EBE Infrastructure Think Tank (ITT). The full report can be found on the website.



*Team Offset: (from left) Rahul Auckloo, Maya Sarembock, Gabriel Chames (Anna Thomas, the fourth team member not in picture).*

A/Professor Nico Fischer headed up the ITT, with representatives from each department. (Karen Le Jeune (CEM), Paul Amayo (Electrical Engineering), Reuben Govender (Mechanical), Francis Carter (APG), Denis Kalumba (Civil), who was replaced due to sabbatical leave by mid-2021 with David Ikumi.)

The report outlines the ITT's work and the suggested next steps for the faculty. As part of the simulated office programme, the architecture and quantity surveying honours students worked with industry mentors and staff to create innovative, open and flexible learning spaces for a Future Fit EBE. Their work was displayed in the foyer on the 3rd floor of the Menzies Building.

Dr Paul Amayo took guests on a tour of the newly equipped Menzi Lab, a transdisciplinary 'maker space' in which ideas from UCT staff and students can be nurtured to reach the prototype stage.

# Young Talents from Africa Prize

Andris Simeon, a 2021 electrical engineering master's graduate, received the Eni Award 2022 Debut in Research: Young Talents from Africa Prize. The award was made by the President of Italy, Sergio Mattarella, Eni Chairwoman Lucia Calvosa and Eni CEO Claudio Descalzi at an official ceremony held at the Quirinal Palace in Rome, Italy. Eni is a global energy company and makes the awards for research and technological innovation in the energy sector.

The Eni Award in Energy is awarded to researchers and scientists, by the Italian oil and gas company Eni with the aim of encouraging better use of energy sources and increased environmental research. The Young Talents from Africa category was established in 2017 on the 10th anniversary of the Eni Award and is dedicated to young talent from the African Continent.

Andris did his master's degree under the supervision of A/Professor Sunetra Chowdry. His thesis topic was "Protection Coordination of a Standalone Microgrid with Static and Rotational Generators". During his master's degree, he published and presented two papers at the IEEE PES/IAS Power Africa conference. Andris said, "It was an honour to represent my country and the entire continent at this prestigious awards ceremony."

# Intervarsity brewing cup back at UCT

The **UCT Brewing Team** from the Department of Chemical Engineering has brought the Intervarsity Brewing Cup back to UCT.

The Intervarsity Brewing and Tasting competition took place from 21 to 23 October 2022. Fifteen student brew teams, from across South Africa, were challenged to create brews in predetermined categories that are sensorially evaluated according to the Beer Judge Certification Programme guidelines. Categories usually include the well-known lager, IPA, sour beers, and this year featured two additional expression categories for which teams are mostly left to invent and experiment on their own. There is also an award for the label design.

Members of the UCT Brewing Team are Nicole Uys, James Heydenrych, Jacolien Du Plessis, Stephen Cotterrell, William Middleton, Wilco Sievers, Elsa Visser, Ricardo Magdalena Zarzuela, Juarez Amaral Filho, and Julia Uys.

The Brewing Team competed in the following categories:

1. Dark Knight - Czech Dark Lager (Lager Category)
2. Cryo me a River - American IPA (IPA Category)
3. Carnaval do Brasil - Catharina Sour (Sour Beer Category)
4. Sour Flower Power - American Wild Ale (African Wild Ale Category)
5. Belle of the Ball - Saison (Low Alcohol Summer Beer Category)
6. Dark Knight Beer Label (Label Design)

The UCT Brewing Team won both the Lager category (Czech Dark Lager) and the IPA category (American IPA), with their Lager winning the Best Beer in Show award. The team has now won the Best Beer in Show award the highest number of times (five in total) since the inception of this competition.


*From left to right: William Middleton, Wilco Sievers, James Heydenrych, Nicole Uys, Elsa Visser*

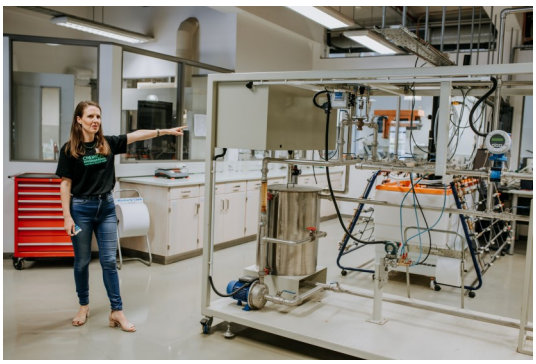
# Rhodes Scholarship finalist

Mokone Shibambu, a final-year mechanical engineering student, was selected as a finalist for the prestigious Rhodes Scholarship.

The Rhodes Scholarship supports outstanding young people to pursue postgraduate study at the University of Oxford and actively fosters lifelong learning and fellowship. Mokone is the only finalist from UCT. His academic achievement and leadership qualities impressed the regional selection committee. The national selection for the scholarship will take place in November.

# Future UCT Graduate day

The university organised a #FutureUCTGraduate day on Saturday, 8 October. Prospective students who had applied to UCT for 2023 attended the event to learn more about their first and second-choice faculties. All EBE departments were well represented, and the applicants attended talks, went on tours of the facilities and participated in activities.


# UCT CHEM-ENG CUP was back!

On Thursday 27 October, the ChemEng staff and postgrad students swopped their research labs for the soccer field. Teams of staff and students competed for the cup. After a fun day, with great team work and good supporters, the CPU team were the winners of the tournament.