GRADUATION CEREMONIES

DECEMBER 2015

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MANNENBERG

The musical piece for the processional march is *Mannenberg*, composed by Abdullah Ibrahim.

Recorded with Basil 'Manenberg' Coetzee, Paul Michaels, Robbie Jansen, Morris Goldberg and Monty Weber, *Mannenberg* was released in June 1974.

The piece was composed against the backdrop of the District Six forced removals. It is named after the Cape Town township of Manenberg, which was established when the residents of District Six settled there. *Mannenberg* stands out as a uniquely South African piece: it blends together South African musical forms (*marabi*, *mbaqanga* and *langarm*) and American jazz. The song became a rallying cry against the injustices of apartheid and the particular destruction it wrought on communities. With its upbeat melodies and buoyant hook, the piece also serves a celebration of the resilience and endurance of humanity in the face of the brutalities of the apartheid regime.

Mannenberg is arguably South African jazz's most famous export, and still stands as an anthem of hope and of fortitude for oppressed communities. It also serves as a reminder of the inhumanity of what this country and this city endured, and of the legacies of that inhumanity.

NATIONAL ANTHEM

Nkosi sikelel' iAfrika
Maluphakanyisw' uphondolwayo,
Yizwa imithandazo yethu,
Nkosi sikelela, thina lusapho lwayo.

Morena boloka etjhaba sa heso,
O fedise dintwa la matshwenyeho,
O se boloke,
O se boloke setjhaba sa heso,
Setjhaba sa South Afrika – South Afrika.

Uit die blou van onse hemel,
Uit die diepte van ons see,
Oor ons ewige gebergtes,
Waar die kranse antwoord gee,

Sounds the call to come together,
And united we shall stand,
Let us live and strive for freedom,
In South Africa our land.

FACULTIES OF COMMERCE, LAW AND SCIENCE

ORDER OF PROCEEDINGS

Academic Procession.
(The congregation is requested to stand as the procession enters the hall)

The Vice-Chancellor will constitute the congregation.

The National Anthem.

The University Statement of Dedication will be read by a representative of the SRC.

Musical Item.

Welcome by the Deputy Vice-Chancellor, Professor D Visser.

Professor Visser will present The Bertha Centre for Social Innovation and Entrepreneurship for the Social Responsiveness award.

The President of Convocation's medal for 2015 will be presented to Mda Mda.

The honorary graduands will be presented to the Vice-Chancellor.

Professor Visser will invite Kenneth Reid to address the congregation.

Address by Kenneth Reid.

The graduands and diplomates will be presented to the Vice-Chancellor by the Deans of the faculties.

The Vice-Chancellor will congratulate the new graduates.

Professor Visser will make closing announcements and invite the congregation to stand.

The Vice-Chancellor will dissolve the congregation.

The procession, including the new graduates and diplomates, will leave the hall.
(The congregation is requested to remain standing until the procession has left the hall.)

DISTINCTIONS IN THE FACULTY OF COMMERCE

The BCom and BBusSc degrees may be awarded with distinction

in a subject, where the student achieves a weighted average of at least 75% in a group of courses in, or related to, that subject (in some cases the average mark required is 80%)

in the degree, where the student achieves a weighted average of 80% in all courses.

Honours degrees are awarded by class of pass (first, second class division one, second class division two, or third).

Master's degrees may be awarded with distinction

for the dissertation, (in a coursework and dissertation curriculum) for especially meritorious work, the dissertation being in the first class (at least 75%) and at least 70% for the coursework depending on the degree.

in the degree, for especially meritorious work, where the average is at least 75% and no component is below 70%.

DISTINCTIONS IN THE FACULTY OF LAW

The Bachelor of Laws may be awarded cum laude where a student has obtained

an average of 70% in all law courses; and

a mark of at least 75% in at least six full law courses or the equivalent.

The Bachelor of Laws may be awarded magna cum laude where a student has obtained

an average of 75% in all law courses; and

a mark of at least 75% in at least nine full law courses or the equivalent.

The Postgraduate Diploma in Law may be awarded with distinction where a student has obtained an average mark of at least 75%.

The Master of Laws or the Master of Philosophy by minor dissertation and coursework may be awarded with distinction in the degree where a student has obtained an average mark of at least 75%.

The Master of Laws or the Master of Philosophy by dissertation may be awarded with distinction in the degree for especially meritorious work.

DISTINCTIONS IN THE FACULTY OF SCIENCE

Bachelors degrees may be awarded with distinction

in a subject (or major), where the student achieves first class passes in specified courses

in the degree, where the student has both distinction in at least one subject (or major) and first class passes in at least the equivalent of six full courses.

Honours degrees are awarded by class (first, second class division one, second class division two, or third).

Master's degrees may be awarded with distinction

in the degree, (by dissertation) for especially meritorious work

in the degree, (by coursework and minor dissertation) for especially meritorious work for the dissertation as well as achieving 75% or better for the coursework.

SOCIAL RESPONSIVENESS AWARD

The Social Responsiveness Award provides an institutional signal to members of the University that social responsiveness is an important priority.

BERTHA CENTRE FOR SOCIAL INNOVATION & ENTREPRENEURSHIP

The Bertha Centre for Social Innovation and Entrepreneurship is the first academic centre in Africa dedicated to advancing social innovation and entrepreneurship. It was established in 2011 as a unit in the Graduate School of Business supported by the Bertha Foundation – a family foundation that works with catalysts for social and economic change.

The award goes to the Bertha Centre, comprising its staff and Bertha Scholars as an organisation chosen for its research and response to social challenges across several sectors, for whom the creation of engaged and sustainable relationships between the University and social change actors in civil society, business and government is central.

Social innovation is an academic, transdisciplinary field that is rooted in practice. It seeks to apply innovative thinking and business models towards accelerating social outcomes. It is a complex human-centred process involving new ways of relating, doing, organizing, and knowing. The approach of the Bertha Centre is to uncover, connect and pioneer social innovations and social entrepreneurs that work to generate inclusive opportunities and advance social justice in our country and continent.

Since inception, the Bertha Centre has uncovered over **300 innovative models and solutions** in education, health and other social impact fields; involved over **5,000 citizens and practitioners** across sectors; tested the feasibility of **innovative social solutions;** and produced over **12 formal knowledge outputs** from this work in publicly available reports and journal articles, in addition to numerous student dissertations and media articles. Four examples of this work are:

- Longstanding partnerships of support and engagement with two leading social enterprises in the Western Cape: R-Labs in Bridgetown, Athlone and Silulo Ulutho Technologies in Khayelitsha both of whom promote social innovation and entrepreneurship emerging from local communities. These partnerships have generated numerous projects and created mutual learning opportunities for UCT students and the organisations.
- The Social Franchise Accelerator where the Bertha Centre partnered with an international NGO and a local social franchise consultancy to deliver workshops to 40 organisations, and an intensive one-year programme to assist four social change organisations to scale their impact through replication. These organisations included Ikamva Youth, Philani, and U-turn Homeless Ministries.
- Building an ecosystem for outcomes-based financing: the Bertha Centre has created a collaborative platform to bring government departments, NGOs and social investors together to explore ways of achieving outcomes in priority areas. The Centre worked across three government departments, a cohort of foundations and investors and over 70 NGOs to co-design a social impact bond as an innovative financial instrument to improve outcomes of early childhood development programmes. The work has also been the subject of several student dissertations and was presented at local and international conferences.

SOCIAL RESPONSIVENESS AWARD (CONTINUED)

- Groote Schuur Hospital Health Innovation Hub: building on its work of designing social innovation hubs (such as the MTN Solution Space at the GSB), the Bertha Centre has established a partnership together with Groote Schuur Hospital and the Faculty of Health Sciences to promote service innovation in the public health sector. Over the last 18 months the Bertha Centre has worked with the hospital management, the Facilities Board trust and the Western Cape Government to support 17 staff projects to improve public health care delivery, and invest in 10 of them. A replicable innovation curriculum has been developed for public hospitals, and two books have been published, profiling health care innovators at GSH and in South Africa at large.

At the Graduate School of Business, the Bertha Centre team has played a leading role in integrating civil society, social entrepreneurs, business and government involved in social innovation into the campus. Social Innovation & Entrepreneurship is now one of the GSB's three key thematic areas and in 2016, and the GSB school will offer the first MBA in the world to have Social Innovation in its core curriculum.

These are but a few examples to demonstrate how the Bertha Centre with its Faculty, PASS staff, and scholars, has taken an integrated approach to engaged scholarship and social responsiveness.

PRESIDENT OF CONVOCATION MEDAL

MDA MDA

The President of Convocation Medal is awarded anually to an alumnus or alumna who has made a significant contribution to the common good.

Mda Mda was born to parents Simeon and Leah (nee Mzimba) in the rural village of Ncambedlana, Mthatha in the Eastern Cape, in 1923. He matriculated from Lovedale College in 1940 and obtianed the BA and a Diploma in Education at Fort Hare. In 1944, he enrolled at the University of Cape Town's Law Faculty for an LLB degree. He was unable to complete this qualification and ended up leaving the City in 1946, giving up his dream of becoming an Advocate. Two years later he took articles in a law firm in Mthatha and after six years' experience, started practising as an attorney in Mqanduli, a practice he continued until 2001. In 2015, at the age of 92, Mda remains active in the law as an advisor and mentor in his community of Mthatha.

HONORARY DEGREE RECIPIENTS

Post humus Johannes de Villiers Graaff

DEconSc(honoris causa)

Jannie Graaff, as he was better know, attained greater eminence in academic economics than any other South African. His 1957 book, *Theoretical Welfare Economics* on taxation, inequality and poverty was described in its preface by Nobel laureate, Paul Samuelson, as "a classic in its own time" and is still praised by contemporary economists.

Although Graaff pursued a career in business he continued to write on economic theory and was highly esteemed in the academy. In the 1980's he was invited to take up a fellowship in at All Souls, Oxford. He remained a member of the Economic Society of South Africa, and twice served as chair.

Much of his work addressed practical issues of income distribution and tax reform, and he was a member of the Margo Commission (1984), Katz Commission (1994- 97), and the Tax Advisory Committee. He served on the Economic Advisory Council and the Competition Board. His impact on South African life was as great as his impact on his academic discipline.

Graaff made an enduring contribution to economics internationally and locally. His contributions to scholarship and to the practical affairs of the country were remarkable. He was able to show the links between the abstract theory of classical welfare and the practical challenges of the real world, his long career was a model of engaged scholarship.

Kenneth Reid

LLD (honoris causa)

Kenneth Reid is an internationally renowned scholar of property law and comparative law whose work has had a profound impact on law and legal scholarship.

Reid's most outstanding accomplishment has been his work a Commissioner of the Scottish Law Commission where for a decade he directed the drafting of the statutes necessary to replace the feudal system in Scotland. His 1996 ground breaking book *The Law of Property* in Scotland reconceptualises the law of property in terms of a theory that included both moveable and immoveable property, has provided the framework for property law in Scotland.

Reid is also a leading scholar of mixed legal systems and this aspect of his scholarship has involved a number of South Africans. His collaboration with South African scholars since 1994 has led to a number of productive joint academic projects, including the volume on *Mixed Legal Systems in Comparative Perspective: Property and Obligations in Scotland and South Africa* (Oxford, 2004).

Kenneth Reid is a pre-eminent jurist who has played a pivotal role over the past two decades in the promotion of private law scholarship at a local, regional and global level.

FELLOWSHIP

The election by Senate of a member of the faculty to be a fellow recognises sustained and original contributions through research or creative endeavour.

The fellows in the Faculty of Science and their years of election are:

2009: I Barashenkov
1998: WJ Bond
2010: SA Bourne
2005: MR Caira
2010: K Chibale
2005: A Chinsamy-Turan
2011: TJ Egan
2010: JM Farrant
2005: CL Griffiths
2011: G Janelidze
2011: H Künzi
2005: AP le Roex
1995: BD Reddy
2014: SH Richardson
2005: AL Rodgers
2011: E Rybicki
2009: JC Sealy

The following member of the Faculty of Science has been elected to a fellowship:

(In absentia) RENÉE CHRISTINE KRAAN-KORTEWEG
Professor of Astronomy

Renee Kraan-Korteweg joined the University of Cape Town in 2005 as the Professor of Astronomy. After a decade under her scientific leadership, the Astronomy Department has been transformed from a small academic department into a large and vibrant community of multi-wavelength astronomers – including four A-rated researchers and two SARChI chairholders – who are leading large international scientific projects on world-class facilities such as SALT (the Southern African Large Telescope) and MeerKAT (the SKA- precursor radio telescope).

FELLOWSHIP (CONTINUED)

Professor Kraan-Korteweg enjoys a very high academic standing in the international community of (radio) astronomers for her work on large-scale structures in the Zone of Avoidance.

The Zone of Avoidance results from the foreground extinction of the Milky Way, causing galaxies to appear increasingly fainter the closer they lie to the Galactic Equator. This Zone of Avoidance obscures about 25% of optically visible galaxies. A "whole-sky" map of galaxies is, however, essential for understanding the dynamics in our local Universe, and it is in this field of research, that she has had major scientific impact, leading amongst others, to a number of highly cited publications in *Nature*. She was instrumental in discovering a large nearby spiral galaxy, named Dwingeloo 1, hidden by the disk of the Milky Way (her paper in Nature, 1994). Discovering a previously unknown large galaxy in the nearby Universe has important implications for our understanding of the local galaxy dynamics. In her 1996 Nature paper, she showed for the first time that major galaxy clusters do exist close to or within the Zone of Avoidance.

The recognition of Professor Kraan-Korteweg as an international leader in her field ensured that her successful bids for two SARChI chairs in (radio) astronomy at UCT were filled quickly by distinguished international radio astronomers, creating a critical mass of top-level research in the study of neutral hydrogen in the Universe. This is a key science theme for the Square Kilometer Array (SKA) and its precursor MeerKAT. She is the Chair of the South African Astronomy Advisory Council, and was elected vice-president of the International Astronomical Union for a 6-year term. In the nearly 100-year history of the International Astronomical Union, she is only the third astronomer from South Africa to occupy this position (after Professors Feast and Warner). She was instrumental in co-founding the UCT-accredited research centre in Astrophysics, Cosmology and Gravity and has created strong links with national facilities in both optical and radio astronomy through joint positions between UCT and the facilities.

NAMES OF GRADUANDS

An asterisk * denotes that the degree will be awarded in the absence of the candidate.

1. FACULTY OF COMMERCE

Acting Dean: Professor MP Wormald

ASSOCIATE IN MANAGEMENT

Ayanda Professor Hute
*Xolelwa Makasi
*Chris Sicelo Wonga Xothongo

In Management Practice:
*Muhammad Agjee (with distinction)
Shelindra Briajraj
*Hsingche Chiang (with distinction)
*Pagel Mark Cloete
Hendrik Albertus Eksteen (with distinction)
*Colin Anthony Merry
*Karen Nell (with distinction)
*Benice Payne
*Christopher John Peers (with distinction)
*Nokuthula Ramatlo
*Keni Lee Richards
Jolene Suzanne Russouw
*Gregory David Sanger
*Johannes Petrus van der Berg
*Blake Anthony Walker

POSTGRADUATE DIPLOMA IN BUSINESS ADMINISTRATION

Lerato Bopape
*Meshack Kanzi
Lauretta Koopedi
Hopewell Junior Moses
Rangiah Naidoo
Jacquelin Ann Orr

POSTGRADUATE DIPLOMA IN MANAGEMENT PRACTICE

Elzaan Bergh
*Wilmari Borel-Saladin
Hurshele Carolissen
Sipho Daniel Claassen
Phadiela Cooper
Dawn Sonia Crowie
Nicol Grant Currin
Wilhelm Carl de Vries
*Tebogo Moremi Dithejane
Elmarie Dreyer
Gideon Johannes Jacobus Johannes Du Plessis
Jacques Du Plessis
Yumna Fagodien
*Christopher Ryan Ford
Winnifred Nokulunga Gwe
*Catharine Havenga
Esther Serena Job
Kershni Johaadien
Pieter Francois Joubert
*Nicolaas Derk Jan Kool
Makhosini Maci
Pelonolo Coleen Mafata
Mfana Kenneth Mfana Makgabutlane
Samantha Marks
John Matiso
Tsholofelo Desiree Matsetela
*Magugu Mvula
*Kerseri Naidoo
Tom Magara Njeru
Lusongamele Martin Ntshuntshe
*Jonathan David Ogle
(With distinction) Andre Pretorius
Lameez Rizia Rabbaney
*Chalenor Grenville Reith
(With distinction) Lee Vera Reitz
Lynette Karen Saunders
*Ross Martin Scullard
Brenda Magdeline Simani
Cicero Denver Theunis
*Zander Van Lingen
*Ian Vorster
Verna Irma Ward
*Willem Johannes Weideman
Julia Jane Scott Wilson
Lynn Wilson

POSTGRADUATE DIPLOMA IN ACCOUNTING

*Bradley Trevor Bosman
*Sandile Christopher Cele

POSTGRADUATE DIPLOMA IN ACTUARIAL SCIENCE

Nabeelah Kolia
*Oganga David Useh

POSTGRADUATE DIPLOMA IN MANAGEMENT

In Actuarial Science Conversion:
Takura Asael Wekwete

In Entrepreneurship:
*Isabella Rosa Bisogno
*Roberto Massimo Gallotta
*Courtney Anne Oliver

In Marketing:
*Jennifer Kay Bailey
*Vuyolwethu Dlova
*Bayanda Godfrey Dyani
Chelcie Gail Lachenicht
*Moshe Lichtenstein
*Dumisani Masilela
*Lindsay Ann Pitt
*Vuyo Qutywa
*Nompumelelo Radebe

In Organisation and Management:
*Lekula Poonyane
*Phumelele Qwabe

In Sport Management:
Warren Clive Mc Ewan
*Angelos Kalintzeos

In Tourism & Events Management:
*Lezane Augustin
*Mzwandile Maxwell Ntamo

DEGREE OF BACHELOR OF COMMERCE

*Matthew Stuart Alborough
*Anganile Asukile
*Ramaano David Booi
Vonriette Ruvimbo Shamiso Chigumba
*Jason Dennis Dionysopoulos
David Craig Gilmour
*Jeffrey Raymond High
Aadila Ismail
*Adam Karp
*Tshenuwani Tshenuwani Khadi
Winile Dolly Kunene
Martin Craig Lukey

Daniel Rian Maartens
Ezama-xesibe Mabi
*Declan Richard Mackay
*Sthembiso Lindani Makelefane
*Ntombizanele Alice Makoko
*Irene Honest Marandu
Nkosikhona Luther Mbhele
*Ruvarashe Junior Mhizha
*Onkgopotse Mogodi
*Whitney-Carol Puleng Mohlokoane
Mabotja Tshepo Mokgata
Pheeha Masekela Morudu
*Nathasha Stacey Ncube
*Siyethemba Pretty-girl Ndlovu
*Tiffany Pascale Ng Chiu Ning
*Fanelesibonge Ntombela
Olebogeng-Osiame Motlhatlhedi Peele
Bruce Hylton Potgieter
*Kamil Prawlall
*Astrid Ridgway
*Fridda Lethabo Semenya
Bongani Joseph Siamtinta
Abhishek Sagar Sumputh
*Refentse Maphehello Thathe
Rupert Michael Howard Tripp
*Nam-il Yoon
Benamile Anne-Deoda Zwane

In Actuarial Science:
*Phindokuhle Zethu Mbambo

DEGREE OF BACHELOR OF BUSINESS SCIENCE

In Finance with Accounting:
*Mongezi Phopho

In Management Studies:
Dylan Jack Cunniffe

DEGREE OF BACHELOR OF COMMERCE (HONOURS)

In Economics:
*Mholi Goodman Thulani Shandu

In Financial Analysis & Portfolio Management:
*Taariq Amod
Inge Buitendag
*Candice Leigh Carr
Sammie Tapiwa Tapiwa Chimusoro
Paul Cohen
*Gabriella Beira Danckwerts
Tamsyn Franken
Janine Fraser
*Guy Friedmann
Yandisa Gcwabe
Zolani Madikazi
Lungile Makhanya
Lungile Nokuthula Malinga
O'Dele Rae Mentor
*Ashfaaq Mohamed
Mashudu Mphohoni
Pauline Mutemeri
Kreesan Nalliah
Sijabulile Faith Ndzimandze
Jabulani Michael Ngobese
*Emile Shaun Norman
(In the first class) Kavir Patel
*Christopher Alcino Pecego
Boipelo Ethel Rabothata
Neha Ratan
Barry Shamley
Lethukuthula Phelela Perfect Shange
*George Raymond Slabbert
*Mohammad Yaasiin Soobhany
*Richard Drummond Stewart
*Lisa Irwin Stride
Jarrod Walters
*Britt Ogilvy Wernars
(In the first class) Fiona Louise Nevins White
*Nicole Elizabeth Winckler

In Information Systems:
*Johannes Collen Weapond

In Taxation:
James Francis Kay-Hards
Phumla Faith Mabuza
Muanda Mulaudzi
Adam Blake Rundle

2. FACULTY OF SCIENCE

Dean: Professor AP Le Roex

DEGREE OF BACHELOR OF SCIENCE

Natalie Jane Barker
Zena Kelz
Drikus Kuyper
*Sara Amy Lambert
*Amohelang Paulina Legodi
*Montlamedi Maikano
Salaama Maneveld
Taedza Nestalee Mazorodze
Mmanchadi Modise
Mamello Bride Motsei
Vimbainashe Nkomo
*Joshua Adam Pein
Mochaka Petrose Shakhane
Azola Tweni
Sean Jo Van Duffelen
Christi Katherine Vosloo

DEGREE OF BACHELOR OF SCIENCE

In Mathematical, Physical & Statistical Sciences:
Tshepo Sonwabile Mngqinya

DEGREE OF BACHELOR OF SCIENCE (HONOURS)

In Chemistry:
Akira Naidu

In Computer Science:
*(In the first class) Dorothy Emma Mhlanga

3. FACULTY OF LAW

Dean: Professor PJ Schwikkard

DEGREE OF BACHELOR OF LAWS

*Michael Vieyra

DEGREE OF MASTER OF LAWS

In Commercial Law:
Robert Kaniu Gitonga
(With distinction) Kelsey Havenga
Gilbert Hwani
Faizel Jacobs
Mikovhe Comfort Maphiri
*Peo Malaika Mmopi
*Mampoja Evelina Mokorosi
Charlene Tsitsi Musiza
*Chanda Musonda
Catherine Nansubuga
*Ketelo Sam Nkoebele
Deon Prins
(With distinction) Julian Christopher Reynolds
*Albertus Ebenhaezer Smit
Lee Theron
Washington Tawanda Zindoga

In Comparative Law in Africa:
*Giuseppe D'Amato

In Dispute Resolution:
*Maximilian Friedrich Richard Hoffmann
*Felix Wilking

In Human Rights Law:
*Chipo Irene Rushwaya

In International Law:
*Atilla Kisla

In International Trade Law:
*Melinda Cser
*Samuel Kaphuka
Karen Wangu Muthee
Brenda Mahoro Ntihinyurwa
Jesse-Scott Ranier Ruiters

In Labour Law:
(With distinction) Soi Anna Kaingu
Brett Andre Susan

In Private Law:
(With distinction) Martin Jason Fischer
Sandra Kayereka

In Public Law:
Michael Jones

In Tax Law:
*Eliya Nkerebuka

DEGREE OF MASTER OF LAWS IN COMMERCIAL LAW

Juan Arendse
*Niel Schalk Burger
*Grethe Carr
(With distinction) Lois Samantha Fish
Tasneem Gangat
*Christopher Grawe
Caroline Humpert
*Kerry Lynne Hutchings
*Jessica Kate Lobban Mann
Nathanael Reuben Mauritz
*Sandra Barbara Meister
Jane Karwitha Mugambi
Joan Mukoya Mwasame
*Rebecca Elizabeth Sanyu Namirimu
Evander Obi
*Ricardo Roncato
Rhona Rwangyezi
*(With distinction) Jacques Johann Stemmet
*Alexander Georg Theiler
*(With distinction) Constance Faye Theron
Till Wedemann

DEGREE OF MASTER OF LAWS IN DISPUTE RESOLUTION

(With distinction) Anita Bell
*Kirsty-Ann Gunther
(With distinction) Mirjam Hauser
Benson Sibonelo Mchunu
(With distinction) Kennedy Kipkoech Melly
Helga Samantha Nefdt

DEGREE OF MASTER OF LAWS IN INTELLECTUAL PROPERTY LAW

*Wenike Carreira
*Kilian Konstantin Kaschkat
*Revel Iyer
Louisa Ngima Matu-Mureithi
Francois van der Westhuizen

DEGREE OF MASTER OF LAWS IN INTERNATIONAL TRADE LAW

Alexis Beaudin-Fol
*Graeme Ian Brink
Catherine Dostaler
*Idah Nomvuyo Govereh
*Frieder Yannic Kühne
*Tabitha Namulinda

DEGREE OF MASTER OF LAWS IN LABOUR LAW

Bruce Scottson Banda
Daniel Francois de Villiers
Philip Jacques Fouche

DEGREE OF MASTER OF LAWS IN PRIVATE LAW AND HUMAN RIGHTS

*Dorothy Nametsegang Moruipisi

DEGREE OF MASTER OF LAWS IN SHIPPING LAW

Luzelle Henrietta Adams
*Cem Arikan
Hendrik Johannes Bothma
*Michael Driscoll
(With distinction) Chloe Johannes
*Annika Franziska Koswig
Samuel Ozhahakachi Nsirim
*Sophia-Charlotte Von Holtz

DEGREE OF MASTER OF PHILOSOPHY

In Dispute Resolution:
*Elvis Begi Nyachieo Abenga

In Environmental Law:
*Cliff Sibusiso Dlamini
*Katherine Edwardes
Deidre Linda Herbst
*Kimberly Jane Joscelyne

In Human Rights Law:
Anah Kelone Moorad

In International Law:
*Darren Ackermann Brookbanks

In Labour Law:
Tanya Adonis
Motlogelwa Harold Arie

In Marine and Environmental Law:
Courtney Jade Hill

In Public Law:
*Ashleigh Henderson

In Tax Law:
Ismail Mohamed

4. FACULTY OF COMMERCE

Acting Dean: Professor MP Wormald

DEGREE OF MASTER OF BUSINESS ADMINISTRATION

Anthea Winifred Houston
Mohamed Reza Ismail
*Sithembele Ndaba
*Mine Schreuder
*Carlos Caleb Sengu

DEGREE OF MASTER OF BUSINESS SCIENCE

In Marketing:
(With distinction) Julia Christina Margit Bastian
Benedikt Hirschfelder
Astrid Ringas

DEGREE OF MASTER OF COMMERCE

In Applied Economics:
Matthew John Chennells

In Economic Development:
Martin Thorne Eichhorn

In Economics:
Taryn Jade Augustine
Samantha Claire Rosenberg

In Finance:
Tarryn Sydne Valle

In Financial & Risk Management:
Jahangir Allie
*Mohsin Ebrahim Cajee
*Warren Howard Erasmus
Rowan Andrew Hoch
Thabani Bonginkosi Mzobe
Graysen Gordon Wright

In Financial Management:
*(With distinction in the dissertation) Kerry-Leigh Elizabeth Kopke
Lameck Onyango Odada
Philip Robert Stallkamp

In Information Systems:
*Kevin Shaun Cupido
(With distinction in the dissertation and the degree with distinction) Shallen Lusinga
(With distinction in the dissertation and the degree with distinction) Sikhulile Lynette Ndlovu
Faizel Richards

In Investment Management:
Matthew Joseph Appelbaum

In Management Practice:
*Chifundo Fadweck Biliwita
Evans Wally Kudzai Chinembiri
Lydia Nalishe Hakweenda
*Josef Halwoodi
Vonesai Shuvirai Hove
Benjamin Rinaune Katjipuka
Josua Levendal
Rwatida Mafurutu
*(With distinction) Johnson Tsoro Maiketso
Dumisani Manqoba Mbambo
Moses Lameck Mfune
Maxwell Young Mkumba
Brian Mureverwi
Sipho Aubrey Tshabalala
Frans Ndeuthigilwa Uusiku

In Marketing:
*Michelle Hill

In Organisational Psychology:
Bianca Lisa Solomon

In South African Taxation:
*Deborah Patience Beelders
(With distinction in the dissertation and the degree with distinction) Graeme Donald Saggers

In Taxation:
Tharwah Davids
*Patrick Joseph McCann

DEGREE OF MASTER OF PHILOSOPHY

In Actuarial Science:
*Josh Tana Kaplan

In Demography:
Mbongeni Charles Hlabano

In Inclusive Innovation:
*Gloria Nyawira Muhoro
Hillary Jephat Musarurwa

In Innovation Leadership:
Mehul Anilrai Sangham

In Management Practice:
Mogammad Sharief Edwards
Keegan Steyn

In Mathematical Finance:
*Daniel Maxwell
(With distinction in the dissertation and the degree with distinction) Wilson Tsakane Mongwe
*(With distinction in the dissertation) Wardah Ushan

5. FACULTY OF SCIENCE

Dean: Professor AP Le Roex

DEGREE OF MASTER OF SCIENCE

In Applied Marine Science:
*Pavanee Annasawmy
Natalie Diemer
*Paul Robert Juby
Kathryn Lee Morrissey
Jodie Romay Reed
*Senam Kofi Tsei
Christopher Themba Waspe

In Applied Mathematics:
*(With distinction) Alexander Dennis Antrobus
*(With distinction) Tslil Clingman
*Alton Vanie Kesselly

In Astrophysics & Space Science:
*Ahmed Elabbas Mustafa Elagali
*Willice Odhiambo Obonyo

In Botany:
*Cameron Wills

In Chemistry:
Nadia Baartzes
(With distinction) Laurelle Margaux Joseph
Vela Mngadi
*(With distinction) Shepherd Siangwata

In Climate Change & Development:
*Monica Grace Giermek
*Alexandra Joanna Logan
Asimenye Nthakomwa
*Viviane Umulisa

In Computer Science:
(With distinction) Justin Crause
Mohato Karabo Lekena
*Tsu-Shiuan Lin
Lwazi Enock Maziya
Sunrise Wang

In Conservation Biology:
*John Dickens
*Dara Sands
*Stefan Schoombie

In Decision Sciences & Analytics:
Hassan Taiwo Sadiq

In Environmental & Geographical Science:
(With distinction) Willem Stefaan Conradie
(With distinction) Taryn Lynne de Beer
*Lucy Jane Gilbert
Molulaqhooa Linda Maoyi
*Oliver Slingers

In Geochemistry:
*Tanya Shayna Dreyer

In Geology:
Jorge Isaac Adrian
Andrew Selkirk Logue

In Information Technology:
*Genevieve Chang
Marshalan Reddy
*(With distinction) Cornelis Thomas Verster

In Mathematics:
*(With distinction) Graham Richard Manuell

In Molecular & Cell Biology:
*(With distinction) Steven Bing
(With distinction) Tunehafo Elisabeth Brock
(With distinction) Emang Tsametse Emi Molojwane
*Robyn Waters

In Ocean & Atmosphere Science:
*Tshikana Phillip Rasehlomi

In Ocean & Climate Science:
Moagabo Natalie Ragoasha

In Operational Research:
Tatenda Mark Gweshe

In Physical Oceanography:
Veronica Fernando Dove

In Physics:
Ferdinand Wilhelm Schenck
*(With distinction) Joshua Wyatt Smith

In Theoretical Physics:
(With distinction) Isobel Kolbe
(With distinction) Benjamin Wallace Meiring

DEGREE OF MASTER OF PHILOSOPHY

In Archaeology:
Lesa la Grange

In Climate Change and Development:
*(With distinction) Tamzin Pascoe Ractliffe

In Environment, Society & Sustainability:
*Dean Charles Harrison
Sarah May Hulley
Sonia Miszczak
*Claudette Muller
*Amy Louise Murray
Wayne Stanley Rice
Frances Jessica Taylor
*John Martin Roy Wilson

In Information Technology:
*Terence Kevin Fenn

DEGREE OF DOCTOR OF PHILOSOPHY

In Archaeology:
Lauren Schroeder
Thesis Title: *The evolution and diversification of Pleistocene Homo*

Lauren Schroeder graduated from UCT with a BSc in Archaeology and Ocean and Atmosphere Science, a BSc(Hons) in Archaeology. Her doctoral research interests emerged from a deep and longstanding passion for understanding the origins of humankind.

Lauren Schroeder's thesis aims to understand the evolutionary processes that have driven diversification since our genus Homo first evolved ~2.8 million years ago. Overall variation across the genus is assessed quantitatively, and methods derived from quantitative evolutionary theory are applied to determine the relative importance of neutral (genetic drift) versus adaptive (selection) evolutionary processes in shaping changes in the skull. Results emphasise the dominance of neutral evolutionary forces in shaping cranial diversity across time and geographic regions. When selection is found to drive morphological change, it is focused on masticatory regions and associated with periods of dispersal out of Africa and the emergence of sympatric species (i.e. Homo rudolfensis). Selection may also have been an important driver in the transition from Australopithecus to Homo. More broadly, this research – which includes a new species of South African Homo – highlights the large amount of morphological variability present during the evolution of Homo.

Supervisor: A/Professor R Ackermann (Archaeology)

In Botany:
David Gwynne-Evans
Thesis Title: *A taxonomic treatment of the genus Hermannia (Malvaceae)*

David Gwynne-Evans has the ambiguous distinction of being one of the longest-registered full-time botany students. In 1996 he uncovered a fervent passion for plants that has taken him across Southern Africa in pursuit of photographing beautiful plants. After toying with activism, naturism and developing the NGO, CASABIO, in 2005 he was called upon to undertake "real science". He thus turned his attention to an exhaustive study of the genus Hermannia.

Hermannia, particularly the subgenus Mahernia, was in a state of disarray. To understand the breadth of the genus, David Gwynne-Evans databased over 16 000 specimens within local herbaria. He then became intimately familiar with the species in the field through collecting and photographing species throughout Southern Africa. This fieldwork revealed in excess of 50 species new to science, which have been described and given memorable names pertaining to their characteristics, such as H. angelica, H. ballerinica, and H. bungholensis. A molecular phylogeny has greatly helped define grouping within the genus, while the biogeography demonstrates remarkably similar boundaries to that of currently-defined biomes. This thesis thus represents the most complete survey of the genus, and is suitable for use by botanists and botanical enthusiasts alike.

Supervisor: Professor T Hedderson (Botany)

Mark Dino Rothman
Thesis Title: *The phylogeny, biology and biogeography of the Southern African kelps Ecklonia maxima and Laminaria pallida*

Mark Rothman is from Pacaltsdorp, George. He graduated with a BSc in 1997 and BSc (Hons) in 1998, both from the University of the Western Cape. He has worked as a scientist in what is now the Department of Agriculture, Forestry and Fisheries since 2001, in the Unit responsible for the management of seaweed resources. He completed his MSc at UCT in 2005

Mark Rothman's PhD thesis examines the global relationships and ecology of Southern African kelps: economically important large brown algae. Using molecular systematic (DNA sequencing) techniques, his study is the first to present a global synthesis of the genus Ecklonia, demonstrating that South Africa indeed has two distinct species, most closely related to Ecklonia from Australasia. He further showed that our Laminaria is most closely related to a warm temperate southern European species but that, despite morphological variation, only one species is present in Southern Africa. Ecological studies quantified this variation and revealed that a gradient in seawater turbidity correlates most closely with morphological differences. Environmental tolerances were studied in laboratory culture, followed by growth in the sea, representing the first time that large kelps have been artificially produced from spores in South Africa.

Supervisors: Professor JJ Bolton (Biological Sciences), Associate Professor RJ Anderson (DAFF & Biological Sciences), Dr Lydiane Mattio (Biological Sciences)

In Chemistry:
Taigh Byrne Anderson
Thesis Title: *Towards the synthesis of the unusual monosaccharides found in the Shigella sonnei O-Antigen and analysis of Shigella flexneri 2a glycoconjugate vaccine samples*

Taigh Anderson has a BSc(Hons) from UCT. Her PhD research investigates chemical aspects of natural and synthetic O-antigens of Shigella species, causative agents of bacillary dyssentary. Her study contributes valuable reference materials and fundamental insights to the ultimate goal of designing and preparing synthetic glycoconjugate vaccines.

The main part of Taigh Anderson's thesis describes the design and empirical investigation of new synthetic routes to two unusual sugars, designated D-FucNAc4N and L-AltNAcA, found in the repeating unit of the polysaccharide O-antigen of Shigella sonnei. The challenge was to prepare the two sugars from derivatives of ubiquitous D-glucose or N-acetyl-D-glucosamine. D-FucNAc4N was duly prepared via a key 2,3-oxazolidinone intermediate, by optimizing critical modifications at C-4 and C-6. Unexpected difficulties were encountered in the preparation of L-AltNAcA. These occasioned careful, detailed studies of the interplay of conformational and stereoelectronic factors affecting the reactivity of carbohydrate derivatives. New reactions were duly discovered and documented: these included an efficient method for anomerization of a β-thioglycoside, which has important implications for retrosynthetic design in glycoside synthesis, and the delineation of requirements for inversion of C-5 stereochemistry in derivatives of D-sugars, as an entry to the much rarer L-sugar series.

Supervisor: A/Professor DW Gammon (Chemistry)
Co-supervisor: A/Professor N Ravenscroft (Chemistry)

Rudy Edgar Cozett
Thesis Title: *Studies on the use of peptide auxiliaries in the meso-desymmetrization of epoxides, and the kinetic resolution of secondary alcohols*

Rudy Cozett was born in Cape Town and studied at UCT for his BSc(Hons) degree in Chemistry.
Rudy Cozett's thesis has been in the area of asymmetric catalysis, a modern field of organic synthesis. Specifically, it has focused on developing small peptides for producing chiral alcohols in enantioenriched form as key building blocks for pharmaceutical and fine chemicals synthesis. The methodology involved attaching a synthetic peptide ligand onto the 3-position of a 4-pyrrolidinopyridine 3-carboxylic acid template, which was then used as an asymmetric Lewis base organocatalyst for the kinetic resolution of a racemic secondary alcohol via selective acylation. The best peptide auxiliary turned out to be based on a LeuTrp dipeptide, with the tryptophan nitrogen Boc-protected. Here, a product enantiomeric excess of > 90% could be achieved in the resolution when using a chiral benzylic alcohol. Molecular modelling using molecular and quantum mechanics calculations revealed that π-stacking interaction between the N-acylpyridinium ion intermediate and the tryptophan indole ring provides a selective face for the resolution. The research has implications for the design of small-molecule enzyme mimics for synthesizing chiral, non-racemic organic products.

Supervisor: Professor R Hunter (Chemistry)

Saajidah Fakier
Thesis Title: *The effect of inositol-hexaphosphate (phylate) on urinary risk factors for calcium oxalate urolithiasis in South African population groups with different risk profiles: theoretical modelling, in vitro and in vivo studies*

Saajidah Fakier obtained her BSc(Hons) in Chemistry from UCT. While working towards her PhD she garnered several awards.
Kidney stone disease afflicts about 10% of most population groups, but in South Africa, the disease occurs rarely in the black population. Saajidah Fakier's thesis examined the hypothesis that phytate, a chemical constituent of maize frequently consumed by black South Africans, might be a contributory factor for this phenomenon, by virtue of its chemical ability to bind urinary calcium, a key risk factor for stone formation. She first performed sophisticated calculations to model the theoretical effects of phytate on the risks of stone formation, followed by laboratory experiments which employed the same chemical scenarios as the model. The outcome of these studies dictated the conditions for a mini-clinical trial, in which phytate was ingested in food matrices, as well as in supplemental form, by groups of black and white volunteers. The results showed that intake of phytate and its urinary concentrations are significantly higher in black individuals. Although some stone risk factors were reduced in black subjects after phytate ingestion, not all of these could be directly attributed to this chemical per se. This thesis has provided insights into understanding the pathogenesis of stones and what dietary factors may enhance protection against this disease.

Supervisor: Professor A Rodgers (Chemistry)
Co-supervisor Professor G Jackson (Chemistry)

In Chemistry:
Malkeet Kumar
Thesis Title: *Design, synthesis and biological evaluation of verapamil analogues, reversed isoniazids and hybrid efflux pump inhibitors against Mycobacterium tuberculosis*

Malkeet Kumar obtained his BSc and MSc degrees from Guru Nanak Dev University, Amritsar in India. His doctoral thesis originated from research studies undertaken on the development of efflux pump inhibitors and anti-mycobacterial agents in the Department of Chemistry at UCT.

Tuberculosis is one of the major epidemics world-wide and is responsible for 2-3 million deaths every year. The emergence of drug resistance increases the severity of this epidemic. Efflux pumps are one of the major contributors to the development of drug resistance. Malkeet Kumar's research aims to enhance activity of anti-TB drugs by countering the efflux pump-mediated resistance. A two-way strategy was utilized to counter this resistance by developing efflux pump inhibitors and reversed isoniazid anti-TB agents. Malkeet Kumar's thesis presents biological results obtained on various synthesized compounds, which demonstrate a "proof-of-concept" and highlighted the importance of these strategies for future development of anti-TB drugs.

Supervisor: Professor K Chibale (Chemistry)

*Elizabeth Victoria Mumbi Kigondu
Thesis Title: *Repurposing chlorpromazine and its metabolites for antituberculosis drug discovery*

Elizabeth Kigondu has BSc and MSc degrees from Jomo Kenyatta University of Agriculture and Technology (Kenya). Her doctoral thesis emerged as a result of the need to find new chemotherapeutics for treatment of tuberculosis (TB), a disease that remains a leading cause of death, especially in Sub-Saharan Africa.

Elizabeth Kigondu's thesis aims to develop a refinement of traditional drug repositioning and repurposing strategies involving the development of drugs that are based on the active metabolite(s) of parental compounds with demonstrated efficacy. Despite an in-depth understanding of how Mycobacterium tuberculosis (Mtb) evolves and overcomes the inhibitory effect of anti-TB drugs, development of resistance has been a major impediment to the treatment of TB. Through the use of biotransformation, chemical synthesis, antimycobacterial screening and mechanism of action studies, Elizabeth Kigondu's PhD project addresses the potential to exploit the chemical matter arising from these activities, which are designed to not only elucidate potential synergies in polypharmacy, but to also confirm the mechanism of action of biotransformation products in relation to the parental drugs. It is hoped that the findings presented in her thesis will complement existing TB drug discovery efforts, through proper understanding of the biology of the disease.

Supervisor: Professor K Chibale (Chemistry)
Co-supervisor: A/Professor DF Warner (Institute of Infectious Disease & Molecular Medicine)

Leah Charlie Matsinha
Thesis Title: *Aqueous phase catalysis using mono- and bimetallic transition metal complexes*

Leah Matsinha was born in Gweru, Zimbabwe, and obtained a BSc Honours degree in Chemical Technology from Midlands State University. She then moved to UCT, where she was awarded an MSc degree in Chemistry in 2012.

Leah Matsinha's thesis in the field of Organometallic Chemistry and Catalysis investigated the preparation and characterisation of water-soluble transition metal complexes. These were evaluated as catalysts in aqueous medium for recycling purposes in various organic transformations, which is in line with some of the principles of Green Chemistry. A series of sulfonated water-soluble rhodium and palladium complexes containing bidentate and tridentate donor ligands were synthesised. The integrity, structural and physical properties of the resulting new catalyst precursors was confirmed using a wide range of analytical and spectroscopic techniques. These complexes were highly active and selective catalysts upon application in some catalytic transformations. Leah Matsinha's thesis has contributed to the advancement of knowledge in the field of Organometallic Chemistry, Green Chemistry and Catalysis. This thesis also demonstrates that aqueous phase catalysis is a viable approach for the development of efficient, recyclable, green and economical catalytic systems.

Supervisor: A/Professor GS Smith (Chemistry)
Co-supervisors: Professor SF Mapolie (Stellenbosch University); Dr GA Venter (Chemistry)

Ath'enkosi Msutu
Title: *New methodology for the organocatalysed α-Amination reaction*

Ath'enkosi Msutu hails from the Eastern Cape and obtained her BSc(Hons) and MSc degrees in Chemistry from UCT. Her PhD studies emerged from her MSc research, where she developed a strong affinity for new methodology development and Green Chemistry.

Ath'enkosi Msutu's PhD reports on a contribution to a new area of green organic chemistry research, coined organocatalysis, that seeks to use a chiral organocatalyst in order to synthesize chiral targets for the pharmaceutical and fine chemicals industries. Specifically, her research has developed new methodology for the enantioselective α-amination of an acetal starting material. The reaction uses Bronsted acidic conditions with an azodicarboxylate aminating agent and L-proline tetrazole as organocatalyst to afford α-hydrazino alcohols in high enantiomeric excess as useful building blocks for chirotechnology. Her research has also resulted in the development of a green method for cleaving the N-N bond of the hydrazide using the benign reagent combination of α-bromomalonate and caesium carbonate based on an E1cB mechanism. Overall, the methodology converts an acetal into a range of highly enantioenriched oxazolidinones for biotechnology purposes. Additionally, the methodology was shown to achieve the desymmetrization of a range of prochiral bis-acetals to afford highly functionalised chiral heterocycles as building blocks for fine chemical synthesis.

Supervisor: Professor R Hunter (Chemistry)

Denis Ngumbu Muhunga
Thesis Title: *Synthesis of side-chain-modified mycothiol analogues incorporating carbazole quinones, and evaluation as inhibitors of enzymes in the Mycobacteria*

Denis Ngumbu Muhunga has a BSc from the University of Kinshasa in the Democratic Republic of Congo, and an MSc in Chemistry from UCT.

Denis Ngumbu Muhunga's thesis builds on an earlier finding that key enzymes involved in the biosynthesis of mycothiol, a molecule produced by Mycobacteria and having protective functions, are strongly inhibited by selectively modified versions of mycothiol. He designed and made a new family of potential inhibitors which combined essential structural features of mycothiol, with those of the carbazole-quinones, a class of heterocyclic compounds with demonstrated anti-TB activity. His work involved careful de novo assembly of modified carbazole-quinones, incorporating required pharmacophores, but with variations permitting chemical attachment to the core of mycothiol. These synthetic hybrid structures, together with their separate building blocks, were evaluated for inhibitory activity against one of the biosynthetic enzymes, MshB, with results confirming that the hybrids did indeed have good inhibitory activity, and that covalent association of components was necessary for the activity. Although the new molecules did not show anti-TB activity, their action in an important enzymic pathway in the Mycobacteria has implications for development of new drugs which might be used in combination with existing drug regimens.

Supervisor: A/Professor DW Gammon (Chemistry)

Aneesa Omar
Thesis title: *Interactions of ferriprotoporphyrin IX with neutral lipids and detergents: insights into their role in β-haematin formation*

Aneesa Omar has BSc and BSc(Hons) degrees in Chemistry from the University of Cape Town. In 2010 she began full-time study towards her PhD degree at UCT.

Aneesa Omar's thesis investigates the partitioning of ferriprotoporphyrin IX into neutral lipids and the ability of detergents to mimic the role of lipids in the crystallization of this substance in the form of synthetic malaria pigment (β-haematin). She shows that ferriprotoporphyrin IX is hydrophobic and partitions strongly into lipids, especially at the low pH at which malaria pigment forms. She further shows that antimalarials, such as chloroquine and quinine, have significant effects on this partitioning and slow the rate of malaria pigment formation in the neutral detergents that have been used in high throughput screening for new antimalarial scaffolds. These findings provide important insights into the role of lipids and detergents in malaria pigment formation and its inhibition by antimalarial drugs.

Supervisor: Professor TJ Egan (Chemistry)

Wade Frank Petersen
Thesis Title: *Methodology studies on the synthesis of chiral, non-racemic aza-quaternary centres*

Wade Petersen completed his BSc(Hons) in Chemistry at UCT, and subsequently upgraded his MSc to a PhD.

Wade Petersen's thesis has involved developing new organic synthesis methodology for accessing highly enantioenriched α-tertiary amine motifs (based on azaquaternary centres), which are found in bioactive natural products, as well as quaternized amino acids

contained in peptidomimetics. The said methodology is based on azidation of a chiral malonate imidazolidinone template. Using KHMDS as base, sequential alkylations with first a carbon electrophile, followed by trisyl azide as a nitrogen electrophile provides the quaternized product in high diastereomeric excess (> 95%). A sequence of reactions involving selective azide reduction, auxiliary deprotection followed by chemoselective reduction with lithium tri-t-butoxyaluminium hydride then furnishes the amino acid as a quaternized serine derivative. The importance of the new methodology is that it can be used to generate a congested carbon stereogenic centre in high enantiomeric form bearing four different groups, one of them as a nitrogen moiety and the other three as different carbon groups. Such a centre presents in 3D-space as a non-superimposable mirror image (enantiomer) with a single handedness. This has relevance to producing single enantiomer drugs for pharmaceutical production, as well as extending the range of synthetic amino acids to ones in which an α-H is substituted with a carbon group, while retaining a single handedness.

Supervisor: Professor R Hunter (Chemistry)

Kathryn Jean Wicht
Thesis title: *Discovery of benzamides and triarylimidazoles active against Plasmodium falciparum via haemozoin inhibition: high throughput screening, synthesis and structure activity relationships*

Kathryn Wicht completed her BSc and BSc(Hons) qualifications at UCT, and began full-time study towards her PhD in 2011.

Kathryn Wicht's thesis reports the high throughput screening (HTS) of more than 40 000 compounds for their ability to inhibit formation of synthetic malaria pigment (β-haematin), a process targeted by some antimalarial drugs. She went on to investigate two of the newly discovered scaffolds, benzamides and triarylimidazoles, via synthesis and antimalarial testing in vitro. This allowed her to propose structure-activity relationships in these classes of compounds. Finally, using HTS findings, the results from the synthesised compounds and data reported in the literature, she develops a model using Bayesian statistics to successfully identify new antimalarials in silico. These findings will be useful in future rational design of antimalarial compounds of this class.

Supervisor: Professor T J Egan (Chemistry)
Co-supervisor: Professor R Hunter (Chemistry)

In Computer Science:
Charity Chao Mbogo
Thesis Title: *Scaffolding java programming on a mobile phone for novice learners*

Chao Mbogo has a BSc in Mathematics and Computer Science from Kenya Methodist University and an MSc in Computer Science from the University of Oxford. Her doctoral thesis was motivated from her experiences while teaching learners of programming at the Department of Computer Science at Kenya Methodist University.

Chao Mbogo's thesis aims to address limitations of mobile phones, such as small screens and small keypads, which impede their use as typical programming environments. This study proposes that programming environments on mobile phones could include scaffolding (supporting) techniques specifically designed for mobile phones, and designed based on learners' needs. Such a scaffolded mobile programming environment would be particularly useful for novice learners of programming in resource-constrained environments. Chao Mbogo uses a six-level theoretic framework to design scaffolding techniques to support construction of Java programs on a mobile phone. The resulting prototype is tested with learners of programming in universities in Kenya and South Africa. The results of the experiments indicate which scaffolding techniques could support the construction of Java programs on a mobile phone. Further, the results indicate the effectiveness of using these scaffolding techniques to construct Java programs on a mobile phone.

Supervisor: Professor E Blake (Computer Science)
Co-supervisor: A/Professor H Suleman (Computer Science)

Grace Ssekakubo
Thesis Title: *Refactoring learning management systems for multi-device use in developing countries*

Grace Ssekakubo has BSc (Hons) and MSc (Computer Science) degrees from Makerere University, where he also worked as an IT support staff member and instructor. His PhD research emerged as a result of his involvement in several LMS-supported e-learning initiatives at the University, most of which totally or partially failed.

Grace Ssekakubo's thesis aims at identifying the constraints and strategies towards better support for implementation of learning management systems (LMSs) using available ICT infrastructure in developing country universities. The thesis designs, develops, implements and evaluates streamlined mobile interfaces (Mobile LMS) for more effective integration of mobile devices into the ecologies of LMSs. This is achieved through a user-centred development approach that includes participatory design, prototyping and user experience evaluation. The impact evaluation of the mobile LMS intervention indicates that

streamlined mobile LMS interfaces can lead to students' increased access and use of the LMS. The students are able to more easily access the LMS services, without the need for desktop and laptop computers. While the streamlined mobile LMS allows students an opportunity to more satisfactorily access LMS services through their mobile phones, it also takes away the pressure from constrained institutional ICT infrastructure and facilities, such as computers.

Supervisor: A/Professor H. Suleman (Computer Science)
Co-supervisor: Professor G Marsden (Computer Science)

In Environmental & Geographical Science:
Kamoru Abiodun Lawal
Thesis Title: *Understanding the variability and predictability of seasonal climates over West and Southern Africa using climate models*

Kamoru Lawal has BTech and MTech degrees from the Federal University of Technology Akure (Nigeria). His doctoral research emerged as a result of his seasonal forecasting experience at the Nigeria Meteorological Agency, where he has been a member of research staff since 1987.

Kamoru Lawal's thesis investigates the extent to which seasonal climate can be predicted over West and Southern Africa. The thesis uses discrepancy in a large ensemble of climate simulations as a tool to investigate variability in dominant seasonal rainfall and temperature patterns over two regions, to examine the capability of climate models in reproducing the variability, and to study the seasonal climate predictability. The study shows that some simulations perform substantially better and others substantially worse than the average of all the simulations, but the best simulations for a particular region/variable combination may not be exceptional for another region/variable. While identification of the best simulations in an array of simulations can provide substantial improvement over usage of the average of all the simulations, the possibility of misidentifying those simulations poses a serious risk to seasonal forecasting. The study provides useful information on how utilizing dissimilarity in multi-ensemble simulations can aid in understanding the variability and predictability of seasonal climate in Africa.

Supervisor: Dr BJ Abiodun (Environmental and Geographical Science)
Co-supervisor: Dr DA Stone (Lawrence Berkeley National Laboratory, USA)

Arlindo Oliva Meque
Thesis Title: *Simulating the link between southern African droughts and global atmospheric teleconnections using regional climate models*

Arlindo Meque has a BSc with honours degree from Eduardo Mondlane University (Mozambique) and an MSc from the University of Bourgogne (France). His doctoral thesis emerged as a result of his seasonal forecasting experience at the National Institute of Meteorology (Mozambique), where he has been a member of research staff since 2005.

Arlindo Meque's thesis focuses on improving drought predictions over Southern Africa. The thesis, which uses a detailed analysis of observation and model simulations to explore the relationship between Southern African droughts and global atmospheric teleconnections, examines the capability of ten regional climate models in simulating the dominant drought patterns over Southern Africa and in reproducing the influence of atmospheric teleconnections on the drought patterns. The study shows that, while some droughts patterns are short-lived, some may persist for years. Only few droughts patterns are induced solely by the El Niño Southern Oscillation (ENSO); most drought patterns are caused by complex interactions among the atmospheric teleconnections. A regional climate model that uses horizontal grid-stretching simulates the best link between the Southern African droughts and the global atmospheric teleconnections. This study ultimately provides useful information for climate modelers, forecasters and researchers on monitoring and prediction of droughts over Southern Africa.

Supervisor: Dr B Abiodun (Environmental and Geographical Science)

Sarah Emerald Osima
Thesis Title: *Understanding a high resolution regional climate model's ability in simulating tropical east Africa climate variability and change*

Sarah Osima is employed by the Tanzania Meteorological Agency, and her doctoral research has been supported as part of the Danish CLIVET capacity building project for Tanzania.

Sarah Osima's thesis explores the role of resolution in simulation skill of climate models, and the potential of increasing resolution in regional climate models for capturing climate variability and change over East Africa. This study uses two resolutions of a regional climate model embedded in a global climate model, and considers both the skill in reproducing the regional climate, as well as how the climate change projections are dependent on the resolution of the simulations. The models demonstrate good skill in the representation of observed patterns of mean climatology and the bimodal nature of East Africa seasonality, as well as the representation of the inter-

annual variability and ENSO signals. Despite these strengths, the resolution dependencies of the models introduce problematic bias and magnitude errors, including the underestimate of rainfall and overestimate of surface temperature. These results inform further interpretation of the model output for climate change applications, and further model development work.

Supervisor: Professor B Hewitson (Environmental and Geographical Science)
Co-supervisor: Dr M Stendel (Danish Meteorological Institute)

In Environmental and Geographical Science:
Izidine Sulemane De Sousa Pinto
Thesis Title: *Future changes in extreme rainfall events and circulation patterns over southern Africa*

Izidine Pinto has BSc and BSc (Honours) degrees from the Eduardo Mondlane University, Mozambique and an MSc from the University of Cape Town. His PhD thesis emerged from the growing threat posed by extreme rainfall in southern Africa as a result of climate change.

Izidine Pinto's thesis examines extreme rainfall through the lense of the driving synoptic environment. Extreme rainfall in southern Africa is associated with particular synoptic environments and these are quantified to assess projected changes in the nature of extreme rainfall. Trends in observed extreme rainfall data over southern Africa show a general increase in the frequency of occurrence of extreme rainfall events and correspondingly the synoptic environments accociated with these events. Downscaled future projections indicate synoptic environments associated with extreme rainfall are likely to increase in frequency over the tropical and sub-tropical summer rainfall region. Increases in frequency and intensity of extreme rainfall are projected over the eastern Drakensberg, while decreases are projected over the western and southern parts of the country. This study demonstrates that changes in extreme rainfall, when understood in the context of the driving synoptic environment, provides defensible messages of future change in the nature of extreme rainfall.

Supervisor: Professor B Hewitson (Environmental and Geographical Science)
Co-supervisor: Dr CL Lennard (Environmental and Geographical Science)

In Mathematics:
Elham Mehdinezhad
Thesis Title: *The annihilation graphs of commutator posets and lattices*

Elham Mehdinezhad has a BSc from Payam-e-Noor University (PNU) in Iran. She began her MSc study at the Department of Mathematics and Applied Mathematics of UCT in 2013 and was upgraded to PhD level in 2014.

Elham Mehdinezhad's thesis develops a wide generalisation of the theory of annihilation graphs of commutative rings. In this new theory the ideals of a commutative ring are replaced with elements of an abstract poset equipped with an additional binary operation, satisfying carefully chosen additional conditions. For some more advanced constructions and results the ground poset is required to be a lattice, or even a complete lattice. Apart from the ring-theoretic context, all the results apply to congruence lattices of universal algebras, with the additional operation being one of known commutator operations, such as the Smith commutator in a congruence modular variety, or the Huq commutator in a semi-abelian variety. This provides a remarkable range of new examples of annihilation graphs from various areas of algebra.

Supervisor: Professor G Janelidze (Mathematics and Applied Mathematics)

*Tahina Rakotoniaina
Thesis Title: *On the computational strength of Ramsey's theorem*

Tahina Rakotoniaina has an MSc (with distinction) from the University of Stellenbosch, a Postgraduate Diploma from the African Institute for Mathematical Sciences (AIMS) in Muizenberg and a BSc degree (honours, with distinction) from the University of Antananarivo, Madagascar.

Tahina Rakotoniaina's thesis aims to classify the computational content of Ramsey's theorem. Ramsey's theorem for colourings of finite sets with finitely many colours is a foundational theorem in combinatorics of major importance. The computational content of this theorem has been intensively studied over several decades. The classification of its computational content does not only reveal the exact nature of non-constructivity inherent in this theorem, but it also characterizes the power provided by this theorem as a computational resource. The questions arising in this research area count as challenging and the last decade has seen a rapidly increasing interest in this subject. Tahina Rakotoniaina's contribution to this topic is unique in that he approaches it from a uniform perspective and the classification is done within the Weihrauch lattice. Within this framework his thesis provides substantial new information on uniform computational aspects of Ramsey's Theorem.

Supervisor: Professor V Brattka (Mathematics and Applied Mathematics)
Co-supervisor: Professor HPA Künzi (Mathematics and Applied Mathematics)

*Pako Ramasu
Thesis Title: *Internal monoid actions in a carte-sian closed category and higher-dimensional group automorphisms*

Pako Ramasu has a BSc from the University of Botswana and an MSc from the University of New Brunswick (Fredericton, Canada). He began his PhD study in the Department of Mathematics and Applied Mathematics at UCT in 2011.

Pako Ramasu's thesis systematically describes various constructions involved in the study of internal monoid actions in a carte-sian closed category, and applies them to describe the internal automorphism group of a group object in the category of small categories. After that, the main result is extended to the context of an n-fold categories for all natural n. Apart from the theory of cartesian closed categories, the main tool it uses is the equivalence between n-fold internal categories in the category of groups and the so-called cat-n-groups introduced by J.-L. Loday for the purposes of homotopy theory. This partially answers a long-standing open problem briefly formulated by R. Brown as "What is a higher-dimensional symmetry?"

Supervisor: Professor G Janelidze (Mathematics and Applied Mathematics)

In Molecular & Cell Biology:
Caroline Gina Gracieuse Beltran
Thesis Title: *A proteomic investigation of the immune response of the South African abalone, Haliotis midae*

Caroline Beltran has BSc and BSc(Hons) degrees from the University of KwaZulu-Natal.
Since climate change can be expected to increase the susceptibility of abalone to infectious disease in farmed abalone, Caroline Beltran's thesis employes a proteomics approach to identify proteins that respond to bacterial infection in order to define the defence response of the abalone haemocyte proteome, a principal cellular component of the animal's immune system.
The study identifies a number of proteins that are differentially expressed in response to bacterial infection and with the use of a variety of bioinformatics tools, reveales a complex and multifaceted response to bacterial challenge in H. midae that involves multiple signalling pathways. One of the proteins, identified as a putative allograft inflammatory factor-1 protein that is significantly overexpressed upon immune stimulation, was found to regulate phagocytosis in cultured H. midae haemocytes via a functional interaction with filamentous actin. This is the first time a high-throughput proteomics approach has been used to investigate the immune response of H. midae. The data obtained from this study reflect the complexity of the abalone immune system and provide an important resource for the discovery of molecular biomarkers that could potentially be used to monitor the health of farmed abalone.

Supervisor: A/Professor V Coyne (Molecular and Cell Biology)

Rizqah Kamies
Thesis Title: *A proteomic approach to investigate the response of tef (Eragrostis tef) to drought*

Rizqah Kamies obtained her BSc, BSc(Hons) and MSc qualifications at UCT. Her MSc degree was obtained with distinction in 2011 and was highly praised by the international examiners in the field of plant proteomics.

Rizqah Kamies' thesis focused on understanding water loss in the African cereal crop, Eragrostis tef, which is grown as an insurance crop to mitigate drought. The aim of the project was to identify stress responsive proteins and biological responses important in protecting tef during drought. Tef plants were subjected to controlled drought conditions, during which ultra-structural analysis and various physiological assays were performed. This was followed by proteomics, quantification and statistical analyses of protein abundance, biological classification and final validation of the data. The results obtained suggests that upon dehydration, tef proteins functioning in stress response, antioxidant protection and those active in maintaining crucial plant cell maintenance processes are accumulated.

Supervisor: Dr MS Rafudeen (Molecular and Cell Biology)
Co-supervisor: Professor J Farrant (Molecular and Cell Biology)

*Ian Kyle Kemp
Thesis Title: *Identification and preliminary characterization of the 2,5-diphenyloxazole biosynthetic pathway in S. polyantibioticus SPRT.*

Kyle Kemp obtained a BSc degree, majoring in Biochemistry and Microbiology, then honours and master's degrees in the Department of Molecular and Cell Biology, all at UCT. His doctoral research developed from his interest in identifying novel antitubercular antibiotics in new species of actinomycete bacteria.

In his thesis, Kyle Kemp proposed a biosynthetic scheme for the synthesis of a novel antibacterial compound, 2,5-diphenyloxazole (DPO), produced by the actinomycete, Streptomyces polyantibioticus SPRT, which exhibits antibiosis against Mycobacterium tuberculosis (the causative agent of tuberculosis). The S. polyantibioticus SPRT genome was sequenced and a genome mining approach was used to identify a gene cluster that is responsible for the biosynthesis of DPO. To confirm the involvement

of the identified genes in DPO biosynthesis, a novel transformation protocol was developed for the introduction of plasmid DNA into S. polyantibioticus SPRT and subsequent gene disruption experiments. The putative DPO biosynthetic genes were inactivated one at a time to show that inactivation of each of the genes abolished DPO production. Complementation of the mutant strains restored DPO production. Based on the genome annotation analysis and gene disruption studies, a model for DPO biosynthesis is proposed.

Supervisor: Dr P Meyers
(Molecular and Cell Biology)

In Molecular and Cell Biology:
Roslyn Michelle Ray
Thesis Title: *Differential effects of progestogens on HIV-1 replication and host gene expression in primary PBMCs and cervical tissue explants*

Roslyn Ray has BSc, BSc(Hons) and MSc (with distinction) qualifications from UCT. Her doctoral study sought to address the underlying molecular differences between the actions of different hormonal contraceptives and their subsequent effects on HIV-1 replication.

Current clinical data suggest that some, but not other, hormonal contraceptives increase HIV-1 acquistion in women. Concerns exist regarding medroxyprogesterone acetate (MPA), the injectable contraceptive widely used in South Africa, which exhibits immunomodulatory activity like cortisol. Roslyn Ray's thesis investigates this issue ex vivo using infectious HIV-1 virus and fresh human periperhal blood mononuclear cells (PBMCs) and cervical tissue explants. Her results show that MPA, unlike norethisterone acetate (NET) and levonorgestrel (LNG), significantly regulates key immunomodulatory genes in both models. MPA, unlike NET, modulates gene expression via the glucocorticoid receptor in PBMCs, consistent with her hypothesis that MPA would exhibit immunomodulatory activity different to other contraceptives. Furthermore, MPA, unlike NET, significantly increases HIV-1 replication in the majority of donor samples. These results provide mechanistic insight and suggest that injectable MPA is not a suitable contraceptive choice for women in high risk areas, but that injectable NET would be a safer choice.

Supervisor: Professor JP Hapgood
(Molecular and Cell Biology)
Co-supervisor: Dr C Avenant
(Molecular and Cell Biology)

*Ryman Shoko
Thesis Title: *A proteomic investigation of the rhizomes of the resurrection fern Mohria caffrorum L. (Desv.) in response to desiccation*

Ryman Shoko completed his BSc(Hons) degree at the National University of Science and Technology, Bulawayo, Zimbabwe and took up a position of Lecturer at the Masvingo Polytechnic / National University of Science and Technology from 2005. He initiated MSc studies at UCT in 2009 and upgraded to a PhD in 2011.

Ryman Shoko's thesis entailed conducting a molecular physiological study on the rhizomes of the seasonally desiccation tolerant fern Mohria caffrorum in order to ascertain whether this organ itself follows the seasonal pattern of tolerance and sensitivity noted in fronds of this species, and to determine whether rhizomes play a role in regulating the frond responses to drought. A quantitative proteomics analysis using isobaric tags (ITRAQ) was utilized for relative and absolute quantification of proteins from hydrated and desiccated rhizomes from sensitive and tolerant forms of the plant. Use of a rhizome specific database, bioinformatics analysis and network enrichment tools were used to identify key molecular processes and pathways involved in the rhizome responses to desiccation stress. Results indicate that the rhizome is permanently desiccation tolerant, although it utilizes somewhat different mechanisms to achieve tolerance in wet vs dry seasons. Furthermore, data suggest that this organ does indeed regulate the drought tolerance of fronds.

Supervisor: Professor JM Farrant
(Molecular and Cell Biology)
Co-supervisor: Dr MS Rafudeen
(Molecular and Cell Biology)

In Molecular and Cell Biology:
Lancelot Wehmeyer
Thesis Title: *The glucocorticoid receptor plays a central role in mammalian reproduction and signal integration in pituitary gonadotropes*

Lance Wehmeyer has BSc, BSc(Hons) and MSc degrees from UCT. He obtained the Class Medal for Honours and obtained his MSc degree with distinction.

Lance Wehmeyer's thesis aims to investigate molecular mechanisms whereby stress affects reproduction in mammals. Stress is primarily regulated by the glucocorticoid cortisol in humans, while mammalian reproduction is regulated primarily by gonadotropin-releasing hormone (GnRH). His results show that both hormones directly regulate expression of key reproductive genes in pituitary tissue and primary purified gonadotrope cells, while co-stimulation results in synergistic regulation of select genes in a gonadotrope cell line. The latter mechanism involves co-localization of receptors of these hormones to the plasma membrane and requires the activity of protein kinase C to synergistically dampen cellular proliferation. Together, the results show that mechanisms exist to integrate adrenal and gonadal

signalling via cross talk between glucocorticoid and GnRH receptor signalling pathways at the level of the pituitary. The results add to the growing body of evidence that cells integrate multiple hormonal signals to modulate different physiological responses, via mechanisms involving cross talk between intracellular hormone receptors and changes in gene expression. This allows mammals to fine-tune responses and respond appropriately to the environment.

Supervisor: Professor JP Hapgood (Molecular and Cell Biology)

In Physical Oceanography:
Marie Catherine Raïssa Philibert
Thesis Title: *A comparative study of nitrogen uptake and nitrification rates in sub-tropical, polar and upwelling waters*

Raïssa Philibert has a BSc and a BSc(Hons) from UCT. Her doctoral research was part of the EU PF7 Greenseas programme, which aimed to develop a global plankton data base and model system for eco-climate early warning.

Raissa Philibert's thesis presents the first instance of simultaneous nitrogen uptake and nitrification rates for the Southern Ocean and St-Helena Bay (Southern Benguela upwelling system). By comparing different environmental conditions and seasons, this study provides a better understanding of factors controlling nitrification and nitrogen uptake. Such an understanding can contribute to the refinement of carbon export and climate models. Nitrification was detected both at the start of an upwelling event (and phytoplankton bloom) and at the end of a bloom in St-Helena Bay, but its importance depended on the timing of sampling within the upwelling cycle. In contrast, in the Southern Ocean, nitrification was more patchy and only detected at five stations out of fifteen. This study confirms that uniform carbon export models need to be revised as the contribution of nitrification to the nitrate pool and the drivers of nitrogen uptake vary regionally, seasonally, as well as within upwelling cycles

Supervisor: Dr HN Waldron (Oceanography)
Co-supervisor: Dr DR Clark (Plymouth Marine Laboratory)

Patrick Angus Vianello
Thesis Title: *A qualitative and physical analysis of processes around the Mascarene Plateau*

Patrick Angus Vianello has BSc, BSc Hons and MSc degrees in Oceanography from the University of Cape Town. His first PhD advisor, Prof Johann Lutjeharms from the Department of Oceanography at UCT, passed away during the first year of his thesis and Patrick has dedicated his PhD to him.

Patrick Vianello's thesis present the results of an oceanographic survey conducted along the Mascarene Plateau in the South-West Indian Ocean, between Mauritius and the Seychelles Bank. The dataset is augmented by Argo float data, which are used to determine the origin of the water masses entering this region, and by Satellite Remote sensing to extend the survey in space and time. This region has only been sampled once in the past and little was known about the oceanography and ocean circulation of that region before Patrick Vianello's thesis.

Supervisor: (A/Professor M Rouault) (Oceanography)
Co-supervisor: (A/Professor I Ansorge) (Oceanography)

In Statistics:
David Hlosi Maphisa
Thesis Title: *Towards adaptive management of high-altitude grasslands: Ingula as a case study*

David Maphisa has an MSc in conservation biology from UCT. His doctoral thesis emerged as a result of his work for a partnership between BirdLife South Africa and Eskom, and since 2013 the South African National Biodiversity Institute.
Nature conservation is often complicated by conflicting land-use demands. David Maphisa's thesis focuses on a moist, high-altitude grassland, where Eskom is building a pumped storage scheme. To offset the negative effects of this development, Eskom has bought additional land that is to be managed for bird conservation. Using sophisticated statistical tools, David Maphisa's PhD thesis examines the habitat needs of typical grassland bird species and how their habitat is affected by different management options. It develops the scientific basis for adaptive management of this area in particular and provides critical knowledge for the protection of grasslands more generally.

Supervisor: A/Professor R Altwegg (Statistical Sciences)
Co-supervisor: Emeritus Professor LG Underhill (Biological Sciences)

In Zoology:
Dale Chéryle Arendse
Thesis Title: *Experimental cultivation of the South African scallop, Pecten sulcicostatus*

Dale Arendse has a BSc, BSc(Hons) and MSc from the University of the Western Cape. Her PhD work resulted from having being tasked, as a researcher within the Department of Agriculture, Forestry and Fisheries, to identify indigenous marine species for aquaculture.

Dale Arendse's thesis investigates the suitability of the local scallop Pecten sulcicostatus as a candidate species for aquaculture in South Africa. Successful cultivation of P. sulcicostatus depends on successful rearing from fertilized egg to market size, with growth and survival rates comparable to those of other commercial scallops. The study therefore aimed to examine the reproductive life cycle, to establish methods of broodstock conditioning and spawning, and to identify techniques for the rearing of larvae and the grow-out of spat to determine the suitability of this species for farming. The results of the investigation have shown that P. sulcicostatus can be successfully conditioned and spawned throughout the year. Although survival was low during both larval rearing and the grow-out of spat, growth rates were similar to those of other commercial species. The potential for farming P. sulcicostatus in South Africa has therefore been demonstrated, although it will be necessary to further improve the survival of all stages of the life cycle.

Supervisor: Emeritus Professor CL Griffiths (Biological Sciences)
Co-supervisor: Dr GC Pitcher (Department of Agriculture, Forestry and Fisheries)

Margaux Emilie Therese Rat
Thesis title: *Dominance, social organisation and cooperation in the Sociable Weaver (Philetairus socius)*

Margaux Rat has a BSc in Biodiversity and an MSc in Ecology, Evolution and Biometry from the University Claude Bernard (Lyon, France). She is interested in why animals aggregate in groups, which is the focus of her doctoral study.
Cooperation is a ubiquitous behaviour, but it remains unclear why individuals help others at a cost to themselves. Margaux Rat's thesis investigates the role of dominance relationships in the evolution of social groups and cooperation among individuals. Her thesis is based on extensive observations on the behaviour and reproduction of the Sociable Weaver, a year-round colonial passerine that cooperates over multiple tasks. Margaux's work examines whether the establishment of dominance hierarchies, linked to the expression of a status-signalling plumage trait, may have evolved to prevent conflict and thus reduce the costs of sociality. Her thesis describes the benefits in terms of access to resources, such as food and reproduction, gained by an individual from achieving high social status. Her thesis reveals the role dominance plays in determining individual contribution to cooperation, promoting the evolution of the communal life exhibited by sociable weavers.

Supervisors: Professor P Ryan and the late Professor P Hockey (Percy FitzPatrick Institute of African Ornithology)
Co-supervisors: Dr R Cova (CIBIO, University of Porto, Portugal); Dr C Doutrelant (CEFE – CNRS, Montpellier, France); Dr R E van Dijk (Animal and Plant Sciences, University of Sheffield, United Kingdom)

6. FACULTY OF LAW

Dean: Professor PJ Schwikkard

DEGREE OF DOCTOR OF PHILOSOPHY

In Commercial Law:
Oluwole Olukayode Akinyeye
Thesis Title: *Are there any justifications for exempting a harbour pilot and port authority from liability and making the shipowner and master of a ship under compulsory pilotage vicariously liable for the actionable wrongs of the pilot, and, if any, are they defensible?*

Oluwole Akinyeye has an LLB from Obafemi Awolowo University, Ife, Nigeria and an LLM (Shipping Law) from the University of Cape Town. His thesis emerged from statutory changes to the allocation of liability for compulsory harbour pilot error in South Africa.

Oluwole Akinyeye's thesis explores what defensible justifications there may be for the current South African statutory allocation of liability for compulsory harbour pilot error. It argues that the primary justification for such allocation of liability appears to be to provide an avenue of redress for third party victims of pilot error. The particular statutory solution to this problem in the form of imposing such liability on the owner of the vessel under compulsory pilotage in all but extremely limited circumstances, is, however, indefensible. It is indefensible in light of legal developments in South African law and that in comparable jurisdictions, and feasible alternative solutions. These alternatives retain an avenue of redress for the innocent third party victim, and provide a more effective and equitable allocation of the liability, and impose an additional measure of accountability for the quality of the pilotage services on the Authority responsible for licensing pilots.

Supervisor: Professor A Rycroft (Commercial Law)
Co-supervisor: Associate Professor G Bradfield (Commercial Law)

Tshepo Herbert Mongalo
Thesis Title: *Using corporate law to empower corporate constituencies to enforce corporate actions purportedly taken in their interests*

Tshepo Herbert Mongalo has BProc and LLB degrees from the University of Kwa-Zulu Natal and an LLM from Cambridge. The idea behind his doctoral thesis is based on his important role in the drafting of the Companies Act 2008.

The thesis examines corporate law developments seeking to empower non-shareholder constituencies. The reluctance in Anglo-American jurisprudence to extend corporate law remedies to non-shareholder constituencies, particularly in public companies, overlooks the importance of the supervision of corporate power to minimise directorial self-serving misconduct. The introduction of an extended corporate legal enforcement framework under the South African Companies Act of 2008 raised the possibility of a right of action for non-shareholder constituencies. Since the enforcement regime is a function of the applicable normative theory, a broadly inclusive corporate legal enforcement framework cannot be based on the conventional shareholder-oriented theories. Mongalo argues that the Companies Act introduces the Actionable Enlightened Shareholder Value Approach (AESVA) which promotes the extended meaning of 'the best interests of the company'. The AESVA recognises that the primary purpose of corporate law is not exclusively the protection of shareholders, but the supervision of corporate power to minimise directorial misconduct.

Supervisor: Judge Professor DM Davis (Commercial Law)
Co-supervisor: Professor HM Corder (Public Law)

In Criminal Justice:
Oluwatoyin Akinwande Badejogbin
Thesis Title: *Sentencing reforms in a postcolonial society. A call for the rationalization of sentencing discretion in Nigeria, drawing on South Africa and England*

Oluwatoyin Badejogbin has an LLB from Obafemi Awolowo University (Nigeria) and an LLM from University of Jos (Nigeria). In 1994 he became a barrister-at-law in Nigeria. His PhD thesis emerged from his extensive experience working in the NGO sector involving research and advocacy toward penal and sentencing reforms in Nigeria.

Oluwatoyin Badejogbin's thesis delineates the problems facing sentencing policy and practice in Nigeria in order to support his call for reform. Nigeria attained independence in 1960 but its criminal justice system remains hamstrung by the colonial mould in which it was framed, unable to respond to the challenges of combating crime in a twenty-first century post-colonial society. This is most acute in the sentencing realm, which comprises common law and sharia-based penal systems, a Constitution offering minimal protection to offenders, and sentencers who exercise largely unfettered discretion. These factors, and the courts' limited ability to subject statutes to constitutional scrutiny, result in frequently disproportionate punishments. Drawing on lessons from South Africa and the UK, the thesis proposes the adoption of constitutional provisions that restrain penal severity, the harmonisation of Nigeria's pluralistic penal system, constitutional scrutiny of statutory penalties, and the development of guidelines that enhance proportionality and parsimony in sentencing.

Supervisor: Professor W de Vos (Public Law)
Co-supervisor: Ms K Phelps (Public Law)

Moliehi Thuto Shale
Thesis Title: *Resilience and risk in the informal economy: a study in the regulation of flooding*

Moliehi Shale obtained a Bachelor degree in Town and Regional Planning from the University of Lesotho in 1999. She went on to study for Honours and Master of Science degrees in Human Geography at the University of Cape Town, graduating respectively in 2004 and 2006.

Moliehi Shale's thesis considers the role of civic associations as informal "insurers" within "areas of limited statehood". The research she undertook to investigate this issue explored the responses of small business owners living in informal settlements (in Cape Town, South Africa) to flooding events that disrupted their businesses. Moliehi Shale's thesis contributes to understandings of the lived reality of people living within informal settlements as well as to understandings of the informal governance processes that are developed within these contexts.

Supervisor: Professor CD Shearing (Public Law)
Co-supervisor: Professor TA Börzel (Otto Sühr Institute for Political Science, Freie University, Berlin)

In Criminology:
Tom Philip Herbstein
Thesis Title: *Insurance and the Anthropocene: Like a frog in hot water*

Tom Philip Herbstein graduated with a BSc in Oceanography & Climatology and an MPhil in Environmental and Marine Law; both from the University of Cape Town. He has been an active member in the Centre of Criminology's environmental security programme.

Philip Herbstein's thesis explores the impact of global environmental change on the commercial insurance industry. It examines why commercial insurers have responded to the significant losses attributed to environmental change mainly by adapting their business activities, rather than mitigating the drivers behind their growing exposure to risk. The research and thesis extend existing analyses of how commercial insurers have responded to the inherent limitations that their existing risk assessment tools face – tools that emerged during a period when environmental risks were more predictable than they are today. This challenge is further compounded by increasingly plural access to the same science and technologies that has supported the growth of commercial insurance in the past. Consequently, the future role of insurance, as society's primary financial risk manager, is called into question.

Supervisor: Professor CD Shearing (Public Law)

Suzall Timm
Thesis Title: *Modalities of regulation in the informal economy: a study of in waste collectors in Cape Town*

Suzall Timm has a Master of Philosophy in Criminal Justice from the University of Cape Town.

Suzall Timm's thesis examines how informal economic activities are regulated in cities. It focuses on the conditions that enable and constrain informal waste-collection work on the streets of Cape Town. The thesis demonstrates how multiple arrangements of formal-informal and human-nonhuman relations organize the daily social lives of those operating in informal economies. The empirical evidence suggests that, although humans are important regulatory agents, there are also powerful nonhumans that actively organize space and enable support networks. The thesis provides an informed understanding of how urban social order is created and contested: first by embracing a broad conception of agency; second, by demonstrating that agency is distributed across the human-nonhuman divide.

Supervisor: Professor CD Shearing (Public Law)

In Private Law:
Hugo Meyer van den Berg
Thesis Title: *Regulation of the upstream petroleum industry: a comparative analysis and evaluation of the regulatory frameworks in South Africa and Namibia*

Hugo Meyer van den Berg holds a BA (Hons) in Classical Literature (Latin) and an LLB from Stellenbosch University and an LLM from the University of Cape Town. He is a practising attorney in Windhoek and an associate at Koep & Partners.

Meyer van den Berg's thesis deals with the regulatory framework for the exploration and production of petroleum. By looking at current problems caused by petroleum resources, and deficiencies in regulatory frameworks for these resources, he identifies three elements crucial for an appropriate legislative framework regulating petroleum exploration and production. They are: transparency, accountability and a balance of interests between petroleum companies and the host nation in which petroleum exploration and production occurs. Asserting that a good governance regime for petroleum exploration and production reflects the presence of all three elements, he compares the current regulatory frameworks in South Africa and Namibia and seeks to ascertain the extent to which these three elements are addressed in each framework. He concludes by identifying areas for improvements in the existing regulatory frameworks.

Supervisor: Professor H Mostert (Private Law)

In Public Law:
Terhemen Andzenge
Thesis Title: *Legal issues in the contextual diffusion of independent regulatory agencies in Nigeria*

Terhemen Andzenge was born in 1961. He holds LLB and LLM degrees from the Ahmadu Bello University, Zaria, Nigeria and a BL degree from the Nigerian Law School, Lagos. After fifteen years' practice as an attorney, he joined the federal public service as General Manager and Legal Adviser to the Nigerian Mining Corporation in the Ministry of Solid Minerals Development in 2000. Since mid-2007 he has been Head of Infrastructure Regulation in the Bureau of Public Enterprises in the Presidency of Nigeria.

Terhemen Andzenge's experience as Head of Infrastructure Regulation has led him to confront many of the problems facing

developing economies in the regulation of their state-owned enterprises, regimes typically negatively affected by both their colonial legacy and their over-reliance on the extraction of natural resources. Many such economies have consequently had to seek assistance from transnational financial institutions such as the International Monetary Fund, a condition of whose grants has been the establishment of Independent Regulatory Agencies to monitor and regulate the activities of public economic enterprises. Terhemen Andzenge's thesis conclusively shows that such a model is inappropriately imposed on an economy such as Nigeria's and proposes, instead, a combination of other measures which would achieve better outcomes.

Supervisor: Professor HM Corder (Public Law)

Temitope Emmanuela Kadiri
Thesis Title: *Regulating land based sources and activities causing pollution of the coastal and marine environment in South Africa, Kenya and Nigeria within the context of integrated coastal zone management*

Emma Kadiri has an LLB degree from Ogun State University, Ago-Iwoye, Ogun State, Nigeria, and an LLM in Marine and Environmental Law from the University of Cape Town. Her doctoral research emerged from her interest in harnessing regional and national legal instruments to combat land-based marine pollution in the African context.

Emma Kadiri's work examines the role that the concept of Integrated Coastal Zone Management is playing in the international and regional sphere in combating pollution of the marine environment emanating from land based sources and activities. This is done against the backdrop of UNEP's regional seas programme, in particular the 1985 Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African region (Nairobi Convention) and the 1981 Convention for the Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention). The body of her work outlines and assesses how the domestic laws and institutions of three case study countries, Kenya, Nigeria and South Africa, have incorporated these regional instruments into their respective domestic laws and governance system to better regulate land based sources and activities causing pollution.

Supervisor: Professor JI Glazewski (Public Law)

In Public Law:
Irekpitan Okukpon
Thesis Title: *Towards the sustainable management of electronic waste in Nigeria: South Africa as a model*

Irekpitan Okukpon has an LLB from the University of Benin, Nigeria, and an LLM from UCT. Her PhD thesis emerged from her 2010-2012 teaching experience at the University of Benin, Nigeria, and her research, since 2012, at the University of Lagos's Nigerian Institute of Advanced Legal Studies.

Irekpitan Okukpon's thesis develops the Extended Producer Responsibility (EPR) principle, which places specific responsibilities on producers of goods, for sustainable electronic waste ('e-waste') management in Nigeria. She refers to the South African model, which epitomises a workable and sustainable e-waste management model and recognises responsibility for electrical and electronic equipment (EEE) beyond the importer by combining mandatory and voluntary EPR schemes on e-waste, to indicate how it is possible to achieve sustainable e-waste management in Nigeria by prescribing a synergy of voluntary and mandatory approaches through an institutionalized approach. She proposes an 'EPR Matrix' to help assess the possibility of realistic implementation and enforcement of these responsibilities on a developing-country producer. The thesis includes empirical research data that highlight the practicability of e-waste management in particular jurisdictions. It contributes to e-waste policy reform in Nigeria and elsewhere in sub-Saharan Africa where volumes of used EEE imports, and management of e-waste, are a challenge.

Supervisor: Professor L Feris (Public Law)

Marie Rose Turamwishimiye
Thesis Title: *Reconciling biodiversity conservation and agricultural development in the context of international and domestic law in Rwanda*

Marie Rose Turamwishimiye has an LLB from the University of Rwanda, and an LLM from the University of Cape Town. Her PhD thesis emanated from her passion to contribute to the development of biodiversity law in Rwanda; a passion felt since 2007 during her Masters' studies of Environmental Law.

Marie Rose Turamwishimiye's thesis examines and interrogates Rwanda's environmental and agricultural laws with a view to exploring appropriate and effective legal mechanisms to reconcile biodiversity conservation and agricultural development in that country. She does so against the backdrop of relevant international conventions which have been incorporated into Rwandan domestic law and the fact that Rwanda has embarked on much needed agricultural development at the expense of biodiversity conservation. She finds

that the current legal instruments applicable to biodiversity conservation in Rwanda are ineffective and inadequate. More specifically her work outlines a body of necessary legal measures and institutional reform needed to achieve sustainable use of soil, water and genetic resources, conservation of crop and livestock diversity, effective participation of all stakeholders and cooperative governance. She thus recommends a body of legal measures aimed at reconciling biodiversity conservation and sustainable agricultural development alongside efforts to inform policy makers, legislators and government officials.

Supervisor: Professor JI Glazewski (Public Law)

7. FACULTY OF COMMERCE

Acting Dean: Professor MP Wormald

DEGREE OF DOCTOR OF PHILOSOPHY

In Business Administration:
Enrico Simone Calandro
Thesis Title: *Governing regional telecommunication networks in a developing region: the SADC case*

Enrico Calandro is a researcher at Research ICT Africa. He holds a Laurea Magistrale (master's degree) in Communications Sciences. The need to understand some of the challenges of regionalism in the context of ICT policymaking emerged in 2009 while he was working at the SADC Parliamentary Forum as United Nations technical advisor for the Information Communicaiton Technology programme in Namibia.

Enrico Calandro's thesis examines the political economy underlying the development and the implementation of ICT policy at a regional and national level through a case study of regional ICT policy-making in the Southern African Development Community (SADC). Constructing a conceptual framework that draws together the idea of capacity-building as a tool for foreign affairs, with that of a global network of epistemic communities of consultants and multilateral agencies that operationalise reform, he is able to explain why SADC protocols and declarations have largely failed to meet their stated objectives, despite the accepted rationale and logic of market integration and harmonisation. The institutional analysis undertaken through the detailed coding and triangulation of findings from a series of in-depth interviews with those involved in the creation of regional ICT structures and processes produces a rich case study which contributes to the field of knowledge in the area of regional and communication reform.

Supervisor: Professor A Gillwald (Graduate School of Business)

Katherine Judith Train
Thesis Title: *Compassion in organisations: sensemaking and embodied experience in emergent relational capability. A phenomenological study in South African human service organisations*

Katherine Train has a BPharm and MPharm from the University of the Western Cape. Her doctoral research emerged as a result of an identified gap in theory while completing her MPharm and while coaching practitioners in human service organisations.

Katherine Train's thesis aims to extend the theory of compassion organising by identifying the capacities required of agents to achieve a quality of attention conducive to empathic concern and consequent compassionate acts in human service organisations facing resource limitation. Katherine Train develops a framework of individual capacities for compassion capability in such organisations. The framework describes the capacities of individual and participatory sensemaking, embodiment practices and experience awareness as emoting, intending and urging as being conducive to empathic concern. The end result is an extension of the assumption that compassion aims to alleviate suffering, to include the intention to create new meaning of the suffering and the capacity to witness the suffering of others. The results of the research are relevant to agents in the human service industry for professional development and supervision.

Supervisor: Professor K April (Graduate School of Business)

In Economics:
Grieve Chelwa
Thesis Title: *The economics of tobacco control in some African countries*

Grieve Chelwa has a BA in Economics from the University of Zambia. In addition he has a BCom(Hons) and an MCom, both in Economics, from UCT.

Grieve Chelwa's thesis considers three aspects of the economics of tobacco control in three African countries. Firstly, he shows that the cost of tobacco in Zambia is not restricted to the mortality and morbidity costs, but that it changes households' expenditures away from welfare-enhancing goods and services like food and education. Secondly, he shows that the demand for cigarettes in Uganda is price inelastic, which means that cigarette consumption decreases as the price decreases, but that the percentage change in consumption is less than the percentage change in the price. By increasing the excise tax on cigarettes, policymakers can simultaneously reduce cigarette consumption and increase tax revenues. Lastly, he shows that South Africa's well-known success in reducing per capita cigarette consumption between 1994 and 2004 is largely owed to the government's consistent tax increases during this time, more than any other tobacco control intervention (e.g. advertising restrictions and restrictions on indoor smoking).

Supervisor: Professor C van Walbeek (Economics)

David Oluwatosin Fadiran
Thesis Title: *Essays on institutional evolution and economic development: evidence from Nigeria*

David Fadiran has a BA from the University of Swaziland and two MA degrees from the University of Wisconsin-Milwaukee and Northern Illinois University. His doctoral research was borne from a quest to characterise the state of property rights and civil liberties in sub-Saharan Africa.

David Fadiran's thesis aims to shed light on the institutions and growth nexus. Given the consensus on the important role of institutions, he approaches this nexus by constructing a new set of institutional indicators for Nigeria, which makes use of ordinances, legislation and constitutions in constructing de jure based measures for the quality of institutions for the period 1862-2011. He therefore created a long time-series data set that had previously not been available. This made the empirical testing of theories on persistence, path dependence, interdependence and identification of the lock-in properties of path dependent institutions in Nigeria possible. David Fadiran extends on the resource curse literature, and conducts a natural resource wealth, institutions and economic growth analysis within Nigeria. He finds that institutional evolution is characterised by British administrative control, path dependent institutions, and a compelling case for customary property rights in reducing the natural resource curse.

Supervisor: Dr M Sarr (Economics)

David Wanyama Khaoya
Thesis Title: *Socioeconomic related health inequalities in South Africa*

David Khaoya holds a BA and MA degree in Economics from the University of Nairobi, Kenya. He joined the School of Economics at UCT in 2011 for his PhD studies in Economics. Before joining UCT, he worked in the pharmaceutical industry and in the HIV and AIDS prevention programmes in Kenya.

David Khaoya's thesis focuses on the economics of health, and estimates the extent of inequality in health outcomes in South Africa. He further investigates factors which could be driving differences in health outcomes. He uses National Income Dynamics Study data which has been repeatedly visiting the same 28 000 South Africans since 2008. He starts by investigating the quality of these data and finds them to be of high quality and nationally representative. He then uses them to measure the level of inequality in health outcomes, finding that good health outcomes are unevenly distributed in favour of the rich. This he attributes majorly to high levels of income inequality and differences in educational attainment. He extends his research to establish the effect on people's health if their incomes change, finding that health improves as income improves.

Supervisor: Professor M Leibbrandt (Economics)
Co-supervisor: Professor I Woolard (Economics)

Esther Mumbi Kimani
Thesis Title: *Education and labour market outcomes in South Africa: evidence from national income dynamics study*

Esther Mumbi Kimani has a BEd and MA from the University of Nairobi. Her doctoral thesis is inspired by her training in education and economics, and her interest in education and labour economics issues.

Esther Mumbi Kimani's thesis explores how school quality affects the level of education attained, and how the level of education attained eventually influences labour market outcomes for South Africans. The thesis starts by first evaluating how state provided school inputs affect the level of education attained by African. In light of the fact that very few South Africans attain tertiary education and that there has been a decline in funding of higher education, the research analyses the private and social benefits of higher education. Based on the evidence that most South Africans are unemployed, and are therefore unable to realise any returns from their education, the thesis studies the factors that influence the transition out of unemployment into either employment or economic inactivity, and how they differ for men and women.

Supervisor: (Professor H Bhorat (Economics)

Yanis Konstantin Kuhn Von Burgsdorff
Thesis Title: *The political economy of innovative development financing: a case study of donor funded risk capital financing in South Africa*

Yanis Kühn von Burgsdorff has a BA from York University and an MSc from the London School of Economics. His PhD research idea emerged while completing a traineeship at the Directorate General for Development at the European Commission during the global financial crisis in 2008.

Yanis Kühn von Burgsdorff's thesis sets out to unpack the perverse incentive structures which throw up sizeable barriers to increasing the effectiveness of development aid. The aim of his research is to contribute to the literature on aid effectiveness by developing a framework to evaluate whether new forms of market based development aid have the ability to translate into higher equilibrium allocations for donors in terms of aid delivery. Based on a case study evaluation, this research suggests that innovative aid delivery modalities could lead to a reduction in welfare losses of development aid by addressing issues surrounding institutional turf fights, vested interests, and legitimacy concerns of aid. The end result is a synthesis of theory and empirical findings which could serve as a basis for policy recommendations to bilateral and multilateral donor organisations in the pursuit of more effective development assistance.

Supervisor: Professor A Black (Economics)
Co-supervisor: Professor H Bhorat (Economics)

Emmanuel Maluke Letete
Thesis Title: *Essays on institutions and economic development in Kenya*

Emmanuel Letete earned his BA in Economics from the University of Lesotho and his MA in Economics from the University of Botswana. His doctoral research emerged from his interaction with his supervisor, Dr Mare Sarr, who first introduced him to the subject matter on Growth, Institutions and Governance.

Emmanuel Letete's thesis focuses on three related issues of the new institutional economics and political economy research: (i) the evolution of institutions; (ii) the causality between political institutions and economic institutions, together with the causality between institutions and economic development; and (iii) the role of institutions on economic development through their impact on foreign direct investment and on the control of rent seeking and corruption in Kenya. Emmanuel Letete's thesis contributes to the political economy and new institutional economics literature in three dimensions. First, it addresses the research gap identified by Douglass North. Secondly, it provides empirical evidence regarding the role of institutions on Kenya's economic development or the lack thereof. Thirdly, it provides evidence for assumptions such as the persistence of institutions that have remained largely untested in Africa due to data paucity. Finally, it provides a conclusive test to the hypothesis advanced by Acemoglu and Robinson that political institutions drive economic institutions.

Supervisor: Dr M Sarr (Economics)

Nicholas Masiyandima
Thesis Title: *The impact of Foreign Direct Investment on productivity and growth in the Southern African Development Community (SADC)*

Nicholas Masiyandima has a BSc and MSc in Economics from the University of Zimbabwe. He worked as an Economist in the Reserve Bank of Zimbabwe for 10 years, and his doctoral research emerged from his interest in the potential for foreign direct investment (FDI) to enhance the growth prospects in the region.

Nicholas Masiyandima's thesis investigates how FDI affects productivity and economic growth in the SADC countries through technology spillovers across country borders. Theory and previous empirical research on developed economies suggests that such positive technology spillovers from FDI exists and this has led many developing countries to institute interventionist policies and tax incentives to attract and retain FDI at considerable expense. The thesis considers whether such FDI induced technology gains indeed exist for SADC, a group of mainly developing countries in Africa and considers the contribution of agglomeration externalities and the role of South Africa as a technology leader and a major source of FDI in the region. Using econometric analysis it finds that there are gains in productivity and growth associated with FDI in the region and that agglomeration externalities and the existence of a regional leader play synergistic roles in magnifying the productivity and growth gains.

Supervisor: Professor JP Dunne (Economics)

Ramaele Elias Moshoeshoe
Thesis Title: *Essays in economics of education: free primary education, birth order and human capital development in Lesotho*

Ramaele Moshoeshoe has a BA in Economics and Statistics from the National University of Lesotho (NUL), and an MA in Economics from the University of Nairobi. He was a lecturer in economics at NUL before enrolling for the AERC Collaborative PhD Programme in the School of Economics in 2011.

Ramaele Moshoeshoe's thesis consists of three self-contained essays examining the effects of Lesotho's Free Primary Education (FPE) policy and family factors on human capital accumulation. The first essay explores the impact of FPE on school enrolment, the second essay explores the implications of FPE for educational achievement and educational inequality over time, and the final essay examines how a child's order of birth influences intrahousehold resource allocation and hence differences in siblings' education outcomes. Applying microeconometrics techniques, he finds that the FPE policy increased school enrolment and reduced gender- and income-related education inequalities. His analysis further reveals that, after the implementation of the FPE policy, educational achievement (of both low-ability and high-ability pupils) and educational inequality increased. This is partly due to the decrease in PTR and increase in "teacher effort" (i.e. teaching hours and the frequency of subject-testing) led to an increase in educational achievement. He finally shows that the first-borns in Lesotho get more education than later-borns, partly due to birth-spacing, which could explain the observed educational inequality.

Supervisor: A/Professor C Ardington (Economics)
Co-supervisor: A/Professor P Piraino (Economics)

In Economics:
Trust Reason Mpofu
Thesis Title: *Real exchange rate volatility, employment and macroeconomic dynamics in South Africa*

Trust Mpofu has a BSc(Hons) and MSc in Economics from the University of Zimbabwe. His doctoral research emerged as a result of his interest in international economics, in particular the effects and causes of exchange rate volatility, and other macroeconomic effects.

Trust Mpofu's thesis focuses on South Africa, an emerging African economy with one of the highest unemployment rates in the world and a currency with a high degree of volatility. He evaluates the impact of exchange rate volatility on employment growth in the manufacturing sector because this sector is vital to both growth and employment creation in most economies. He establishes that exchange rate volatility leads to negative developments in South African labour markets. Following the contractionary effects of exchange rate volatility, the thesis further investigates the determinants of exchange rate volatility in two ways. First investigation uses macroeconomic fundamentals which are vital to the growing controversy of the link between capital controls and exchange rates. Second, it analyses the short run behaviour of the rand using an event studies approach which is an asset price model unlike the first model which uses macroeconomic fundamentals. Trust Mpofu establishes that the rand is not only influenced by demand and supply flows but is also determined by political and macroeconomic announcements or events.

Supervisor: Professor H Bhorat (Economics)
Co-supervisor: Dr A Peters (Economics)

Threza Louis Mtenga
Thesis Title: *The role of exchange rate in small open economies: the case of Tanzania*

Threza Louis Mtenga has a BA and MA from the University of Dar es Salaam and an Accounting Technician Certificate from the National Board of Accountants and Auditors. She enrolled into the AERC collaborative PhD programme. Her doctoral thesis is derived from her interest in macroeconomic performance of partial dollarised economies.

Threza Mtenga's thesis investigates whether the exchange rate has exhibited overshooting behavior; whether it has impacted the monetary transmission mechanism; and whether dollarisation has affected the pattern of Tanzania's foreign trade. The results suggest that the volatility in the exchange rate encourages additional holdings of foreign currency deposits and there would appear to be evidence of delayed overshooting. Contractionary monetary policy is associated with lower money supply, which leads to a decline in output growth and inflation, while the exchange rate appreciates. The model simulations suggest that despite the existence of partial dollarisation, monetary policy has important short-term real effects. The J-curve hypothesis does not hold. Additionally, imports are not reduced by a rise in the value of the shilling. This may be ascribed to the country's partial dollarisation, as over 40% of monetary supply is currently held in dollar denominated accounts, and as such, trade is largely unaffected by domestic currency fluctuations.

Supervisor: Professor H Abraham (Economics)
Co-supervisors: Adjunct Professor M Ellyne (Economics); Dr K Kotze (Economics)

Alfred Kechia Mukong
Thesis Title: *Social networks, bargaining power within couples and maternal health care in Tanzania*

Alfred Kechia Mukong holds a BSc(Hons) in Economics from the University of Buea, and an MA in Economics from Makerere University. He joined UCT in 2011 as a PhD student in the School of Economics.

Alfred Mukong's thesis examines the impact of social networks and bargaining power within couples on the probability of utilising maternal health services in Tanzania. While social networks increase the probability of antenatal care utilisation, he demonstrates that what matters most is the quality as opposed to quantity of one's contacts. Secondly, he explores the effect of bargaining power within couples on choice of health care provider at childbirth. The results suggest that cooperation in decision-making, female discretion over household resources, and low incidence of domestic violence increase the probability of childbirth in a health facility as opposed to home birth. Lastly, he examines the contribution of intra-household bargaining to the rural-urban gap in child nutrition. The results confirm that weak bargaining power by women within couples is associated with higher levels of child stunting. While differences in household socioeconomic status between the rural and urban communities account for a bulk of the gap in child nutrition, he shows that the contribution emanating from differences in intra-household bargaining cannot be ignored.

Supervisor: A/Professor J Burns (Economics)

Herbert Ntuli
Thesis Title: *An economic and institutional analysis of community wildlife conservation in Zimbabwe*

Herbert Ntuli holds a BSc in Mathematics and Statistics from the Zimbabwe Open University, and an MSc in Agricultural and Applied Economics from the University of Zimbabwe.

Herbert Ntuli's thesis focuses on the economics and institutional aspects of community-based wildlife conservation around the Gonarezhou National Park in Zimbabwe. These issues are explored in three papers. The first paper investigates the impact of wildlife on community income, poverty and inequality. Wildlife rewards the poor more, reduces their poverty by 5.5% and has income-equalizing effects. Therefore, on-going wildlife-based land reform needs to bolster wildlife-related capital accumulation by poor households. The second paper examines the role of local institutions in community wildlife conservation. Results confirm that sound institutions are an important ingredient for cooperation, and cooperation positively affects biodiversity. Therefore, government should target institutional capacity building to positively impact biodiversity. The third paper develops a bio-economic model to analyse wildlife conservation outcomes by two community types. The model simulations suggest that an improvement in CAMPFIRE institutions could enhance conservation and welfare. The thesis therefore demonstrates the symbiotic relationship between rural households and wildlife. There is room for institutional reform in the CAMPFIRE which could bring about an improvement in both conservation and welfare.

Supervisor: A/Professor E Muchapondwa (Economics)

Muna Ahmad Shifa
Thesis Title: *Land tenure, investment, land markets, off-farm employment, and rural welfare in Ethiopia*

Muna Shifa has a BSc from Addis Ababa University, and a BCom(Hons) and MCom from UCT. Her doctoral research focused on four related issues in development economics: land tenure systems, land-related investments, factor markets, and poverty in rural settings.

Muna Shifa's thesis analyses empirically the relationship between land tenure issues and investment in rural areas, the functioning of rural land and labour markets, and household welfare. In many poor agrarian economies land reforms such as land titling and registration programmes, and liberalisation of land markets have been widely proposed as fundamental policy instruments to improve investment incentives and land access by the poor, and thereby to reduce rural poverty. However, empirical evidence on whether these land reforms achieve their intended objectives is very limited and inconclusive, particularly in Africa. Using panel data from Ethiopia, Mhbuba Shifa's empirical work contributes to this ongoing debate in developing countries. She provides evidence that without complementary reforms in credit and other factor markets, land reforms play limited roles in improving the livelihoods of poor rural households.

Supervisor: Professor M Leibbrandt (Economics)
Co-supervisor: Professor M Wittenberg (Economics)

Nan Tian
Thesis Title: *The economics of military spending, conflict and growth*

Nan Tian has a BBusSc and an MBusSc in Economics, both from UCT. His research interests lie in development economics, focusing on peace and security. In addition to his doctoral research, he is internationally published and has presented his work at various institutions, including the Universities of Oxford and California, Berkeley.

Nan Tian's thesis examines the interplay between military spending conflict and economic development. Using a general growth model, he finds military spending to have an adverse effect on development, a result that remains even when country heterogeneity and non-linearities are accounted for. Secondly, he explores the spillovers effects of wars on neighbouring countries, moving beyond geographical distance and allowing for economic and political characteristics. The results confirm that conflict devastates development, but suggests previous studies which only use geography as a distance measurement to be overestimating the impact on neighbours. Finally, Nan Tian examines the determinants of civil war, offering insight on a new estimation approach that deals with the problem of excess-zeroes in the dependent conflict variable. He finds this approach to give less biased results and one where contrary to past studies suggests ethnicity, democracy and inequality to be significant predictors of civil war prevalence.

Supervisor: Professor JP Dunne (Economics)

In Information Systems:
Mphatso Exlysa Nyemba-Mudenda
Thesis Title: *A pathway through which mHealth outcomes are produced for maternal healthcare consumers in a developing country context*

Mphatso Nyemba-Mudenda holds a BSc in Computer Science and Demography from the University of Malawi and an MSc in Business Information Systems from University of East London, United Kingdom. She joined the University of Zambia in 2008 where she now works as an academic in the department of Computer Studies.

Mphatso Nyemba-Mudenda's thesis aims to examine how the use of mobile technology in health (mHealth) contributes to maternal health outcomes in a developing country context. Using empirical evidence from an mHealth intervention in Malawi, the thesis analyses context, mechanisms, and outcomes patterns to explain how mHealth outcomes for maternal health consumers are produced, and the variations in outcomes. The findings show that mHealth as a complement to existing maternal health services can lead to improvement in consumer behaviour and experiences, and even clinical outcomes. Mphatso Nyemba-Mudend has highlighted a pathway through which mHealth outcomes are produced for mothers in maternal health. This process starts from mHealth acceptance and adoption as a technology by the consumers, to women acting as agents of their own health by utilising the opportunities generated by mHealth, and finally health system efficiencies for provision of adequate care to the women. This understanding of how mHealth works in maternal health can improve design and operations of such interventions for effectiveness that may lead to the realisation of its full potential; where there is dearth of evidence currently.

Supervisor: Professor W Chigona (Information Systems)

In Information Systems:
Chidi Gerard Ononiwu
Thesis Title: *Mechanisms for emergent usage of adaptive information systems: a critical realist case of e-financial systems in South Africa*

Chidi Ononiwu has a BSc(Hons) in Electronics and Computer Engineering from Federal University of Technology, Owerri, Nigeria and an MScBus in Enterprise Systems from Victoria University, Melbourne, Australia. He also has a Postgraduate Certificate in Management Systems Research from Waikato University, Hamilton, New Zealand.

Chidi Ononiwu's thesis emerged as a result of a lack of mechanism-based theory that explains emergent usage of adaptive information systems, especially when particularized to e-financial service-systems in South Africa. The thesis aims to develop such a theory by adopting Baskarian critical realism and an abduction-retroduction strategy. Theories of complex adaptive systems (CAS) and meta-design are employed. An organization that develops and deploys an adaptive e-financial service-systems for public use in South Africa is used as the case study. The Technology Emergent Usage Model (TEUM) that emanates from the thesis is the key theoretical contribution. The theory's relevance is based on its openness to flexible interpretation when applied to different contexts, without making claim to its universality. Other contributions include methodological and practical contributions to highlight an area where there has been little empirical research to date.

Supervisor: Professor I Brown (Information Systems)
Co-supervisor: Professor S Carlsson (Informatics: Lund University, Sweden)

Olam-Oniso Osah
Thesis Title: *Determinants of user continuance intention towards mobile money services: the case of M-pesa in Kenya*

Olam Osah holds a BSc from the United States International University, and honours and master's degrees from the University of the Witwatersrand. His doctoral research was inspired by the inception and proliferation of an African based mobile money service launched in Kenya where he studied for his first degree.

Olam Osah's thesis models and tests the antecedents and determinants of user continuance intention towards a mobile money services in Kenya called M-pesa. Since inception in 2007, M-pesa has witnessed commendable adoption and usage levels, as the service transactions in Kenya now exceeds those of western union globally. However, historically: products and services of similar nature to M-pesa have been unsustainable in Africa, and extant studies caution that success of a technology is realized in continuous use over initial adoption. A case of M-pesa's demise would have dire implication for the Kenyan economy and 30% of the households in the country that rely on it for remittances. Thus, to counteract an ephemeral success story, it is of precautionary and long-term value to understand the drivers of continuance intention. This safeguards the opportunity mobile money presents for vendors to bolster an institutional establishment and enable the population harness several economic benefits like increase money circulation, employment opportunities, facilitate savings, promote financial autonomy, amongst others.

Supervisor: Professor M Kyobe (Information Systems)

FACULTY OF HEALTH SCIENCES
UNDERGRADUATES AND HONOURS

ORDER OF PROCEEDINGS

Academic Procession.
(The congregation is requested to stand as the procession enters the hall)

The Vice-Chancellor will constitute the congregation.

The National Anthem.

The University Statement of Dedication will be read by a representative of the SRC.

Musical Item.

Welcome by the Deputy Vice-Chancellor, Professor S Klopper.

Professor Klopper will present Valerie Mizrahi and Rajkumar Ramesar for the award of a Fellowship.

Professor Klopper will present Roshan Galvaan and Liesl Peters for the Social Responsiveness award.

The graduands will be presented to the Vice-Chancellor by the Dean of the Faculty of Health Sciences.

The Vice-Chancellor will congratulate the new graduates.

Professor Klopper will make closing announcements and invite the congregation to stand.

The Vice-Chancellor will dissolve the congregation.

The procession, including the new graduates, will leave the hall.
(The congregation is requested to remain standing until the procession has left the hall.)

DISTINCTIONS IN THE FACULTY OF HEALTH SCIENCES

MBCHB courses are weighted differently, with the first three years (basic sciences) counting 110 out of a total of 252 points, and the final three years (clinical sciences) counting 142 out of 252.

The degree may be awarded with

Distinction in the basic sciences, where the student scores at least 80% of the maximum points for the basic sciences; and/or

Distinction in the clinical sciences, where the student scores at least 75% of the maximum points for the clinical sciences; and/or

Honours, where the student achieves an overall point score of at least 75% of the maximum overall points; or

First class honours, where the student achieves an overall point score of at least 85% of the maximum overall points.

The degrees of BSc (Audiology) and BSc (Speech-Pathology) may be awarded with distinction for a weighted average of at least 75% across all four years of study.

The degree of BSc (Occupational Therapy) may be awarded with distinction for a weighted average of at least 75% for all courses from the first to the fourth year of study across all four years of study.

The degree of BSc (Physiotherapy) may be awarded with distinction for an average of 75% across all four years of study.

The gold medal is awarded to the student in MBCHB who achieves the highest overall grade point average across all six years of his or her degree, and a weighted average of at least 75% across all years of study.

DECLARATION FOR HEALTH SCIENCES GRADUANDS

AT THE TIME OF BEING ADMITTED AS A MEMBER OF THE HEALTH PROFESSION:

I solemnly pledge to serve humanity

My most important considerations will be the health of patients and the health of their communities

I will not permit considerations of age, gender, race, religion, ethnic origin, sexual orientation, disease, disability or any other factor to adversely affect the care I give to patients

I will uphold human rights and civil liberties to advance health, even under threat

I will engage patients and colleagues as partners in healthcare

I will practise my profession with conscience and dignity

I will respect the confidentiality of patients, present or past, living or deceased

I will value research and will be guided in its conduct by the highest ethical standards

I commit myself to lifelong learning

I make these promises solemnly, freely and upon my honour.

FELLOWSHIP

The election by Senate of a member of the faculty to be a fellow recognises sustained and original contributions through research or creative endeavour.

The fellows in the Faculty of Health Sciences and their years of election are:

2006: F Brombacher
2014: G Hussey
2014: NS Levitt
2006: PN Meissner
1992: TD Noakes
2009: VA Russell
2010: DJ Stein
2013: ED Sturrock
2013: C Williamson
2008: HJ Zar

The following members of the Faculty of Health Sciences have been elected to a fellowship:

VALERIE MIZRAHI

Professor and Director of the Institute for Infectious Disease and Molecular Medicine

Valerie Mizrahi is an international leader in the field of tuberculosis (TB) research.

She studies aspects of the physiology and metabolism of Mycobacterium tuberculosis of relevance to TB drug resistance, efficacy and discovery, and to mycobacterial persistence. She is best known for elucidating mechanisms of metabolic and physiological adaptation of M. tuberculosis to conditions encountered during host infection. A major theme of her research has been the study of enzymes involved in DNA metabolism. She moved into the TB field in the early 1990s, at the start of the genomic era. Her analysis of the repertoire of DNA repair genes in M. tuberculosis led to the surprising discovery that this organism lacks a canonical system for mismatch repair – a finding with profound implications for the evolution of inter-strain variation and drug resistance through chromosomal mutation. In collaboration with colleagues at the NIH, Professor Mizrahi discovered a novel system for DNA damage tolerance in mycobacteria, and demonstrated a role for the DnaE2 polymerase in the evolution of drug resistance in *vivo*. Her team subsequently showed that DnaE2 acts as the translesion DNA polymerase in DNA damage tolerance and SOS mutagenesis and that it acts as part of a larger system – a "mutasome" – which involves other proteins. This, together with her work on nucleotide metabolism in mycobacteria, has provided fundamental insights into the mechanisms of DNA replication, repair and mutagenesis in mycobacteria, and has contributed significantly to the positioning of M. tuberculosis as a new model organism in the field of Microbiology.

FELLOWSHIP (CONTNUED)

Professor Mizrahi's team has elucidated fundamental aspects of energy metabolism and cofactor metabolism in mycobacteria. In collaboration with colleagues at the University of Pennsylvania, Professor Mizrahi's team functionally characterised the aerobic respiratory chain in mycobacteria which has subsequently emerged as a major target for TB drug discovery. One of the reagents developed in Professor Mizrahi's laboratory is being used in the TB Drug Accelerator programme of the Bill & Melinda Gates Foundation to identify small molecule inhibitors of M. tuberculosis which inhibit respiration. And her team has developed new tools which harness the power of phenotypic and target-based approaches to enable the identification of target-selective small molecules with growth-inhibitory activity against M. tuberculosis, and are being routinely applied in major international TB drug discovery consortia.

Professor Mizrahi holds an A rating from the NRF and her numerous awards include the 2000 Unesco-L'Oréal 'For Women in Science' Award (for Africa & Arab States Region) and the 2013 Christophe Mérieux Prize from the Christophe and Rodolphe Mérieux Foundation and the Institut de France.

(In absentia) GARY MAARTENS

Professor and Director of the Institute for Infectious Disease and Molecular Medicine

Professor Gary Maartens has made important original scientific contributions in clinical research in the fields of HIV and tuberculosis.

His research on the diagnosis, prevention, and optimal co-treatment of HIV-associated tuberculosis has influenced national and international guidelines. He has also conducted research into the effectiveness, adherence, and healthcare costs of antiretroviral therapy in South Africa.

He led the first randomised controlled trial of adjunctive steroids for tuberculosis-associated immune reconstitution inflammatory syndrome, which occurs in up to 40% of co-infected patients starting antiretroviral therapy, showing reduced morbidity. He led a randomised controlled trial of patient-nominated treatment supporters to improve adherence, resulting in reduced mortality. Finally, he led the first randomised controlled trial of preventing tuberculosis in people with HIV on antiretroviral therapy published in the *Lancet* in 2014, showing that preventive therapy was effective irrespective of tuberculin skin test status. Previous studies, which were done in people not on antiretroviral therapy, had shown that only those with positive tuberculin skin tests benefitted from preventive therapy.

FELLOWSHIP (CONTNUED)

(In absentia) BONGANI MAWETHU MAYOSI

Professor of Medicine in the Department of Medicine

Professor Mayosi has made significant original contributions to knowledge in the fields of poverty-related heart diseases and genetics of cardiomyopathy and fibrosis.

He assembled the Investigation of the Management of Pericarditis (IMPI) research programme to study the clinical, immunological, and biochemical features of tuberculous pericarditis, and revealed that in tuberculous pericarditis, steroids:

a) do not reduce the incidence of the combined outcome of death, cardiac tamponade or constriction,

b) increase the incidence of HIV-associated cancer,

c) reduce the incidence of constrictive pericarditis and hospitalisation regardless of HIV status.

The findings of IMPI have set a new standard for clinical practice.

He has established the Global Rheumatic Heart Disease Registry to provide information on the clinical characteristics, treatment, outcomes and barriers to care of rheumatic heart disease. REMEDY – the first and largest multi-centre study of rheumatic heart disease - has shown that rheumatic heart disease is a disease of the young that is associated with a heavy burden of complications, and major gaps in the use of proven interventions such as penicillin for secondary prophylaxis, oral anticoagulants for those at risk for stroke, and a dearth of contraceptive services for women. He has also made notable contributions to studies of incidence of rheumatic heart disease, cost-effectiveness of primary prevention, and genetics of rheumatic heart disease.

Professor Mayosi has made key discoveries in the field of genetics and has created a unique global resource for genotypephenotype correlation studies in cardiomyopathy. He observed a new inherited condition of multisystem fibrosis, and conducted a whole-exome sequencing experiment which led to the discovery of mutations in ‘family with a sequence similarity’ gene as the cause of the disease. Thus FAM 1 1 1 B is a critical gene in the development of multisystem fibrosis, which is a key pathological process in human disease. This new biological pathway to fibrosis provides a novel target for intervention to prevent and treat fibrosis. His contributions have also had an important impact on patient management.

FELLOWSHIP (CONTNUED)

RAJKUMAR RAMESAR

Professor of Human Genetics

Raj Ramesar's research is on disease susceptibility in African populations, progressing from the commonly recognised inherited diseases to those that are more complex yet more common and relevant to our burden of disease.

Having engaged with families along the West Coast of South Africa where an hereditary form of cancer was a major concern, Professor Ramesar sought to identify the genetic predisposing factor which leads to the disease. After extensive field work he discovered the genetic mutation linked to colorectal cancer in these communities. His immediate priority was to bring world-class medical intervention to those at risk. He and his team developed an intervention programme that included genetic counselling and predictive genetic testing to identify individuals most likely to develop the cancer. This programme has involved colleagues in the Surgical Colorectal Unit at Groote Schuur Hospital and has been running for more than 20 years; it has successfully contributed to significantly lowering mortality and morbidity in these communities. His work has attracted international attention to these families – and brought a clinical trial to these remote communities which showed that aspirin had the effect of delaying the onset of colorectal cancer by up to 10 years in those carrying the disease-causing mutation.

Retinal Degenerative Diseases (RDDs), leading to blindness, have historically proven to be recalcitrant. Professor Ramesar has worked with the patient support group, *Retina South Africa* for more than 25 years in developing a national research programme, which relies on recruitment of families with RDDs. This has led to the identification of the genetic and biological basis of disease in up to 50% of people recruited into the programme. The understanding of the biological basis of disease now allows the possibility of predictive and confirmatory diagnostic testing, as well as potential interventions such as gene therapy. Knowing exactly which gene is defective in any individual/ family has paved the way for the development of novel biological therapeutics.

SOCIAL RESPONSIVENESS

The Social Responsiveness Award provides an institutional signal to members of the University that social responsiveness is an important priority:

ROSHAN GALVAN and LIESL PETERS
Division of Occupational Therapy
Department of Health and Rehabilitation Sciences,

Roshan Galvaan and Liesl Peters' scholarship has recast Occupational Therapy beyond its traditional borders towards addressing the sociopolitical realities and pressing social concerns facing South Africans in their everyday lives. Paying careful attention to the way that research serves society has changed the practice of occupational therapy in community development settings and has generated new knowledge.

Their authentic partnerships with communities are long-standing, a testament to their commitment to the processes of development. The emphasis in their work is on the collaborative identification of critical areas of health and social needs and the development of practice in collaboration with communities. These partnerships provide scope for student learning while offering interventions that address social exclusion.

Developing and introducing the Occupation-based Community Development Practice Framework, commonly referred to as OBCD, as a theoretical frame, has provided students and practitioners with a tool for initiating and designing contextually-relevant interventions with communities. This framework introduces students to practices that are relevant to contexts shaped by challenging social, political, economic and cultural realities. Under Galvaan and Peters' guidance, occupational therapy students have shifted their practice to be able to respond to the pressing needs of individuals, groups and organisations in the education, social development and health arenas. Teaching has focused on the design of innovative interventions in these contexts and the development and application of participatory methods suited to such interventions. Students have the opportunity to apply contextually relevant knowledge and also contribute to new knowledge development through service learning. This influences the ongoing conceptual development of OBCD.

Their work demonstrates that a compelling commitment to the confluence of research, teaching and service in addressing social realities can advance positive social change for vulnerable groups and much needed change in the profession. Their occupational therapy graduates who continue to engage with such issues revolutionise occupational therapy practice, ensuring that it responds more actively to the conditions of peoples' lives.

NAMES OF GRADUANDS

An asterisk * denotes that the degree will be awarded in the absence of the candidate.

FACULTYOF HEALTH SCIENCES

Dean: Professor G Hussey

Before presenting the graduands, the Dean will invite all graduating students in the Faculty to stand and to make the Faculty Declaration. All members of the congregation who treat or will be treating patients are invited to join in affirming or re-affirming their commitment to ethical patient care.

DEGREE OF BACHELOR OF SCIENCE IN AUDIOLOGY

*Simone Teresa Alwar
Mon-Cheri Betanie Baatjes
Zenzo Chakara
Romy Cohen (with distinction)
Aliyah Coleman
Kelsey Fourie
Tracy Anne Frosler
Danielle Gounder
Sivuyile Jange
Inga Macamba
Nyasha Makaruse
Hlupheka Mary Maluleka
Smangele Mashele
Sika Lindelwa Mcgogo
Sboniso Magnificent Memela
Kwanele Leocardia Mseleshe
Snenhlanhla Prescious Ndlovu
Matsie Ntatamala
Lizwe Siyabonga Ntshangase
Babalwa Ezethu Potelwa
Hlologelo Mphulo Ramatsoma
Nomzamo Thabethe
Gomotsegang Tshepang Tshite
Dylan Graham Walker

DEGREE OF BACHELOR OF SCIENCE IN MEDICINE

Nicholas Burdon Bechet
Keolebogile Mable Selebano

DEGREE OF BACHELOR OF SCIENCE IN OCCUPATIONAL THERAPY

Nicola Carey Aberdein
Jenna Ashcroft
Tessa Emily Becker
*Sarah Rose Bishop
Nabeela Brown
Shelby Joan Childs
*Shannon Cohen
Caley-Ann Coughlan
Emma Cronwright
Zainab Davids
Leanne Kirsten Davies
Mishka Ebrahim
Nicola Jean Evans
Stephanie Jenna Farmer
Alice Gelderblom Waddilove
*Nicole Goldberg
Nicole Sarah Gurney
Leigh Michaela Hendricks
Julie Heusser
Kerri-Lee Jean Howell
Nina Lucia Jacobs
Mishka Kadir
Megan Kate Kirsten
Astrid Irene Lisa Kostner
*Mieke Lippstreu
Reyna Makan
Sinegugu Judith Malunga
Tshwaro Benedict Manyeneng
Michael Mathole
Tebogo Pamela Matsebanane
Pallo Mazothana
*Bertha Kanute Mbuya
Siseko Mkalipi
Siphelele Matenza Ndevu
Kendra Mclean Neethling
Salome Ramatsimela Nkoane
Ursula Malebo Nonhlanhla
Malebo Nkosi
Sive Veronica Nyanda
*Nina Oberzaucher
*Setobane Phina Pale
Camilla Price
*John Derek Ralphs (with distinction)
Jessica Bridget Rees-Gibbs
Boitshoko Segwe
*Emily Marguerite Sheard
Mike Shikwambana
S'thembile Phumelele Innocentia Sithole
Bronwen Jane Smithers
Maleekah Terblanche
Xeeder Kelly Van Der Ross
Shivani Vassen
Morgan Catherine Rose Voges
Nadine Volkwyn
Megan Ashleigh Weston

DEGREE OF BACHELOR OF SCIENCE IN PHYSIOTHERAPY

*Liezel Anker
Emma Enid Bergman
Jarred George Brink
Lara Jane Brookstein
Kealan Kumar Chainee
Gabriela De Araujo
Keren Sue Dugmore
Nicola Shan Fielding
Samantha Betty Grace (with distinction)
Thathakahle Charity Hadebe
Rosemary Kate Emma Hanley
*Gregory James Heeger
Rudolph Adriaan Hoffmann (with distinction)
Melissa Margaret King
*Niki Machida
Nicole Jean Maharage
Seanakgotso Makamole
Athenkosi Mbetshu
Anelisiwe Mntambo
Mary-Ann Mmathapelo Phoku
Charni Lee Potter
Lisa Jacqueline Pritchard
Ofentse Pule
Zinhle Radebe
Jacqueline Anne Rowe (with distinction)
Natalie Maida Schenk
Tshepang Chriseldah Sebulele
Nicole Stewart
Shannon Lee Stubbs (with distinction)
Tyron Brett Tarpey
Frans Mahlabane Tebeile
Olorato Precious Thejane
Mihlali Tomose
Olo Toni
Shauna Maureen Tweedie
Marchelle Wessels
Cindy Williams
Robin John-Joseph Williams
Matthew David Wills
*Helen Jay Worthington-Smith

DEGREE OF BACHELOR OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Storm Harvey Anderson

Aimee Michelle Auret
Amy-Rose Austin (with distinction)
Candice Elizabeth Bestenbier
Megan Bingham
Melanie Margaret Brunette
Emily Charlotte Danvers
Lara Cathryn Day
Aimee De Jager
Svenja Delicio
Natania Hester Esterhuizen (with distinction)
Mary-Ann Isabel Farelo
Amy Nina Grant
Sasane Mercedes Hendricks
Olivia Jane Hodgkinson
Alice Howes
Izelle Megan Jassen
Kaytlin Jesse Kerrigan
Megan Frances Lang
Caseyleigh Carnelle She' Lawrence
Noxolo Nontsikelelo Ludidi
Jessica Maria Miles
Khahliso Yvonne Mofokeng
Goitsemodimo Moipei
Sarah Morris
Lize Mostert
Chané Naidoo
Anushka Nair
Nombuso Ndawonde
Taryn Leigh Neethling
Meghan Isla Perry
Juliette Reynders
Savannah Senior (with distinction)
Sabelo Zinhle Sibiya
Amy Samantha van der Merwe
Carla Joy Van Zyl
Dagmar Rose Wigmore (with distinction)

DEGREE OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

Adli Abrahams
Jahaan Abrahams
Zunaid Ahmed
Kim Janey Alexander
Bianca Gillian Amansure
Kirsten Deanne Arendse
Tahira Banoobhai
Nicolina Thandiwe Bardou Shabala
Bibi Bassa (with distinction in the basic sciences, distinction in the clinical sciences and the degree with honours)
Clio Elizabeth Bax
Abraham Bernardus Beyer
Catherine Elizabeth Bigalke
Michelle Louise Bird
Kedisang Kanjane Boikanyo
Beth Ann Buchanan (with distinction in the basic sciences and the degree with honours)
Katherine Diana Calver
Mohammed Chand
Valmy Craffert (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Candice Lisa Daniels (with distinction in the clinical sciences)
Wilhelm Wolfgang Dannheimer (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Thabiet Dawood
Nomaqhwa Suzan Dladla
Yenziwe Nokudunyiswa Dlamini
Matthew James Dold
Lisa Denise Dondashe
Jessica Lee Du Preez
Samantha Magdalene Dyantyi
Surya Begum Ebrahim (with distinction in the clinical sciences and the degree with honours)
Bernard Tristan Edwards (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Mahdi Elabor
Nathan Carl English (with honours)
Ghaalied Fakier
Danielle Simone Ferrar (with distinction in the clinical sciences and the degree with honours)
*Tracy Lee Flowers (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Rhiannon Kristin Forlee
Jennifer Joy Fouché
*Liesl Fourie
Amy Annabel Freakes (with distinction in the clinical sciences)
Isma-eel Gamieldien
Bronwen Jessica Gavine (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Nichola Joanne Gilbert (with distinction in the basic sciences, distinction in the clinical sciences and the degree with honours)
*Shuaib Goga
Adele Roxanne Govender (with distinction in the basic sciences)
Anelisiwe Zizipho Gqweta
Mikail Amir Gurland
Sharon Nkiruka Harbor (with distinction in the clinical sciences)
Hervin Nivans Heeroo
Zamngedwa Jessica Hlombe
Jacob Robin Hoffman (with distinction in the basic sciences and the degree with honours)
Andrea Catherine Icely (with distinction in the basic sciences)
Kaashifah Akbar Ismail
Gabby Anne Jacobs
Kelly Monique Jacobs (with distinction in the clinical sciences and the degree with honours)
Ishraaq Jakoet
Farah Jawitz
Melissa Jhinku
Relebohile Moratoa Joale
Naomi Tebogo Tuckey Johnson (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Dilish Jokhoo
Louise Jooste (with distinction in the basic sciences)
Jessica Joseph (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)

Christy Aino Ndapewa Kaiyamo
Tasneem Kemp
*Vanessa Khonje
Giles Hayden King
Jessica Lindsay Klazinga
Londiwe Nomagugu Kunene
Jerry Ye Aung Kyaw
Papa Kwabena Offeh Kyei
Darshnika Pemi Lakhoo (with distinction in the clinical sciences and the degree with honours)
Natasha Lalloo
*Innocent Maroslyn Lamola
Carl Michael Larbi
Molelekeng Sanna Lesole
Viwe Ludidi
Zamalunga Sinenhlanhla Lunga
Siphosethu Popi Lusu
Odelia Beryl Lutchman
Tshepang Mabala
Mampe Johanna Mabelane
Prashanti Ranjiv Maharaj
Samiya Zahra Mahomed
Gaynelle Makhubele
Eugene Baleseng Malefahlo
Tshegofatso Meta Maoto
Nonhle Princess Maphumulo
Mmangaliso Yoliswa Maseko
Phuti Matsetela
Bokang Mauba
Tivani Mbambu
Anesu Tapiwa Mbizvo (with distinction in the basic sciences)
Tsakisani Inocentia Mboweni
*Jason Mcarthur
Jason Browning Mc Master (with distinction in the clinical sciences)
Brigid Patricia Mc Millan
Mathilda Christina Mennen
Luke Daniel Metelo-Liquito (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
*Lindokuhle Methula (with distinction in the basic sciences, distinction in the clinical sciences and the degree with honours)
Nsekela Leticia Mfuta
Noxolo Mgemane (with distinction in the clinical sciences and the degree with honours)
Karen Michitsuji
Christy Anne Milligan (with distinction in the clinical sciences and the degree with honours)
Tsembekile Nthabiseng Mkhonta
Thanda Thelma Mnguni
Mamphato Modipadi Adolphina Moela
Amogelang Mpho Mokobane
Thabang Mokoena
Kaelo Molefe
*Thato Moloko
Gaolatlhe Motlhaedi
Lwando Ndabezitha Mpotulo
*Nomakhosi Renegia Msimango
Sinovuyo Xolelwe Msutu
Nozipho Ayanda Mthethwa
Nkanyezi Girly Zanele Mthimunye
Philip Michael Munda
Matthew Michael Everett Murphy (with distinction in the clinical sciences and the degree with honours)
Lwelani Augustine Mushiana
Bupe Claire Mwangalawa
Syed Safwan Nadvi
Denver Naicker (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Maxine Naicker
Priyadarshni Naidoo
Priyanka Naidu (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Devina Nair
Stephanie Sandisiwe Ncube
Mxolisi Brian Ndimande
Sakhile Sbonile Ndlazi
Ntombinati Ngcetane
Sizwiwe Vangeli Ngema
Abongile Wendy Njiyela
Kgothalo Mamotabo Nkoagatse
*Thulani Sihle Ntshangase
Mzwandile Zondi Nyalungu
Samukelisiwe Sindisiwe Nyamathe
Amaan Omar
Kelebogile Othugile
Victoria Parker (with distinction in the clinical sciences and the degree with first class-honours)
Shama Aashish Patel (with distinction in the clinical sciences)
Inge Pearson (with distinction in the clinical sciences)
Raeesah Petersen (with distinction in the basic sciences, distinction in the clinical sciences and the degree with honours)
Odette Michelle Pheiffer
Katlego Harriette Pitse
Chido Ponde
*Kate Alexis Price
Monwabisi Patrick Pumlomo
Varish Rajkumar Ramesar
Kholofelo Faith Raphahlelo
Moloko Eudora Rapholo
Phillippa Ann Rattray (with distinction in the clinical sciences and the degree with honours)
Simone Megan Rayner
Alexia Nicola Rossi (with distinction in the clinical sciences)
Theresia Amanda Rubler (with distinction in the clinical sciences and the degree with honours)
Phiwokuhle Nobahle Rubuluza
Bijou Stefanie Salence (with distinction in the clinical sciences and the degree with first class honours)
Ryan John Sampson
Fatima Scello
Azhar Seedat
Bianca Carmenita Speller
Simon Nkululeko Spoor
Niklo Pedro Staggie
Leanne Rachel Stakes
*Pranav Sundrum
Thandi Swiel (with distinction in the clinical sciences and the degree with honours)
Zakeera Taliep
Mmopi Gontse Kebaabetswe Thekiso
Bongekile Gladness Tiwane
Mpho Rose Tsheisi
Keagile Obamelang Tsoke
Kevin Patrick Van Der Merwe
Stacy-lee Van Der Westhuizen
Nicola Ellen Van Dongen
David Ross Shearer Veitch (with distinction in the clinical sciences and the degree with honours)

Christopher James Westwood
Lumart Wiechers (with distinction in the basic sciences, distinction in the clinical sciences and the degree with first class honours)
Jade Williams
Yonga Yako

DEGREE OF BACHELOR OF SCIENCE IN MEDICINE (HONOURS)

In Nutrition & Dietetics:
Nicole Christine Gay Abrey

DEGREE OF BACHELOR OF MEDICAL SCIENCE HONOURS

In Applied Anatomy:
Chandra Longden-Thurgood

In Bioinformatics:
(First Class) Penelope Ruth Hay-Hartnady
Florence Malehlabathe Phelanyane
(First Class) Kayleigh Diane Rutherford
*(First Class) Sabina Stefan

In Biological Anthropology:
Laura Kareline Benetton
Elizabeth Sarah Potter

In Clinical Pharmacology:
*(First Class) Marine Barnabe
*(First Class) Leigh Bronwyn Jacqueline Howard
*(First Class) Bianca Linda Lourens
Pumeza Nomawushe Makasi
*(First Class) Devasha Redhi
*(First Class) Daniel John Watson

In Forensic Genetics:
(First Class) Nicole Kerry Barnes

In Human Genetics:
(First Class) Siobhan Nadine Brushett
(First Class) Hannah-Ruth Engelbrecht
*(First Class) Amy Frances Geard
Noluthando Rearabetswe Manyisa
*Buyisile Goodnature Mkhize

In Infectious Diseases and Immunology:
*Zoe Andrea Morrow Baker
(First Class) Emily Iona Chetwin
Reyaaz Davids
(First Class) Keisha De Gouveia
Ryan Michael Dinkele
(First Class) Deelan Sudhir Doolabh
*(First Class) Rachel Tal Esra
(First Class) Caryn Samantha Louise Prentice

In Medical Biochemistry:
*Claudia Albeldas
*Genevieve Marie Auger
(First Class) Sian-Ailin Da Silva
Tina Younis Jonker
Kathleen Kehoe
*(First Class) Tarisiro Matiza
Nokuthula Msibi
*(First Class) Yashodhan Mannadiar Nair
*Beatrice Relebogile Ramorola
(First Class) Nicola Stephanie Steinhaus
*(First Class) Sylvia Dominique Ujma

In Medical Cell Biology:
Leonardo Alves De Souza Rios
Tatjana Alexa Baleta
Mohamed Ebrahim Essop
*Carla Astrid Gustafsson
*Nawaal Luke
*Bronte Oaker

In Physiology:
Jessica Abrams
(First Class) Ashlee Elizabeth Alston
(First Class) Anja De Lange
*(First Class) Kira Michaela Düsterwald
(First Class) Sarah Gabrielle Ive
Dana Katsere
(First Class) Simone Catherine le Roux
(First Class) Yifan Joshua Li
(First Class) Samantha Lynn Marchant
Buhlebethu Sukoluhle Mpofu
*Prisca Ofure Osiki
(First Class) Philippa Gillian Phelp
*(First Class) Clare Christine Phillips
Tamlynn Phoenix
(First Class) Anja Schwär

In Radiobiology:
(First Class) Claire Rosemary Conradie

In Structural Biology:
(First Class) Angela Mary Kirykowicz

DEGREE OF BACHELOR OF MEDICAL SCIENCE HONOURS IN BIOKINETICS

(First Class) Nadav Yehuda Aharonov
Waseem Choonara
Warwick Gordon Cross
Nicola Cupido
Yasteel Dass
Demi Davidow
(First Class) Tamsyn Jade Fenner
Kyla Susan Lees Malloch-Brown
(First Class) Alexander Donald McKerrow
*Amoray Chantel Theunissen
Luke John Elwin Wewege

DEGREE OF BACHELOR OF MEDICAL SCIENCE HONOURS IN DIETETICS

*Deandra Catry
*Mariella Eliane Dierks
*Julie Emma Rose Fienberg
Kelsey Jean Glynn
*Chloe Titia Hartwig
Elsje-Marié Honing
Tanya Huber
Khanyisa Akhona Ndaba
Melanie Sher
Simone Caroline Singery
Aretha Lameez Van Rhyn

DEGREE OF BACHELOR OF MEDICAL SCIENCE HONOURS IN EXERCISE SCIENCE

*(First Class) Brittany Morgan Andrew
(First Class) Suhail Dada
*Anna Josephine Notten
Drew Wade Sin
*(First Class) Lindsay Toyah Starling
*Tiffany Van Niekerk

FACULTIES OF ENGINEERING & THE BUILT ENVIRONMENT, HEALTH SCIENCES AND HUMANITIES

ORDER OF PROCEEDINGS

Academic Procession.
(The congregation is requested to stand as the procession enters the hall)

The Vice-Chancellor will constitute the congregation.

The National Anthem.

The University Dedication will be read by a member of the SRC.

Musical Item.

Welcome by the Deputy Vice-Chancellor, Professor F Petersen.

Professor Petersen will present Keertan Dheda for the award of a Fellowship.

Professor Petersen will invite the outgoing Registrar, Mr Hugh Amoore, to address the congregation.

Address by Mr Amoore.

The graduands and diplomates will be presented to the Vice-Chancellor by the Deans of the faculties.

The Vice-Chancellor will congratulate the new graduates and diplomates.

Professor Petersen will make closing announcements and invite the congregation to stand.

The Vice-Chancellor will dissolve the congregation.

The procession, including the new graduates and diplomates, will leave the hall.
(The congregation is requested to remain standing until the procession has left the hall.)

DISTINCTIONS IN THE FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

A qualification may be awarded with distinction, honours, and first class honours where a student has shown outstanding academic achievement.

The Bachelor of Architectural Studies (BAS) may be awarded with distinction where a candidate has obtained

> a minimum of 75% in the Design and Theory Studio III examination and minimum of 60% in one of the other Design and Theory Studio examinations
>
> and an additional three marks of at least 75% in his or her BAS course work.

The degrees of Bachelor of Science in Engineering and Bachelor of Science in Geomatics may be conferred with

> first class honours, where the candidate has obtained at least 75% for the research project and a weighted average of 75% for the degree or,
>
> honours, where the candidate has obtained a minimum of a second class pass in the research project and a weighted average of 65% for the degree.

The degrees of Bachelor of Science in Construction Studies and Bachelor of Science in Property Studies may be awarded with distinction where a candidate obtains a minimum weighted average of 75% for the degree.

DISTINCTIONS IN THE FACULTY OF HEALTH SCIENCES

Postgraduate diplomas may be awarded with distinction if the candidate has achieved 70% and above for all courses with a weighted average of at least 75%

Master's degrees (by coursework and dissertation) may be awarded with distinction

for the dissertation, where the mark for the dissertation is at least 75%

for the degree, where the weighted average is 75% or better and no component is below 70%

Master's degrees (by dissertation) may be awarded to a candidate who achieves a mark of 75% and above for the dissertation.

DISTINCTIONS IN THE FACULTY OF HUMANITIES

Bachelors degrees may be awarded with distinction

in a subject, where the student has an average of at least 75% and no mark below 70%

in the degree, where the student has both distinction in at least one subject and first class passes in at least 10 courses.

Honours degrees are awarded by class (first, second class division one, second class division two, or third).

Master's degrees may be awarded with distinction

for the dissertation, (in a coursework and dissertation curriculum) for especially meritorious work, the dissertation being in the first class (75% or better)

in the degree, for especially meritorious work, where the average is 75% or better and no component is below 70%.

DECLARATION FOR HEALTH SCIENCES GRADUANDS

AT THE TIME OF BEING ADMITTED AS A MEMBER OF THE HEALTH PROFESSION:

I solemnly pledge to serve humanity

My most important considerations will be the health of patients and the health of their communities

I will not permit considerations of age, gender, race, religion, ethnic origin, sexual orientation, disease, disability or any other factor to adversely affect the care I give to patients

I will uphold human rights and civil liberties to advance health, even under threat

I will engage patients and colleagues as partners in healthcare

I will practise my profession with conscience and dignity

I will respect the confidentiality of patients, present or past, living or deceased

I will value research and will be guided in its conduct by the highest ethical standards

I commit myself to lifelong learning

I make these promises solemnly, freely and upon my honour.

FELLOWSHIP

The election by Senate of a member of the faculty to be a fellow recognises sustained and original contributions through research or creative endeavour.

The fellows in the Faculty of Health Sciences and their years of election are:

2006: F Brombacher
2014: G Hussey
2014: NS Levitt
2006: PN Meissner
1992: TD Noakes
2009: VA Russell
2010: DJ Stein
2013: ED Sturrock
2013: C Williamson
2008: HJ Zar

The following members of the Faculty of Health Sciences have been elected to a fellowship:

KEERTAN UNKA JAIRAN DHEDA
Professor in the Department of Medicine

Keertan Dheda's main research interest is the study of multi-drug resistant pulmonary infections including TB.

His work has enabled more rapid diagnosis of drug-resistant TB, avoids redundant and expensive drugs, has found ways in which survival of patients with drug-resistant TB can be improved, has defined when therapy should be withdrawn in destitute patients, how healthcare workers should be optimally diagnosed, and is currently evaluating a new treatment regimen for drug-resistant TB. These measures will help the lot of drug-resistant TB in general, but will also help individual patients and families who rely on these patients who come from vulnerable communities. In South Africa, more than half the drug-resistant TB remains undiagnosed in the community. Professor Dheda's methodology and study incorporates the use of novel diagnostic technologies on a mobile van stationed at congregate settings, e.g shopping centres, in previously disadvantaged townships. This approach has revealed that advanced diagnostic technologies do not have to be restricted to central laboratories, but can be deployed in peripheral health outposts and TB hotspots. This has ushered in the placement of these technologies in prisons, mines, and certain high burden TB clinics. Professor Dheda's work has shaped policy on how healthcare workers should be screened and diagnosed for drug-resistant TB. It has highlighted the problem of drug-resistant TB in healthcare workers, already in short supply in the country, and has played a seminal role in prioritising the rollout of infection control measures nationally within hospitals and clinics.

FELLOWSHIP (CONTINUED)

He holds three patents related to new TB diagnostic or infection control technologies, one of which is currently being developed as a user-friendly test for extra-pulmonary tuberculosis. His work has resulted in several seminal publications in journals such as *The Lancet*. He is the Chief Editor of the South African Respiratory Journal and also serves on other editorial boards. He has established an international collaborative network and a research programme in which several Master's and PhD students are currently enrolled; and he has been involved in several capacity-building related global health programmes.

NAMES OF GRADUANDS/DIPLOMATES

An asterisk * denotes that the degree or diploma will be awarded in the absence of the candidate.

1. FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Dean: Professor A Lewis

POSTGRADUATE DIPLOMA IN PROPERTY STUDIES

Sean Gordon Fox
*Jared David Halliday
Deon Jansen van Vuuren
*Rubia Ann Manuel
*Jason Ross Rodrigues
*Cornelius Johannes van der Walt

POSTGRADUATE DIPLOMA IN PROJECT MANAGEMENT

*Enslin Gardiner
*Ibtisaam Lilla
*Hendrik Albertyn Smit

DEGREE OF BACHELOR OF ARCHITECTURAL STUDIES

*Jessica Jane Grinaker

DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING

In Chemical Engineering:
*Zolisa Chuma Hohana
Chiara Maharaj
Lineo Matumane
*Senzo Mntukhona Mgabhi
Saphokazi Mgqamqo
*Nobuhle Mpofu
*Smanga Prince Ngcobo
*Zinwe Ngculu
Rorisang Ntoane
Karabo Motsile Ramonnye
Murray Leslie Shaw

In Civil Engineering:
*Mogammad Saadick Abrahams
*Claire Birungi
Sanelisiwe Nonhlanhla Precious Buthelezi
Tasneem Ebrahim
Vuyiseka Thandokazi Mapangwana
Nhlamulo Ndlovu
Ntobeko Sthabiso Happyson Sindane

In Electrical Engineering:
Tholi Biyela
Khanyisa Wendy Dyani
Mogamad Tauriq Hendricks
Chetan Deep Jankee
Rijin Reji John
Ntozintle Matiwane
Sandisiwe Mtshaulana
Sugesan Reddy

In Electrical and Computer Engineering:
Michael James Allport
Tinashe Alfred Chirongoma
Elizabeth Ajoa Nyamebekyere Foli
Ananya Gangopadhyay
Yean-tzer Hsu
Bradley Kahn
Barbara Apili Ojur

In Mechanical Engineering:
Fabian Ross Canterbury
Michael Haig Daly
Kyle Hankey
Sam Shafishuna Ithete
Andre Van Willingh
*Jonathan David Waite

In Mechatronics:
Nathan Boyles
*Jon Peter Dixon
*Patrick James Lambert
*Grant Norman Maxwell
*Munyaradzi Keith Mupazviriho
Siddiqah Rinquest (with honours)
Sabina Sundaramoorthy
Mark Thabo Townsend
*Alahanage Janith Wimaladasa

DEGREE OF BACHELOR OF SCIENCE IN GEOMATICS

Jannik Wilhelm Rottcher
*Gustaf Swart

DEGREE OF BACHELOR OF SCIENCE IN PROPERTY STUDIES

*Stuart Campbell Dunlop
*Nicholas Mitchell Holton
Brenden Shiel

2. FACULTY OF HUMANITIES

Dean: Professor S Buhlungu

CERTIFICATE IN ADULT EDUCATION, TRAINING & DEVELOPMENT

*Bukelwa Sontshatsha

PERFORMER'S DIPLOMA IN THEATRE

*Peggy Zinziswa Tunyiswa

DIPLOMA IN JAZZ STUDIES

*Edward Alexis Herman

DIPLOMA IN EDUCATION

*Shirley May Bonita Lippert

HIGHER DIPLOMA IN EDUCATION (POSTGRADUATE) SECONDARY

*Anati Zantsi Pilani Mciteka

POSTGRADUATE DIPLOMA IN AFRICAN STUDIES

*Isaac Olivier Essomba

DEGREE OF BACHELOR OF ARTS

Funeka Banjatwa
Abdeah Davis

Georgia Emily East
Nabila Ganie
*Karen Grobler
*Emma Lancaster
Lesego Khutso Madisa
Caitlin Grace Manne
*Brian Thabo Mnisi
*Tegan Lee O'Neill
Jayson Pillay
Talysa Rudah
Robyn Van Schalkwyk
Vanessa Camille Weich
*Chengyu Zhang

In Fine Art:
*Ra-ees Saiet

DEGREE OF BACHELOR OF MUSIC

In Performance:
Matthew Lee Belyeu (with distinction in Jazz Guitar)

DEGREE OF BACHELOR OF SOCIAL SCIENCE

Rachel Joaquim Alberts
Rasoha Sindi Amunga
Janet Awodele
Ashley Justin Benn
*Lisa Berkman
*Liam Noel Berry
*Edward Pennell Buxton
Alicia Gaelle Chamaille
Kennedy Macharia Chege
Ariel Cheng
Pontsho Kabelo Innocentia Chilwane
*Jaime Tiago Fragoso Santos Brazao De Barros
*Daniel John de Klerk
Samantha Farquharson
Kelsy Kim Fisher
*Alexandra Fuller
Thaaqib Hendricks
Sean Johnstone
*Tad Khosa
Azande Fanelesibonge Kubheka
Andisiwe Nangamso Kumbaca
Oyisa Latsha
Nicole Sarah Lee
Ishmael Zithembiso Mahlangu
Jaydene Malcolm
Sharon Farrahnaz Mashhood
Ceili McGeever
*Lindiwe Mlalazi
*Ompolokile Owen Mmuhela
Nkosinathi Mncwabe
Nancy Moshi
Penjani Joy Mseteka
Sinenhlanhla Nhlapo
Kirsty Anne Noonan
Landile Yolanda Nxesi
Lemeez Osman
Mikaela Pace
*Nina Pienaar
Zayd Rajie
*Khanyiso Lwazi Sangqu
Jemma Romi Shargey
Annie Shumba
Aisha Slamang
Sihle Sogaula
Asiphe Sogiba
*Matthew Calton Stringer
Shari Mikaela Thanjan
*Rebecca Catherine Thomson
Courtney Megan Titus
Caryn van Rooyen
*Amy Krystyna Wisniewski

In Philosophy, Politics and Economics:
*Joschka Louis Opitz

DEGREE OF BACHELOR OF SOCIAL WORK

Nicole Andrea Forbes
Graylene Hilary Gelderbloem
*Charmaine Nicks
Nontuthuzelo Siganda
*Sabrina Sykes

DEGREE OF BACHELOR OF ARTS (HONOURS)

In African Languages & Literatures:
Ziyanda Yola

In African Studies:
*Diana Mjojo

In Curatorship:
Lindelwa Pepu

In Film and Television Studies:
*Keorapetse Lentsoe Serote

DEGREE OF BACHELOR OF EDUCATION (HONOURS)

Luvuyo Jack
*(First class) Lindy Michele James
Jacquelene Jane Layman
Thulani Mphahlwa
Siyathemba Walter Poswa
Carol Tessa Wengrowe

DEGREE OF BACHELOR OF SOCIAL SCIENCE (HONOURS)

In Philosophy, Politics and Economics:
(First class) Tristan Hugh Von Zahn

3. FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Dean: Professor A Lewis

DEGREE OF BACHELOR OF SCIENCE (HONOURS) IN GEOGRAPHICAL INFORMATION SYSTEMS

*Rimbilana Ribbon Masinge
*Sifiso Nkalitshana

DEGREE OF BACHELOR OF SCIENCE (HONOURS) IN CONSTRUCTION MANAGEMENT

Yusuf Abrahams

DEGREE OF BACHELOR OF SCIENCE (HONOURS) IN MATERIALS SCIENCE

*Olwethu Mndini
*Samukhele Mwase

DEGREE OF BACHELOR OF SCIENCE (HONOURS) IN QUANTITY SURVEYING

Tinashe Michael Matare

DEGREE OF MASTER OF ARCHITECTURE (PROFESSIONAL)

Clint Mark Abrahams
*Irshaad Ahmed Allie
*Louwrens Botha
(With distinction) Alexander Francois Coetzee
(With distinction) Christine Caryl de Beer
Claire du Plessis
Devin du Plessis
Laura Dale Graham
*(With distinction) Juliet Anne Therese Harrison
Lauren Jane Herring
Lawden Curtis Holmes
Luc Daniel Le Grange
Mphumzi Nelson Mabukana
(With distinction) Alexandria Emily Mackinnon
Catharina Malan
Mabasa Mashazhu
Maximillian Richard Melvill
(With distinction) Matthew James Mills
Katlego Moreme Mothapo
Hayley Jane Mouton
Suaad Patel
Jamil Randera
Jean Sebastian Rolando
Christos Simos
Timo Smit
*Ekin Alexandra Thompson
Paramasiven Veeramundar
Bayonle Olanrewaju Windapo
(With distinction) Sophie Zimmermann

DEGREE OF MASTER OF CITY AND REGIONAL PLANNING

Faranaaz Bassa
*Dirk Frederik Mudge Basson
(With distinction) Mari Botha
Brogan Laine Bradfield
Palmira Ndeshihala de Almeida
Ryan Nicholas Fester
David Michael Scott Hanly
*(With distinction) Kate Hogarth
Voumani Panagiotis Madonko
Tarryn McCann
Martin Felix Mendelsohn
Guillaume Jean-Robert Narainne
Catherine Barbara Cartwright Nicks
Lungelo Welisa Nkosi
*Samuel Vandewater
Adam David van Heerden
Thokozani Sthandiwe Zulu

DEGREE OF MASTER OF CITY PLANNING AND URBAN DESIGN

Ranvir Singh Guttee
Azraa Rawoot
Meghan Smith
Nicola Smith
Marika Strauss

DEGREE OF MASTER OF ENGINEERING

In Civil Infrastructure Management and Maintenance:
*Lindy-Ann Krause
*Nyiko Alexander Makaring

In Engineering Management:
Shingirayi Nyamhandu

In Structural Engineering & Structural Materials:
Yusuf Hargey
*Francois Potgieter

In Transport Studies:
Aideen Carolus

In Water Quality Engineering:
Jennifer Louise Robertson

DEGREE OF MASTER OF LANDSCAPE ARCHITECTURE

*Luciana Angela Hendrika Acquisto
*Michael John Brown
Frank Bramwell Kleinschmidt

DEGREE OF MASTER OF PHILOSOPHY

In Conservation of the Built Environment:
Joanne Ruth Buitendach
Elize Joubert

In Engineering Management:
Daniel Rogatschnig

In Energy Studies:
Vinesh Naicker

In Energy Development Studies:
Haydn Liam May
*Kimenthrie Pillay

In Geomatics:
*(With distinction in the dissertation and the degree with distinction) Leslie Anne Downie

In Space Studies:
(With distinction in the dissertation) Tsige Yared Atilaw
*(With distinction in the dissertation and the degree with distinction) James Alexander Gibson Kilroe

In Sustainable Mineral Resource Development:
Takunda Yeukai Chitaka

In Transport Studies:
Anacletta Moipone Sam

In Urban Infrastructure, Design & Management:
*Gary Claude Goliath

DEGREE OF MASTER OF SCIENCE IN ENGINEERING

In Chemical Engineering:
Zaheera Ahmed
Simone Monique Daniels
(With distinction in the dissertation and the degree with distinction) Gorden Thobani Gambu
Sibongiseni Yamkela Gqebe
Ntandoyenkosi Hlabangana
Precious Thandeka Hlongwane

Tiisetso Makheane Moimane
*Latifa Mbwana Mrisho
Sibongile Chiedza Muziki
Adolph Ntaja Mwale
Wadzanai Nyabeze
Malikaah Galant
Caelin Gee September
Jestos Taguta
*Franschua Johan van der Walt
*Michael Rudi Van Heerden
Charl Francois Van Schalkwyk
*Philasande Xalabile

In Civil Engineering:
*Janina Prakash Kanjee
*Andrew Graham McKune
Eva Wanjiru Muinamia
(With distinction in the dissertation and the degree with distinction) Michael Papathanasiou
Mmanake Maria Rathete
*Michelle Vogts

In Electrical Engineering:
*Netsanet Kassa Alamirew
Adele Monica Yayra Boadzo
(With distinction in the dissertation and the degree with distinction) Michael Bosongo Bombile
*Paul Andrew Carpenter
(With distinction in the dissertation) Munyaradzi Justice Chihota
*Logan Michael Dunbar
(With distinction in the dissertation and the degree with distinction) Callen Fisher
*Dayne Hilton Kemp
Zahir Hoosain Khan
*Seoungyoung Lee
Sekhonyana Moeti
Otshepeng Johny Moraka
*Pius Kavuma Basajjabaka Mugagga
(With distinction in the dissertation and the degree with distinction) Nixon Thuo Ngethe
*(With distinction in the dissertation and the degree with distinction) Alexander Ernest Noel Schutz
*Benjamin Charles De Villiers Sheard
Samkeliso Hubert Shongwe
(With distinction in the dissertation and the degree with distinction) Johannes Petrus Truter
Lekhobola Joachim Tsoeunyane

In Energy Development Studies:
Hakirii Julian

In Geomatics:
Ahmad Desai

In Geotechnical Engineering:
(With distinction in the dissertation and the degree with distinction) Angella Lekea
*(With distinction in the dissertation and the degree with distinction) Byron Wade Mawer
Vincent Oderah
*Jjuuko Samuel
*(With distinction in the dissertation) Sam Bryant Wegener

In Materials Engineering:
(With distinction in the dissertation and the degree with distinction) Nur Mohamed Dhansay
*Clinton Derek Leary
Uyuenendiwannyi Mandavha
Lwazi Qangule
Yu Zhang

In Mechanical Engineering:
Kerry-Anne Airey
*Sulaiman Ahmed Sadeck Bapeekee
*Kirsty Joy Biden
Javon Chrizando Farao
(With distinction in the dissertation and the degree with distinction) Wai Kit Fong
*Timothy Patrick Hope
(With distinction in the dissertation and the degree with distinction) Timothy King
Greig Knox
*Dane Glen Merrick
(With distinction in the dissertation and the degree with distinction) Whitney Ogalaletseng Monnaemang
*Dineo Ngwenya
(With distinction in the dissertation and the degree with distinction) Vinay Ramaswami Shekhar

In Structural Engineering and Structural Material:
Warrick de Kock

In Sustainable Energy Engineering:
Deepti Charitar
*Yoav Shmulevich

DEGREE OF MASTER OF SCIENCE IN PROJECT MANAGEMENT

Sello Adam Masongwa

DEGREE OF MASTER OF SCIENCE IN PROPERTY STUDIES

David Peter Lange
Gerhard Meyer
*Nosiyabonga Portia Mgudlwa
Monique Vernooy

4. FACULTY OF HUMANITIES

Dean: Professor S Buhlungu

DEGREE OF MASTER OF ARTS IN NEUROPSYCHOLOGY

(With distinction in the dissertation) Lesia Smith

DEGREE OF MASTER OF ARTS

In African Cinema:
*(With distinction) André Ricardo Lapa Petit

In Creative Writing:
*(With distinction in the dissertation) Daniel Jonathan Berti
(With distinction) Michele Anne Betty

In French:
(With distinction) Mianda Elizabeth Erasmus

In Historical Studies:
*(With distinction) Ryan Kahn
*(With distinction) Thomas Keegan

In International Relations:
*Elspeth Whitney Boynton
*Megan Claire Bybee
*Omaduore Rosaline Daniel
*(With distinction in the dissertation) Daniel Gregory Moody

In Media Theory and Practice:
(With distinction) Elsa Marguerite Henriette Glenn
(With distinction) Kim Alexa Johnson
(With distinction in the dissertation) Amit Jayantilal Makan
*Thiat Oreoluwa Makinwa

In Philosophy:
*Willem Stephenus McLoud

In Political Studies:
*(With distinction) Samuel Frederic Hamer

In Religious Studies:
(With distinction in the dissertation) Gerda von Benecke

In Screenwriting:
*Carla Inez Espost

DEGREE OF MASTER OF EDUCATION

In Education:
(With distinction) James Alan Buchanan

In Higher Education Studies:
(With distinction) Akisha Estelle Pearman

In Information Communication Technologies:
*Agripah Kandiero
*Gabriel Syantema Konayuma

DEGREE OF MASTER OF FINE ART

(With distinction) Zyma Amien

DEGREE OF MASTER OF MUSIC

*Jacques Abraham Fouche

In Music (Dissertation and Composition):
*(With distinction) Amy Jane Crankshaw

In Music (Dissertation and Coursework):
(With distinction) Wilhelmus Hendrikus Delport

DEGREE OF MASTER OF PHILOSOPHY

In Applied Language and Literacy Studies:
(With distinction) Sara Louise Muller

In Development Studies:
*Jared Rossouw

In Heritage and Public Culture:
*In Soo Hong

In Information Communication Technologies:
Matipa Ricky Ngandu

In Philosophy, Politics and Economics:
Amos Slayer Odhav

In Public Policy and Administration:
*(With distinction) Lesley Blinn Gittings

In Rhetoric Studies:
*Sisanda Bukeka Nkoala

DEGREE OF MASTER OF SOCIAL SCIENCE

In International Relations:
Christopher Knoetze
Marcel Felicity Nagar
*Kaitlin Elizabeth Sweenie
*Gillian Heather Turner

In Organisational Psychology:
Heinrich Adrean Minnaar

In Practical Anthropology:
Ziyanda Majombozi
*(With distinction) Simon Sender

In Psychology:
*(With distinction) Nicholas Ray Malherbe

In Religious Studies:
(With distinction) Veeran Naicker

In Social Anthropology:
(With distinction in the dissertation) Alice Louise Nevin

In Social Development:
Primrose Sikhanyiso Dube
Nthabiseng Aretha Adelice Monare

In Social Policy and Management:
*Ashleigh Jean Kreusch
*Schwarzenegerr Tonderai Kusikwenyu

In Social Work:
*(With distinction) Caroline Dulcie Mills

In Sociology:
(With distinction) Nicole Miriam Daniels
Cornelis Mighael Lombard
(With distinction) Samuel Charles Telzak

5. FACULTY OF HEALTH SCIENCES

Acting Dean: Professor G Hussey

POSTGRADUATE DIPLOMA IN HEALTH PROFESSIONAL EDUCATION

Bandile Basil Makalima

POSTGRADUATE DIPLOMA IN PAEDIATRIC RADIOLOGY

Petrus Jacobus Greyling

DEGREE OF MASTER OF FAMILY MEDICINE AND PRIMARY CARE

*Gregory Howard Cleveland

DEGREE OF MASTER OF MEDICINE

In Anaesthesia:
*Neil David Hauser
Jessica Gwendoline van der Walt
*Christo van der Westhuizen
Gerhardus Petrus van Rensburg

In Family Medicine:
*Wiaan Francois Bedeker

In Radiology:
*Ruschka Ho-Yee

DEGREE OF MASTER OF MEDICINE IN EMERGENCY MEDICINE

*(With distinction in the dissertation) Derrick Reginald Evans
*Katya Evans

DEGREE OF MASTER OF MEDICINE IN FORENSIC PATHOLOGY

*Estevao Bernardo Afonso

DEGREE OF MASTER OF MEDICINE IN MEDICINE

(With distinction in the dissertation) Tasnim Mohammed Bana
*Megan Sara Borkum
*Lindisa Mbuli
(With distinction in the dissertation) Ayanda Trevor Mnguni
*(With distinction in the dissertation) Arthur Kaggwe Mutyaba

DEGREE OF MASTER OF MEDICINE IN NEUROLOGY

*Alan Michael Stanley

DEGREE OF MASTER OF MEDICINE IN NUCLEAR MEDICINE

(With distinction in the dissertation) Garba Haruna Yunusa

DEGREE OF MASTER OF MEDICINE IN OBSTETRICS AND GYNAECOLOGY

Ibezimako Augustus Enyeribe Iwuh
*(With distinction in the dissertation) Ahminah Fakier
Nadia Naude
Lizle Joann Oosthuizen

DEGREE OF MASTER OF MEDICINE IN OPHTHALMOLOGY

*(With distinction in the dissertation) Steven Robert Jan Lapere

DEGREE OF MASTER OF MEDICINE IN ORTHOPAEDIC SURGERY

*(With distinction in the dissertation) David Andrew Chivers
Sibasthiaan Gometomab Shituleni

DEGREE OF MASTER OF MEDICINE IN PAEDIATRICS

*Steffen Bau
*Zakira Mukuddem-Sablay
(With distinction in the dissertation) Tracey Lee Nupen
*Martha Helena Wege

DEGREE OF MASTER OF MEDICINE IN PSYCHIATRY

(With distinction in the dissertation) Deirdre Ilse Pieterse
*James Bradly Shelly

DEGREE OF MASTER OF MEDICINE IN PUBLIC HEALTH MEDICINE

*(With distinction in the dissertation) Kate Rees

DEGREE OF MASTER OF MEDICINE IN SURGERY

Britta Dedekind
(With distinction in the dissertation) Mahammed Riyaad Moydien

DEGREE OF MASTER OF MEDICINE IN UROLOGY

*Farzana Cassim

DEGREE OF MASTER OF PHILOSOPHY

In Biokinetics:
Robert William Evans

In Biomedical Forensic Science:
Courtnee Clark

In Gastroenterology (Surgical):
*Stefan Hofmeyr

In Gynaecological Oncology:
*Kamendran Govender

In Maternal & Child Health:
*Bonface Ombaba Osano

In Nephrology (Adult):
(With distinction in the dissertation) Oluwatoyin Idaomeh Ameh

In Paediatric Critical Care:
Ilse Nadine Appel
John Adabie Appiah

In Paediatric Infectious Diseases:
*Regina Oladokun

In Palliative Medicine:
*Anna Elizabeth Fourie
*Elvis Joseph Miti
*Wilbroad Mutale

In Public Mental Health:
(With distinction) Qhama Zamani Cossie
*Rabia Khan
Demoubly Kokota
Chitsanzo Mafuta
*Connie Olwit

In Sport & Exercise Medicine:
*Alan Denis Shedi Kourie

In Sports Physiotherapy:
*Johan van Wyk

DEGREE OF MASTER OF PUBLIC HEALTH

Carol Diane Cragg
*Johann Alexander Daniels
*Sabelo Jabulani Hlatshwayo
Annesinah Moloi
*Bob Mwiinga Munyati
*Robert Anthony Reed
Farzana Sathar
*Kenin Richard Stuurman

In Clinical Research:
*Mogamat Shamiel Salie

In Epidemiology:
Blake Edward Hendrickson
*Sana Mahtab
*(With distinction) Briana Jean O'Sullivan
*(With distinction) Penelope Cathryn Rose
*(With distinction) Bey-Marrie Schmidt
Tembeka Sineke

In Health Economics:
Plaxcedes Chiwire
(With distinction in the dissertation) Sostina Mutasa
Jennifer Anne Noble-Luckhoff
*(With distinction) Catherine Reid Tomlinson

In Health Systems:
Theodore William John Abrahams
*Janet Giddy
Doreen Mheta

DEGREE OF MASTER OF SCIENCE IN MEDICINE

In Anatomy:
(With distinction) Francesca du Toit
(With distinction) Steven Ronald Randall

In Biomedical Engineering:
*Aliza Janse van Rensburg
(With distinction) Emmanuel Chukwubuikem Nwosu
*(With distinction) Jeremy David Pitman
*(With distinction) Matthew Ryece Proxenos
*(With distinction) Jadrana Teresa Fiorella Toich

In Clinical Pharmacology:
(With distinction) Precious Ngwalero

In Clinical Science and Immunology:
*Loretta Qinisile Magagula

In Dietetics:
Celeste Marinda de Bruyn

In Emergency Medicine:
Jean-Paul Tyrone Veronese

In Exercise Science:
*(With distinction) Christopher Charles Webster

In Exercise Science (Biokinetics):
*(With distinction) Amanda Bakkum

In Genetic Counselling:
*(With distinction in the dissertation) Gillian Düsterwald
(With distinction in the dissertation) Tarryn Shaw
*Katryn van Niekerk

In Medical Biochemistry:
(With distinction) Brandon Dean Murugan
Satishkumar Ishverlal Patel

In Paediatrics:
Heloise Anne Buys

In Physiology:
*Mehreen Tootla

DEGREE OF MASTER OF SCIENCE IN NURSING

*(With distinction in the dissertation) Debora Burger
Gohwa Fisher

DEGREE OF MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

*(With distinction in the dissertation) Dominick Michael Mshanga

DEGREE OF MASTER OF SCIENCE IN PHYSIOTHERAPY

Rene Catherine Jacobs
*(With distinction) Desiree Jean Scott

DEGREE OF MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Joanne Courtney Rossouw

6. FACULTY OF HUMANITIES

Dean: Professor S Buhlungu

DEGREE OF DOCTOR OF PHILOSOPHY

In Drama:
*Nandita Dinesh
Thesis Title: *Grey Zones: performances, perspectives, and possibilities in Kashmir*

Nandita Dinesh holds a BA in Theatre Studies and Economics from Wellesley College and an MA in Performance Studies from New York University.

Nandita Dinesh's thesis is based on a theatre-practice engagement across the 'victim'/'perpetrator' binary in the Kashmir valley – one using Primo Levi's term, "grey zones" to investigate giving theatrical form to narratives from Kashmiri Civil Society/Militants and Ex-militants/Indian Armed Forces. The work involved three phases: the first and second comprised respectively theatre workshops and performances with and about Civil Society and Ex-Militants in Kashmir; the third involved consideration of 'failed' attempts to engage similarly with the Indian Armed Forces. Analysis of that three-phase exercise was framed by one question: if an outside theatre maker is to create one performance piece that contains cross-community narratives from Kashmir, what ethical, pedagogical, and aesthetic considerations might arise as a result? Amongst the strategies proposed to answer this question, three are particularly significant as outcomes: a need to re-articulate grey zones as existing both between and within particularly identified groups; a proposal for a process based spectatorship when utilising novelty in form and content; and a re-framing of discussions of affect and effect by considering artists' intentions and spectators' responses.

Supervisor: Dr V Baxter (Drama)
Co-supervisor: Professor A Sitas (Sociology)

In Education:
Abdul Moeain Arend
Thesis Title: *Revealing the Janus Face of Literacy: Text Production and the Creation of Trans-contextual Stability in South Africa's Criminal Justice System*

Abdul Moeain Arend has a BA, an HDE and an MPhil from UCT and is a Lecturer in the UCT Centre for Higher Education. His PhD thesis emerged from his MPhil research which focused on literacy practices in a police station in Khayelitsha.

Abdul Moeain Arend's thesis is based on a study of institutional practices in South Africa's criminal justice system. He analyses how trans-contextual order and disorder are created at three critical moments: the opening of dockets, where police officers aim to identify, classify and record crimes; the investigation of crimes, where detectives encode objects and persons with meaning as evidence and witnesses; and the work of prosecutors in court, who animate witnesses, written statements and objects to produce prosecutions. The thesis shows that network stability within the justice system is contingent on three inter-related factors: material durability, that is the extent to which material-semiotic relations stay intact across these moments; strategic durability, that is the relative successes of strategies employed by officials to ensure trans-contextual stability in the system; and discursive stability, that is the ordering effects of literacy and literacy practices so that the network can maintain stability across distinct sites of written and semiotic practice.

Supervisor: Associate Professor M Prinsloo (School of Education)

*Maria Del Carmen Blyth
Thesis Title: *Chronicle of a dys-appearance: An autoethnography of a teacher in conflict*

Carmen Blyth has a BSc (Hons) from the University of Manchester and an MA from the School for International Training. Her PhD thesis emerged as a result of her experiences while teaching internationally.

Carmen Blyth's thesis aims to analyse the experiences of disempowerment as an educator within an international school context. The thesis draws heavily on feminist and feminist sociomaterialist arguments to provide a compelling account of international schools and how such schools comport themselves within the international domain. The thesis makes a contribution to the study of conflict and how discourses, material conditions, affect, and power can converge to produce situations which can have serious consequences for those working within them.

Supervisor: Associate Professor K Murris (School of Education)

Daniela Gachago
Thesis Title: *Sentimentality and digital storytelling: towards a post-conflict pedagogy in pre-service teacher education in South Africa*

Daniela Gachago is a senior lecturer at the Center for Higher Education Development at the Cape Peninsula University of Technology (CPUT). She holds an MEd in Adult Education from the University of Botswana. Her PhD question evolved from her engagement in a digital storytelling project at CPUT in 2010.

Daniela Gachago's thesis investigates the potential of digital storytelling as a possible post-conflict pedagogy within pre-service teacher education. Using narrative inquiry, the study questions current assumptions around the transformative power of storytelling for establishing empathy and human connection. A multimodal analysis of the digital stories and an examination of audience response to these stories, reveals that conveying authorial intent is difficult and that receiving the message of a digital story is compromised by students' cognitive, emotional and semiotic histories, and by their access to resources. The study concludes that digital storytelling is an ongoing, iterative process of critical emotional reflexivity. Recommendations include the use of individual narratives to understand how power and privilege in a classroom mirror the larger society, and to move beyond the individual to an emerging collective narrative.

Supervisor: Associate Professor Dick Ng'ambi
(School of Education)
Co-Supervisor: Professor V Bozalek (Directorate of Teaching & Learning, University of the Western Cape)

Yunus Omar
Thesis Title: *"In my stride": a life-history of Alie Fataar, teacher*

Yunus Omar holds a BBibl, an HDE(PG)Sec (distinction), and an MPhil (Educational Administration, Planning and Social Policy) (distinction for dissertation) from UCT. He has taught at schools and universities and conducts projects combining teacher-training and community media.

Yunus Omar's thesis investigates the emergence and sustainment of a teacher identity under conditions of education resistance in South Africa. His primary data, supplemented by documents, photographs, and archival materials, are transcribed narratives of Alie Fataar, a legendary teacher at Livingstone High School, Claremont, Cape Town. All are analysed using constructivist grounded theory. A founder-member of the Non-European Unity Movement and General-Secretary of the Teachers' League of South Africa, Fataar was banned in 1961 and went into exile in 1965. The thesis reveals the fluid, discursive dimensions of a teaching life navigating complex political, professional and personal fields. It shows that Alie Fataar resisted essentialising identities and held consistently to an identity of teacher as supreme public intellectual. Omar contends that, to avoid policy mismatches, teacher-policy formulation must incorporate nuanced teacher voices. Asserting that the authorial voice of the researched life-history subject should not be subjugated by the researcher's voice, his study contributes theoretically to the fields of life-history and literature on exile.

Supervisor: Professor C Soudien
(School of Education)

Craig Robert Paxton
Thesis Title: *Possibilities and constraints for improvement in rural South African schools*

Educated as a chemical engineer (UCT 1998), Craig Paxton had a pivotal teaching experience during his PGCE (UCT 2002) which sparked an enduring interest in rural schooling. This has taken him to a remote village in the Eastern Cape where he and his wife lead a non-profit organisation supporting school improvement.

Using the Five Essential Supports framework previously developed by the Consortium on Chicago School Research, together with Pierre Bourdieu's notions of habitus and doxa, Craig Paxton's thesis examines what school improvement might mean in a South African rural schools context. Studying education processes and outcomes in 25 schools, he found compelling evidence for the applicability of these five supports – leadership, learning climate, school-community ties, ambitious instruction and professional capacity – in a rural developing country context. Strength in these supports is significantly linked with student performance in mathematics and English. Using interviews and observations alongside a quantitative framework, Paxton's thesis provides a picture of the complex forces that history and rurality produce in these schools. He shows that the location of rural schooling on the South African education field's periphery, and the overwhelming structural adversity many rural schools face, constrain their capacity to develop strength in the Five Essential Supports.

Supervisor: Professor P Christie
(School of Education)
Co-supervisor: Dr. H Jacklin
(School of Education)

Desiree Leonora Scholtz
Thesis Title: *A comparative analysis of academic literacy specifications for a standardised test and academic literacy requirements for reading and writing in a range of disciplinary contexts*

Desireé Leonora Scholtz has an MPhil from Stellenbosch University, a MEd from the University of Cape Town, and an Honours degree from the University of the Western Cape. Her PhD emerged as a result of her background in teaching English and Communication, and her involvement in standardised testing in higher education. She has served on several panels for different standardised tests, including the National Benchmark Test in Academic Literacy from its inception in 2005 to the present.

Desireé Leonora Scholtz's thesis explores the perceived reading and writing practices required for first year subjects within specific diploma programmes at a university of technology. It draws comparisons between subject specifications and academic literacy test specifications to determine the measure of commonality that might exist. Standardised tests in academic literacy are used nationally to determine students' readiness to deal with the academic demands of higher education. The thesis foregrounds how disciplinary differences in diploma programmes impact on academic literacy requirements and shows that generic standardised tests might not present a valid reflection of students' abilities across a range of disciplines. The implications of misalignment between standardised tests of academic literacy and subject specifications offer augmented possibilities for how standardised tests might be conceived.

Supervisor: Dr A Cliff
(Centre for Innovation in Learning and Teaching)

Zachary Storm Simpson
Thesis Title: *Students' navigation of the multimodal meaning-making practices of civil engineering: An (auto)ethnographic approach*

Zach Simpson has a Master's Degree from the University of the Witwatersrand. His PhD thesis emerged as a result of his teaching in the Faculty of Engineering at the University of Johannesburg, where he has been a member of staff since 2009.

Zach Simpson's thesis aims to understand the representational forms that civil engineering diploma students need to harness in order to succeed. To explore the meaning-making practices of civil engineering, Zach Simpson developed a theoretical and methodological framework, termed '(auto) ethnography of meaning-making', which integrates ethnography, auto-ethnography and multimodal social semiotics. His research revealed that civil engineering diploma study is constituted by a meaning-making narrative constituted through the transformation of meanings and resources from one representational form to another. He draws out the implications for pedagogy, including organizing curriculum around meaning-making practices rather than discrete knowledge areas. Zach Simpson's study makes a defined contribution to engineering education theory and practice and extends knowledge in the area of social semiotics.

Supervisor: Dr A Archer
(Centre for Higher Education)
Co-supervisor: Associate Professor B Collier-Reed (Engineering)

Karin Elizabeth Wolff
Thesis Title: *Negotiating disciplinary boundaries in engineering problem-solving practice*

Karin Wolff Has a BA, a BA (Hons) and an MPhil in Education from UCT.. She has worked in education for two decades, and in engineering education since 2008 and has been a lecturer, a curriculum specialist, a learning support manager and in staff development at four South African universities.

Higher Education's challenge in producing effective problem-solving engineering practitioners led Karin Wollf to investigate the nature of 21st century engineering problem-solving practice. Her thesis contends that the nature of and relationship between different forms of engineering disciplinary knowledge is ill-conceptualised. Drawing on social realist concepts of knowledge structures and epistemic relations, she maps the topology of engineering problem-solving practice, illuminating how technicians engage in epistemic code-shifting in different industrial contexts. Her methodologically pluralist study includes analysis of twelve matched cases in three types of engineering work contexts. Her key findings demonstrate a symbiotic, structuring relationship between the 'what' and the 'how' of the problem in relation to the problem-solving components. Successful problem solving, she shows, relies on practitioners' recognition of these relationships and their realisation of appropriate disciplinary and contextual practice code conventions. Karin Wolff's research makes an empirical contribution to the theory-practice debate in Higher Education engineering curricula.

Supervisor: Associate Professor S Shay (Centre for Higher Education Development)
Co-supervisor: Associate Professor K Maton (University of Sydney)

In Environmental and Geographical Studies:
Oliver John Schultz
Thesis Title: *Power and democracy: the politics of representation and participation in small-scale fisheries governance on the Cape Peninsula*

Oliver Schultz earned a BSocSci and MA in Social Anthropology from the UCT. In 2011, he began a PhD in UCT's Department of Environmental and Geographical Science Department, and submitted his thesis in 2015.

Oliver Schultz's thesis seeks to address a lacuna in dominant approaches to fisheries governance theory. These theoretical approaches emphasise the value and feasibility of collaborative partnership between multiple state and non-state actors; but in so doing they pay insufficient attention to the multi-dimensional power dynamics that fundamentally shape engagements between these actors. To address this lacuna, Oliver Schultz's thesis explores the phenomenon of power in the context of the post-apartheid democratisation of fisheries governance, with a specific focus on political representation and public participation among small-scale fishers on the Cape Peninsula. Drawing on two years of ethnographic fieldwork, the thesis demonstrates that political representation and public participation can serve as mechanisms that undermine the democratic rights and practices of small-scale fishers, while reinforcing structural asymmetries of power, access and benefit distribution. The thesis concludes that a rigorous theorisation of fisheries governance requires confrontation with power and strategic practice.

Supervisor: Associate Professor M Sowman (Environmental and Geographical Science)
Co-supervisor: Associate Professor A Menon (Madras Institute of Development Studies, India)

In French Language and Literature:
*Annabelle Corinne Marie
Thesis Title: *Hybridity, animality and métissage in contemporary francophone literature*

Annabelle Marie studied French Literature at UCT and has an MA (Teaching French as a Foreign Language) from the same institution. Having been awarded an Erasmus Mundi bursary, she obtained a master's in French Literature from the University of Perpignan, France. She is presently a Lecturer in French in UCT's School of Languages and Literatures, and completed her PhD thesis whilst teaching undergraduate students. Her work has benefitted from seminars given by the Regional doctoral school on Language, Plurality and Development, funded by the Agence universitaire de la Francophonie (AUF).

Annabelle Marie's thesis considers the frequent use of animal characters in contemporary postcolonial Francophone literature within the larger framework of the French literary canon. She does that in order to assess the extent to which postcolonial Francophone writers remain linked to the French canon which they claim to simply bypass. By making use of the latest developments within theories of "intertextuality" and of "postcolonialism", and being cognisant of recent philosophical debates on animal rights, she underscores the need for an aesthetic that can be traced through and in the works of Patrick Chamoiseau, Alain Mabanckou, Ananda Devi and Patrice Nganang.

Supervisor: Professor J-L Cornille (School of Languages and Literatures)

In Historical Studies:
Susana Molins-Lliteras
Thesis Title: *"Africa starts in the Pyrenees": the fondo kati, between Al-Andalus and Timbuktu*

Susana Molins Lliteras received a BA from George Washington University (USA) in French and Spanish Literature in 1999. In 2005 she completed an MPhil in African Studies at UCT, researching a West African community in Cape Town belonging to the Tijaniyya sufi movement. She then became a Tombouctou Manuscripts Project researcher.

Susana Molins Lliteras's thesis presents a biography of the Fondo Kati archive, a private family collection in Timbuktu, Mali, that has positioned itself apart from other libraries due to its claim to a unique historical heritage linked to al-Andalus, many thousands of miles away and centuries back. The Fondo Kati archive was built upon two cornerstones: a genealogical project claiming uninterrupted "originally" Spanish ancestry for the Kati family; and a project of the marginalia through which the archive as a family collection was built by generations of family members, each adding manuscripts and marginalia to the collection. Questions around the authenticity of the marginalia, in terms of their dates of production and authorship, point to a forgery in the Fondo Kati that is ultimately about the issue of historical evidence. The very act of construction of the Kati collection exemplifies an active intervention in the production of history.

Supervisor: Associate Professor S Jeppie (Historical Studies)

Samaila Suleiman
Thesis Title: *The Nigerian history machine and the production of Middle Belt historiography*

Samaila Suleiman hails from Funtua in Katsina State, Nigeria. He holds a BA and MA in History from Bayero University Kano where he currently lectures and from which he received the Ibrahim El-Tayyeb prize for the Best Final Year Student. His thesis was supported by SSRC Next Generation Social Sciences in Africa Fellowships for doctoral research.

Samaila Suleiman's thesis considers the over-lapping institutions and locations where knowledge about the past is collected, studied, and disseminated. Challenging previous studies of Nigerian historiography which have mainly focused on how historians have studied the past as a body of ideas, Mr Suleiman argues that history as a discipline in Nigeria would be more productive were historians of Nigeria to study the places – archives and museums – where information about the past was and is deposited, the associations and journals of professionals – both historians and archaeologists – who study the past and the means whereby those who study the past disseminate history – in monographs and edited volumes published by all types of publishers. As a case study, he looks at a region of the country – the Middle Belt – that has seen a steady growth in the numbers of professionals and outlets for them to publish their work.

Supervisor: Associate Professor S Jeppie (Historical Studies)
Co-supervisor: Dr A Brigaglia (Historical Studies)

In Media Studies:
Aletta Hendrika Janse van Rensburg
Thesis Title: *Finding new and innovative ways of communicating climate change to the vulnerable: a study of the contextual and internal factors that influence audience understandings of climate change in the Western Cape*

Alet Janse van Rensburg was an undergraduate at Stellenbosch University before she completed an MA in Political Communication at UCT.

Alet Janse van Rensburg's thesis links research on climate politics to audience studies in order to offer insights into the peculiar geopolitics of South Africa, particular relevant with its increasing role in climate negotiation and membership of BRICS countries. Her thesis aims to overcome the current insufficiency, in global-south perspectives within the political communication field, regarding indigenous knowledge and local perspectives about Africa. Her research investigated perceptions of climate change hazards amongst vulnerable media audiences in the Western Cape. Her argument is that the way the public perceives climate change risks strongly influence their attitudes and opinions about the issue and, by extension, their behaviour. She analyses local people's perceptions of climate change by contextualising them in specifics that are unique to South Africa, including factors such as culture, social norms and ideology, and others such as existing mental models, emotion and the cognitive effort it takes to understand climate change. The thesis proposes a number of recommendations for improving communication of climate change issues and encouraging adaptive and mitigative behaviour in the public, with specific focus on vulnerable groups.

Supervisor: Dr IMA Saleh (Centre for Film and Media Studies)

In Music:
Thokozani Ndumiso Mhlambi
Thesis Title: *Early Radio Broadcasting in South Africa: Culture, Modernity and Technology*

Thokozani Mhlambi has a Bmus and Mphil from the University of Cape Town. The impulse for the Phd thesis came from the fascination he experienced as a child: Sounds of radio in Zulu pouring out of his mother's bedroom window or from taxis passing by as he played outside.

Thokozani Mhlambi's thesis tells the story of how radio broadcasting came about in South Africa, and how broadcasting was extended to include black audiences during the Second World War. The segregated state in South Africa used radio to reach black people for recruitment in the war. But radio became more than just that! It inspired creative genres of izibongo (praise poetry) speech and boosted the recording of African voices in song and music. In a sense, radio became the main driver of local public culture in indigenous languages. The story is important in the archiving of the contributions black people made in early communication technology as well as in shaping a South African 'modern' past. The ability to tell our own stories and to own them can remove the haze of apartheid that tried to define the totality of that reality.

Supervisors: (Joint) Associate Professor R Sandmeier (College of Music) Emeritus Professor N Ndebele (School of African and Gender Studies, Anthropology and Linguistics)
Co-Supervisors: Professor C Hamilton, (School of African and Gender Studies, Anthropology and Linguistics)

In Philosophy:
*Jessica Lerm
Thesis Title: *Moral reasons of our own*

Jessica Lerm holds a BSocSc (Philosophy and Psychology), a BSocSc (Hons) and an MSocSc in Philosophy, all from UCT, and all with distinction. Parts of her doctoral thesis have appeared in the leading ISI-accredited general philosophy journal on the African continent. She is currently a lecturer in the University of the Western Cape's Philosophy Department.

Jessica Lerm's thesis provides a critically fresh view about the nature of moral reasons. Are moral reasons constructed by our minds, or are they discovered by our minds as real features of the world that exist apart from our apprehension of them? Lerm critically explores a recent, innovative version of the former, constructivist view advocated by Stephen Darwall, one of the world's most influential contemporary ethical theorists. Darwall has championed a 'second-personal' form of constructivism, according to which moral reasons are, roughly, a function of the relationship between two or more people. Lerm motivates Darwall's view, provides novel criticisms of his arguments for it, and suggests an original, alternative interpretation of his view that she contends promises to enable him to avoid the criticisms it has drawn. Her thesis is to date the most intricate and largest single body of work on Darwall's second-personal account.

Supervisor: Dr E Galgut (Philosophy)
Co-supervisor: Professor T Metz (Philosophy, University of Johannesburg)

In Psychology:
Caroline Yon Kim
Thesis Title: *Racial Integration: A Social Intervention on a South African University Campus*

Caroline Kim holds a B.A. from Boston College, an M.Div. from Princeton Theological Seminary, and an Ed.M. from Harvard University. Her academic career has been focused on psychology, diversity studies, education, and linguistics.

Caroline Kim's thesis presents two sets of longitudinal intergroup contact studies that investigated whether established patterns of 'self-segregation' on a diverse university campus can be disrupted. She implemented an intervention that created more opportunities than might otherwise have occurred for structured and ongoing interracial contact. The intervention enhanced were structured to create optimal conditions of contact and to address intergroup anxiety – one of the main hindrances to interactions across group lines – by attempting to instil positive emotions. Ms Kim measured changes in intergroup attitudes and behaviours as a function of the interventions, using both naturalistic observational and quasi-experimental methods. Students who experienced the intervention reported significant increases in cross-race friendship, intergroup contact and positive intergroup attitudes, as well as reduced intergroup anxiety. The expanded study showed that these changes were also reflected in observable behaviour patterns, namely the reduction of 'self-segregated' seating patterns. Ms Kim's results show that the implemented intervention accomplished the facilitation of intergroup interactions, and led to positive outcomes of contact.

Supervisor: Professor C Tredoux (Department of Psychology)

In Public Administration:
Lina Taing
Thesis Title: *Implementing sanitation for informal settlements: Conflicting rationalities in South Africa*

Lina Taing has a Bachelors degree in Anthropology from UCLA and a Masters degree in Integrated Water Management from the University of Queensland. She has been a research consultant for the SA Water Research Commission, the City of Cape Town, and the Government of Zambia.

Lina Taing's thesis aims to unpack the considerably difficult task faced by the South African state in rendering basic sanitation services to the poor. Water and sanitation are considered essential services because of their contribution to meeting a basic level of human health and welfare. Sanitation is especially important given the added dimension of human dignity that often accompanies it. Whilst recognising shortcomings in the ability of the state to provide basic access to sanitation in densely populated urban areas, Ms Taing strives to unpack to what extent poor implementation of uncontested policy is to blame. She employs intensive fieldwork in the City of Cape Town, shaped by her anthropological background, coupled with extensive policy analysis. Ms Taing shows convincingly that sanitation policy is often subjected to 'conflicting rationalities' in the form of significant differences of opinion and understanding amongst various governmental and non-governmental stakeholders about the ideal level and modalities of providing access to this crucial service.

Supervisor: Dr V Naidoo (Political Studies)
Co-supervisor: Professor R Cameron (Political Studies)

In Religious Studies:
Johnathan Jodamus
Thesis Title: *An investigation into the construction(s) and representation(s) of masculinity(ies) and femininity(ies) in 1 Corinthians*

Johnathan Jodamus holds a BA, Bible and Theology with honours from Cape Theological Seminary and a MSocSc, in Religious Studies with a distinction for the minor thesis, from UCT.

Johnathan Jodamus' thesis, which focuses on 1 Corinthians, a letter of the Apostle Paul in the New Testament of the Christian Bible, is particularly valuable because much of the research in gender studies of the Bible has focused on the role and representation of women in biblical texts rather than on general gender roles. In contrast, Johnathan Jodamus, whose work is theoretically well-grounded in both gender studies and biblical studies, has examined the construction(s) and representation(s) of both male and female genders as they appear in 1 Corinthians, and also the interactions described there between male and female gendered performances. His ground breaking thesis demonstrates that normative and normalising engendering is operative in the text; and that the discourse in the text replicates hegemonic gendered structurings and machinations from the broader social and cultural environment of the text's milieu. Jodamus consequently shows that Christian bodies are scripted to perform according to the dominant cultural protocols and engendering praxes of the first century Graeco-Roman world.

Supervisor: Emeritus Associate Professor CA Wanamaker (Religious Studies)

Ivor Gerard Poobalan
Thesis Title: *Who is 'The God of This Age' in 2 Corinthians 4:4?*

Ivor Poobalan holds a BA (Hons) in Theology from the London School of Theology, UK, and a ThM in Old Testament and Semitic Languages from Trinity International University, USA. His PhD thesis emerged from his work as Principal and Lecturer at Colombo Theological Seminary, Sri Lanka, where he has worked since 1996.

Ivor Poobalan's thesis critically examines the arguments that have long been used to support the consensus view, held over the past five-hundred years, that the unique biblical phrase, "The God of this Age," found in the Apostle Paul's Second Letter to the Corinthians, refers to the biblical figure of Satan. By means of a comprehensive survey of the history of the interpretation of 2 Corinthians 4:4, from its first mention in the second century CE to the present, a review of the concepts of Satan and apocalypticism within Second Temple Judaism, and the application of a Socio-Rhetorical Interpretive approach to the exegesis of 2 Corinthians 4:1-6, Ivor Poobalan demonstrates that the referent of the phrase must be God and not Satan. His having done that thus invites Bible translators and commentators to reconsider how the text ought to be rendered and interpreted.

Supervisor: Emeritus Associate Professor C Wanamaker (Religious Studies)

In Social Anthropology:
Rosemary Jennifer Christine Blake
Thesis Title: *Moral motherhood: the politics of care in a Western Cape township*

Rosemary Blake has BSocSc and BSocSc(Hons) degrees from UCT and a master's degree in Anthropological and Sociological Approaches to Health and Illness from the University of Edinburgh.

Rosemary Blake's thesis emerged from her interest in children's illness and modalities of care in paediatric cancer contexts. She aims to develop a refined theory of gender and generation for understanding the limits of childhood agency in illness contexts. Using ethnographic evidence from the Western Cape's Zwelethemba Township, she argues that many contemporary childhood theorists' overemphasis on children's 'agency' risks masking the inter-dependency of both conceptualisations and the lived relationships of what it means to be a child and to be an adult or parent. Her concern with how children, parents, and grandparents create one another expands anthropological approaches to kinship and offers a means to explore, more deeply than previously, ideas around generation and inter-generational relationships. It does that through the lens of morals and mortality. Her thesis also offers a critical account of how people in Zwelethemba access social grants, especially those related to children, and how having such access rendered people vulnerable to the surveillance and judgement of government representatives as well as of friends, family and neighbours.

Supervisor: Associate Professor S Levine (School of African and Gender Studies, Anthropology and Linguistics)

*Joshua Benjamin Cohen
Thesis Title: *Kruiedokters, plants and molecules: relations of power, wind, and matter in Namaqualand*

Joshua Cohen has a BA Hons from Oxford Brookes University and an MSocSc from UCT.

Seeking to re-conceptualise the terms 'traditional' and 'scientific' knowledge, Joshua Cohen explores the work of both a phytochemist searching for bioactive compounds in Namaqualand plants and local practising kruiedokters (herb-doctors). His study focuses on the different modes of 'the real' at work in their respective engagements with human well-being, including kruiedokters' specialisation in curing ailments associated with toor (witchcraft/magic). Aiming to avoid unfairly reducing these phenomena to belief, the thesis attunes to the ways three vital concepts – krag (power/vitality/strength), toor, and wind (wind), all central to kruiedokters' work – come into existence in people's lives. The thesis demonstrates that krag, toor, and wind can be understood through the lens of Bruno Latour's "modes of existence", and that the healers' approach to medicinal plants, with their goal being to cultivate vitality, energy and wellbeing, is dissimilar to the approach of the molecular sciences and ethnopharmacology where the question of efficacy is framed in terms of molecules that can target specific classes of pathogens or biochemical pathways. Joshua Cohen's study provides conceptual tools for future non-reductive collaborations between plant science, 'traditional' and 'bio'-medicine.

Supervisor: Associate Professor L Green (School of African and Gender Studies, Anthropology and Linguistics)
Co-supervisor: Associate Professor DW Gammon (Chemistry)

In Social Work:
Tanya Marie Robinson
Thesis Title: *An explorative study of false allegations of child sexual abuse in divorce and custody proceedings in South Africa*

Tanya Robinson has a BA (SW) and DPhil from Stellenbosch University, a MSD from the University of Pretoria, a PG Cert (Ed) from UNISA and a PhD from North West University. Her current thesis emerged from her over ten years of social work practice experience with families during divorce and custody proceedings.

Tanya Robinson's thesis develops a theoretical understanding of the phenomenon of false child sexual abuse allegations during divorce and child custody proceedings. Utilising general systems theory, the theory of planned behaviour and crisis theory, she explores factors contributing to unfounded child sexual abuse allegations and identifies the archetypes of parents making such allegations. Dr Robinson also examines the psychosocial impacts of false child sexual abiuse allegations on families, and the meanings accused parents give to the experience. Her results indicate that falsely accused parents present with agony, acute trauma, emotional distress, depression, suicidal ideations and utter dismay. Her thesis highlights the adverse effects of this phenomenon on families. It is ground-breaking in identifying gaps in South African child-welfare policies and legislation needed to address the problem and in suggesting the need to develop evidenced-based capacity building initiatives about the problem, specifically targeted at mental health and child-welfare professionals.

Supervisor: Dr J. John-Langba (Social Development)

In Sociology:
Gideon John Nomdo
Thesis Title: *At the crossroads of the identity (re)construction process: an analysis of fateful moments in the lives of coloured students within an equity development programme at UCT*

Gideon John Nomdo has BA, BA (Hons) and MA degrees in Religious Studies, all from the University of Cape Town. His PhD study and thesis arises out of his many years of dedicated work in the Language Development Group of UCT's Academic Development Programme.

Gideon Nomdo's thesis focuses on the sharp identity transformations among coloured students at the University of Cape Town who are participants in the Mellon Mays Undergraduate Fellowship Programme (MMUF). The study is an in-depth qualitative investigation of three individual cases. It uses Anthony Giddens's notion of a fateful moment to analyse how those individuals go through life-changing, existential shifts in their views of themselves, of their life-purpose and their relationships with others. In doing that it sketches out the complexities of racial, religious and academic identity formation in post-apartheid South Africa. Theoretically the thesis is an attempt to expand and enrich Giddens's concept of fateful moment through considering and applying the complementary identity-analysis approaches of Ivanic, Mezirow and Heidegger.

Supervisor: Dr J Graaff (Department of Sociology)

Erna Louisa Prinsloo
Thesis Title: *From Victims to Warriors: collective identity generation at cancer assemblies in South Africa*

Erna Prinsloo has a BSocSc (Social Work) and BSocSc (Honours) (Social Work) from UCT, and an MA (Social Science) from UNISA. A long career in the non-profit sector, and her involvement with the cancer movement, sparked her interest in collective identity.

Erna Prinsloo's thesis investigates the unexplored intersection of cancer and identity within the context of a burgeoning cancer solidarity movement. A hermeneutic perspective allows a dual focus on the micro-sociological dimensions and the structural elements that converge to generate collective identities at cancer assemblies. Her research findings show that illness identities and role identities interact with a potent cocktail of elements – ephemeral space, a focus on cancer, collective action, illusion and emotions – to activate three symbolic identities: a dominant collective identity that relies on heroic warrior mythology; a secondary collective identity that draws from a transformation ideal; and a hidden identity that has its roots in the notion of being wounded. Ms Prinsloo's inquiry recognises that the dominant identity provides benefits over a victim representation. She also expresses reservations regarding the wisdom of expecting affected people to maintain a brave exterior in the face of an illness that causes emotional disequilibrium.

Supervisor: Dr J P de Wet (Sociology)
Co-supervisor: Dr J Graaff (Sociology)

7. FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Dean: Professor A Lewis

DEGREE OF DOCTOR OF PHILOSOPHY

In Architecture & Planning:
Friderike Sitas
Thesis Title: *Becoming otherwise: two thousand and ten reasons to live in a small town*

Friderike Sitas has a BA in Political and Historical Studies from UCT, a BA(Hons) in Sociology from UKZN, and an MTech in Fine Art from DUT. Given her experience as a public art practitioner, Rike's PhD emerged out of a desire to explore public art as a form of urban enquiry.

Through an analysis of three public art projects from the Visual Arts Network South Africa's 'Two Thousand and Ten Reasons to Live in a Small Town', Friderike Sitas' thesis argues that experimental, inclusionary and less object-oriented forms of public art can offer useful lessons for Urban Studies. The public art of 'Two Thousand and Ten Reasons to Live in a Small Town' demonstrated that affect impacts on how people can access complex spatial issues and perform citizenship. Furthermore, as part of a larger epistemological project of attuning urban theory to conditions of the South, this thesis argues that intersecting conceptual threads from three bodies of literature: public space, public art and public pedagogy, is important. More specifically, it demonstrates that public art can harness an affective rationality that can foster alternative ways of knowing and acting in/on the urban, thereby offering public art as a unique pedagogy for exploring and deepening cityness.

Supervisor: Professor E Pieterse (African Centre for Cities & School of Architecture & Planning)
Co-supervisor: Dr S Daya (Environmental and Goegraphical Science)

In Chemical Engineering:
*Elaine Govender
Thesis Title: *Investigating the growth kinetics and colonisation of Acidithiobacillus ferrooxidans on whole low-grade chalcopyrite ore at various physico-chemical conditions at the agglomerate-scale*

Elaine Govender completed a National Diploma in Chemical Engineering from the Durban Institute of Technology. She worked in the development of technology in biohydrometallurgy for BHP Billiton before studying at UCT, where she earned her BScEng (Chemical Engineering) in 2009.

Elaine Govender's thesis focuses on generation of understanding of the fundamental principles that govern microbial growth and colonisation in heap bioleaching systems. In particular, she set out to quantify the microbial growth rate of iron and sulphur oxidising micro-organisms on increasingly important low grade copper ores. The model micro-organism Acidithiobacillus ferrooxidans was used together with a purpose-designed system of mini leach columns developed for experimental study of this application. Using rigorous experimentation and associated modelling of the microbial growth and transport of the microbial phase across the ore bed, she showed that microbial growth on the ore surface dominates colonisation of the ore bed. Furthermore, preferential extraction environments for bioleaching of metals are created in the interstitial slow-moving flow elements within the heap which enhance microbial concentration by two to three orders of magnitude. The new insights not only inform the effective colonisation of low grade heaps for metal extraction but also inform approaches to the

prevention of acidrock drainage formation.

Supervisor: Professor STL Harrison (Chemical Engineering)
Co-supervisor: Dr CG Bryan (Sustainable Mining and Mineral Resourcing, University of Exeter)

Sarah Melissa Jane Jones
Thesis Title: *Mixing, mass transfer and energy analysis across bioreactor types in microalgal cultivation and lipid production*

Sarah Jones grew up in Zimbabwe in the Hwange National Park as the child of a wildlife ecologist and was schooled in Harare. She studied biochemistry, microbiology and biotechnology at Rhodes University, graduating at the top of her class and continuing to postgraduate study. On completing a master's degree at Rhodes University, she moved to UCT to take up PhD research on bioproducts and bioprocesses.

Sarah Jones' thesis focuses on the provision of efficient gas liquid mass transfer of CO2 into algal photobioreactors as the major carbon supply for assimilation into algal biomass. While microalgae are recognised as a source of lipids for bioenergy, nutrients and pharmaceuticals, the high energy requirements of conventional photobioreactors for mass transfer and mixing restricts their use in bio-based processes. Sarah Jones compared the operation of the airlift and surface aerated photobioreactors in terms of mass transfer, mixing and power requirement. Her findings highlight the potential of surface aerated bioreactors for the optimisation of energy usage. Through this, she demonstrates the essential requirements of photobioreactors for sustainable bioprocesses, using life cycle assessment indicators to evaluate micro-algal processes.

Supervisor: Professor STL Harrison (Chemical Engineering)
Co-supervisor: Professor H von Blottnitz (Chemical Engineering)

Evan Matthew Smuts
Thesis Title: *A methodology for coupled CFD-DEM modelling of particulate suspension rheology*

Evan Smuts has a BSc(Eng) and an MSc in Mechanical Engineering from UCT. He commenced his doctoral studies in Chemical Engineering with the Minerals to Metals group in 2010.

Evan Smuts' thesis outlines the development of a numerical model that is intended for the study of the flow behaviour, or rheology, of particle suspensions. A combination of Computational Fluid Dynamics (CFD) and the Discrete Element Method (DEM) was used to create the numerical model. CFD uses a continuum approach to model the fluid component, while DEM resolves the behaviour of each individual particle. This allowed the influence of individual particles on suspension rheology to be studied. This type of model has not been used before to study suspension rheology. Thus, a systematic approach was adopted in order to develop the model. Complexity was added over a number of stages, with each of these steps being validated against known experimental values. The development of this model will serve as a foundation for future work in using coupled CFD-DEM numerical models to study suspension rheology.

Supervisor: Professor DA Deglon, (Chemical Engineering)
Co-supervisor: Professor CJ Meyer, (Mechanical and Mechatronic Engineering, Stellenbosch University)

In Civil Engineering:
Lloyd Norman Fisher-Jeffes
Thesis Title: *The viability of rainwater and stormwater harvesting in the residential areas of the Liesbeek River Catchment, Cape Town*

Lloyd Fisher-Jeffes has a BSc and an MSc from UCT. He has been a member of the Urban Water Management research unit in the Civil Engineering Department since 2010. During this time he has contributed to the development of South Africa's first guidelines for Sustainable Drainage Systems and Water Sensitive Urban Design.

Lloyd Fisher-Jeffes's PhD research focuses on the viability of rainwater and stormwater harvesting in the residential areas of the Liesbeek River Catchment, Cape Town. This was achieved through the development of an Urban Rainwater Stormwater Harvesting Model to disaggregate water demand data and model the use of rainwater and stormwater for over 6000 properties. The study found, inter alia, that: rainwater harvesting was viable for only a minority of property owners; climate change would have limited impact on the performance of rainwater harvesting systems; and rainwater harvesting is an unreliable – even for small storm events – means of attenuating peak flows. On the other hand, stormwater harvesting has the potential to significantly reduce potable water demand. However, for stormwater harvesting to be viable there would need to be a high level adoption by residents, making use of it for at least non-potable uses such as flushing toilets and outdoor irrigation. Finally, the research found that the implementation rainwater harvesting and stormwater harvesting together would not be a wise approach as both are most cost-effective under conditions of maximum demand.

Supervisor: Professor NP Armitage (Civil Engineering)

Hertzog Venter Schalekamp
Thesis Title: *Paratransit operators' participation in public transport reform in Cape Town: a qualitative investigation of their business aspirations and attitudes to reform*

Hertzog Schalekamp has a BAS and BArch, and an MPhil degree in Transport Studies from UCT. Since 2009 he has been the research officer for the African Centre of Excellence in Transport, a collaborative research venture between the Universities of Cape Town, Dar es Salaam and Nairobi.

Hertzog Schalekamp's thesis investigates the business aspirations of paratransit operators in Cape Town, and identifies how their attitudes relate to two government-led reform programmes. The minibus-taxis of paratransit operators dominate public transport systems, yet there is little direct insight into these operators' unenthusiastic responses to reform efforts, as highlighted in Cape Town's MyCiTi reform project. Over the course of six years Hertzog Schalekamp documented the engagement process between the municipality and paratransit operators in MyCiTi's first project phase. He also conducted qualitative interviews with paratransit operators in Cape Town to explore their business motivations and attitudes to reform. Internal attempts by operators to restructure their businesses reveal that they are not necessarily passive participants waiting for government to stimulate change. The reform programmes do nonetheless respond to certain key aspirations of large- and small-scale paratransit businesses. Proposed revisions could extend both programmes' impacts, but building trust with operators is an essential first step.

Supervisor: A/Professor R Behrens (Civil Engineering)

In Construction Economics & Management:
Solomon Sertse Desta
Thesis Title: *The management of the construction processes in developing countries: a case study of the Ethiopian Roads Authority*

Solomon Desta has a BSc in Civil Engineering from Addis Ababa University and an MSc in Project Management from UCT. He is currently working as a lecturer at the Ethiopian Institute of Architecture and Building Construction.

Solomon Desta's thesis examines the management of the construction processes and identifies peculiar challenges within the construction industry in Ethiopia. The study adopts a post-positivist inclined case study methodology whereby the Ethiopian Roads Authority's (ERA) project delivery approaches are taken as a case in point and employed data collected from documents and interviews. Moreover, it uses concepts and principles associated with the basic pillars of context dependent processes, resources and management/governance systems of the conceptual framework it developed and 'accepted practices' in the management of construction processes to guide the data collection and analysis as well as to compare/critique the findings. The study establishes that ERA adopts extra-fragmented project delivery approaches while its processes and governance systems are not adequately tailored to the peculiarities and contexts of its projects. In addition, it establishes that the environment creates peculiar constraints on ERA's delivery. A key implication of the findings is therefore the need for the adaptation of the processes and their management to the project peculiarities and contexts.

Supervisor: A/Professor KA Michell (Construction Economics and Management)

In Engineering Education:
Disaapele Gleopadra Mogashana
Thesis Title: *The interplay between structure and agency: how Academic Development Programme students 'make their way' through their undergraduate studies in engineering*

Disaapele Mogashana has a BSc(Eng) in Chemical Engineering from UCT. Following an MPhil in engineering education she took up a position as a lecturer in the Academic Development Programe (ADP) in engineering.

Disaapele Mogashana's thesis research followed a group of 12 senior ADP students and sought to explain the ways in which they 'made their way' through their studies, building on Margaret Archer's morphogenetic realist social theory and its conceptualisation of the interplay between structure, culture and agency. With regard to structure, it was found that the combination of a fragmented curriculum, a shortened examination period, and unfavourable examination timetables all served as potential constraints. With regard to culture, it was found that the prevalent ideas about ADP students underscored their experiences of marginalisation and exception. Nonetheless, students were also found to have exercised corporate agency and different modes of reflexivity to overcome some of their constraining circumstances. The study thus suggests that the ADP, although it facilitated students' entry into the university, simultaneously positioned them within a situational logic of constraining contradiction and as such exacerbated their experiences of exception.

Supervisor: Professor J Case (Chemical Engineering)
Co-supervisor: Dr K Williams (Centre for Higher Education Development)

In Electrical Engineering:
Natasha Govender
Thesis Title: *Active object recognition*

Natasha Govender has a BSc in Computer Science and BSc(Hons) from the University of Kwa-Zulu Natal. She has an MSc from the University of Pretoria. Her doctoral research emerged as a result of her work on computer vision at the robotics unit at the Council for Scientific and Industrial Research, where she has worked since 2008.

Natasha Govender's thesis aims to develop an active object recognition system. Active object recognition provides a mechanism for selecting informative viewpoints to complete recognition tasks as quickly and accurately as possible. In her thesis she investigates using local interest points and Fourier descriptors in probabilistic and non-probabilistic settings for active single and multiple object and viewpoint/ pose recognition. Test images used contain objects that are occluded and occur in significant clutter. A novel approach to weighting the uniqueness of features extracted is presented, using a vocabulary tree data structure with a Bayesian framework to update the system's confidence in the identities of the different objects. The accuracies of the systems developed are quantitatively assessed and shown to outperform a number of current state-of-art active vision systems. The effectiveness of active vision in various recognition systems using different low-level inputs, is also demonstrated.

Supervisor: A/Professor F Nicolls (Department of Electrical Engineering)

Brandon Kyle Hamilton
Thesis Title: *MURAC: a unified machine model for heterogeneous computers*

Brandon Hamilton graduated with a BSc(Eng) in Electrical and Computer Engineering from UCT in 2007. His subsequent MSc was upgraded to a PhD focusing on high-performance computing.

Brandon Hamilton's thesis proposes an effective unified model for heterogeneous computers – systems that include multiple different types of computing elements. A high level design methodology, including a study of the theoretical and practical trade-offs, has been developed that allows the easy integration of these heterogeneous components within a common environment that clearly separates the programming model from the system implementation. This enables programmers to efficiently write high performance code that is reusable and portable, without the need to focus on the complex low level device specific details that would normally be required, leading to reduced cost and time to market through the application of familiar modularisation and reusable design best practices. As the benefits of heterogeneity become increasingly important in high-performance computing, it is anticipated that this model will also be able to serve as a guiding principle for the design and implementation of these processors of the future.

Supervisor: Professor MR Inggs (Department of Electrical Engineering)
Co-supervisor: Dr H So (University of Hong Kong)

Gabriel Lellouch
Thesis Title: *Waveform design and processing techniques in OFDM radar*

Gabriel Lellouch received his MSc in Electronics and Signal Processing from ENSEEIHT (Toulouse, France) and his MSc in Advanced Techniques in Radio Astronomy and Space Science from Chalmers University (Gothenburg, Sweden), both in 2006. His MSc dissertation, carried out at LEGOS (Toulouse), was in the field of hydrology from space.

With the advent of powerful digital hardware, software defined radio and radar have become an active area of research and development. This in turn has given rise to many new research directions in the radar community, which were previously not comprehensible. One such direction is the recently investigated OFDM radar, which uses OFDM waveforms instead of the classic linear frequency modulated waveforms. Being a wideband signal, the OFDM signal offers spectral efficiency along with improved range resolution, two enticing characteristics for radar. Gabriel Lellouch's thesis aims to mature the comprehension of OFDM for radar and contribute to the realm of OFDM radar. In his thesis, three distinct aspects are researched, viz., firstly, novel methods to process trains of OFDM pulses in order to retrieve the target range and radial velocity, secondly, advanced techniques to optimally design OFDM pulses before transmission and thirdly, original schemes to improve the radar recognition function.

Supervisor: Professor MR Inggs (Department of Electrical Engineering)
Co-supervisor: Dr AK Mishra (Department of Electrical Engineering)

Francois De Villiers Maasdorp
Thesis Title: *Doppler-only target tracking for a multistatic radar exploiting FM band illuminators of opportunity*

Francois Maasdorp holds a BEng (Electronics) and MEng (cum laude) from the University of Pretoria. He is currently employed at the Council for Scientific and Industrial Research as a senior researcher and has 10 publications in international journals and conferences, in which he was the main author of five.

Francois Maasdorp's thesis aimed to prove the concept of tracking an aircraft of interest with Frequency Modulated (FM) radio signals, by simultaneously measuring only the Doppler shift of these signals at spatially distributed measurement sites. An in depth mathematical analysis of exploiting only the Doppler effect was conducted, the models were verified with simulations and finally the concept was proven with a field experiment, in which large commercial airliners approaching Cape Town International airport was successfully tracked to a good degree of accuracy. Moreover, the field measurement data also closely followed the simulation predictions that validated the simulation study. Therefore, this thesis provided the necessary proof of concept for Doppler only target tracking for a multistatic radar exploiting FM band illuminators of opportunity that now requires an extensive qualification test as a next step.

Supervisor: Professor MR Inggs (Department of Electrical Engineering)

David Temitope Oluwasehun Oyedokun
Thesis Title: *Geomagnetically Induced Currents (GIC) in large power systems including transformer time response*

David Oyedokun obtained his BSc(Eng) and MSc(Eng) degrees from UCT, where he is now a lecturer. His doctoral thesis emerged from his department's ongoing research into the currents in power systems caused by matter emitted from the Sun.

Internationally, researchers are modelling the complex effects of the solar wind on power systems, but most models neglect the time response of the geomagnetically induced currents (GICs) in the power system itself. David Oyedokun's thesis develops an algorithm which incorporates the response characteristics of large power transformers into the calculation of GICs. David developed a test for a transformer's time response to direct current (DC) injection that emulated GICs. He conducted a series of laboratory experiments and simulations to identify the response characteristics of transformers with different core structures and windings. The response parameters were incorporated into an algorithm that calculates the GICs more accurately, as shown by comparison with measured GICs. The work provides guidance for the sampling intervals for collecting geomagnetic field data and calculating GICs.

Supervisor: Professor CT Gaunt (Electrical Engineering)
Co-supervisor: A/Professor KA Folly (Electrical Engineering)

Avinash Kant Raikwar
Thesis Title: *Scalable architectures of interconnect protocols in distributed base transceiver stations*

Avinash Raikwar has a B.E from the Jabalpur Engineering College, India, and an MTech in Electrical Engineering from IIT Madras. His doctoral thesis emerged as a result of his industry experiences with LSI Corporation, Bangalore, where he has been a R&D Engineer since 2008.

Avinash Raikwar's thesis aims to develop novel and scalable architectures for the interconnect protocols of upcoming distributed base stations. The project evolves a unified view to provide modularity and flexibility; thereby bringing advancements in installation and connectivity technology of the wireless infrastructure devices. The wireless operator driven open interconnect standards are emerging; as industry consortiums and standard bodies are promoting various interconnect standards. Avinash Raikwar extends the interconnect technology by performing detailed analysis of the mapping schemes in these standards and identifying the architectural characteristics to bring in the scalability, flexibility and resilience in base station connectivity. The end result is the architectures of the IP based designs, to be used in standard ASIC solutions for the base station controller and the DFE devices. The implementation of architectures is evaluated with industry standard IP design methodology to prove and promote the use of novel methods contributed by this project.

Supervisor: Dr AK Mishra (Electrical Engineering)

Jun Yan
Thesis Title: *Investigation of the impact of demand elasticity and system constraints on electricity market using extended Cournot approach*

Jun Yan has a Diploma in Economics from Fudan University, and an BCom(Hons) and MCom from UCT. His doctoral research emerged as a result of deregulation and restructuring of electricity market worldwide, and related research activities with Eskom.

Jun Yan's thesis aims to study the impact of demand elasticity on power producers' market competition output. An analytical model, called "Extended Cournot model" is developed in this thesis based on the classical Cournot model. Through the integration with conjectural variation model, in which power producers consider both the generation and price level, the extended Cournot model can be used to analyse the demand responsiveness of electricity market under different network constraints. The analytical model is validated using an industrial electricity market simulation tool, known as "Plexos". Simulation results show that the developed analytical model and Plexos software package are in agreement.

Supervisor: A/Professor KA Folly (Department of Electrical Engineering)

In Mechanical Engineering:
Alfred Edward Jules Bogaers
Thesis Title: *Efficient and robust partitioned solution schemes for fluid-structure interactions*

Alfred Bogaers obtained his BEng, BEng (Hons) and MEng from the University of Pretoria. He is currently employed as a senior researcher with the CSIR's Advanced Mathematical Modelling unit.

Alfred Bogaers's thesis explores numerical methodologies to enable and improve the solution stability of strongly coupled, partitioned fluid-structured interactions problems. Fluid-structure interactions (FSI) is the field of study whereby the two-way coupled interactions between fluid flow and structural deformations are analysed. Examples include modelling blood flow through the vascular system, flutter prediction in aerostructures or large waves crashing into coastal systems, to name but a few. One viable solution methodology is to solve these class of problems using well established numerical solution techniques and or software for the fluid and solid subdomains, often referred to as a partitioned (or staggered) solution scheme. However, under certain conditions these solution schemes prove to be numerically unstable or ill-posed. In his thesis, Alfred Bogaers proposes a series of novel numerical techniques aimed at stabilising and improving the overall efficiency of paritioned solution schemes. His work has resulted in a number of publications in a respected international journal.

Supervisor: Professor BD Reddy (Mathematics and Applied Mathematics)
Co-supervisors: A/Professor T Franz (Human Biology); Professor S Kok (Mechanical and Aeronautical Engineering, University of Pretoria)

8. FACULTY OF HEALTH SCIENCES

Acting Dean: Professor G Hussey

DEGREE OF DOCTOR OF PHILOSOPHY

In Anatomy:
Kavita Novinchandra Lakha
Thesis Title: *Sequential changes in epiphyseal union in South African children, using low dose x-rays*

Kavita Lakha has a BSc and BSc Honours from the University of the Witwatersrand and an MSc from the University of Central Lancashire. Her doctoral thesis is a direct outcome of her employment with the National Prosecuting Authority where she works as a special investigator in the Missing Persons Task Team.

Kavita Lakha's thesis looks at the age of union of the epiphyses of the major joints of the human body in South African children. Her tool of analysis is the LODOX statscan system which emits low dose radiation and provides a complete body scan in thirteen seconds. The results of her study show that there are no significant differences between the state of bone maturation in children of different South African biological and socioeconomic groups. The methodology derived on radiographs is successfully applied to gross observations of skeletal material as well and it therefore provides a useful diagnostic tool in skeletonised forensic cases in the absence of skeletal material from which to derive such standards. The current work provides an alternative to the Greulich and Pyle (1959) method most commonly used in South Africa and is specifically tailored toward South African children.

Supervisor: Professor AG Morris (Human Biology)

In Bioinformatics:
Brejnev Muhizi Muhire
Thesis Title: *Evolutionary impacts of secondary structures within the genomes of eukaryote-infecting single-stranded DNA viruses*

Brejnev Muhire studied at the Malawi Polytechnic, obtaining a BSc in Mathematics before coming to South Africa in 2009, where he completed his BSc(Hons) in Mathematics at the University of the Western Cape. He commenced his MSc in Bioinformatics at UCT in 2011 which he later upgraded to a PhD in 2012.

Brejnev Muhire's thesis developed a series of computational tools (including fully-fledged computer programs with graphical user interfaces) both for analysing computationally predicted and/or biochemically determined secondary structures within complete virus genomes, and for visualizing the evolutionary impacts of these secondary structures. He then used these tools to identify the subsets of structures within the genomes of a diverse set of single stranded DNA viruses that display evidence of being evolutionarily preserved and which are therefore likely to be biologically functional. He found evidence of many such structures, the vast majority of which have never been previously identified let-alone biologically characterised. Finally, he showed that whereas in single stranded DNA viruses, genome secondary structures have had a substantial impact on patterns of genetic polymorphism accumulation, they do not seem to have very obviously impacted the patterns of genetic recombination that are observable in these viruses.

Supervisor: A/Professor D Martin
(Division of Computational Biology)

*Gustavo Adolfo Salazar Orejuela
Thesis Title: *Integration and visualization of data in Bioinformatics*

Gustavo Salazar has a Systems Engineering degree from the Universidad del Valle, Colombia, and an MSc in Computer Science from UCT. His master's dissertation had a focus on bioinformatics, and he has continued to apply his IT training to this field in his doctoral research.

Gustavo Salazar's thesis explores two closely related fields: the integration and visualisation of biological data. Both of these are essential for the management and analysis of increasingly large and complex datasets in biology. The distributed annotation system (DAS) is a community project that supports the integration of data from federated sources and its visualisation on web and stand-alone clients. In his thesis, Gustavo Salazar extends the DAS protocol to improve its search capabilities and to support feature annotation by the community. He is involved in the BioJS community project, an open source library of visualisation components for biological data, and combines several BioJS components to create PINV, a web based visualiser of protein-protein interaction (PPI) networks. PINV takes advantage of the features of modern web technologies to explore PPI datasets via the web and facilitates collaboration between scientific peers. This thesis concludes with biological use cases of the PINV tool.

Supervisor: Professor N Mulder
(Clinical Laboratory Sciences)

In Biomedical Engineering:
Jia Fan
Thesis Title: *Neuroimaging study of prenatal alcohol exposure effects on structural and functional connectivity in children*

Jia Fan has undergraduate degrees in Chemical Engineering and Japanese Language from TJUT in Tianjin, China, and an MSc(Eng) in Chemical Engineering from UCT. He has been conducting research in Magnetic Resonance Imaging (MRI) at UCT in the MRC/UCT Medical Imaging Research Unit since 2009.

Jia Fan's thesis examines the effects of prenatal alcohol exposure on microstructural integrity of white matter and functional brain connectivity in children aged 9-12 years using diffusion tensor imaging (DTI) and resting-state functional MRI. Children with fetal alcohol syndrome (FAS) or partial FAS (PFAS) reveal poorer white matter integrity in both cerebellar and cortical regions that are attributable to increased radial diffusivity suggesting poorer axon packing density and/or myelination. Functional connectivity is lower in children with FAS/PFAS in the default mode, salience, dorsal and ventral attention, and right executive control networks. Alterations in nonsyndromal heavily alcohol exposed children are less extensive suggesting that some regions may be relatively spared. Effects are dose dependent in many of the regions. The locations of the white matter alterations found with DTI suggest that the compromised connectivity found in 3 of the 5 networks could be attributable to deficits in tracts providing intra-network connections.

Supervisor: Prof EM Meintjes
(Human Biology)
Co-supervisor: Dr PA Taylor
(Human Biology)

In Cell Biology:
Maribanyana Robert Lebeko
Thesis Title: *The use of in vitro 2D co-culture models to determine the optimal keratinocyte to melanocyte ratio to be used in the development of pigmented 3D skin model*

Maribanyana Lebeko has a BSc, BSc(Med)(Hons) and an MSc(Med) in Clinical Sciences and Immunology from UCT. Subsequent to completing his master's, he moved from Medical Virology to pursue a PhD in Cell Biology.

Maribanyana Lebeko's thesis aimed at isolating primary human skin melanocytes and keratinocytes, and co-culturing them at ratios of 5:1, 10:1 and 20:1 in order to attain optimal pigment production and/or consequent improved wound healing outcome, with the idea of determining the best keratinocyte to melanocyte ratio to use in recapitulating pigmented 3D skin constructs. This research was inspired by the alarming statistics of burn injuries, not only globally, but also in the South African setting, which is influenced by the informal settlement types in low to middle income communities. The 5:1 co-culture ratio of keratinocytes to melanocytes yielded the best wound healing outcome, following an addition of fibroblast conditioned medium, thus conferring it as a potential optimal ratio of keratinocytes to melanocytes, to be used in development of pigmented 3D constructs. Such engineered 3D skin constructs are useful in treating not only burn injuries, but also other skin defects such as vitiligo and diabetic foot ulcers.

Supervisor: Associate Professor Lester M. Davids (Department of Human Biology)

Tarryn Willmer
Thesis Title: *The role and regulation of the T-box transcription factor 3 in soft tissue and bone sarcomas*

Tarryn Willmer obtained a BSc, BSc(Hons) and an MSc in Biochemistry from Rhodes University. In 2012 she registered for a PhD in cancer research at UCT.

Tarryn Willmer's thesis focused on exploring the expression status as well as the role and regulation of the T-box transcription factor, TBX3, in sarcomas. She showed that TBX3 is expressed at high levels in a diverse subset of soft tissue and bone sarcoma cell lines and patient-derived sarcoma tissues. Importantly, she demonstrated that this overexpression promotes tumourigenesis and that silencing TBX3 in chemo-resistant chondrosarcoma cells could inhibit the aggressive nature of this cancer. Furthermore, she elucidated the mechanisms involved in TBX3 overexpression in chondrosarcomas and showed that it involves the oncoprotein c-Myc, the molecular chaperone Hsc70 and the cyclin A-CDK2 complex. Finally, she identified the c-Myc-Hsc70/TBX3/nucleolin-p21 signalling axis to be pivotal in promoting chondrosarcomagenesis. The findings of Tarryn Willmer's PhD study are of great significance because they suggest that c-Myc, TBX3, Hsc70 and nucleolin can be used in combination as biomarkers for the diagnosis and targetted therapy of a range of sarcoma subtypes.

Supervisor: A/Prof S Prince, Department of Human Biology

In Clinical Pharmacology:
Elizabeth Allen
Thesis Title: *Optimising methodology for the elicitation of participant-reported data relating to drug safety in resource poor settings*

Elizabeth Allen successfully completed her doctoral research while working full time as a Senior Clinical Research Manager, managing diverse projects from malaria efficacy studies in Mozambique to the recent "First-in-Human" clinical trial on MMV048, a novel treatment discovered by scientists based at UCT.

Elizabeth Allen's thesis makes an important contribution to better understanding the safety of malaria treatments. This is of particular relevance now when efforts to improve malaria control and eventually eliminate malaria have led to these treatments not only being given to symptomatic malaria patients, but also as preventive treatment to those "at risk" but who do not have malaria. As malaria treatments are generally safe, serious side effects are rare with few occurring in even quite large studies. Hence, explaining why certain patients get side effects requires combining or comparing results from a number of studies. However, the research methods used across studies need to be similar enough for valid conclusions to be reached. This work focuses on the first step of identifying side effects: what the patient or study participant reports to the researcher. It is clear from this research that results differ vastly between studies, often just because these differed in exactly how the researcher questioned the patients whether they had had any side effects. Elizabeth Allen's work will help the malaria research community, including pharmaceutical manufacturers, agree on what research methods should be used in future to assess malaria medicine safety accurately.

Supervisor: Professor K Barnes (Medicine)

In Clinical Science and Immunology:
Munyaradzi Nyasha Musvosvi
Thesis Title: *Systems analysis of the CD4 T cell response induced by the novel subunit tuberculosis vaccine, H1:IC31*

Munyaradzi obtained a BSc in Biotechnology from UCT in 2009 and went on to complete a BSc(Hons) in Infectious Diseases and Immunology in 2010. He then joined the South African Tuberculosis Vaccine Initiative (SATVI) for an MSc in Clinical Immunology and in 2012 upgraded to a PhD.

Munyaradzi Musvosvi's thesis aims to understand how underlying latent Mycobacterium tuberculosis infection in humans affects the CD4 T cell response induced by novel TB vaccines. Using cutting-edge approaches to measure the immune response in adolescents upon vaccination with H1:IC31, a novel tuberculosis vaccine, he reveals the profound effects of latent infection on the immune response. His results show that underlying infection promotes and maintains antigen-specific CD4 T cells endowed with immediate effector function. Furthermore, his study suggests that very different functional and phenotypic characteristics of antigen-specific immune cells can be linked to the level of protein expression by the infecting Mycobacterium tuberculosis bacterium. These results highlight the importance of antigen selection in development of novel tuberculosis vaccines.

Supervisor: A/Prof Thomas Scriba, Pathology
Co-supervisor: Dr Adam Penn-Nicholson, SATVI

In Disability Studies:
Martha Geiger
Thesis Title: *Building interventions for children with severe communication disabilities on cultural resources: an action research enquiry.*

Martha Geiger has a BA and a BSc in Logopaedics from UCT, and a master's in Early Childhood Intervention from the University of Pretoria. Her doctoral research emerged from her experience as a Speech Therapist, working with community-based caregivers of children with severe communication disabilities.

Martha Geiger's work aims to identify culturally appreciative strategies to support the communicative participation of children with severe communication impairments in an isiXhosa language context. She embarked on a transformative action research journey which entailed focus group sessions, reflective dialogues with the group facilitators, a rapid local survey and participant observations and extensive thematic content analysis. The findings contributed to three theses, namely (1) relationships are the context and motivation for communicative participation the social inclusion (and non-ostracism) of mothers need to be prioritised in order for them and their children to enjoy communicative participation; (2) the 'Middle Ground' is a valuable positionality in implementing transformative action learning as an intervention approach and (3) there is a need to reframe culture as a resource in supporting the communication development of children with severe communication disabilities. Implications of these three theses for clinical practice, training, policy and further research are presented.

Supervisor: Associate Professor S E Duma, Health and Rehabilitation Sciences
Co-supervisor: Associate Professor T Lorenzo, Health and Rehabilitation Sciences

In Exercise Science:
*Julia Marguerite Fisher
Thesis Title: *Revealing the complexities in biomechacnical analysis and injury prevention in flat water kayaking.*

Julia Fisher completed a BSc(Physio) at UCT. While working as the physiotherapist with the South Africa Olympic sprint kayaking squad, she initiated a doctorate studying all aspects of kayaking performance.

Julia Fisher's research serves to advance the understanding of the complexities of sprint kayaking using neuromuscular and biomechanical analyses of the paddle and boat. She is the first to measure three-dimensional boat biomechanics for different phases of the stroke cycle. Findings reveal common behavour of the boat for deviations of pitch and yaw. The lateral roll of the boat however, showed large variability between paddlers with different training backgrounds. The neuromuscular stratgies employed by marathon paddlers during maximal paddling were atypical, differing from those observed in sprint kayakers. The high incidence of shoulder injuries in kayakers threatens paddling performance. A kayak-specific prehabilitation program was found to improve intrinsic risk factors for shoulder injuries in kayakers. This thesis provides clinical, evidence based insight for coaches, athletes and scientists aiming to optimize all aspects of performance in the sport of flat-water kayaking.

Supervisor: Dr R Tucker (Human Biology)
Co-supervisor: Mr D Karpul; Professor TD Noakes (Human Biology)

David John Hume
Thesis Title: *Mind the Gap: brain-behaviour barriers to successful weight loss maintenance*

David Hume has a BA degree in Sport Science from the University of Stellenbosch and a BSc(Med)(Hons) Exercise Science (Biokinetics) degree from the University of Cape Town. He is registered with the Health Professions Council of South Africa as a biokineticist, and is currently a junior lecturer in the Division of Exercise Science and Sports Medicine, Department of Human Biology.

David Hume's thesis makes two important contributions to the scientific literature. First, it provides empirical support that individuals with dissimilar weight histories, but matched for age and body size, exhibit remarkably similar habitual eating and exercise behaviours. The data therefore suggest that the positive energy gap said to drive weight loss recidivism is not attributable to energy-sparing compensatory responses in behaviour but may, instead, relate to alternate derangements in physiology or metabolism. Second, there are measurable differences in visual food cue-reactivity (i.e. cortical arousal and attentional processing) between women of dissimilar phenotypes, weight histories and eating styles. This observation underscores the importance of strategies to down-regulate heightened reactivity of the brain's neural reward pathways in overweight/obesity-prone individuals, and provides pragmatic support for their inclusion in traditional dietary and exercise weight loss intervention modalities.

Supervisor: Professor EV Lambert (Division of Exercise Science and Sports Medicine)
Co-supervisors: Dr J Kroff Exercise Science and Sports Medicine); Dr L Rauch (Exercise Science and Sports Medicine); Dr F Howells (Human Biology)

Phoebe Anne Runciman
Thesis Title: *Performance and fatigue characteristics of Paralympic athletes with cerebral palsy*

Phoebe Runciman has a BA from the University of the Western Cape and an honours degree in Biokinetics from Nelson Mandela Metropolitan University. Her PhD at UCT was upgraded from an MSc degree in 2012.

Phoebe Runciman's thesis is the first to investigate in-depth body composition, exercise performance and neuromuscular characteristics of elite Paralympic athletes with cerebral palsy (CP). The findings of this thesis contradict the existing literature which states that individuals with CP are permanently impaired, by showing that ambulant athletes with CP have similar body composition and bone mineral density, exercise performance capacities and fatigue profiles to able-bodied athletes. The work in Phoebe Runciman's thesis lends novel insights and understanding to the physiology and physiological adaptations of highly functioning ambulant athletes with CP. The findings of this thesis have important implications with respect to the understanding of rehabilitation, classification, coaching and clinical management of individuals with CP.

Supervisor: Prof. W. Derman (Department of Surgery, Stellenbosch University)
Co-supervisors: Prof. R. Tucker (Department of Medicine, Free State University), Dr. S. Ferreira (Department of Sport Science, Stellenbosch University), Dr. Y. Albertus-Kajee (Department of Human Biology, University of Cape Town)

Monika Uys
Thesis Title: *Socio-ecological influences on physical activity in primary school children: a view from South Africa*

Monika Uys completed her BSc in Molecular and Cellular Biology and BSc(Hons) in Physiology at the University of Stellenbosch. She then took a research post at the MRC Chronic Diseases of Lifestyle Unit, working on HealthKick, a school-based nutrition & physical activity intervention, set in disadvantaged school settings in the Western Cape. In the course of her PhD studies, she has produced or co-produced two peer-reviewed manuscripts, with two more currently under review.

Monika Uys' thesis investigated the impact of mainly the school, but also the neighbourhood environment, on children's physical activity (PA). Key findings of this thesis were: 1) that a low-touch multi-component, school-based intervention was not effective in changing physical activity behaviour in learners from South African low-income settings, 2) that factors in the school environment influence children's physical activity (for example, supervision, playground density, green space) and 3) that objective measures of the neighbourhood environment, such as traffic safety, crime and the availability of recreational facilities, have a greater influence on children's out-of-school physical activity than parents' perceptions of the neighbourhood environment. Future school-based interventions should be more intense and learner-focused, including an emphasis on changing the school built environment. Further, local government policy changes addressing neighbourhood environmental justice and redress may impact positively on leisure time physical activity in South African children.

Supervisor: Professor Estelle V. Lambert, Division of Exercise Science and Sports Medicine,

Department of Human Biology
Co-supervisors: Dr. Catherine Draper, Division of Exercise Science and Sports Medicine, Department of Human Biology

In Health Economics:
*Vincent Okongo Okungu
Thesis Title: *Towards universal health coverage: exploring healthcare-related financial risk protection for the informal sector in Kenya*

Vincent Okungu holds a BEd(Hons) and MA (Anthropology) from the University of Nairobi, Kenya. In addition, he has an MPH in Health Economics from UCT. He has worked with KEMRI-Wellcome Trust Research Program (Kenya) from 2006 and recently joined Strathmore University (Kenya) as a lecturer and researcher.

Vincent Okungu's thesis focuses on health care financing in Kenya within the context of global calls to provide universal access to needed health services without individuals facing financial catastrophe when paying for health care. He specifically examines the feasibility of providing financial protection coverage to populations outside of formal employment. His study explores the nature of the informal sector in Kenya, the current experience of members of the informal sector with the health system and their views on different ways of prepaying for health services. The financial resource requirements for universal access to health care through general government revenue are compared with a contributory health insurance scheme approach. Although both funding options would require considerable government subsidies, given the magnitude of the informal sector in Kenya and their limited financial means, a tax-funded system would be less costly and more sustainable in the long-term than an insurance scheme approach.

Supervisor: Professor D McIntyre (Health Economics Unit, Public Health)
Co-supervisor: Dr J Chuma (KEMRI)

In Human Genetics:
Fiona Eugenie Kebirungi Baine
Thesis Title: *A molecular investigation of Huntington disease; origins of the mutation and current prevalence in South Africa*

Fiona Baine received her BSc, BSc(Med)(Hons) and MSc(Med) from UCT. Her doctoral research arose from an interest in the genetics of neurodegenerative diseases in African populations, to which she was introduced as a master's student in the Division of Human Genetics.

Fiona Baine's thesis investigated the molecular genetics of Huntington disease in the South African population. Normal allele distribution revealed distinct patterns suggested to be associated with differences in disease prevalence. A comprehensive analysis of the gene identified specific haplotypes associated with the disease-causing mutation; and confirmed unique origins for the mutation across the ethnic groups investigated. Based on molecular testing records, minimum estimates were made for the prevalence of Huntington disease in South Africa. Fiona Baine determined that these current estimates of frequency are associated with both the allele distribution and the population-specific haplotypes identified. This research has laid the foundation for South African patients affected by this devastating and incurable neurodegenerative disease to potentially benefit from international collaborative efforts to develop treatments and possible interventions for the symptoms of the disease.

Supervisor: Professor LJ Greenberg (Human Genetics)
Co-supervisor: Professor MR Hayden (Vancouver, Canada)

Shareefa Dalvie
Thesis Title: *Genetic analysis of bipolar disorder and alcohol use disorder*

Shareefa Dalvie completed a BSc degree in 2007 at UCT. She subsequently obtained a BSc(Hons) and MSc(Med) in the Division of Human Genetics. Her doctoral work followed on research from her previous postgraduate degrees on the complex genetic aetiology of psychiatric disorders.

Shareefa Dalvie's thesis aims are to investigate the aetiology of the complex behavioural disorders: bipolar disorder (BD) and alcohol-use disorder (AUD), using high-throughput genomic technologies, bioinformatics, brain-imaging and environmental measures. This innovative work, addressing important contributors to burden of ill-health and psychosocial problems in society, brings together years of study involving advanced clinical characterisation of research cohorts, with state of the art genomic technologies. An additional aim is to assess the genetic aetiology of BD-AUD comorbidity. The results show that disruption in immune-related genes may contribute to the development of BD. In AUD, although no statistically significant gene by environment interactions were detected for adolescent AUD, the research suggests that the circadian pathway and childhood trauma may play a role in the development of adolescent AUD. Differential brain volume in AUD and BD-AUD comorbidity may be characterised by variations in the glutamatergic pathway. This work, the first of its kind on the African continent, offers important clues that these biochemical pathways and the interactions between them play a role in BD and AUD - and provide impetus for their further investigation in our populations.

Supervisors: Professor R Ramesar (Department of Pathology)
Co-supervisor: Professor DJ Stein (Department of Psychiatry and Mental Health)

In Medical Biochemistry:
*Jessica Da Gama Duarte
Thesis Title: *Proteomic studies on patient responses to chemotherapy, radiotherapy and immunotherapy in cancers*

Jessica Duarte holds a BSc(Hons) in Biochemistry from the University of Algarve, Portugal. She has been studying towards a PhD degree at UCT since 2011 in the Division of Medical Biochemistry.

Jessica Duarte's thesis lies in the field of cancer immunology and is specifically concerned with developing new technology to enable monitoring and predicting the response of cancer patients to treatment. Jessica Duarte's thesis thus describes the design, creation and validation of a novel protein microarray platform – a cancer-testis antigen microarray - that enables quantitative measurement of alterations in cancer-specific autoimmune responses in patients before and during treatment. This thesis then utilizes the developed cancer-testis antigen microarray platform to determine quantitative changes in anti-cancer antigen autoimmune profiles in, inter alia, metastatic melanoma patients undergoing a variety of therapeutic treatment regimes and draws correlations between the resultant data and recorded clinical data for the individuals in the cohort. Through this study, Jessica Duarte develops a novel experimental tool for precision medicine that may be utilized in stratification of cancer patients prior to treatment, as well as in monitoring and predicting therapeutic outcomes in cancer patients undergoing treatment.

Supervisor: Professor JM Blackburn (Medical Biochemistry)

Henriette Renee Hobbs
Thesis Title: *Preparation and evaluation of polymer microspheres for enhanced lateral flow immunoassay: the case study for malaria.*

Henriette Hobbs holds a BSc (Honours) and MSc (with distinction) in Biochemistry from the University of Pretoria. She has been studying towards a PhD degree at UCT since 2012 in the Division of Chemical & Systems Biology.

Henriette Hobbs' thesis lies in the field of lateral flow immuno-assays, the preferred diagnostic technology for point-of-care applications in resource constrained settings. Her thesis aims to develop a new detection system that will address the limitations of existing lateral flow-based diagnostic devices. The new detection particles developed in the research provide for improved stability, with sensitivity at least on-par with the current standard in detection reagents, gold nanoparticles. In addition, this research provides proof-of-concept for lateral flow multiplexing using the detection particles developed in this thesis. Henriette Hobbs will be continuing the development of the particles at the CSIR through an NRF postdoctoral fellowship.

Supervisor: Professor Jonathan Blackburn (UCT, Division of Chemical & Systems Biology, Department of Integrative Biomedical Sciences).
Co-supervisor: Dr Justin Jordaan (CSIR Biosciences & ReSyn Biosciences)

Kate Morgan Larmuth
Thesis Title: *Angiotensin-converting enzyme cleavage of the Alzheimer's beta-amyloid peptide.*

Kate Larmuth completed her BSc in Cellular and Molecular Biology followed by her honours in Molecular Microbiology at Stellenbosch University.

Kate Larmuth's thesis focuses on the mechanistic role that the two-domain (N and C) angiotensin-converting enzyme (ACE) plays in the hydrolysis of the Alzheimer's beta-amyloid peptide (Aß). Her studies interrogated the molecular basis of the cleavage of Aß by determining the kinetic parameters of different forms of human ACE with various Aβ substrates. In addition, high-resolution crystal structures of the N-domain of ACE complexed with various Aß peptides were determined. Her results elucidated a novel ACE cleavage site at the His14-Gln15 bond of the physiologically relevant Aß(1-16) peptide. Shorter fluorogenic substrates, Aß(4-10)Q and Aß(4-10)Y, were also cleaved, but with different specificity. All Aß substrates indicated an overarching N-selectivity, driven largely by interactions with the domain-specific residues of the S2 and S2' pockets, most notably the N-domain S2' Ser357 residue. High-resolution N-domain/Aß crystal structures showed a conserved mode of peptide binding and, evidence of the enzyme's broad exoprotease activity. ACE's signalling response to Aß was also investigated using immunodetection and mass spectrometry. Exposure to Aß(1-42) resulted in increased ACE activity and expression, providing an explanation for the increased ACE found in AD. Together, these findings provide rationale for further in vivo pharmacological studies using domain-selective ACE inhibitors to assess their efficacy in the pathogenesis of AD.

Supervisor: Professor E. D Sturrock (Integrative Biomedical Sciences)
Co-supervisor: Ms S Schwager (Integrative Biomedical Sciences)

Hapiloe Mabaruti Maranyane
Thesis Title: *Phosphoglucomutase 1 (PGM1) expression and regulation in cancer cells.*

Hapiloe Maranyane has a BSc and a BSc(Med)(Hons) from the University of Johannesburg.

In her thesis, Hapiloe Maranyane investigates the expression, regulation and biological significance of the metabolic enzyme, PGM1 in cancer cells. Cancer cells undergo metabolism that is significantly different to normal cells, with an increased dependence on glucose metabolism as a hallmark of most cancers. Her results showed that PGM1 expression was elevated in cervical cancer tissue compared to normal. Its expression was also high in cervical, oesophageal and breast cancer cell lines. Elevated PGM1 expression associated with high promoter activity as well as with E2F and HIF1 activities in cancer cells. PGM1 expression in cancer cells was required mainly for glycogen accumulation and did not appear necessary for cancer proliferation in conditions of oxygen and nutrient sufficiency. Her data shows that it is required for proliferation under conditions of glucose and oxygen deprivation combined. These findings suggest that PGM1 expression is altered in cancer cells, that it is required for aberrant glycogen expression in cancer cells and that it has a role in cancer biology during severe stress conditions.

Supervisor: A/Professor V Leaner (Division of Medical Biochemistry)

In Medical Physics:
Graeme Lawrence Lazarus
Thesis Title: *Validation of Monte Carlo-based calculations for small irregularly shaped Intra-Operative Radiotherapy Electron beams*

Graeme Lazarus obtained a BSc Hons cum laude in Physics from the University of Durban-Westville. He then completed his Medical Physics academic qualification through UCT whilst performing his experiential training and internship at Groote Schuur Hospital. He is currently the regional head of Medical Physics in KwaZulu-Natal.

Graeme Lazarus's thesis focuses on the use of the Monte-Carlo method to simulate radiation transport of electrons from medical linear accelerators (LINACs) for radiotherapy of small surgically exposed cancer sites. Measurements have proven to be inaccurate for small radiation fields. The Monte-Carlo method simulates the real-life physics processes that occur and has emerged as being the most accurate method of modelling radiation therapy beams. Monte-Carlo commissioning of the LINAC is first performed until acceptable comparisons between calculations and measurements are achieved. The resulting electron source spectrum and treatment head specifications are then used as input for simulating the Intra-Operative Radiation Therapy (IORT) cone system, the results of which are compared to measurements. Finally, custom-made irregularly shaped cut-outs that conform to the shape of the surgically exposed tumour are simulated and dose distributions and output factors are obtained. A patient case utilising the resulting Monte Carlo calculations is presented.

Supervisor: Prof E R Hering (University of Cape Town)
Co-Supervisor: Dr F C P du Plessis (University of the Free State)

In Medical Virology:
Tsungai Ivai Jongwe
Thesis Title: *Construction and evaluation of three candidate vaccines expressing HIV-1 subtype C mosaic Gag*

Tsungai Jongwe grew up in Kwekwe, Zimbabwe. She holds a BSc, BSc(Hons) and MSc(Med) from UCT. She has been the recipient of prestigious scholarships during her postgraduate studies and has presented her work at international conferences.

Globally there are 35 million people living with HIV. A prophylactic HIV-1 vaccine is the best long-term means of preventing the spread of this epidemic, however, the immense sequence diversity of HIV-1 makes it challenging to develop effective vaccines. Tsungai Jongwe's thesis aims to develop stable, safe, and affordable HIV-1 vaccines expressing a computationally-derived mosaic Gag (GagM) immunogen which is designed to overcome HIV-1 diversity by maximizing the inclusion of common T cell epitopes. The vaccines were based on Mycobacterium bovis Bacille Calmette Guérin (BCG), modified vaccinia Ankara (poxvirus), and a novel DNA vector with enhanced expression of transgenes developed at UCT. Tsungai showed that the mosaic GagM protein formed virus-like particles like the natural one and small doses of the vaccines elicited potent immune responses in mice. Furthermore, the mosaic vaccines were more immunogenic than vaccines expressing natural Gag.

Supervisor: Dr R Chapman (Department of Pathology)
Co-supervisors: Professor A-L Williamson, Dr N Douglass, Dr F Chege (Department of Pathology)

In Medicine:
Anastase Innocent Dzudie Tamdja
Thesis Title: *Predicting pulmonary hypertension and outcomes in patients with left heart disease*

Anastase Dzudie trained as a medical doctor and internist at the University of Yaounde 1 (Cameroon), and as a cardiologist in Lyon, France. He works for the Douala General Hospital, Cameroon. His doctoral work emerged from his collaboration in cardiovascular research with colleagues across Africa since 2012.

Anastase Dzudie's thesis aims to investigate the clinical, biological and paraclinical attributes associated with the presence of and/or mortality and hospitalisation for pulmonary hypertension due to left heart disease (PH-LHD). Hitherto, little was known from Africa on this disease of global importance, which is characterised by a rise in lung arteries' pressure, resulting from various conditions, and usually leading to right heart failure and death if left untreated. Using two multinational African registries, Anastase Dzudie's thesis demonstrates that all types of pulmonary hypertension are present in African patients, with PH-LHD being the dominant type. Affected patients are young, predominantly women, uneducated and poor; and more likely in the short term to die and/or to be hospitalised for heart failure. Electrocardiogram abnormalities are very frequent but non-specific in these patients, with some however, being indicative of high mortality risk. The thesis suggests that future research should investigate early diagnostic methods and affordable treatments for patients with pulmonary hypertension in Africa.

Supervisor: Professor K Sliwa (Medicine)
Co-supervisor: A/Professor A Pascal Kengne (Medicine)

Boitumelo Louisa Fanampe
Thesis Title: *Interferon-γ aptamers for the diagnosis of extra-pulmonary tuberculosis*

Boitumelo Fanampe has a BTech and MSc from the Cape Peninsula University of Technology. Her interest in TB diagnotics emerged as a result of her working as a Research Scientist (2009-2010) for Quantum Biotech, a biotechnology company that focused on developing handheld point-of-care diagnostics for TB and HIV. She then joined the Lung Infection and Immunity Unit at UCT to undertake her doctoral work.

Boitumelo Fanampe's thesis aims to develop different point-of-care tools for the diagnosis of extra-pulmonary TB (EPTB). The prevalence of EPTB in HIV-uninfected patients is 25-30%. However, in HIV-infected persons, the prevalence increases to between 50 and 70%. With that said, there are no point-of-care (POC) tests to diagnose these patients rapidly, so that they can initiate treatment. Boitumelo Fanampe therefore raised synthetic antibodies, referred to as "aptamers", against interferon-γ, a well-characterised biomarker for EPTB. These aptamers will be characterised and incorporated into different diagnostic platforms, with the aim of developing POC tests that are highly sensitive & specific, rapid and inexpensive. The work will thus contribute to developing better field friendly tests for TB, which is a major unmet global need.

Supervisor: Professor K Dheda (Lung Infection and Immunity Unit, Medicine)
Co-supervisors: Dr M Khati (Emerging Health Technologies, CSIR); Dr G Theron (Lung Infection and Immunity Unit, Medicine)

Anil Sanjeev Pooran
Thesis Title: *The role of IL-4 and Th2-like cytokines in pulmonary tuberculosis*

Anil Pooran has an MSc in Medical Microbiology from the London School of Hygiene and Tropical Medicine in the UK, where he was introduced the field of TB immunology. He relocated to South Africa to pursue his PhD at the Lung Infection and Immunity Unit.

Anil Pooran's thesis investigated the role of a specific subset of T helper cells involved in the immune response to TB. Certain types of T cells (Th1 and Th17) are protective in tuberculosis because they produce proteins called cytokines that activate immune mechanisms to help eliminate infection. However, persons with TB still have high levels of these particular cytokines. One explanation is that another T-helper cell subset, called Th2, may be blocking the protective actions of other cells by producing the cytokine, interleukin-4 (IL-4). Anil Pooran successfully produced IL-4 protein in a baculovirus system and showed that IL-4 directly restricted the ability of the host's immune cells to eliminate infection by enhancing the survival of the TB bug. He then showed that the effect of IL-4 on TB survival was driven by an increase in regulatory T cells which dampen the protective T-helper cell responses. Furthermore, he found that another T-helper cell subtype, Th9 cells, was associated with TB infection. His findings are important in helping identify targets for the development of vaccines and immunotherapeutic agents for treating TB.

Supervisor: Professor K Dheda (Medicine)
Co-supervisor: Professor J Blackburn (Medical Biochemistry)

In Neurosciences:
Petrus Jurgens van Zyl
Thesis Title: *A study of the WKY as a rat model of depression*

Petrus van Zyl obtained his BPharm and MSc in Pharmacology from North-West University and is a registered pharmacist.

Petrus van Zyl's thesis aimed at establishing a robust rat model of depression/anxiety as well as identifying changes in the brain that accompany the reversal of depression-/anxiety-like behaviour. The study used Wistar-Kyoto rats, maternally separated Wistar-Kyoto and a comparator maternally separated Sprague-Dawley rats to measure depression-/anxiety-like behaviour during antidepressant drug treatment as well as neurochemical changes in relevant brain areas associated with depression. The result was a more robust maternally separated Wistar-Kyoto rat model of depression and anxiety. His work included establishing that changes in ultrasonic vocalizations could serve as a marker for depression/anxiety-like behaviour in the rat model. Furthermore, an increase in phosphorylated GSK3β in the prefrontal cortex of Wistar-Kyoto rats, following treatment, provided novel evidence for the mechanism of action of the antidepressant drug, desipramine.

Supervisor: Professor VA Russell (Human Biology)

In Neurosurgery:
Llewellyn Cavill Padayachy
Thesis Title: *Ultrasound as a non-invasive diagnostic tool in paediatric neurosurgery: relationship between the optic nerve sheath diameter (ONSD) and intracranial pressure (ICP)*

Llewellyn Padayachy has an MBChB from the University of Pretoria. While working as a registrar at UCT from 2004-2008, he obtained an MMed (Neurosurgery), and and received the Rowland Krynauw medal for the most outstanding candidate in the FCNeurosurg (SA) exam (the first time this medal was awarded in nearly two decades). He has dedicated his career to paediatric neurosurgery and has been a consultant at Red Cross War Memorial Children's Hospital since 2010.

As many neurosurgical disorders present with raised intracranial pressure (ICP), there is a great need for accurate, non-invasive techniques to detect this condition. Lllewellyn Padayachy's thesis aimed to evaluate the role of an ultrasound-based, non-invasive technique of optic nerve sheath diameter (ONSD) measurement to detect raised ICP in children. Comparison of ONSD measurement to the criterion standard of invasive ICP measurement provided an opportunity to assess the diagnostic accuracy of this technique and identify relevant physiological and demographic factors which influence this relationship. Although this technique is highly sensitive, specificity is low due to poor understanding of the elastic nature and subsequent distensibility of the ONS. This work describes a dynamic imaging technique, which evaluated the 'pulsatile deformability' of the ONS, as a marker of the sheath stiffness. This helps differentiate pathologic distension of the ONS due to raised ICP, from a widened ONS that is a variant of normal.

Supervisor: Professor Graham Fieggen (Neurosurgery)
Co-supervisor: Dr Tormod Selbekk (SINTEF, Norway)

In Nursing:
Douglas David-John Newman-Valentine
Thesis Title: *Transsexual women on the journey of sexual re-alignment in a hetero-normative healthcare system in the Western Cape*

Douglas David-John Newman-Valentine obtained a BCur and MCur from the University of the Western Cape. His PhD research emerged from working with marginalised women in his early career as a nurse. His strong internal drive of activism towards equality and justice contributed to his identifying that transsexual women were also marginalised as they negotiated the public health care system for their transgender-related health care needs.

Douglas Newman-Valentine's thesis aims to understand the lived experiences and their meaning for transsexual women during the sexual-realignment process when negotiating health care for their transgender-related health care needs in a heteronormative health care system. He utilises an Interpretive Phenomenological Analysis (IPA) and a feminist lens to give a voice to the transsexual women who participated in the study. The findings highlight how the heteronormative health care system is ill-equipped to address all the transgender related health care needs of transsexual women who are on the journey of sexual realignment. Recommendations are made for the health care system, policy makers, and educational institutions to become inclusive and affirming to the needs of transsexual women. Furthermore, recommendations for research are made to stimulate the transsexual debate in scientific literature.

Supervisor: A/Professor Sinegugu Duma (Health and Rehabilitation Sciences)

In Paediatrics:
Kirsten Ann Mary Donald
Thesis Title: *Multimodal neuroimaging and early neurobehaviour and development correlates in alcohol-exposed infants in Cape Town*

Kirsten Donald has an MBChB and MPhil from UCT, where she also subspecialised in paediatric neurology based at Red Cross War Memorial Children's Hospital. She currently runs the Division of Developmental Paediatrics, and her doctoral work emerged from an interest in studying the potentially preventable causes of developmental delay and disability in young children.

Kirsten Donald's thesis explores the relative impact of prenatal alcohol exposure on the brain in infants as measured by multimodal brain imaging and the relationship of these findings to early neurobehavioural and developmental status. Alcohol use and alcohol use disorders contribute a significant proportion of the burden of disease in low, middle, and high-income countries, following which the spectrum of fetal alcohol spectrum disorders represents one of the most common preventable causes of intellectual disability globally. Understanding the core brain areas of susceptibility to prenatal alcohol as they manifest in early life is key to developing strategies for early focused identification and interventions. Kirsten Donald provides preliminary evidence for the measurable effect of alcohol on the neonatal brain at a structural, microstructural, neurochemical as well as functional organisational level. This highly novel data underscores the harmful effects of prenatal exposure to alcohol on brain structure and organisation and establishes that these changes are already discernible in newborns, well before the age Foetal Alcohol Syndrome and Foetal Alcohol Spectrum Disorders are typically diagnosed.

Supervisor: Professor Dan Stein (UCT, South Africa)
Co-supervisors: Professor Katherine Narr (University of California, Los Angeles, USA)
Professor Edward Riley (San Diego State University, USA)

Liesl Joanna Zuhlke
Thesis Title: *Outcome of asymptomatic and symptomatic rheumatic heart disease*

Liesl Zuhlke has an MBChb and a Master in Public Health from UCT. She was admitted to the Fellowship of the College of Paediatricians of South Africa in 1999, and earned the Certificate in Cardiology of the Colleges of Medicine of South Africa in 2007. She also holds a Diploma in Child Health of the Colleges of Medicine of South Africa (1996).

Liesl Zuhlke's thesis examines the outcome of asymptomatic and symptomatic people with rheumatic heart disease. She shows in the first multi-centre multinational study of rheumatic heart disease that the condition causes death and disability in mainly in young women who have limited access to proven treatments for this condition such as penicillin, anticoagulation and contraception. Her work has shed new light on the burden of rheumatic heart disease and has major implications for clinical practice and research.

Supervisor: Professor BM Mayosi (Medicine)

In Psychiatry:
*Jacqueline Hoare
Thesis Title: *A diffusion tensor imaging and neurocognitive study of ART-naïve and ART-treated children in Cape Town*

Jacqueline Hoare is Head of the Division of Liaison Psychiatry in the Department of Psychiatry and Mental Health at UCT/GSH. The Liaison team assesses and managers patients with psychiatric and physical comorbidity and complicated functional somatic symptoms.

Jacqueline Hoare's research focus is neuroHIV/AIDS in children and adolescents. This area of work is highly relevant to South Africa, and other parts of the low-middle income world, where prevalence of HIV/AIDS is high, and where there has been vertical transmission. Having been the first graduate from UCT in Neuropsychiatry, Jacqueline Hoare was well aware that there was an absence of brain imaging data in this group, as well as a gap in understanding the spectrum of cognitive disorders in Pediatric HIV. She has undertaken the largest studies to date in this area. Her findings have been important in emphasising a range of cognitive disorders in children infected with HIV, and have led to several papers in high impact journals. Dr Hoare has been awarded a number of local grants, including the Discovery foundation fellowship, MRC SIR, Carnegie corporation (IIDMM) and NRF Thuthuka, which she have used to fund a large adolescent neuroAids cohort study for her PhD. Furthermore, this work has led to independent NIH funding.

Supervisor: Professor Dan Stein, Psychiatry

Nastassja Koen
Thesis Title: *Psychological trauma and posttraumatic stress disorder in a South African birth cohort study*

Nastassja Koen has an MBChB from UCT. As a young clinician-scientist, she has a keen interest in integrating research and clinical practice, with a view to improving mental healthcare in South Africa.
Nastassja Koen's thesis aimed to investigate a number of questions about trauma and posttraumatic stress disorder (PTSD) in the Drakenstein Child Health Study (DCHS) – an ongoing South African birth cohort study – including their risk factors; their impact on infant anthropometry and neurodevelopment; and their genetic correlations. Psychological trauma and lifetime PTSD each were found to be highly prevalent in this cohort. Recent life stressors were found to be associated with both lifetime trauma and PTSD; while childhood trauma was associated with PTSD. Maternal trauma exposure increased the risk of low infant birthweight; while maternal trauma and PTSD each were associated with poor infant neurodevelopment at age 6 months. Among the 33 single nucleotide polymorphisms (SNPs) genotyped in this cohort, one SNP of the regulator of G-protein signaling 2 (RGS2) gene, rs4606, was found to be associated with lifetime PTSD. Further large-scale transgenerational studies in under-studied populations such as ours could potentially elucidate the neurobiology of PTSD and the stress response; and may inform intervention programmes.

Supervisor: Professor Dan Stein, Psychiatry
Co-supervisor: Professor Raj Ramesar, Pathology

Daniella Vuletic
Thesis Title: *Imaging of cerebral glucose metabolism, functional connectivity and perfusion in methamphetamine dependence, with and without psychotic symptoms, compared to healthy controls: a PET and MRI study*

Daniella Vuletic has a BSc (Hons) from the University of the Witwatersrand, and a master's in Neuroscience from Institute of Psychiatry Kings College London. She has been based at the Department of Psychiatry at UCT, where her PhD work emerged from an interest in neuroimaging and addictions.

Substance use disorders represent a major public health problem both globally and in South Africa. Psychostimulants such as methamphetamine are highly addictive and have been shown to be substantial contributors to global disease burden. Methamphetamine dependence may lead to a range of psychiatric and medical symptoms, including psychotic symptoms. Such work may be mediated by frontal, striatal, and limbic regions, and by frontostriatal and frontolimbic connectivity. However there are few neuroimaging data that include patients with methamphetamine dependence who do and do not have psychosis. Daniella Vuletic's thesis utilised three different, but potentially complementary, imaging techniques to investigate the neurocircuitry of methamphetamine dependence with and without psychotic symptoms. This is the first study to use both FDG-PET, resting state fMRI and ASL to study methamphetamine use disorders. Altered cerebral metabolism, functional connectivity, and cerebral perfusion is consistent with the disruption of mesocorticolimbic and frontostriatal connectivity in methamphetamine use disorders. These imaging modalities provide complementary insights into the neurocircuitry of methamphetamine dependence.

Supervisors: Prof Dan Stein (Psychiatry)
Co-supervisor: Prof James Warwick (University of Stellenbosch)

ORIGIN OF THE BACHELOR DEGREE

The term ‘Bachelor’ derives from ancient ceremonies (the first such was believed to have been at Oxford in 1432) held to honour achievements of scholarship. The word derives from bacca lauri (laurel berry). Instead of the hoods we use today to signify your graduation, graduands of old wore garlands of laurel leaves and berries.

So the term has nothing to do with our modern understandings of what being a bachelor means, and everything to do with a long tradition of celebrating high achievement.

ACADEMIC DRESS

OFFICERS OF THE UNIVERSITY

CHANCELLOR

The Chancellor wears a gown made from dark blue silk. The front of the gown has facings down each side made of dark blue velvet embroidered with a gold floral design. The gown and sleeves are lined with pale blue silk and the sleeves are looped up in front with a gold cord and button. The yoke of the gown is edged with gold cord. The gown is worn with a square blue velvet hat with a soft crown and gold tassel.

V ICE-CHANCELLOR

The Vice-Chancellor wears a gown made from bright blue silk. The front of the gown has facings down each side and sleeve-linings of pale blue silk. The sleeves are looped up in front with a gold cord and button and the yoke of the gown is edged with gold cord. The gown is worn with a black velvet bonnet with a silver cord.

DEPUTY VICE-CHANCELLOR

A Deputy Vice-Chancellor wears a gown made from dark blue silk. The gown has closed sleeves with an inverted T-shaped opening at the level of the elbow to free the arms. The front of the gown has facings of light blue down each side. The sleeves are lined with light blue and the yoke of the gown is edged with silver cord. The gown is worn with a black velvet bonnet with a silver cord.

CHAIR OF COUNCIL

The Chair of Council wears a gown, of the same pattern as that worn by the Vice-Chancellor, made from light blue silk. The front of the gown has facings down each side and a yoke of dark blue. The sleeves are lined with dark blue and the facings and yoke are trimmed with gold cord. The sleeves are looped up in front with a gold cord and button. The gown is worn with a black velvet bonnet with a gold tassel.

MEMBERS OF COUNCIL

Members of Council wear graduate-pattern gowns made from black silk. The front of the gown has 10cm wide, light blue facings down each side trimmed with dark blue cord. The gown is worn with a black velvet bonnet with a blue cord.

REGISTRAR

The Registrar wears a gown made from black silk. The front of the gown has 10cm wide facings of blue silk down each side. The gown is worn with a black velvet bonnet with a white cord.

PRESIDENT OF CONVOCATION

The President of Convocation wears a gown made from black silk and has long closed sleeves with an inverted T-shaped opening at the level of the elbow to free the arms. The front of the gown has facings down each side and sleeves of blue silk. The gown is worn with a black velvet bonnet with a blue tassel.

ACADEMIC DRESS (continued)

GOWNS

A plain black gown styled after the pattern of the Oxford scholar's gown is worn by diplomats, and Bachelor's, Honours and Master's graduands. Senior doctoral graduands wear a scarlet gown, with facings the colour distinctive of the faculty in which the degree is awarded. PhD graduands wear a scarlet gown without facings.

HOODS

The hood is particular to the qualification and the faculty. Diplomates and Bachelor's grdauands wear a black hood lined with white and edged with the colour distinctive of the faculty. Master's graduands wear a black hood lined with the colour distinctive of the faculty and edged with white, except in the case of the hood for the MMed degree, which is edged with red. Senior doctoral graduands wear a hood of the colour distinctive of the faculty and a black velvet bonnet with a cord of the colour distinctive of the faculty in which the degrees is awarded. PhD graduands wear a hood of scarlet lined with black and a black velvet bonnet with a cord of the colour distinctive of the faculty in which the degree is awarded.

DISTINCTIVE COLOURS

Faculty of Commerce	Yellow
Faculty of Engineering and the Built Environment	Green
Faculty of Health Sciences	Red
Faculty of Law	Old gold
Faculty of Humanities	Blue
Faculty of Science	Purple

HISTORICAL SKETCH

Founded as the South African College (a boys' school that aimed to provide higher education as well) in 1829, the University was established as the University of Cape Town in 1918.

The early history was one of great expectations and hard times and it was not until the early years of the twentieth century that the University was developed into a fully-fledged tertiary institution. A significant and pioneering development in the 19th century was the admission of women as degree students in 1886, many years ahead of most universities in the world.

At the start of the 20th century the University incorporated the Diocesan College, the teacher training classes of the Normal College, the South African College of Music and the Cape Town Schools of Fine Art and Architecture.

The Medical School was established and in the 1920s the University began a partnership with the local health authority (now the Provincial Government's health department) that saw the Medical School move from the Hiddingh Campus and the Green Point Somerset Hospital to Observatory (the rest of UCT's Upper Campus moved from Hiddingh to its present site, on part of Cecil Rhodes' estate, in 1928). This partnership allowed for the construction of the first Groote Schuur Hospital on a University site. The partnership continues to this day and now involves not only Groote Schuur as a teaching hospital but Red Cross Children's Hospital, Valkenberg and a growing number of primary health care sites.

The period between the end of World War II and 1994 was marked by two themes. Firstly, the University recognised that if it was to be fully South African, it would have to move beyond academic non-segregation to be fully inclusive. It would have to face the consequential and increasing clashes with a government determined to legislate for segregation and enforce the doctrine of apartheid. And secondly, the University intended to transform into a leading research institution.

Before World War II, the University was largely a teaching university and its students were mostly undergraduates. The research undertaken was sporadic, though in some cases notable. A research committee was appointed for the first time in 1945. The next 75 years saw a great expansion of research and scholarly work such that the UCT of 2014 has a greater proportion of highly rated researchers and gains significantly more research grants and awards than any other South African University.

The 1980s and 1990s were characterized by the deliberate and planned transformation of the student body. This was aided by the establishment of the Academic Development Programme aimed at helping students from disadvantaged educational and social backgrounds to succeed and the desegregation of student residences. As a result, a student body that was 90% white in 1979, when UCT marked its 150th anniversary, is in 2014 more than 50% black. The total student enrolment of just above 26 000, includes international students drawn from over 100 countries, a significant proportion of which are from SADC states. Particular emphasis is placed on postgraduate studies and more than 20% of these students will be enrolled in master's and doctoral programmes. A growing number of postdoctoral fellows contribute substantially to the research endeavours and reputation of the University (UCT has more than a third of the total number of post docs in South Africa).

UCT continues to work towards its goal to be Africa's leading research university. Its success can be measured by the scope of study it offers and the calibre of its graduates.

MISSION STATEMENT OF THE UNIVERSITY OF CAPE TOWN

UCT aspires to become a premier academic meeting point between South Africa, the rest of Africa and the world. Taking advantage of expanding global networks and our distinct vantage point in Africa, we are committed, through innovative research and scholarship, to grapple with the key issues of our natural and social worlds. We aim to produce graduates whose qualifications are internationally recognised and locally applicable, underpinned by values of engaged citizenship and social justice. UCT will promote diversity and transformation within our institution and beyond, including growing the next generation of academics.

Foundation statement underpinning the mission statement
Our research-led identity is shaped by a commitment to:

- academic freedom as the prerequisite to fostering intellectual debate and free injury;
- ensuring that research informs all our activities including teaching, learning and service to the community;
- advancing and disseminating knowledge that addresses the key challenges facing society – South African,
- continental and global;
- protecting "curiosity driven" research;
- nurturing and valuing creativity in the sciences and arts including the performing and creative arts;
- stimulating international linkages of researchers and research groupings.

We strive to provide a superior quality educational experience for undergraduate and postgraduate students through:

- providing an intellectually and socially stimulating environment;
- inspired and dedicated teaching and learning;
- exposure to the excitement of creating new knowledge;
- stimulating the love of life-long learning;
- the cultivation of competencies for global citizenship;
- supporting programmes that stimulate the social consciousness of students;
- offering access to courses outside the conventional curricula;
- attracting a culturally and internationally diverse community of scholars;
- guaranteeing internationally competitive qualifications;
- offering a rich array of social, cultural, sporting and leadership opportunities;
- providing an enabling physical and operational environment.

In advancing UCT as an Afropolitan university, we will:

- expand our expertise on Africa and offer it to the world;
- extend our networks on the continent, along with our global connections and partnerships;
- promote student and staff exchanges and collaborative research and postgraduate programmes;
- engage critically with Africa's intellectuals and world views in teaching and research;
- contribute to strengthening higher education on our continent.

We strive to provide an environment for our diverse student and staff community that:

- promotes a more equitable and non-racial society;
- supports redress in regard to past injustices;
- is affirming and inclusive of all staff and students and promotes diversity in demographics, skills and backgrounds;
- offers individual development opportunities to all staff;
- is welcoming as a meeting space for scholars from Africa and around the world.

THE UNIVERSITY OF CAPE TOWN DONOR ROLL

The University of Cape Town gratefully acknowledges the sustained contributions of the following partners. Their generosity has assisted us toward our goals of improving student access to tertiary education and promoting curriculum, staff and student transformation; increasing our research capacity; and implementing programmes that promote social engagement and community upliftment.

FOUNDATIONS, CORPORATES AND TRUSTS

Platinum Circle
Foundations, Trusts, Corporates that have made donations to UCT totaling R50 million and above (alphabetically)

The Andrew W Mellon Foundation
The Atlantic Philanthropies (Bermuda) Ltd
Carnegie Corporation of New York
Claude Leon Foundation
The Ford Foundation USA
The Harry Crossley Foundation
Hasso Plattner Foerderstiftung, gGmbH
The MasterCard Foundation
The Rockefeller Foundation
The Wolfson Foundation

Gold Circle
Foundations, Trusts, Corporates that have made donations to UCT totaling between R25 million and R50 million (alphabetically)

The Bertha Foundation
Cancer Research Trust
The Elma Foundation
The Gallagher Foundation
The Michael and Susan Dell Foundation
Minerals Education Trust Fund
The William and Flora Hewlett Foundation
The Wolfson Foundation

Silver Circle
Foundations, Trusts, Corporates that have made donations to UCT totaling between totaling between R10 million and R25 million (alphabetically)

The Albert Wessels Trust
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John and Margaret Overbeek Trust
The John Wakeford Trust
Johnson & Johnson Family of Companies Contribution Fund
The Kresge Foundation
Liberty Holdings Ltd
The Mauerberger Foundation Fund
Moshal Scholarship Program
National Lottery Distribution Trust Fund
The Nellie Atkinson Trust
Novartis Research Foundation
The Raith Foundation
The Raymond Ackerman Foundation
The Rhodes Trust
Rustenburg Platinum Mines Ltd
Sigrid Rausing Trust
The South African National Roads Agency Ltd
The Spencer Foundation
Standard Bank Group Ltd
Unilever South Africa Home and Personal Care (Pty) Ltd
WK Kellogg Foundation, USA

Bronze Circle
Foundations, Trusts, Corporates that have made donations to UCT totaling between R1 million and R10 million (alphabetically)

The A & M Pevsner Charitable Trust
The Aaron Beare Foundation
Abax Foundation
Abe Bailey Trust
Actuarial Society Development Trust
Actuarial Society of South Africa
AECI Ltd
Allan Gray Orbis Foundation
Anglo American Platinum Ltd
Anglo American South Africa Ltd
Anglo Operations Ltd – Anglo Corporate Division
Anglogold Ashanti Fund
AngloGold Ashanti Ltd
The Atlantic Philanthropies (Ireland) Limited
Attorneys Fidelity Fund
Aurecon South Africa (Pty) Ltd
The Beit Trust
The Bertha Foundation
BHP Billiton Development Trust
BirdLife South Africa
BM Raff Will Trust
BoE Corporate, Cape Town
Boehringer Ingelheim (Pty) Ltd
Bokomo Foods
BP Southern Africa (Pty) Ltd
The Breadsticks Foundation
British American Tobacco South Africa
British Council, Cape Town
Cape Gate (Pty) Ltd, Cape Town
Cape Gate (Pty) Ltd, Vanderbijlpark
Capebridge Trust Company (Pty) Ltd
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The Children's Hospital Trust
CHK Charities Ltd
The Chris Barnard Trust Fund

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The Davis Foundation
De Beers Consolidated Mines Ltd
De Beers Fund Educational Trust
Department for International Development (DFID), Southern Africa
Department of Economic Development and Tourism
Department of Health (Western Cape)
The Desmond Tutu Educational Trust
Die Rupert-Musiekstigting
Discovery Fund
The Doris Crossley Foundation
Dow Southern Africa (Pty) Ltd
Dr Stanley Batchelor Bursary Trust
Dr. Leopold und Carmen Ellinger Stiftung
Edgars Consolidated Stores Ltd
Edwards Lifesciences (Pty) Ltd
EJ Lombardi Trust
Elsevier Foundation
Embassy of the People's Republic of China
Eranda Foundation
Ernest E and Brendalyn Stempel Foundation
Eskom, Brackenfell
Eskom, George
Fetzer Institute
FirstRand Bank Limited
The FirstRand Foundation
The Foschini Group CSI
The Foschini Group Ltd
The Gabriel Foundation
Garden Cities Inc
The Gatsby Charitable Foundation
Gensec Bank Ltd
GlaxoSmithKline plc
Gold Fields Foundation
Goldman Sachs Charitable Fund
Goldman Sachs Foundation
Government of Flanders
Guy Elliott Medical Research Trust
HBD Business Holdings
HCI Foundation
The Hermann Ohlthaver Trust
Hope for Depression Research Foundation
HR Hill Residuary Trust
HSBC Investment Services Africa (Pty) Ltd
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- Friends of UCT: formerly <R60,000, now <R100,000.

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Diverse as this community is, the shared experiences of a critical academic ethos and a spectacular campus make for a strong network that has a wide footprint, not only in South Africa, but across the continent and the globe.

We set a great store by our links with our alumni, and indeed the links alumni have with each other. We promise that we will be in touch, and ask you in turn to let us know not only your current contact details but also, from time to time, something of your lives and where you are in your careers.

Updates can be done on the web – http://www.uct.ac.za/dad/alumni/update/
- or by writing to the Alumni Office, UCT, PB X3 Rondebosch 7701
or by contacting us on (27) (21) 650 3746.

Your alma mater looks forward to welcoming you back, whether to a public lecture, a leadership forum, your class reunion, or just an informal call!