



UNIVERSITY OF CAPE TOWN

RESEARCH &

INNOVATION

HIGHLIGHTS

2018-19



# CONTENTS

The One Ocean Hub is one of two global, interdisciplinary initiatives UCT is involved in that were selected by United Kingdom Research and Innovation for large-scale funding. **SEE STORY 05 FOR MORE.**

## 2018-19 in numbers

### A legacy of research excellence: tribute to Dr Marilet Sienaert

#### Highlights

- 01** Prof van As receives 2018 Alan Pifer Award
- 02** UCT's 2019 women in science winners
- 03** UCT scientists shine at NRF awards
- 04** Double award in Three Minute Thesis competition

- 05** Large-scale research funding for UCT
- 06** 10 years of South African collaboration with CERN
- 07** Advancing womxn award winners
- 08** Pioneering 'new science' in Masiphumelele
- 09** SATVI wins Social Responsiveness Award

- 10** Priceless climate-change data haul from Antarctica
- 11** Three UCT researchers among world's most cited
- 12** Inaugural African fellowships for young UCT scholars
- 13** UCT first university to adopt global ethics code
- 14** First-of-its-kind wound healing research unit
- 15** International recognition

- 16** New 'fully funded' scholarship for top young researchers
- 17** Prof Mizrahi awarded Harry Oppenheimer Fellowship
- 18** UCT, Bristol in 'profound collaboration'
- 19** Three UCT researchers awarded 'Science Oscars'
- 20** New Future Leaders
- 21** UCT leaps up in world rankings

# 2018-19 IN NUMBERS

A RESEARCH DASHBOARD

## WORLD UNIVERSITY RANKINGS

**1st in Africa across all five major rankings**

198th IN THE WORLD QS 2020	136th IN THE WORLD THE 2020	252nd IN THE WORLD CWUR 2019-2020	121st IN THE WORLD US NEWS 2020 BEST GLOBAL UNIVERSITIES	201-300 IN THE WORLD ARWU 2019
----------------------------------	-----------------------------------	---	--	--------------------------------------



## SUBJECT RANKINGS

<b>TOP 10</b> Development studies <b>9th</b> IN THE WORLD QS 2019	<b>TOP 50</b> Oceanography <b>36th</b> IN THE WORLD SHANGHAI 2019	<b>TOP 100</b> Microbiology <b>72nd</b> IN THE WORLD US NEWS BEST GLOBAL UNIVERSITIES 2020	<b>Law</b> <b>77th</b> IN THE WORLD THE 2019	<b>TOP 100</b> Anatomy & physiology Anthropology Archaeology Architecture/built environment Education Geography Social policy & administration Sports-related subjects Clinical Medicine Public health SHANGHAI 2019
<b>TOP 20</b> Mining & mineral engineering <b>20th</b> IN THE WORLD SHANGHAI 2019	<b>Immunology</b> <b>56th</b> IN THE WORLD US NEWS BEST GLOBAL UNIVERSITIES 2020	<b>Social sciences and public health</b> <b>73rd</b> IN THE WORLD US NEWS BEST GLOBAL UNIVERSITIES 2020	<b>Social sciences</b> <b>89th</b> IN THE WORLD THE 2019	
	<b>Sport science schools and departments</b> <b>49th</b> IN THE WORLD SHANGHAI* 2018	<b>Clinical, pre-clinical &amp; health</b> <b>72nd</b> IN THE WORLD THE 2019	<b>Education</b> <b>95th</b> IN THE WORLD THE 2019	

## 2017 PUBLICATIONS

**1731.62**  
Publication count (units)\*

**16** NUMBER OF BOOKS  
**187** NUMBER OF CHAPTERS IN BOOKS

**R224 million**  
Subsidy income: publication

**2 766** NUMBER OF JOURNAL ARTICLES  
**2 923** NUMBER OF AUTHORS (ALL OUTPUTS)

**271** Number of conference proceedings

**515** NRF-RATED RESEARCHERS  
13%  
The National Research Foundation allocates ratings based on a researcher's recent research outputs and impact, as perceived by international peer reviewers.

**36** A-RATED RESEARCHERS  
30%  
A-rated researchers are international leaders in their field. About 30% of the country's A-rated researchers are at UCT.

**43** SARCHI CHAIRS  
20%  
Department of Science and Technology/National Research Foundation South African Research Chairs are designed to strengthen the ability of the country's universities to produce high-quality research, innovation and students. 20% of the country's SARCHI Chairs have been awarded to UCT.

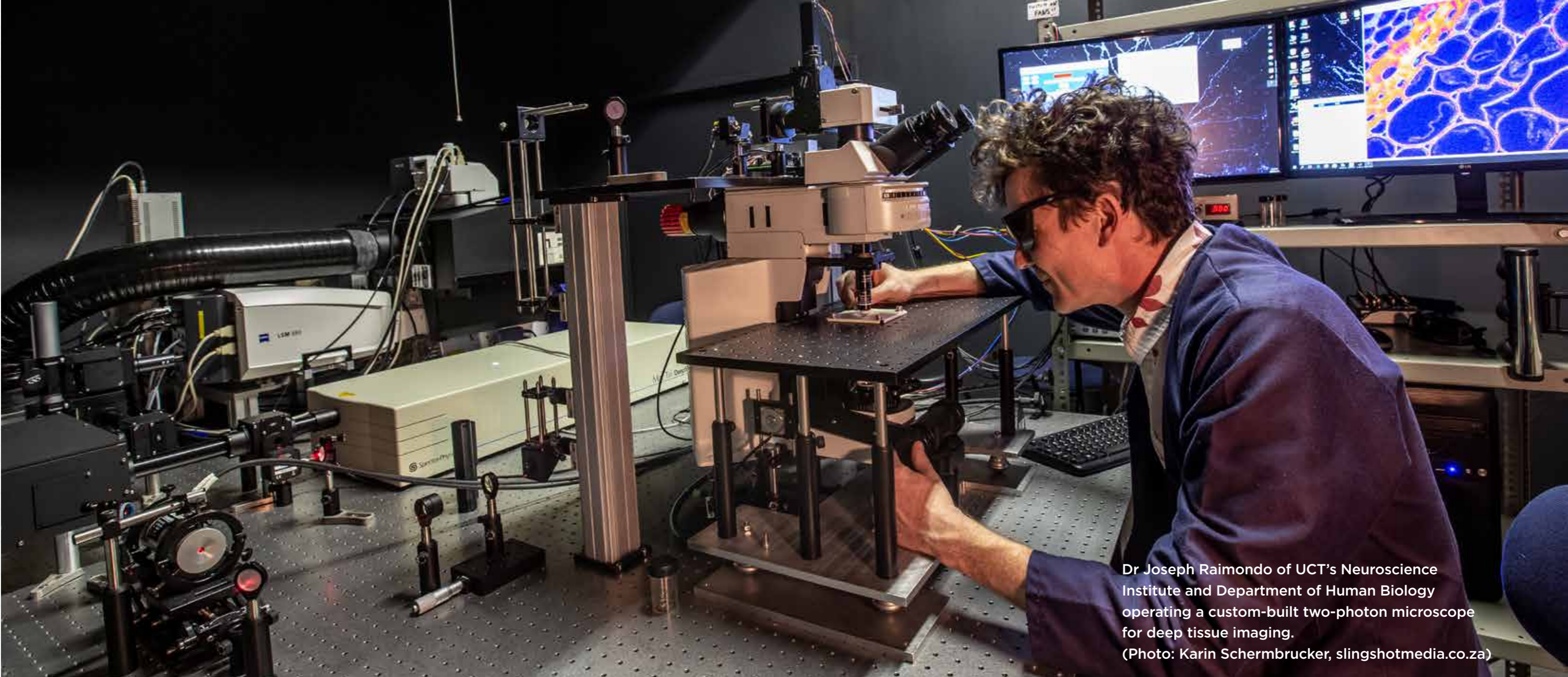
### KEY TERMS

**THE** Times Higher Education   **QS** Quacquarelli Symonds   **CWUR** Center for World University Rankings   **GRAS** ShanghaiRankings  
**BRICS** Brazil, Russia, India, China and South Africa   **SHANGHAI** ShanghaiRanking's Global Ranking of Academic Subjects  
**SHANGHAI\*** ShanghaiRanking's Special Focus Institution Ranking   **ARWU** ShanghaiRankings - Academic Ranking of World Universities

\* The publication figures are for accredited (subsidy-generating) outputs only published in the preceding year. Latest figures available at the time of going to print: October 2019.

**INCOME**

**R1.6 billion** external research income in 2018  
**R312 million** postgraduate funding (all sources)  
**R78 million** funding for postdoctoral fellows



Dr Joseph Raimondo of UCT's Neuroscience Institute and Department of Human Biology operating a custom-built two-photon microscope for deep tissue imaging. (Photo: Karin Schermbrucker, slingshotmedia.co.za)

## 2018 Contract research

2 226  
research  
contracts  
signed

RESEARCH  
CONTRACT  
VALUE  
R1.6 bn



VALUE OF  
FOREIGN  
RESEARCH  
CONTRACTS  
SIGNED  
R1 202 m



VALUE  
OF LOCAL  
RESEARCH  
CONTRACTS  
SIGNED  
R386 m

## 2018 Innovation

LICENCE INCOME  
R1.3 m

EQUITY IN SPIN-OFF  
COMPANIES  
10

LICENCE  
AGREEMENTS  
(OUTBOUND)  
21\*

**25** Spin-off  
companies  
to date

## IP protection

INVENTION  
DISCLOSURES  
**51**

PATENT  
APPLICATIONS  
FILED  
**60**

PATENTS  
GRANTED  
**28**

### INVENTION DISCLOSURES



85% male  
15% female

**1** NUMBER OF  
SPIN-OFF  
COMPANIES  
STARTED IN 2018

**143** Active IP  
rights to date

**23%**  
active portfolio  
commercialised

**46%**  
relate to  
human health

\*Includes option and assignment agreements



**CLICK HERE  
TO READ MORE**  
in *Innovation*  
at UCT 2019



# A legacy of research excellence: tribute to Dr Marilet Sienaert

Professor Sue Harrison, UCT's deputy vice-chancellor for research and internationalisation, pays tribute to Dr Marilet Sienaert, who is retiring at the end of this year



Marilet Sienaert, executive director of the UCT Research Office, has been a key part of researchers' lives at UCT for some 20 years. Certainly, my research career

has been facilitated and impacted through Marilet's dedication and innovation in her management of the Research Office during that time. The Research Office, as we know it at UCT, has been built by Marilet and her team, under the guidance of a series of deputy vice-chancellors (DVCs). The six permanent DVCs, plus several acting DVCs, are proof of the length of her involvement in research at UCT.

As a researcher, my experience of Marilet's contribution to UCT research is framed by her ongoing dedication to making the lives of researchers and the quality of their research better and better. Marilet has an amazing propensity to guide and inspire researchers, to lead them through the processes and admin (that is not a strength of many researchers), and to give time to them freely in her over-busy portfolio. Mostly, Marilet cares for our success – of each and every one – which is enabling. Not only is her personal interaction exceptional, but Marilet has an eye for processes and

systems, for innovations and for new opportunities. Her can-do attitude is something that UCT researchers value.

By moving into the role of DVC Research and Internationalisation, my understanding of Marilet has grown to unearth – even further – her understanding of the over-arching research arena at UCT and across the country. I have also come to appreciate her exceptional ability to interact with the deep detail of this system and its continual improvement, while at the same time taking a helicopter view to guide the holistic, systemic changes needed, or to defend the key gems that are critical to its success.

With these attributes, Marilet has been an amazing support to me in taking on the role of DVC.

In closing, UCT has been incredibly fortunate to have had Marilet at the helm of its research management. Her contribution has been immense, and we thank her for it.

Marilet, we wish you well in the next phase of your life, and we know that you will continue to work actively for the betterment of academic research in South Africa for some while yet, sharing your immense wisdom in this field.

**SUE HARRISON**

Out-going executive director of the Research Office, Dr Marilet Sienaert recalls the highlights from her time at UCT

At the heart of what working at UCT has meant to me has been the people: relations with my dedicated team and colleagues in cognate departments, as well as the array of inspiring individuals across the university that constitute its community.

I was enthralled by my exposure to the width and breadth of disciplines across all faculties and the often

**'Looking back then, the dominant sentiment for me is one of gratitude.'**

life-changing findings of researchers, many of whom also took the time to share with me their challenges and their triumphs along the way.

Looking back then, the dominant sentiment for me is one of gratitude – for the scope and richness of relationships and the opportunity to connect with a very wide range of people in a meaningful way.

But my tenure has also been a rollercoaster journey, as higher education, in general, and the nature of research, in particular, have undergone a sea change over the past two decades.

In this context, the only constant was change, and I thrived on the bigger picture of the landscape in all its complexity, sharing in a venture whereby UCT increasingly excelled at locally relevant research that helped resolve global problems and witnessing its meteoric climb in impact and productivity.

This vision of an upward trajectory will continue to carry my team when I leave, and we feel buoyed by the university's emerging 'Vision 2030', as spearheaded by the new executive. I am truly grateful to have been part of UCT over the past years and am confident of its role on, and for, the continent going forward.

**MARILET SIENAERT**





## 01 Prof van As receives 2018 Alan Pifer Award

Professor Sebastian van As, head of the Red Cross War Memorial Children's Hospital Trauma Unit, has won the 2018 Alan Pifer Research Award. The award recognises the important research he has conducted over the past 20 years into child safety in South Africa.

Van As has made it his life's work to treat and prevent childhood injury. And it is the research he has conducted over the past 20 years in support of this aim that has now garnered him the 2018 Alan Pifer Award.

"Traditionally, hospitals focus on the treatment and rehabilitation of injuries, or the cure," says Van As. "But when it

comes to children, the prevention of injury is an ethical imperative."

The award, which carries a purse of ZAR20 000, is awarded annually by UCT's vice-chancellor in recognition of outstanding welfare-related research that benefits South Africa's disadvantaged people.



[CLICK HERE TO READ THE ARTICLE](#)

## 02 UCT's 2019 women in science winners

UCT Professor Tania Douglas and two postgraduate researchers – Julia Healy and Sibabalo Noludwe – were among the winners at the 2019 South African Women in Science Awards (SAWiSA). The awards recognise and reward excellence by women scientists and researchers, and profile them as role models for younger women.



**Professor Tania Douglas**  
Faculty of Health Sciences  
*Distinguished Woman  
Researcher in the Research  
and Innovation category*

Douglas, who is the National Research Foundation/Department of Science and Technology South African Research Chair in Biomedical Engineering and Innovation, has research interests covering medical imaging and image analysis, the contextually appropriate health technologies and health innovation management.



**Julia Healy**  
Faculty of Science  
*TATA Scholarship*

Healy is enrolled for a joint PhD degree at UCT and the University of Groningen. She is investigating the neutral hydrogen gas content of galaxies in galaxy clusters to understand the processes that drive galaxy evolution.



**Sibabalo Noludwe**  
Faculty of Engineering & the Built Environment  
*TATA Scholarship*

Noludwe is doing her master's degree in electrical engineering at UCT with a focus on power-system resilience – a relatively new concept in the industry.



[CLICK HERE TO READ THE ARTICLE](#)

## 03 UCT scientists shine at NRF awards

There have been two annual National Research Foundation (NRF) Awards since the publication of the 2017/18 Research and Innovation Highlights. These awards, which recognise and celebrate South African research excellence, are presented in two categories: ratings-linked awards and special recognition awards. Here we recognise those UCT researchers from both years that we haven't yet celebrated.

**2018** UCT's top scientific minds dominated at the 2018 NRF Awards ceremony, accounting for 11 of the 37 academics honoured at the prestigious annual event.



**Dr Mohlopheni Marakalala**  
**Faculty of Health Sciences**

*Emerging Researcher award*

In the Special Awards category, Dr Mohlopheni Marakalala, a senior lecturer in the pathology department at the

time of the award, took one of two Emerging Researcher awards. This award recognises outstanding research excellence by current beneficiaries of Thuthuka grants, a key NRF intervention to support emerging researchers.



**Associate Professor Edmund February**  
**Faculty of Science**

*Hamilton Naki Award*

The Hamilton Naki Award went to UCT, with Associate Professor Edmund February, from the biological sciences department, being honoured for "achieving world-class research performance despite considerable challenges". February has overcome significant difficulties in his life to rise through the academic ranks and become an international leader in the field of plant ecology.


In addition to three new P-ratings and two new A-ratings, UCT saw four of its researchers re-evaluated as A-rated during 2018.

- **Professor Hans-Peter Kunzi**  
Department of Mathematics and Applied Mathematics
- **Professor Edward Rybicki**  
Department of Molecular and Cell Biology
- **Professor Heather Zar**  
Department of Paediatrics and Child Health
- **Professor George Ekama**  
Department of Civil Engineering

 [CLICK HERE TO READ THE ARTICLE](#)

**2019** This year, UCT welcomed the A-rating of seven of its researchers. Of the year's 21 A-ratings across the country, seven were from UCT. One, Professor Gary Maartens, was awarded an A rating for the first time; the other six were re-evaluated and retained their A ratings.

- **Professor Gary Maartens**  
Department of Medicine
- **Professor Harold Kincaid**  
School of Economics
- **Professor Don Ross**  
School of Economics
- **Professor Igor Barashenkov**  
Department of Mathematics and Applied Mathematics
- **Professor Philippe-Joseph Salazar**  
Centre for Rhetoric Studies
- **Professor Dan Stein**  
Department of Psychiatry and Mental Health
- **Professor Douglas Butterworth**  
Department of Mathematics and Applied Mathematics

 [CLICK HERE TO READ THE ARTICLE](#)

## 04 Double award in Three Minute Thesis competition

UCT doctoral candidate Rene Nsanzubuhoro won first place and the People's Choice Award in the 2018 national Three Minute Thesis competition.

In the competition, PhD candidates are given just three minutes to explain their PhDs to the public. Nsanzubuhoro, an assistant lecturer in the Department of Civil Engineering, won for his contribution to addressing the water crisis in South Africa.

He has developed a novel device that can be used to assess the extent of leaks in sections of water pipeline

and other fluid-pipeline systems, without the need for costly and invasive efforts.

"I believe in what I do and believe in how important it is, and I'm glad I was able to win by sharing my passion," he explains.



[CLICK HERE TO READ THE ARTICLE](#)



## 05 Large-scale research funding for UCT

Researchers from UCT are included in two of 12 international teams selected by United Kingdom Research and Innovation (UKRI) to establish large interdisciplinary research hubs based at leading UK universities that address the world's complex development challenges.

The research hubs are funded through the Global Challenges Research Fund (GCRF), which was set up by the UK government to support research that tackles the challenges faced by developing countries. It offers five years of large-scale funding for initiatives that aim to make the world safer, healthier and more prosperous.

The two hubs UCT is involved in were chosen to be among the 12 successful applicants out of a pool of some 380:

**UKRI GCRF Accelerating Achievement for Africa's Adolescents Hub**, led by an interdisciplinary team

at Oxford University and UCT, aims to discover which combinations of services can most efficiently and cost-effectively help adolescents achieve their potential across multiple life domains.

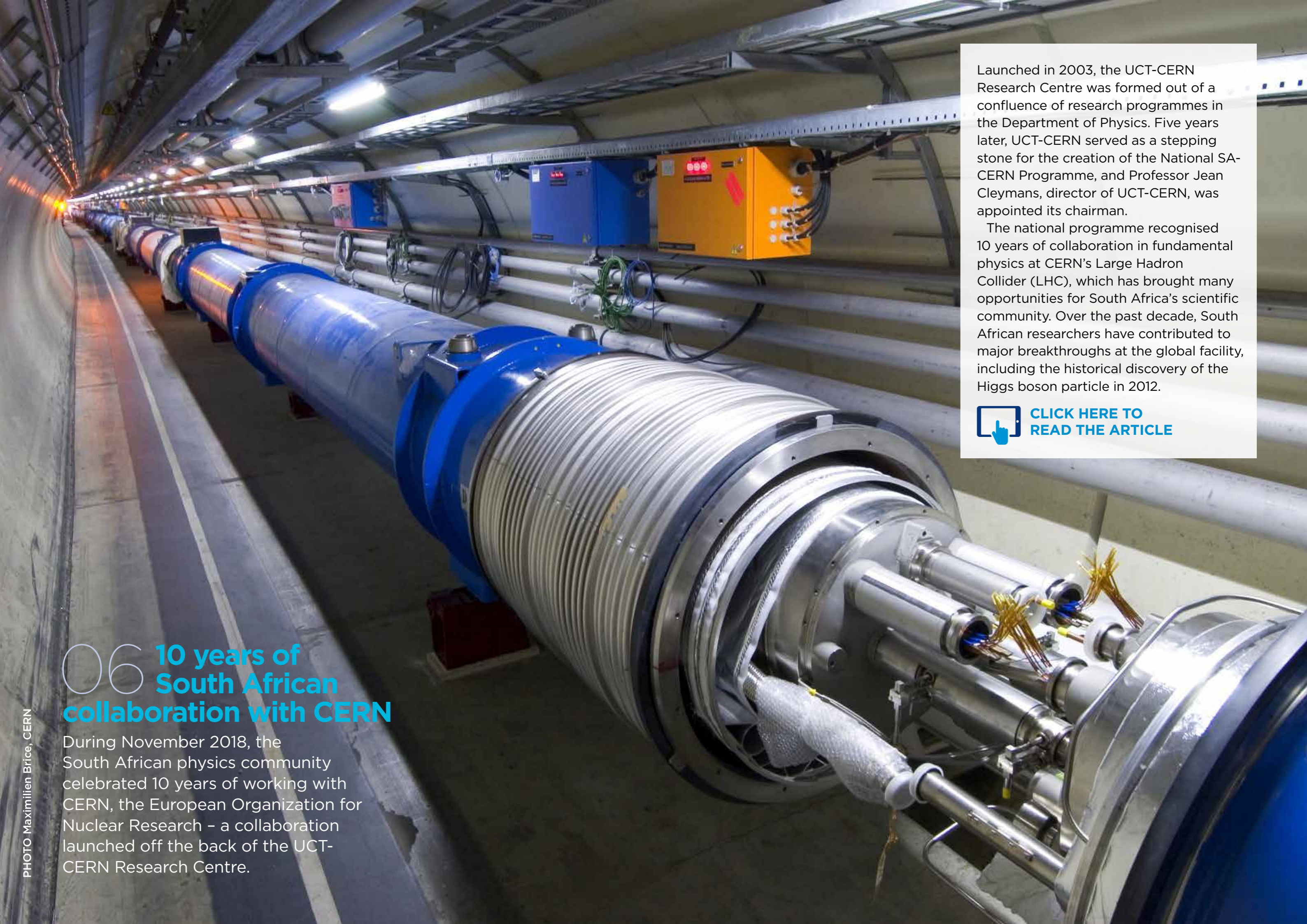
**UKRI GCRF One Ocean Hub**, led by the University of Strathclyde, aims to transform our response to the multiple, urgent challenges that threaten the health of the world's ocean and its contributions to human well-being.



[CLICK HERE TO READ THE ARTICLE](#)







Launched in 2003, the UCT-CERN Research Centre was formed out of a confluence of research programmes in the Department of Physics. Five years later, UCT-CERN served as a stepping stone for the creation of the National SA-CERN Programme, and Professor Jean Cleymans, director of UCT-CERN, was appointed its chairman.

The national programme recognised 10 years of collaboration in fundamental physics at CERN's Large Hadron Collider (LHC), which has brought many opportunities for South Africa's scientific community. Over the past decade, South African researchers have contributed to major breakthroughs at the global facility, including the historical discovery of the Higgs boson particle in 2012.



[CLICK HERE TO READ THE ARTICLE](#)

## 06 10 years of South African collaboration with CERN

During November 2018, the South African physics community celebrated 10 years of working with CERN, the European Organization for Nuclear Research – a collaboration launched off the back of the UCT-CERN Research Centre.

## 07 Advancing womxn award winners

UCT made strides in the advancement of womxn by awarding grants totalling R22.5 million to womxn researchers over the next five years under the banner of Advancing womxn: a call for change.

The winners will not only be conducting leading-edge research in fields where womxn are under-represented and into womxn's issues but will also be advancing the next generation of

womxn researchers through capacity building. Dr Katye Altieri, Professor Floretta Boonzaier and Professor Janet Hapgood will receive funding of ZAR1 million per year for five years.



**Professor Floretta Boonzaier**, from the Department of Psychology, aims to shift the ways we think about and conduct research on gender-based violence. With postdoctoral fellow Dr Taryn van Niekerk, Boonzaier will foreground socially just methodologies and ways of doing research that might contribute toward the advancement of social justice, especially for womxn.



**Dr Katye Altieri**, from the Department of Oceanography, aims to develop a research and leadership training programme at UCT for black womxn to build capacity in the field of oceanography. The project – co-led by Associate Professor Isabelle Ansorge, Dr Sarah Fawcett and Associate Professor Juliet Hermes – aims to transform the postgraduate culture of oceanography at UCT.



**Professor Janet Hapgood**, from the Department of Molecular and Cell Biology, aims to help womxn make informed choices about contraception. Her work investigates the molecular mechanisms behind the potential increased risk for womxn using Depo-Provera – the hormonal contraceptive that's most widely used in sub-Saharan Africa and may increase the risk of HIV infection by about 40%.

### MERITORIOUS AWARDS

Professor Patricia Kooyman from the Department of Chemical Engineering and Dr Robyn Pickering from Department of Geological Sciences received meritorious awards to the value of ZAR750 000 per year for five years.

**Professor Kooyman** is exploring ways to remove carbon monoxide gas from hydrogen gas with the goal of improving the methods used to prepare fuel for fuel cells. She will also train black womxn postgraduate

researchers in critical skills in chemical engineering, catalysis research and transmission electron microscopy.

**Dr Pickering** and her co-investigators, Professor Rebecca Ackermann and Dr Jayne Wilkins, want to take the first step towards transforming the field of paleoanthropology, in which womxn are under-represented and black womxn are virtually absent.



**CLICK HERE TO READ THE ARTICLE**



## 08 Pioneering 'new science' in Masiphumelele

UCT's Desmond Tutu HIV Foundation Masiphumelele (DTHF) research site is also home to the new Aerobiology TB Research Facility. Officially launched on 20 February 2019, it will focus on the study of the transmission of tuberculosis (TB) organisms with a view to finding ways to halt the spread of the disease.

The lab, known to the researchers as the "Masi site", is in a township where 20% of five-year-olds are infected with TB before they start school. It serves as a microcosm of the TB epidemic in Cape Town.

Emeritus Professor Robin Wood, chief executive officer of the DTHF and director of the Desmond Tutu HIV Centre (DTHC), an accredited research centre within UCT's Health Sciences

faculty, said at the launch that poor socio-economic conditions are one of the big drivers of TB transmission.

The researchers will study how TB is transmitted through the air - via actions such as breathing, talking and coughing - and the role anti-TB therapy can play in limiting the disease's spread.

 [CLICK HERE TO READ THE ARTICLE](#)

## 09 SATVI wins Social Responsiveness Award

Established in 2001, the South African Tuberculosis Vaccine Initiative (SATVI) was presented with UCT's 2018 Social Responsiveness Award.

Social responsiveness is UCT's third pillar of academic performance criteria, alongside teaching and learning, and research. Accordingly, the annual award recognises individuals and groups employed by the university whose scholarly initiatives and undertakings play an effective developmental role in a cultural, economic, political, scientific and/or social environment.

Located within the Department of Pathology's Institute of Infectious Disease and Molecular Medicine in UCT's Faculty of Health Sciences, and with a field office in Worcester, SATVI

is a tuberculosis research group set up with the objective of developing better prevention strategies to curb the disease.

Alongside its clinical research agenda, SATVI has engaged with local communities in the Cape Winelands district through a portfolio of social responsiveness programmes, which have included drama productions such as *Carina's Choice* co-developed with Worcester Secondary School (pictured), to help raise awareness about TB and clinical research.

 [CLICK HERE TO READ THE ARTICLE](#)





## 10 Priceless climate-change data haul from Antarctica

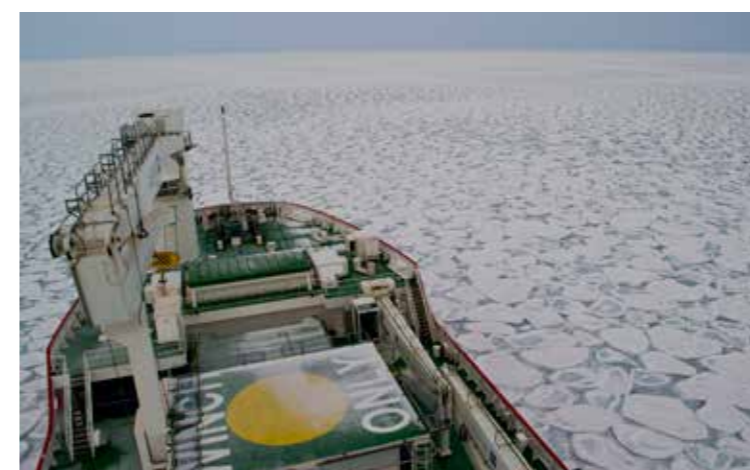
The thousands of seawater, ice and plankton samples brought home by the UCT 2019 Weddell Sea Expedition research group may take up to five years to analyse and interpret.

But the data yielded by this stockpile will be priceless in understanding changes to the Antarctic ice shelves and their role in climate change.

When it docked in Cape Town on 15 March, the *SA Agulhas II* had recorded a round trip of over 11 000 kilometres;

an “unprecedented” international scientific expedition of 40 world-leading researchers – including nine from UCT.

 [CLICK HERE TO READ THE ARTICLE](#)



## 11 Three UCT researchers among world's most cited

Three UCT researchers – Emeritus Professor Eric Bateman, Emeritus Professor William Bond and Professor Dan Stein – featured on the list of Highly Cited Researchers for 2018.

The annual list of Highly Cited Researchers, released by Clarivate Analytics, identifies scientists and social scientists who have demonstrated significant influence through publication of multiple highly cited papers during the past decade. The three researchers were all listed in the new cross-field category which has been added to recognise researchers who are influential in more than one field.

 [CLICK HERE TO READ THE ARTICLE](#)

# 12 Inaugural African fellowships for young UCT scholars

Seven young UCT scholars are among the inaugural 2019 cohort of 21 Future Leaders – African Independent Research (FLAIR) Fellows.

The initiative is a partnership between the African Academy of Sciences (AAS) and the Royal Society, supported by the Global Challenges Research Fund.

The fellowships give these young scholars an opportunity to build independent research careers in a sub-Saharan African institution. The proviso is that they undertake cutting-edge scientific research that addresses global challenges facing developing countries.

## **DR SARAH FAWCETT** Faculty of Science

Fawcett's project aims to identify and track the sources of pollution in rapidly urbanising coastal regions, using False Bay as a model.



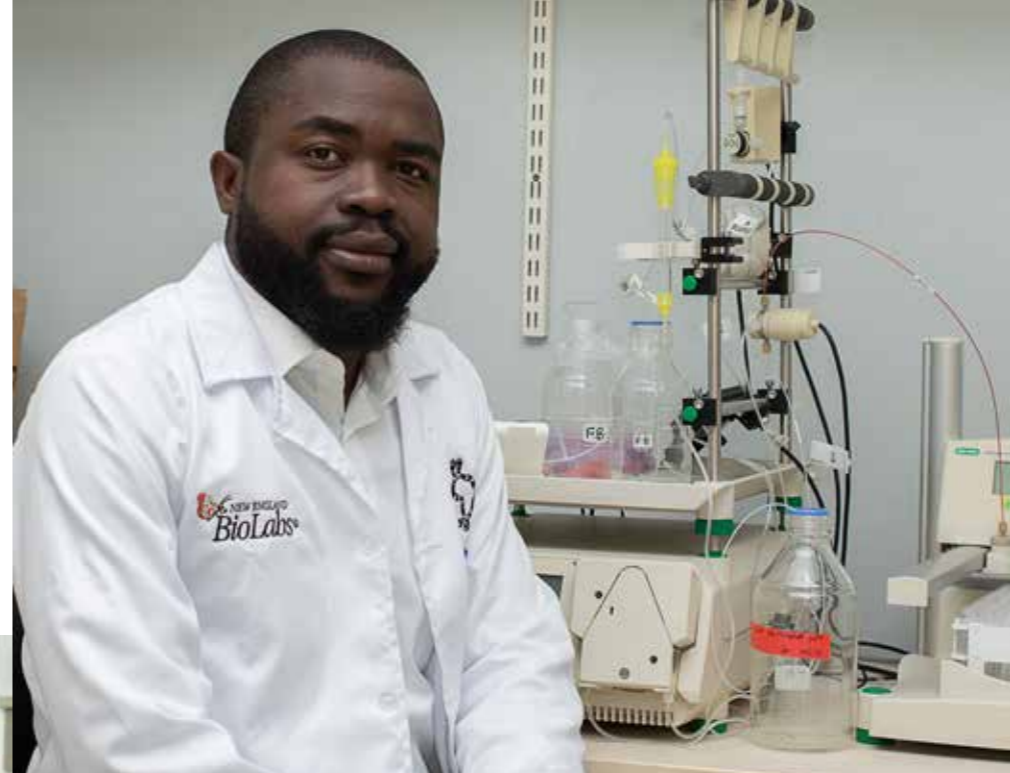
## **DR DORIT HOCKMAN** Faculty of Health Sciences

Hockman's fellowship will fund a research programme investigating the dynamics of gene expression and gene regulation in the human brain.



## **DR WADE PETERSEN** Faculty of Science

Petersen's research focuses on developing environmentally-friendly and sustainable ways to synthesise molecules that can be used to design new drugs.



## **DR JUSTIN KOMGUEP NONO**

### Faculty of Health Sciences

Nono will investigate whether susceptibility to and pathology of schistosomiasis, also known as snail fever and bilharzia, differs because of gene expression or gut microbial populations.



## **DR JOSEPH RAIMONDO** Faculty of Health Sciences

Raimondo will study how inflammation in the brain might result in epileptic seizures by affecting the concentration of ions in different brain cell types.



## **DR DYLLON RANDALL** Faculty of Engineering & the Built Environment

Randall's project will challenge the status quo by investigating the upcycling of human urine into useful products such as water and fertiliser(s).



## **DR CHRIS TRISOS** Faculty of Science

Trisos, who will be based at UCT's African Climate and Development Initiative, will aim to improve the quality of information for policymakers concerned with long-term environmental change in Africa.



**CLICK HERE TO  
READ THE ARTICLE**



## 13 UCT first university to adopt global ethics code

The UCT Senate has adopted the Global Code of Conduct for Research in Resource-Poor Settings (GCC). The code, which is directed at all research disciplines from bioscience to zoology, emphasises close collaboration between partners in the global north and south through all stages of research.

It aims to counter ‘ethics dumping’, broadly the practice of exporting sensitive research not ethically accepted in the global north to the global south and other resource-poor settings. It’s a practice that has gained prominence with globalisation and increased researcher mobility; sometimes it’s wilful exploitation but it can result from lack of knowledge. The GCC therefore also serves as an educational tool for researchers and research support systems.

This makes UCT the third adopter of the Global Code, after the European Commission and the European & Developing Countries Clinical Trials Partnership, and the first adopter in the global south.

The GCC was developed over the past four years by TRUST, a collaborative EU-funded project, with UCT as a key partner.

 [CLICK HERE TO READ THE ARTICLE](#)

### UCT TO HOST 2021 WORLD CONFERENCE ON RESEARCH INTEGRITY

This year, UCT was also selected, via a competitive process, to host the 7th World Conference on Research Integrity – this will be the first time it’s held in Africa. The conference fosters international exchange of information and discussion about responsible conduct of research.

## 14 First-of-its-kind wound healing research unit

UCT Professor Nonhlanhla Khumalo, head of the Division of Dermatology in the Department of Medicine, will direct a new research unit dedicated to understanding and managing skin scarring. Its focus will be keloid scarring, a type of raised scarring that can form when scar tissue grows excessively and that is most common among Africans.

The UCT Wound and Keloid Scarring Translational Research Unit, to be known in short as the Wound Healing Unit, aims to be a centre of excellence in skin scarring education, research and clinical management. As a translational research unit, it will build on basic scientific research to create techniques and tools that meet critical medical needs.

The research unit was awarded by the South African Medical Research Council, and it will be hosted at the UCT Hair and Skin Research Laboratory – the first dermatology laboratory in the country and possibly on the continent.

 [CLICK HERE TO READ THE ARTICLE](#)



# 15 International recognition

During the past year, UCT researchers across a spectrum of fields were recognised internationally for their research excellence and influence.



UCT applied mathematician and fisheries scientist

**Professor Emeritus Doug**

**Butterworth** was awarded the Order of the Rising Sun, Gold Rays with Neck Ribbon by the Emperor of Japan for his contribution to the sustainable management of the country's fisheries.



[CLICK HERE TO READ THE ARTICLE](#)



**Professor Shadreck Chirikure,**

head of the UCT Archaeological Materials Laboratory, won a Global Professorship from the British Academy for his work dating historical artefacts and the study of pre-colonial urban societies in Africa.



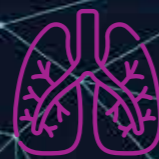
[CLICK HERE TO READ THE ARTICLE](#)



The director of UCT's Medical Imaging Research Unit in the Division of Biomedical Engineering, **Professor Tania Douglas,** was included on the prestigious recently-released list of 30 Quartz Africa Innovators for 2018.



[CLICK HERE TO READ THE ARTICLE](#)



Leading tuberculosis researcher **Professor Keertan Dheda,** head of UCT's Division of Pulmonology, was awarded the 2018 Scientific Leadership prize by the prestigious European & Developing Countries Clinical Trials Partnership.



[CLICK HERE TO READ THE ARTICLE](#)



The Georges Lemaître International Prize was awarded to UCT **Emeritus Professor George Ellis,** in the Department of Mathematics and Applied Mathematics, during May 2019 in Louvain-la-Neuve, Belgium.



[CLICK HERE TO READ THE ARTICLE](#)



**Professor Mark New,**

director of the African Climate and Development Initiative, was listed among the world's 100 most influential people in climate policy for 2019.



[CLICK HERE TO READ THE ARTICLE](#)



Head of the UCT Department of Psychiatry and Mental Health

**Professor Dan Stein** was

honoured with a lifetime achievement award at the 14th World Congress of Biological Psychiatry.



[CLICK HERE TO READ THE ARTICLE](#)



**Professor Peter Zilla,** head of UCT's Chris Barnard Division of Cardiothoracic Surgery, was awarded

Austria's highest national accolade, the Grand Decoration of Honour for Services to the Republic of Austria.



[CLICK HERE TO READ THE ARTICLE](#)



## 16 New 'fully funded' scholarship for top young researchers

The new UCT Vice-Chancellor Research Scholarship will fully support and develop the institution's top young researchers to position them at the forefront of research into society's most pressing challenges.

Vice-Chancellor Professor Mamokgethi Phakeng congratulated the first 100 awardees, representing all six academic faculties, at the scholarship launch on 30 May 2019.

"We are committed to helping you build on your excellence and we hope

that as a result you will find your way to world-changing research," she said.

These excellence awards recognise "exceptional academic achievements" among UCT's master's and doctoral students registered for research degrees. The scholarships cover the

full cost of attendance at UCT.

In recognition of their academic achievements, all awardees will also receive an additional R5 000, unless the conditions of their other award/s specifically preclude this.



**CLICK HERE TO  
READ THE ARTICLE**



## 17 Prof Mizrahi awarded Harry Oppenheimer Fellowship

Africa's premier research fellowship has been awarded to Professor Val Mizrahi, director of the Institute of Infectious Disease and Molecular Medicine at UCT. The award recognises Mizrahi as a pre-eminent scholar who has made an internationally significant contribution to the field of microbiology and tuberculosis (TB) research.

Mizrahi proposed two projects as part of the Oppenheimer fellowship. The first, involving collaboration with Professor Digby Warner and Dr Melissa Chengalroyen, is aimed at exploring the many roles of the essential vitamin B2 (riboflavin) in the biology of the TB bacterium. The second builds on a study led by UCT postdoctoral fellow Mandy Mason and

will test a longstanding hypothesis of Mizrahi's regarding the possibility of shortening treatment for TB.

This is the 21st time that the Oppenheimer Research Fellowship has been awarded, and Mizrahi is the ninth person at UCT to be honoured.



[CLICK HERE TO READ THE ARTICLE](#)



## 18 UCT, Bristol in 'profound collaboration'

UCT has joined with the University of Bristol in the United Kingdom to launch a novel Researchers without Borders PhD programme that Vice-Chancellor Professor Mamokgethi Phakeng has described as a "profound collaboration".

The two universities have developed a framework agreement for co-tutored PhDs, providing opportunities for students to work on research projects that exploit the strengths and capabilities of both institutions.

Phakeng and Professor Hugh Brady, president of the University of Bristol, signed the agreement in Bristol during July, after the university conferred an honorary doctorate on Phakeng in recognition of her substantial

contribution to the development of mathematics education in South Africa.

Participating PhD students will be registered at, and have supervisors and co-supervisors at both universities, spending almost equal amounts of time at each institution during the four-year, fully-funded scholarships.



[CLICK HERE TO READ THE ARTICLE](#)





## 19 Three UCT researchers awarded 'Science Oscars'

In recognition of their outstanding contributions to science, engineering, technology and innovation in South Africa, UCT's Professor Alison Lewis, Dr Hlumani Ndlovu, Professor Martine Visser all received awards at the NSTF-South32 2019 event.

### **PROFESSOR ALISON LEWIS** Faculty of Engineering & the Built Environment

*Engineering Research Capacity Development Award*

This award is in recognition of Lewis's training, nurturing and mentoring of students at the UCT Crystallisation and Precipitation Research Unit. Under her guidance, they have been trained in new research methods for the recovery of valuable metals, water and minerals.



### **DR HLUMANI NDLOVU**

*TW Kambule-NSTF Awards: Emerging Researchers*

This award is in recognition of Ndlovu's research into the immunological mechanisms behind inflammation of the liver and mediating protective immunity. Ndlovu, a lecturer in the Division of Chemical and Systems Biology, leads a lab largely concerned with studying inflammation.



### **PROFESSOR MARTINE VISSER**

*NSTF-Water Research Commission Award*

This award recognises Visser's spearheading of a project – in collaboration with the City of Cape Town – that used behavioural nudges to conserve water during the region's water crisis.



 [CLICK HERE TO READ THE ARTICLE](#)



Dr Nomusa Makhubu



Dr Asanda Benya

## 20 New Future Leaders

The 2030 Future Research Leaders Project lifts out a small cohort of exceptionally talented early career researchers, selected by Vice-Chancellor Professor Mamokgethi Phakeng from across faculties, who are recognised by their peers as future world-leaders in their fields.

At the launch of the programme in 2018, 12 researchers were selected. This year we welcome three new researchers: Dr Geoff Howarth, Dr Asanda Benya and Dr Nomusa Makhubu. With this programme, the Vice-Chancellor has shown her commitment to ensure current and

future excellence in research at the university.

### 2019 COHORT

- Dr Geoff Howarth (Geological Sciences)
- Dr Asanda Benya (Sociology)
- Dr Nomusa Makhubu (Fine Art)

### 2018 COHORT

- Dr Katye Altieri (Oceanography)
- Prof Shadreck Chirikure (Archaeology)
- Dr Sarah Fawcett (Oceanography)
- A/Prof Lindsey Gillson (Biological Sciences)
- Dr Shazrene Mohamed (Astronomy)
- Dr Malebogo Ngoepe (Mechanical Engineering)
- Dr Robyn Pickering (Geological Sciences)
- Prof Fiona Ross (African and Gender Studies, Anthropology and Linguistics)
- Prof Sudesh Sivarasu (Biomedical Engineering)
- Dr Kurt Van der Heyden (Astronomy)
- A/Prof Amanda Weltman (Mathematics & Applied Mathematics)
- Dr Sahal Yacoob (Physics)

 [CLICK HERE TO WATCH THE VIDEO](#)



Dr Geoff Howarth



## 21 UCT leaps up in world rankings

UCT jumped up 20 places to 136th position in the 2020 Times Higher Education (THE) World University Rankings. This puts UCT in the top spot in the country, as well as on the continent.

“It is encouraging to see UCT demonstrate such excellence in international rankings,” said UCT Vice-Chancellor Professor Mamokgethi Phakeng, “particularly given the incredibly competitive, global arena we operate in and the enormous challenges we face in terms of declining national funding and the imperative to transform our institution.”

This latest ranking means UCT now leads in Africa in all of the five major world university rankings: THE, Quaquarelli Symonds, Centre for World University Rankings, US News Best Global Universities Rankings and the Academic Ranking of World Universities.

The THE World University Rankings, published once a year, assess almost 1 400 institutions worldwide. To do this, it uses 13 performance indicators grouped into five areas: teaching (30%), research (30%), citations (30%), international outlook (7.5%) and industry income (2.5%)



[CLICK HERE TO READ THE ARTICLE](#)



## Contact us

+27 (0) 21 650 4015

researchvisibility@uct.ac.za

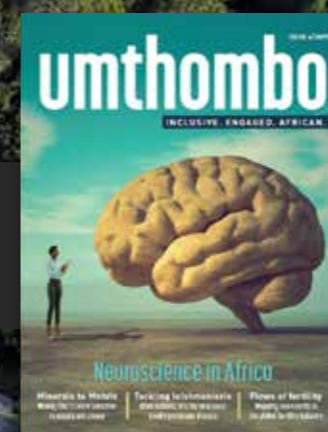
@UCT\_Research

@UCTResearchandInnovation

www.research.uct.ac.za  
www.researchsupport.uct.ac.za

Produced by Global  
Strategy & Visibility Unit,  
UCT Research Office

EDITORIAL TEAM Lisa Boonzaier, Carolyn Newton,  
Jess Oosthuizen, Birgit Ottermann  
DESIGN Sean Robertson



Explore *Umthombo*, UCT's research magazine  
featuring stories from across the university.