

# GRADUATION CEREMONY

December 2022

### **GRADUATION CEREMONIES DECEMBER 2022**

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### FACULTY OF COMMERCE

#### **ORDER OF PROCEEDINGS**

Welcome by the Master of Ceremonies.

The Presiding Officer will constitute and address the congregation.

The Master of Ceremonies will present the Fellowship Award to Professor N Biekpe.

Praise Poetry.

The graduands and diplomats will be presented to the Presiding Officer by the Dean of the Faculty.

The Master of Ceremonies will make closing announcements.

The Presiding Officer will dissolve the congregation.

### **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%.

### **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 Commerce and their years of election are:

- 2010: RE Dorrington
- 2015: M Leibbrandt
  - D Ross
- 2021 H Bhorat

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

#### PROFESSOR NICHOLAS BIEKPE

#### GRADUATE SCHOOL OF BUSINESS

Professor Nicholas Biekpe was the first academic to initiate, develop and establish development finance degree programmes in Africa. Until then, there was not a single African University offering either an undergraduate or postgraduate degree in development finance. He developed and launched the first master's programme at Stellenbosch University in 2003. Other universities, where he partnered to establish and launch development finance degree programmes, are the University of Cape Town, Nelson Mandela University, University of Namibia, University of Ghana, GIMPA, Kwame Nkrumah University of Science and Technology, University of Education Winneba, KCA University, Strathmore University, Great Zimbabwe University and University of Lagos. These programmes have produced thousands of graduates over the years since 2003. Professor Biekpe also launched two high impact journals (Review of Development Finance (with impact score of 3.52) and African Finance Journal (impact score of 1.35) to support development finance research. He is currently the Editor-in-Chief of both journals. He is also an Editor of the Journal of African Trade (Published by Springer).

Between 2006-2019, Professor Biekpe successfully trained 17 African PhD graduates from many African countries with 8 PhD graduates graduating from the University of Cape between 2012-2019. Some of the students trained are now established senior academics and some are now senior academics at the University of Cape Town. He has also supervised 217 minor master's dissertations between 2000 and 2021. At the University of Cape Town, Professor Biekpe established the Development Finance Centre (DEFIC), launched the MCom in Development Finance and the PGDip in Development Finance. DEFIC is well regarded throughout Africa and beyond. He has published extensively in the area of development finance and his most notable contribution was the development of the highly used and cited Bilinear Generalised Autoregressive (BGARCH) model. This model has been extensively used globally to measure financial and other risks. Professor Biekpe has developed a very solid academic network throughout Africa through several initiatives including the Annual African Finance Association Conference and the Annual Global Development Finance Conference which he initiated. He also established the Chartered Institute of Development Finance and the Africagrowth Institute.

### **FELLOWSHIP (CONTINUED)**

Professor Biekpe is a Fellow of the Following Scholarly Academies: Academy of Science of South Africa (ASSAf), African Academy of Sciences (AAS), The World Academy of Sciences (TWAS), Royal Statistical Society (RSS), Royal Society of Arts (RSA) and a Distinguished Fellow of International Engineering and Technology Institute (IETI). He is the Editor-in-Chief of the African Finance Journal, Review of Development Finance, Development Finance Agenda and Africagrowth Agenda and is Managing Editor of the Journal of African Trade. Professor Biekpe has raised very significant funds to support research and postgraduate students from poorer background.

Professor Biekpe has the following research impact indices: Google Scholar H-Index :34; Scopus H-Index: 20 and Most Cited Paper: 453

#### NAMES OF GRADUANDS

#### FACULTY OF COMMERCE

Dean: Professor S Goodman

#### DOCTOR OF PHILOSOPHY

Aradeh, Osama Abid Matar Thesis Title: Investigating the antecedents and consequences of e-participation on refugees' sustainable livelihoods. A case of Palestinian refugees in the Gaza Strip.

Osama Aradeh is a lecturer in Information Technology at the Arab Open University, Saudi Arabia. He holds a Master's in Information Systems from the Arab Academy for Science, Technology & Maritime Transport and a Bachelor's in Computer Science from the Islamic University of Gaza, Egypt.

Osama Aradeh's doctoral study investigates the role of e-participation implementation on sustaining refugees' livelihoods in the Gaza Strip, Palestine using two stakeholder perspectives. A quantitative approach is adopted to examine refugees' perspectives, using a survey. A qualitative approach is also conducted to assess the perspective of Palestinian public service providers through in-depth interviews. The results illustrate the role of e-participation in increasing information access and awareness among refugees, saving them time and money, allowing them to make direct and long-term relationships, and increasing participatory community decision-making. The results further show how e-participation influences livelihood outcomes such as reducing poverty, increasing well-being, and reducing vulnerability. Given the positive orientations of the respondents, e-participation has been found to be beneficial in the context of sustainable livelihoods of refugees, and therefore needs to become more of a political imperative.

*Supervisor:* Professor J-P Van Belle (Information Systems)

#### Bhogal, Nishana

Thesis Title: Towards a grounded theory of how and why founders vary in their scaling approaches: Alleviating period poverty

Nishana Bhogal holds an MBA with Distinction from UCT and is an associate of the South A frican Institute of Chartered Accountants. She received a Fulbright fellowship in the USA. Nishana worked in finance at multinational corporations and as a consultant before pursuing her PhD at UCT Graduate School of Business.

Nishana Bhogal's PhD investigates how and why prosocial founders vary in their scaling approaches in contexts with extreme poverty. She shows that founders' perceptions of their beneficiaries differ, and these differences result in founders adopting different ways of helping beneficiaries. Founders who see themselves as being similar to beneficiaries adopt a person-oriented approach; they try to help beneficiaries in many ways and introduce them to people from resource-rich contexts. In contrast, those who see themselves as different from beneficiaries adopt a problem-oriented approach. They focus on supplying feminine hygiene products and do not introduce beneficiaries to people from resource-rich contexts. Introducing beneficiaries is important, since it broadens the beneficiaries' social network, enabling them to access additional resources.

Supervisor: Professor R Hamann (Graduate School of Business) Co-supervisors: Professor T Baker (Entrepreneurship, Rutgers Business School), Professor E Powell (Management, Innovation and Entrepreneurship, North Carolina State University)

Blandin De Chalain, Megan Thesis Title: *Evaluating applicant reactions to a gamified assessment of personal values: developing and testing a theoretical model* 

Megan Blandin de Chalain holds bachelor's, honours and master's degrees in Organisational Psychology from UCT. She completed her PhD studies in the School of Management Studies while working in the financial industry as a registered industrial psychologist responsible for developing novel pre-employment assessments.

Megan Blandin de Chalain's thesis focuses on how job applicants react to novel game-based assessments which increasingly supplant traditional questionnaire-style assessments. She starts by deconstructing the design distinguish elements that gamebased assessments from traditional assessments. She then develops a theoretical model to explain how applicants' reactions to assessments may be shaped and uses an experiment to test her theory. She finds that game-based assessment may improve applicants' reactions to testing, most likely because of increased engagement and enjoyment in the test-taking process. These findings provide original empirical evidence about applicants' reactions to gamebased assessments—evidence which will aid informed decision-making about test choice in modern personnel selection programmes. Her study also sheds new light on the psychological mechanisms that may explain how applicants' reactions to game-based assessments are formed

*Supervisor:* Professor F. de Kock (School of Management Studies)

Chikumbi, Lydia Mwelwa Thesis Title: Energy price volatility, competitiveness, and innovation in the South African wine industry

Lydia Mwelwa Chikumbi holds a BA in Economics from the University of Namibia and an MCom degree from the University of Cape Town. She joined the School of Economics in 2017 for her PhD studies.

Lvdia Chikumbi's thesis investigates South Africa's wine competitiveness against other Southern Hemisphere producers, the impact of energy price volatility on South African wine prices, and consumers' willingness to pay for innovative South African wine preservatives. She uses a variety of data and methods. Results show strong evidence that the South African wine industry lags behind rivals in

many respects. Volatility in input costs adds to their non-competitiveness. The study provides the industry with the first evidence for consumers' acceptance of a novel natural wine preservative and also how wine consumers may respond should the industry decide to scale up. With innovations in wine production, mechanisms could be designed to protect the South African wine industry against global competition and energy price volatility. The thesis also suggests that the South African wine industry could enhance its competitiveness by emulating some of their rivals' strategies and programmes.

*Supervisor:* Professor E Muchapondwa (Economics)

*Co-supervisor:* Dr Milan Scasny (Environmental Economics, Charles University)

#### Hitchens, Barry Grant

Thesis Title: *Designing an optimum shipping tax regime by applying an updated multi- analytical framework* 

Barry Hitchens is an Advocate of the High Court of South Africa and an Australian Lawyer, having obtained his Bachelor of Laws degree cum laude at the erstwhile University of Natal. He was also Director of the Unit for Maritime Studies at the University of Kwazulu-Natal before moving to Australia to join the New South Wales Bar. Barry Hitchens' thesis applies seapower as a critical underlying objective for designing an optimum shipping tax regime based on its analysis of the historical development of the American and English merchant ship registers and the 21st century Chinese ship register. This objective remains valid despite globalisation as States are essentially entities that compete with each other under particular conditions. Registered tonnage and corresponding shipping income demonstrate exceptionally high mobility as a tax base. The thesis observes that an enhanced substantial activity factor is unlikely to vary this feature significantly. Thus, under a revised model analytical framework, an optimal shipping tax regime's design should vigorously promote efficiency and

simplicity, generally, and super efficiency, exceptionally but more intensely. The thesis recommends the basic construct of the Panamanian regime incorporating specific broader design features of the Greek regime as a model for an optimal shipping tax regime.

Supervisor: Adjunct Professor Craig West (Tax) Co-supervisor: Emeritus Professor Jennifer Roeleveld (Tax)

#### Kadzima, Marvelous

Thesis Title: *The effect of idiosyncratic and macroeconomic risk on cash holdings* 

Marvelous Kadzima holds a BSc in Economics from the University of Zimbabwe and an MSc in Finance from the National University of Science and Technology (in Zimbabwe). She joined the Department of Finance and Tax at UCT in 2019 for PhD studies. Before joining UCT, she worked for the Zimbabwe Revenue Authority.

Marvelous Kadzima's thesis focuses on the dynamics and determinants of cash holdings in South African firms. First, she investigates the direct impact of risk on cash holdings and find that firms become conservative with their cash when faced with high firm-specific risk and reduce cash levels in periods of high macroeconomic uncertainty. Second, she investigates whether firms can use social media to reduce firm-specific risk and increase stock liquidity. Using Facebook data from Crowd Tangle, she shows that firms can use social media to reduce risk. Finally, she studies the extent to which the board of directors determine firm social media decisions. She finds that firms with older directors and older CEOs are less likely to adopt social media. At the same time, a larger proportion of female directors on the board increases the probability that firms adopt social media and is associated with frequent postings and positive sentiments.

Supervisor: A/Professor E Chamisa (Finance)

*Co-supervisor:* Professor O Talavera (Economics, University of Birmingham)

#### Kallarakkal, Sheejan

Thesis Title: Role modelling for organisational citizenship behaviours in not-for-profit organisations: a phenomenological investigation in Tanzania

Sheejan Kallarakkal has a BA in Economics (Bangalore University, India), a MBA (University of Dar es Salaam, Tanzania) and a Master of Research (Stracthclyde University, Scotland). His PhD thesis emerged from his works as a missionary priest and involvement in not-for-profit organisations.

Sheejan Kallarakkal's thesis focused on the lived experiences of the Chief Executive Officers (CEOs), senior managers and subordinate staff in not-for-profit organisations (NFPOs) in Tanzania, to understand how they promoted organisational citizenship behaviours (OCBs) and the effectiveness of role modelling. The Multifactor Leadership Questionnaire was used to analyse and understand the transformational and transactional leadership orientations of the CEOs and senior managers. The study found CEOs and senior managers promote OCBs through specific attitudes and outlooks, promoting collective ownership with boundaries, and voluntarism. Role modelling is effective, as a soft influence, when CEOs and senior managers provide an exemplary example through leading by example and 'walking-the-talk'. Subordinate staff emulate the OCBs of an authentic, competent role model with enthusiasm, consistency and a positive attitude. Idealised influence, visibility and physical proximity with flatter organisational structures, make effective role models. Implications include promoting a family-culture, organisational team-culture, as well as considering personal and socio-cultural factors in NFPOs to enhance the OCBs of staff.

*Supervisor:* Professor K April (Graduate School of Business)

#### Machoka, Philip Gichaba Thesis Title: *The influence of the roles* of mobile-phone users on the adoption of m-commerce activities – the case of Kenya

Philip Machoka holds a BSc. Degree in Management Information Systems and an MBA from the United States International University-Africa (USIU-A), Kenya. Currently, he is an Information Systems lecturer at USIU-A in Kenya. Philip Machoka's thesis investigates the factors that drive the adoption of m-commerce activities from a role perspective. He surveyed 467 mobile-phone users in Kenya. His study reveals that mobile-phone user roles, that is, the consumer role, technology-user role, and social networkmember role, influence them towards adopting m-commerce activities. These findings provide a more comprehensive understanding of individual m-commerce activities adoption determinants than existing adoption research.

Supervisor: Professor I Brown (Information Systems)

#### Masito, David Mzamo Thesis Title: English-language advertising effectiveness with illiterate or non-English-speaking consumers in the Western and Eastern Cape townships of South Africa

Mzamo Masito completed a BSocSc (Statistics and Economics) and a Postgraduate Diploma In Management (Marketing) at UCT. He also has an MBA from GIBS. He began his study towards a PhD in 2018 and currently works as Chief Marketing Officer for Google Africa. Mzamo Masito's thesis explores the effectiveness of English television advertising to non-English speakers in Western and Eastern Cape townships. His study not only investigates the impact of language on planned behaviour, but also industry decision making with regard to language. His mixed methods experimental design using multiple dubbed advertisements shows that mother tongue (Xhosa) advertising significantly influences attitudes, behaviour, and intention to

purchase, and improves advertising effectiveness as measured using brand recall, enjoyment, short term, and longterm sales effect.

Supervisor: Dr J Lappeman (Marketing)

Meyer, Karl Zeeman Thesis Title: *The logic of corruption: tensions between structure and agency* 

Karl Meyer completed his Master of Business Administration at Henley Business School, The University of Reading (UK), and joined UCT's Graduate School of Business to pursue his PhD in 2016. Karl Meyer's thesis focuses on

furthering our understanding of how the interplay between actors (individuals) and their structural contexts influences corruption in societies around the world. He conducts a multi-theory review of the corruption literature in order to understand both the factors in actors' structural contexts that have been argued to influence corruption, as well as those related to actors' expressions of agency. He synthesises these arguments into a theoretical framework and builds on this by theorising the conditions under which anticorruption oriented institutions in actors' structural contexts are more (or less) likely to constrain and direct actors' expressions of agency. He tests these arguments on a dataset containing 13 years of data for 149 countries, and finds support for his arguments. His arguments have various implications for corruption and institutional scholarship, and highlight ways in which anticorruption initiatives may be more effective.

Supervisor: Professor JM Luiz (Graduate School of Business) Co-supervisor: Professor JW Fedderke (School of International Affairs, Pennsylvania State University)

#### Miller, Taryn Kerry Thesis title: *Responsible leadership competencies in accounting education*

Taryn Miller is a senior lecturer in the College of Accounting, where she has taught for more than ten years. She is a Chartered Accountant and convenes a master's course as well as the UCT APC Professional Programme, which prepares prospective CAs for their final qualifying board exam.

Taryn Miller's thesis explores how to develop Responsible Leadership competencies in accounting students. She interviews South African Chartered Accountants in their early-to-mid careers who hold a variety of different roles, and who have been recognised nationally for their professional excellence and significant impact on society. She also interviews senior accounting academics from ten different South African universities. The data obtained from these interviews is used to create a strategy for developing Responsible Leadership competencies in accounting students, titled the RESPOND model. This model depicts the role of the accounting curriculum as a catalyst for the development of these competencies, by equipping students with various tools and providing opportunities to practise applying these tools that mimic real life and broaden students' perspectives. This is supplemented by supportive feedback and reflection. The strategy involves a range of nurturing influencers and a disposition towards lifelong learning by the student.

*Supervisor:* Professor G Willows (College of Accounting)

#### Njozela, Lindokuhle

Thesis Title: *Standing on the shoulders* of birth: intergenerational mobility, inequality, and pro-social preferences

Lindokuhle Njozela holds a BBusSc and an MCom in Applied Economics, both from UCT. He joined the School of Economics in 2015 as an Honours student and has remained part of the School throughout his postgraduate studies. Lindokuhle Njozela's thesis investigates how family background affects social cohesion. He uses a nationally representative dataset with 7,000 children, ranging in age from 15 to 50, and finds that maternal racial trust attitudes are positively associated with a child's race related trust. He then runs experiments to see how inheriting social class and wealth affects trust attitudes and redistribution. The findings show the influence of the socio-economic class of a person's family on Trust. Trust is increased towards those with parents from a lower socio-economic class. In addition, people with parents of a high class background are more willing to honour trusting behaviour when interacting with people from disadvantaged families. Lastly, while people are reluctant to redistribute inherited wealth, they act altruistically towards people from underprivileged families. These findings have important implications for designing policies to address the legacy of Apartheid and current inequality in South Africa.

*Supervisor:* Professor J Burns (Economics)

#### Sehgal, Sarita Danute

Thesis Title: *Stepping in, aside or away? A micro-level study of commitment in cross sector partnerships* 

Sarita Sehgal holds a BA from UC Berkeley, an MA in international relations from the Graduate Institute in Geneva and an MBA from INSEAD. Prior to joining the GSB at UCT in 2016 for her PhD studies, she worked on health and HIV for the United Nations in several countries.

Sarita Sehgal's thesis examines the commitment of individuals who work in cross sector partnerships (CSPs) for development. She studied 23 partnership practitioners representing business, government, or NGO/social enterprise sectors over more than two years. These individuals worked across four different CSPs to improve the health of underserved communities in South Africa. She found that individuals' CSP commitment varies depending on whether they approach the partnership with an instrumental or an altruistic commitment nature. This differentiation, combined with other internal and relational factors, influences the response to partnership challenges, with some individuals stepping in, and others stepping aside, or away. Her findings contribute to the scholarly literature on both partnerships and commitment by shedding light on the human and relational side of partnering and identifying what drives people to sustain engagement in such dynamic, cross boundary work arrangements. Her insights also have practical implications for how to strengthen partnering practice.

*Supervisor:* Professor R Hamann (Graduate School of Business)

Sihela, Jacobs Jakobo Thesis Title: *The lived experiences of Black managers in accessing top management positions within Namibian private sector organisations* 

Jacobs Sihela completed his BTech in Electrical Power Engineering in Namibia (2011), a Master of Business Leadership in South Africa (2016) and joined the GSB at UCT for his PhD in 2018. Jacobs Sihela's thesis focuses understanding the experiences on of Black managers in accessing top management positions in the Namibian private corporate sector. He investigates the interconnectedness of the multilevel factors shaping Black managers' professional advancements through interviews with 44 Black managerial employees in several industries. Findings of his thesis imply that: (1) sociallevel racial inequality appears to be recreated and maintained in the contemporary Namibian private sector; (2) at the corporate level, racial inequality seems embedded in organisational structures, cultures and practices; and (3) corporate, institutional and sociallevel racial inequality seems to shape individual-level racial power difference. which ultimately limits Black managers' opportunities to attain and sustain top management positions. Jacobs attributes this outcome particularly to the persistent patterns of colonial relations that seem to structure racial disparities. Finally, he proposes strategies that could transform the Namibian private corporate sector to foster racial equality.

*Supervisor:* Professor K April (Graduate School of Business)

Soane, Andrew James Thesis title: *Enlargement of filtration, backward stochastic differential equations and optimal stopping problems* 

Andrew Soane holds a BBusSc in Actuarial Science from UCT. He completed his MPhil in Mathematical Finance in 2018 at the African Institute of Financial Markets and Risk Management. He then continued at the department with his PhD. Andrew Soane's thesis researches the effect of differential information on the pricing and hedging of financial instruments. The focus of his thesis is on the stochastic modelling of credit risk, and the interplay between credit events and the rest of the financial market. The thesis begins by developing a theoretical foundation based on the socalled theory of progressive enlargement of filtration. This is then applied to two fields of stochastic analysis, namely backward differential stochastic equations and optimal stopping (both of which have applications to the pricing and hedging of financial instruments). The thesis concludes by re-deriving, using his developed theory, a well-known solution to a problem in the literature.

Supervisor: A/Professor P Ouwehand (African Institute of Financial Markets and Risk Management)

Vellios, Nicole Georgia Thesis Title: *Smoking cessation in South Africa: cigarette prices, plain packaging, and illicit trade* 

Nicole Vellios completed her BSocSc, BSocScHons and MSocSc at UCT. She has been working as a researcher at UCT's Research Unit on the Economics of Excisable Products for the past decade, and has published papers on tobacco, alcohol, cannabis, and UCT student tuition fees.

Nicole Vellios's thesis focuses on the economics of quitting cigarette smoking in South Africa. Using survival analysis techniques applied to data from the National Income Dynamics Study and price data from government documents, she finds that an increase in the price of cigarettes is significantly associated with quitting behaviour. By interviewing UCT students, and showing them various cigarette packs with different attributes, she finds that plain packaging (where all branding is removed, and graphic health warnings are printed on cigarette packs) would be effective in reducing the demand for cigarettes. Since access to cheap, illicit cigarettes could reduce the effectiveness of both excise tax increases and plain packaging, she measures the size of the illicit market. She finds that it had increased sharply since 2010, and accounted for about a third of the total market in 2017.

# *Supervisor:* Professor C van Walbeek (Economics)

*Co-supervisors:* Principal Investigator H Ross (Economics), A/Professor GE Guidon (McMaster University, Department of Health Research Methods, Evidence, and Impact)

# MASTER OF INDUSTRIAL & ORGANISATIONAL PSYCHOLOGY

Brown, Ameerah (with distinction in the dissertation) Ebrahim, Farheen Farista, Feranaaz (with distinction in the dissertation and the degree with distinction) Josiah, Kelly Karen (with distinction in the dissertation and the degree with distinction) Kortman, Carmalita Sharon (with distinction in the dissertation) Mathews, Raeesa Mokoaleli, Tsepang Angela Patel, Ahmed Shiraz (with distinction in the dissertation and the degree with distinction) Ponnadu. Coral Juliette Rautenbach, Casey Tayla (with distinction in the dissertation and the degree with distinction) Schade, Marizanne (with distinction in the dissertation) September, Miché Kaylin Shapiro, Kaylin Lee Viljoen, Lana (with distinction in the dissertation) Visser. Selene (with distinction in the dissertation and the degree with distinction)

Zwelibanzi, Thembakazi Thelma (with distinction in the dissertation)

#### MASTER OF BUSINESS ADMINISTRATION

Akimanzi, Paula Ingabire Antony, Satish Manuel (with distinction) Basson, Frederik Andries Baur, Joel Benno (with distinction) Bbosa, Constance Amaning Bbosa, Lawrence Sidney Behesnilian, Vighen Keram Berkowitz, Bernard Basil Bleekers, Robin James Booth, Cikizwa Abegail Boum, Yap Chen, Jiayuan Chetty, Wesley Cilliers, Jakobus Coopsamy, Cheryl Dalvit, John-Paul Lawrence Dantu, Gevano Davis-Ferguson, Luke Ernest Daval, Ashna De Beer, Christle (with distinction) Du Pisani, Petro (with distinction) Du Plessis, Than Durcan, Benedicta Siphesihle P N Eberlein, Richard John Ebrahim, Aasim (with distinction) Erdmann, Alexander Felix Fick, Lambert Hendrik Foot, Lizette Fouche, Joshua Anthony Frans, Nokubonga Fritz, Mario Francois Gabriel, Gabriel (with distinction) Gaffley, Mario Edward Goncalves, Miguel Gouveia (with distinction) Gono, Tawanda Nicholas Govender, Stanton Wesley Govender, Sumeshen Haida, Wolfgang Wilhelm (with distinction) Hendricks, Mogamat Faiek Herman, Carl Riaan Hermanus, Thabiso Mpilo Denzil Hesqua, Donovan Craig Hlongwane, Doctor Jakoet, Maahir Johnson, Tazwelll Cheslyn (with distinction) Jose, Tamiris Albertina Jugmohan, Anilkumar (with distinction) Kalam, Malika

Kambule, Mnwana Remington Kandemiiri, Kudakwashe Simon (with distinction) Karriem, Thielshad Kelebemang, Tloco Natefo Khan, Hussein Kinghorn, Brendan-Bruce Lekgoathi, Shadi Lephole, Ntseiseng Pauline Levesque, Richard Arthur Levithan, Joshua Greg Little, Brian Joseph Louw, Lodewikus Johannes Ludlow, Jordan Rhys (with distinction) Mabwe, Simbarashe (with distinction) Magubane, Perfect Thembinkosi Mahomed, Ayesha Rashid Mahomed, Sumayya (with distinction) Majija, Xolile Vuyile Majola, Mholi Senzo Malila. Cecilia Bernadette Manuel, Olwen Amanda Lee-Anne (with distinction) Mapfidza, Gibson Mathew, Cibin Thomas Matshaya, Thanduxolo Buntu Mazibuko, Phindile Philile Meyer, Azraa (with distinction) Middleton-Jackson, Aisha Zalika Mkize, Nontuthuko Moepye, Lebogang Esther Molope, Tumelo Moodley, Lerusha Moosa, Tasneem Mosala, Reabetswe Reitumetse (with distinction) Moshesha, Katleho France Mosiadz, Mariusz Mouton, Hendrikus (with distinction) Mgedlana, Yondela Khanya Msengana-Bam, Libo Eusabia (with distinction) Muke, Princesse Kabala Mumba, John Mwashita, Tapuwa Geofrey (with distinction) Nadasen, Karen Genovienne (with distinction) Nadasen Phillips, Renaldo Roderick Naidoo, Kaylin Devanathan (with distinction) Naidoo, Kirshen (with distinction) Namwandi, Seno Ndhlovu, Jabulani Pius Nete, Limakatso Matebello Ngatane, Xolani (with distinction) Ngcengeni, Thobela William Ngcwabe, Funeka

Ngorima, Necessity (with distinction) Nhlanhla, Mzwakhe Goodwill Nnabuihe, Theodora Nkechinyere Novoa, Hendrik Edmundo Xavier Ntumba, Cimanga Egla Nyakeri, Willys Makoyo Ojageer, Roheid Petersen, Charmelle Biancha Pfupajena, Shelton Confidence Phala, Kgoputjo Simon Elvis Pinzon Fernandes, Gabriel Prince, Deidre Mabel (with distinction) Reimers, Danielle Richardson, Dominic Francisco Charlton (with distinction) Saban, Zayaan Sack, Adam Philip Saraglis, Christos Seddon, Shane David September, Eugene Peter Sewnarain, Nalisha (with distinction) Shabalala, Nombuso Sihlangu, Thokozani Doctor Silweya, John Ovid Simmonds, Nicholas Michael Singh, Shruti Skosana, Vincent Jappie Smith, Christopher Mark (with distinction) Smouse, Nokwanda Minty Soeker, Ridhaa Sokolsky, Nicholas Ralph Soutar, Stewart James Richmond Sproul, Alastair John Sweeney, Janine Jane (with distinction) Sylvester, Carmellita Deidre Syster, Chantall Gloria Taljaard, Quinten Stephan (with distinction) Thomas, Stephanie Frances (with distinction) Tiombe, Rick-Ashlev Tsoeu, Mohohlo Samuel Van Den Berg, Deseree Van Der Merwe, Gerrit (with distinction) van der Walt, Suzette Elizabeth Van Vlaanderen, Megan Ingrid Van Wyk, Ryno Venter, Mauritz (with distinction) Viljoen, Rebecca Layla (with distinction) Walsh, Sean Matthew Watt, Tiffany Jade (with distinction) Wessels, Inga Widauer, Stefan Williams, Barry Michael Wilson, Gordon Lee

MASTER OF BUSINESS SCIENCE Abbott, Lara Elizabeth Kaplan, Michael Len MASTER OF COMMERCE Abdurahman, Saleem Abiola, Babatunde Abimbola Adams, Deen Barry, Nortimer Ansley Bazanye, Kizito Philip (with distinction in the dissertation) Begbie, Lyle Anleo Bowden, Guy Anton (with distinction) Breda, Leigh Nathan Burger, Stefan Albert Chikafa, Scora Scholessah Choga, Simbarashe Michael Culligan, Samantha Leigh Cumming, Kyle (with distinction in the dissertation) Damonse, Kyla Khanyi Dullabh, Hitesh (with distinction) Evans, Timothy Milton (with distinction in the dissertation and the degree with distinction) Fitchet, Alex George Fuchsloch, Michael Gallant, Allistair Gidlow, Liam Benedict (with distinction) Gross, Eden Ben Michael Hendricks, Rodney Francois Jacobs, Chandré Kayla (with distinction) Kandoje, Natasha Yasinta Kariem, Latiefa Kotze, Ruhan Kusena, Adelade Lengoatha, Lebohang Alphonci Luthuli, Sandisa Zizipho Maharaj, Naushaad Makhubu, Nkululeko Mandlazi, Tsepo Itumeleng Zakhele Mann, Jane Ross Marinus, Luigi Clint Mataga, Vimbayi Theresa Mathebula, Woxonga Matross, Lonwabo Matthew

Worship, Geneve Rosslyn

Mthembu, Simeme Bohlokwa Sakhelwe Mutetwa, Shaloam Muzanya, Shelton Zaba Nutt, Frans Ignatius Oladimeji, Anthonia Paul, Michael John Leith Pike, Tamarah Anne Pretorius, Soné Raubenheimer, Grace Elizabeth Roos. Lilv Elizabeth Sokhela, Hlengiwe Francisca Stemmet, Paulus Stevens, Joshua Kevin Swan. Matthew Kevin (with distinction in the dissertation and the degree with distinction) Talasi, Teboho Johannes Torrington, Catherine Ruth Van Der Westhuizen, Werner Vermaak, Kelly Jade (with distinction in the dissertation and the degree with distinction) Vorster, Rikus Christiaan Wagenvoorde, Guy Steven (with distinction in the dissertation and the degree with distinction) Weaver, Zachariah Samuel John (with distinction)

#### MASTER OF COMMERCE IN APPLIED FINANCE

Valjee, Mikhil Ajit

Wills. Nicola Grace

# MASTER OF COMMERCE IN DEVELOPMENT FINANCE

Ambunda, Katrina Kandiwapa (with distinction in the dissertation) Brown, Louise Helen (with distinction) Chininga, Emmerson Davids, Megan Davidson, Nontokozo Andiswa De Villiers, Jacques Isak Endjila, Ester Tegelelomuwa Fellingham, Stacey Joy (with distinction in the coursework component) Haixuna, Joyce Ndayambekwa Hunter, Renée Suzanne (with distinction in the coursework component) Jakarasi, Veronica Nonhlanhla Killingbeck, Charles William Jack (with distinction in the coursework component)

the degree with distinction)

distinction in the dissertation and

Matsikidze, Hezel

Matthews, Kirwin Brett

Mokoko, Tseko Sebetia

McHardy, Gareth Andrew (with

Kootsholetse, Neo Charmaine (with distinction in the dissertation) Long, Edward Porter Magangxa, Fadzai (with distinction in the dissertation) Makhele, Mosa Keneilwe Matsietsi, Lisema Noel Mahomed, Yaseen (with distinction) Makombore, Lizah Mofoka. Ntoetse (with distinction in the dissertation) Mokoena, Beverly Tshegofatso Mpowe, Refilwe Maggie (with distinction in the dissertation) Mudau, Lufuno Mugabe, Leo Mandizvidza Muhoni, Eremia Great Mwape, Isaac Nanyemba, Paulina Kandiwapa Ntisana, Malwande Sijongisile Olugbenro, Samuel Adedotun Packirisamy, Kuberin (with distinction in the dissertation) Phiri, Kamphasa Ruwanika, Jonathan Shifidi, Lovisa Ndaendelao Siloya, Perpetua Mashule (with distinction in the dissertation) Simango, Soza Sydney Souto, Ana Prescilla Takundwa, Simbarashe (with distinction in the coursework component) Tyilana, Zikhona

#### MASTER OF COMMERCE IN RISK MANAGEMENT OF FINANCIAL MARKETS

Mgam, Mvano Morolong, Maliseloane Johanna

#### MASTER OF DEVELOPMENT POLICY & PRACTICE

Bewana, Aphiwe Lonwabo Chetty, Lee-Roy Lifuka, Rueben Lupupa (with distinction) Maseko, Ben Venald Mbuyazi, Slindile Nontobeko Mohamed, Ansaaf Mutimura, Christine Umuganwa Nogcinisa, Luthando Ricks, Jenny Shikongo, Lahya Itedhimbwa Swartz, Michael Mathew Tshivhase, Humbulani Oscar Zemburuka, Israel Kazembire

#### MASTER OF PHILOSOPHY

Adewusi, Olatomiwa Ayooluwa Bastick, Kirk Freeman Brill, Nicola Mary (with distinction in the dissertation and the degree with distinction) Chehore, Thandeka Tanyaradzwa Chepete, Koziba Claassen, Quintin Daniel (with distinction in the dissertation and the degree with distinction) Dadah, Sahil Mohamed Du Plessis, Jeanne Egesi, Tochukwu Chiemeziem (with distinction) Eisenstein, Kaylah (with distinction in the dissertation and the degree with distinction) Goliath, Marusca Lecinta Goosen, Jenna Lee (with distinction in the dissertation and the degree with distinction) Grimwood, Kim Melissa Kruger, Bingle Stegmann (with distinction in the dissertation and the degree with distinction) Kwenda, Geraldine Abigail Kölzer, Joshua (with distinction) Le Mottee, Sherrilee (with distinction) Matikinca, Ntombizandile Mkhize, Khayelihle Ludgar Busa Mkhize, S'ngaye Christopher Phumlani Moshani, Alutha Moyo, Audrey (with distinction in the dissertation and the degree with distinction) Nassar, Aneesa (with distinction) Ndandani, Mbali Thandile Khanyisile Ngakane, Boipelo Mapitso Ogutu, Moses Onyango Omar, Omar Parker, Farhaanah (with distinction) Patel, Ishani Patel, Keyurkumar Kamleshbhai (with distinction in the dissertation and the degree with distinction) Peinke, Simone Petit-Perrot, Clémence Anne Elisabeth Pettit, Paul Lawrence Pillay, Kuvendren Raziva, Ntombezintle Rees, Rhiannon Janet

Rizzo, Massimo Michele Valentino (with distinction in the dissertation and the degree with distinction) Shibduth, Darvesh Yogandar Soderbergh, Jenny Elizabeth (with distinction) Stewart, Alex Leith Tarr, Grant Thops, Andre Marshall Van Schaik, Luke Laurenson (with distinction in the dissertation and the degree with distinction) Vidima, Sizwe Bonga Innocent

#### BACHELOR OF COMMERCE HONOURS

Adams, Dale Ashworth, Jason (in the first class) Battersby, Kiera Jane Buser, Jemma Leigh Chitah, Musonda Kunda Deeble, Callum John De Marco, Michael Piero De Oliveira Bastos, Ryan Carl Friedman, Joshua Gerald Gray, Peter John Groenewald, Braam Gwele, Asavela Hamilton, Matthew John Hogan, Cullen Horgan, Amy Jean Savannah Huang, Yue Idas, Stephanie Nicole Keet, Donovan Khumalo, Mthokozisi Siphamandla Klein, Alain Jody Klue, Tanner Koff, Zoe Hannah Kolia, Faheem Kuhn, Samuel John Loedolff, Alastair Michael Andrew Loeve, Reece Laine Macdonald, James Johnstone Macdonald, Robert Duncan Macleod, Michael Gregory Macminn, Coco-Chanel Alyssa Makhubu, Londiwe Fortunate Matabane, Desire Mdletshe, Zamangomane Simthobisile Mertens, Robert Stephen Meyer, Reece Miller, Moegamad Dawood Mokwena, Boikano Lulu Motlhabane, Mpho Comfort T Newbury, Maxwell John

Ngwenya, Pule Mlamuli Outram, Travis Edmund Parent, Nathan John Parker, Rukeya Peckham, Gabrielle Maria Phehla, Mzimasi Poleman, Niven Ashley Price, Thomas Wynter Rala, Zola Nontutuzelo Schoeman, Gino Sibanda, Amanda Natasha Smart, Daniel Frederick Smith, Joshua Daniel Terblanche, Cailyn Paige Van Der Nest, Matthew Marlow Vos, Ashleigh Heather Wishart, Connor Malcolm Zingoni, Simbarashe Tainos

#### POSTGRADUATE DIPLOMA IN MANAGEMENT IN ENTREPRENEURSHIP

Likhoele, Itumeleng Irene

#### POSTGRADUATE DIPLOMA IN ACCOUNTING

Croy, Aidan Corbin Kiewietz, Hadley Thomas Mabunda, Giyani Cikizwa Mntambo, Sanelisiwe Sethabile Mtonga, Mathias Tatenda Ramakuwela, Phophi Hagara Octavious Thobejane, Mehloti Elliot Walters, Shihaam Wei, Aadam Wei-Hsien

#### POSTGRADUATE DIPLOMA IN ACTUARIAL SCIENCE

Gounden, Darryl Junior

#### POSTGRADUATE DIPLOMA IN MANAGEMENT IN BUSINESS COMMUNICATION

Makama, Nontokozo Nosipho

#### POSTGRADUATE DIPLOMA IN MANAGEMENT

Kani, Thando Makumbani, Hanyani Johannes Manto, Mzwandile Maseko, Mathews Sandile Vumazonke, Thando

#### POSTGRADUATE DIPLOMA IN MANAGEMENT IN MARKETING

Malindi, Alison Thandeka Orrie, Aneeqah

#### POSTGRADUATE DIPLOMA IN MANAGEMENT IN SPORT MANAGEMENT

Mkhize, Sduduzo Lwandiso Clive

#### POSTGRADUATE DIPLOMA IN MANAGEMENT INFORMATION SYSTEMS

Lebenya, Majara Paschal Mncube, Sibonisile Prudence Mrwetyana, Nontuthuzelo Grace Shilakwe, Richmond

#### POSTGRADUATE DIPLOMA IN DEVELOPMENT FINANCE

Dweba, Nolusindiso Primrose

#### POSTGRADUATE DIPLOMA IN MANAGEMENT PRACTICE

Atherstone, Kerry Lee Beän, Werner (with distinction) Botha, Tegan Burnham, Ross Gavin (with distinction) Classen, Chad Ashley (with distinction) Davids, Waseema (with distinction) Do Rego, Fabio Dias Engelbrecht, Trisha Vanessa Farao, Ayrton Thenswille (with distinction) Haindongo, Ndaindila Ndafilwanghenda Keulukuwa (with distinction) Kunene, Bukhosibethu Mgcini Hamatwi - Lumbu, Elina Ndahambelela Indongo, Ueitiraije Lerato Charmaine Ingele, Genial Juif Jacobs, Moegamat Ieshaam Jay, Robin Wayne Johnson, Travis Geoffrey Kajee, Yusuf Kwetana, Lamla Happyboy

Macdonald, James Mantanga, Onele Masella, Leverne Jorlene Matima, Melody Mcdougall, Bruce Ronald (with distinction) Mhlambo, Nokwanda Thembeka Mlenzana, Daluxolo Moodley, Nicole Morkel. Natalie Samantha (with distinction) Mquqo, Lumka Najaar, Ithra (with distinction) Ncamani, Zikhona Ndaba, Millicent Lindiwe (with distinction) Ndayi, Ncumisa Ndovela, Pamela Nefale, Rendani Vincent Nkosi, Hloniphile Angeline Nosilela, Gcobisa Phillipa Pienaar, Rita Anna Pono, Xola Punt, Adrian Trevor (with distinction) Qwaqwa, Phumzile Rabambi, Rendani (with distinction) Ramorula, Ofentse Titus (with distinction) Richards, Tarryn Jaqueline (with distinction) Schultz, Anthea Portia Siebritz, Robyn Somo, Itumeleng Herby Tshongweni, Lona Van Wyk, Angelique Estine

#### POSTGRADUATE DIPLOMA IN PUBLIC SECTOR ACCOUNTING

Bovungana, Afrika Khanyiso

#### ADVANCED DIPLOMA IN BUSINESS PROJECT MANAGEMENT

Hlengwa, Philile Donna Moekoa, Basetsana Holly Phooko, Palesa Hazel

#### ADVANCED DIPLOMA IN MANAGEMENT DEVELOPMENT

Anandlal, Shikara (with distinction) Banda, Alfred (with distinction) Chetty, Shalona Dimba, Phindile Joy (with distinction) Dorasamy, Previn (with distinction) Duma, Mpho (with distinction) Fehsenfeld, Jane Susan (with distinction) Fisher-Croeser, Jeantél Kim Flowers, Vincent Peter Gwamanda, Pumla Nosipho Hartzenberg, Dawn Nicolette Hawthorn, Elise Susan (with distinction) Hlabana, Sekhmetsi Elizabeth Hockey, Carmen Ann (with distinction) Jacobsz, Robert Samuel (with distinction) James, Jeremy David (with distinction) Jooste, Kim Lauren (with distinction) Joseph, Natasha Lizelle King, Zarita Kisten, Andrew Alexander (with distinction) Kutama, Muligwa (with distinction) Malikana, Samson Ganelang Maroka, Obed Sefako Maropola, Moses Lesetja Mbatha, Lynette Mgolodela, Siyabonga Moshao, Cebisa Nonkanyiso Motsilili, Retshelisitsoe Myeni, Mthokozisi Siyanda Ndlozi, Senzile Brenda Nkumane, Phakamile Brightness Ntshikilana, Witness Olivier, Margaretha Magdalena (with distinction) Randalls, Isabell Sibanyoni, Mapula Fridda Simons, Barry Duncan (with distinction) Simpson, Bianca Samantha Singh, Jerusha White, Taryn Leona

#### BACHELOR OF BUSINESS SCIENCE

Moeng, Eugene Monde, Natascha Namushi Perumal, Yesholan Scheepers, Leigh Rosemary Tichivangana, Tendaishe

#### BACHELOR OF BUSINESS SCIENCE IN ACTUARIAL SCIENCE

Naidoo, Reagan Roman

#### BACHELOR OF COMMERCE

Adonis, Athi-Zilungile Qaqamba Armadien, Zahraa Banda, Theresa Baxter, Jessica Milly Chipika, Kundisoyashe Cooper, Jaime Lynn Ditshego, Bonolo Falala, Nozithelo Ferreira, Daniel Gatuke, Lebogang Mitchel Glass, Kayla Nicole Gumede, Luvanda Olwethu Hiscock, Grant Edward Huang, Tiantao Ibrahium, Achmad Hesham Jolwana, Sibulelo Sanele Kagisho, Bontle Precious Kaumbi, Pahee Pandera Lubanga, Lonwabo Xolo Mabunda, Kenneth Khanani Madala, Cwayita Moganedi, Kgomotso Pearl Mokgatle, Kgomotso Indira Ghandi Montse, Thebe Tumelo Mothibe, Gontse Patience Mothibi, Ofentse Kamogelo Motsemme Motswakhumo, Lucretia Kefilwe Mtegha, Tandana Jolly Mwiru, Debora Samwel Ngapurue, Tjeheripo Tunaune Ngcobo, Thembinkosi Ngunga, Salome Safo Nkosi, Luyanda Nyezi, Siyabonga Galelo Qashani, Siphokazi Rajkaran, Rahul Kumar Salie, Saarah Sekati, Mmasello Tsholofelo Tsoai, Relebohile Ratsoai Van Zyl, Gustav Johan Xozwa, Mihlali

#### BACHELOR OF COMMERCE IN ACTUARIAL SCIENCE

Andhee, Simryn Kiara Chitima, Takudzwa Chisanga Legae, Matlhogonolo Norah Majova, Xhanti Milisa Makondo, Abigail

### FACULTY OF HUMANITIES

#### **ORDER OF PROCEEDINGS**

Welcome by the Master of Ceremonies.

The Presiding Officer will constitute and address the congregation.

The Master of Ceremonies will present the Distinguished Teacher Award to Associate Professor E Moore.

The Master of Ceremonies will present the Creative Works Award to Mr M Mbothwe.

Praise Poetry.

The graduands and diplomats will be presented to the Presiding Officer by the Dean of the Faculty.

The Master of Ceremonies will make closing announcements.

The Presiding Officer will dissolve the congregation.

### **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%.

### **DISTINGUISHED TEACHER AWARD**

The Distinguished Teacher Award, given once only to an individual, recognises teaching at any or all levels by a member of the faculty that has made a significant and lasting impression on students.

Previous recipients in the Faculty of Humanities have been:

1993	G Solomons (Classics)
1995	M Adhikari (History)
1996	R Mendelsohn (History)
2000	V Bickford-Smith (Historical Studies)
2002	A K Mager (Historical Studies)
2005	P R Anderson (English Language & Literature)
2007	J Bennett (African Gender Institute)
2008	V Everson (School of Languages & Literatures)
2009	C Clarkson (English Language & Literature)
2011	M Campbell (SA College of Music)
	S Levine (Social Anthropology)
2012	J Higgins (English Language & Literature)
2013	H MacDonald (Social Anthropology)
	I Rijsdijk (Film & Media Studies)
	H Twidle (English Language & Literature)
2015	J Hardman (School of Education)
	A Reisenberger (Hebrew Language & Literature)
2019	T Dowling (African Languages)
	A Pande (Sociology)
2020	B Kar (Historical Studies)
	M Swai (Social Anthropology)

### **DISTINGUISHED TEACHER AWARD (CONTINUED)**

The following member of the Faculty of Humanities has been chosen for this award in 2021:

#### ASSOCIATE PROFESSOR ELENA MOORE SOCIOLOGY

Elena Moore is Associate Professor and the Head of the Department of Sociology. The DTA Committee remarked that *authenticity and growth* are themes that strongly emerge throughout the testimony to her teaching- not only is she described as genuine and clearly in harmony with her pedagogical approach and interest in her students, but she has demonstrated a remarkable growth herself, with the ability to support the growth of her students, department and colleagues. She describes her pedagogical approach as one that creates spaces to talk, gather, open up, ask questions and collaborate, and is acknowledging of the relational aspects of pedagogy. In doing so, she prioritises openness, reflection, intellectual pluralism, and the broader context in which teaching and learning relations are based.

Indeed, her teaching philosophy is corroborated by the group of postgraduate students who nominated her. They state that 'the Distinguished Teacher Award at UCT, which recognises excellence in teaching innovation, student impact and contribution to curriculum transformation accurately reflects the qualities and values that Elena Moore upholds'. They testify that it is her dedication to learning, thinking and teaching within a community of practice that supports decolonial praxis, that has been most impactful in shaping their own scholarship and academic careers.

While Elena Moore has taught at all levels of the undergraduate and postgraduate curriculum, it is in the Department's recent curriculum review that her pedagogical approach has been keenly operationalised.

In this work, she is described by a colleague as 'providing leadership lifting the heavy load and doing the grinding quantitative and qualitative review of all courses, holding the space and contributing to crafting and operationalising our vision'. Her ground breaking contributions to this curriculum review process have set the foundations for the institutional imperative for curriculum change, and her achievements here are described by the Dean as 'unique, and a major contribution to the very diverse fields of humanities, scholarship and humanising critical radical pedagogies'.

Elena Moore describes this contribution herself as one where she has renewed and transformed what she teaches, how she teaches, and what knowledge is produced via her research and embedded in her teaching. Accompanying this work has been a remarkable shifting of structures of power, through the creation of more collaborative and equitable teaching and learning environments for students, teachers, academics, and administrators.

Notwithstanding her transformative pedagogical practice and research, Elena Moore is celebrated by her students and colleagues for a genuine curiosity, inclusivity, empathy and support beyond the classroom, mentorship and what one student describes as 'her ability to make each student and colleague feel valued as an intellectual and social being'.

### THE UNIVERSITY CREATIVE WORKS AWARD

The University Creative Works Award recognises the production of outstanding and/or influential creative works (art works, performances, productions, compositions, architectural design) that make a scholarly contribution.

#### MANDLA MBOTHWE G7: OKWE-BOKHWE..(LIKE/OF THE GOAT)

*G7: OKWE-BOKHWE* is a theatre production based on the historical records about the Gugulethu Seven, seven young members of *Umkhonto weSizwe* (MK) who were ambushed and heartlessly killed by the apartheid security forces on the morning of 3 March 1986. The production also draws on the testimonies of their mothers and highlights the role that language, culture and translation played in the South African Truth and Reconciliation Commission (TRC). The Gugulethu Seven memorial was built on the site of the ambush to commemorate the lives and deaths of those activists.

The production functions as a powerful active memorial that attempts to engage with a process of healing the pain of our collective past. The production is also regenerative, allowing the wounds of our history to be exposed, validated, and attended to. Drawing on the powerful language of the body, song and ritual, *G7: OKWE-BOKHWE* honours the Gugulethu Seven and celebrates the power of theatre to heal. Central to the production is an image of the slaughtering of a goat and its wailing in the process which are essential elements of South African rituals which seek to appease or communicate with the ancestors.

*G7: OKWE-BOKHWE* was originally conceived and devised by Mandla Mbothwe with the Magnet Theatre Full Time Training and Job Creation Programme (2017/2018) as part of a Performing Community Memory module and performed at the Gugulethu Memorial site. It then went on to be performed at Magnet Theatre, on UCT's Hiddingh Campus and at the National Arts Festival in Grahamstown. The production was nominated in four categories at the 2020 Fleur du Cap theatre awards and won in three categories: Best Director, Best Ensemble and Best Sound Design. Produced by Magnet Theatre in collaboration with UCT's Centre for Theatre, Dance and Performance Studies. Directed by Mandla Mbothwe, with movement direction by Jennie Reznek and assistant direction by Zukisani Nongogo. Design by Linda Mandela Sejosingoe, choreography by Mzo Gasa, music by Babalwa Makwetu, lighting design by Themba Stewart.

### MERITORIOUS CREATIVE WORKS AWARD

The Meritorious Creative Works Award for 2022 is awarded to:

**CD: Partita** *Africana* by Professor Hendrick Hofmeyr (College of Music) **Dance Film:** *And Then...* by Doctor Jackï Job (School of Dance)

#### NAMES OF GRADUANDS

#### FACULTY OF HUMANITIES

#### Dean: Associate Professor S Kessi

The symbol † indicates that the qualification is awarded posthumously

#### DOCTOR OF PHILOSOPHY

Amoah, Samuel Twumasi Thesis Title: *Present and active: the negotiated logics of container street traders in the governance of a Ghanaian city* 

Samuel Twumasi Amoah holds a BA(Hons) in Integrated Development Studies from the University for Development Studies, Tamale, Ghana, and an MSc in Human Geography from Lund University, Sweden. He joined UCT in 2017 for his PhD studies in the Department of Environmental and Geographical Science. Samuel Twumasi Amoah's thesis examines the critical roles container street traders play in city governance in Wa, a rapidly urbanising Ghanaian city. Drawing on in-depth interviews and participant observation, he examines the logics which motivate trade and shape relationships between traders and city actors such as landowners, officials, and their representatives. By analysing the micro-practices of governance through which trade is sustained, Samuel Twumasi Amoah demonstrates that container street traders are legitimate actors, present and central to Ghanaian city governance. His work's contribution is that it extends scholarly work on trading in African cities by demonstrating that traders are more than victims of exclusionary policies that limit and, in many instances, aim to eliminate street trading. Instead, as he shows, they are critical actors whose negotiated trading logics shape city governance, its built environment, and the street economy.

*Supervisor:* Professor S Oldfield (African Centre for Cities)

Bin Md Aris, Mohd Murat Thesis Title: When dispute threatens harmony in the public sphere: discerning the dynamics of state-religion relation with particular reference to Singapore's Muslim scholars

Mohd Murat Bin Md Aris holds a Degree (Licence) in Islamic Philosophy from Al-Azhar University and a master's in Islamic Revealed Knowledge and Heritage from the International Islamic University, Malaysia. He joined UCT's Department of Religious Studies in 2018 for PhD studies. Mohd Murat Md Aris' thesis focuses on contestations for authority and authenticity among Singapore's new Islamic scholars who belong to established, Salafi and Sufi orientations. In it he finds that such contestations are enabled by the explosive growth of information technology, riding on globalisation and migration trends, to go beyond their traditional domains such as mosques and schools. He shows that these religious contestations are finding their way into the public sphere, raising concern that they will unravel the social fabric of multi-religious Singapore. While most conventional studies examine such contestations from the perspective of ideologies, doctrines or the content of disputes, Mohd Murat Md Aris' study makes a distinct contribution in showing how charisma, manifested through various modes of transmission, impacts on authority. His study's findings offer insights into the dynamics and impact of inter-group relations, as well as of statereligion relations and management in Singapore.

Supervisor: Professor A Tayob (Religious Studies)

Dollar, Cathlene Elizabeth Thesis Title: "Let's Smash the Idols!" Kemal Pilavoğlu's Sufi Pan-Islamism in Republican Turkey

Cathlene Dollar completed her BA(Hons) in English Literature and Middle Eastern History at the University of Minnesota. She received her MA in Religious Studies from UCT in 2015, in the field of Islamic Studies.

Cathlene Dollar's thesis explores the theory that Sufi Islam has played an important role in the Muslim world's response to modernity. She considers a case study, a Tijani Sufi Muslim organization, established illicitly in 1931 in Turkey by Kemal Pilavoğlu, and a selection of Pilavoğlu's biographies and writings that she has translated. She briefly documents the north African origins of the Tiyaniyya Sufi order that was founded between 1781 and 1785 by Algerian Ahmad al-Tijani. She explains that, because the new secular, westernising Turkish republic, founded in 1923 by Mustafa Kemal Atatürk, had banned Sufi organisations, Pilavoğlu's establishment of the Tijani Sufi organization was necessarily clandestine. Moreover, she adds, in protest against Atatürk's secular reforms, Pilavoğlu's Tijani followers recited the Muslim call to prayer illegally, and decapitated and smashed statues of Atatürk. Based on her analysis of the organisation, Cathlene Dollar concludes that Pilavoğlu's response demonstrates that Sufism has played a critical role in Islam's response to modernity.

*Supervisor:* Dr A Brigaglia (University of Naples "L'Orientale")

Dube, Primrose Sikhanyiso Thesis Title: Spatiality and Human Development in the Western Cape of South Africa

Dube Primrose holds BSocSc, BSocSc(Hons) and MSocSc degrees in Sociology and Social Development from UCT. She began full-time in 2017. study towards her PhD Primrose Dube's thesis focuses on how spatiality impacts on human development in the Western Cape province of South Africa. Her investigation sought to establish whether spatial transformation had taken place in the post-apartheid era, and then suggested how spatiality could be transformed to enhance human development in the Western Cape. She also sought to establish whether spatiality could be incorporated into the traditional Human Development Index (HDI). Her research findings indicate that spatial justice is missing in the Western Cape and that there has been insignificant spatial transformation in the areas where previously disadvantaged population groups, especially Black Africans, reside. She was thus able to identify spatiality as a critical facet of human development and to develop a model that incorporates spatiality into the traditional Human Development Index (HDI) and thereby holistically to measure human development beyond the traditional HDI.

Supervisor: Professor N Noyoo (Department of Social Development)

#### Fore, Grant Alan

Thesis title: *Ethical Becoming, Ethical Fetishism, and Capitalist Modernity: An Ethnography of Design Education* 

Grant Fore holds BA and MA degrees in Anthropology, respectively from the University of Wyoming and UCT. Since 2012, he has been a research associate at Indiana University-Purdue University Indianapolis. He began his PhD in 2017. Grant Fore's thesis critically examines student design-making processes in an architectural technology course for undergraduate interiordesign majors at a US university. His focus is on how students make ethical sense of the relations in which designing implicates them. He presents ethnographic data from three semesters of fieldwork. He demonstrates that designers and their designs are affected by multiple relationships, many of them concealed and devalued by dominant political-economic rationalities (e.g., neoliberalism), legitimating discourses (e.g., professionalism), and nationalistic myths (e.g., the American Dream). A consequence, he argues, is that design relations take on ghostly forms that haunt designs. He also describes how some student designers manage to reveal and revalue these design relations, but only when they utilise ethical, aesthetic, and empathic approaches to valuing them. Grant Fore's ethnography dwells on such moments as a basis from which to propose a new framework for ethics education ethical becoming - that recognises and cherishes relationality whilst challenging the dominant beliefs and values which design us every day.

Supervisor: Emeritus A/Professor AD Spiegel (Anthropology) Co-supervisors: A/Professor S Morreira (Education Development Unit); A/Professor J McMillan (Centre for Innovation in Learning and Teaching)

Kongo, Minga Mbweck Thesis Title: *Water and sociality in Khayelitsha: an ethnographic study* 

MingaMbweckKongoisananthropologist and fellow at HUMA with research interests in water sociality, mobility, urbanism, illness and climate change. He holds a BSc in Biomedical Science, an Honours degree in Anthropology and a Master's degree in African Studies.

Minga Mbweck Kongo's thesis is based on research that employed an anthropological perspective using ethnography to examine water, sociality and the challenge of navigating dignified livelihoods in Khavelitsha, a Cape Town settlement often characterised by limited access to, and the uncertain quality of water. He investigates the subjectivities created by unequal municipal water distribution and how Khayelitsha residents access and harness water to meet their everyday needs, sustain life and build socio-cultural personhood. He further explores how Khavelitsha residents navigate and seek to reconcile the various contradictions arising from the uneven distribution of water in Khayelitsha and its surrounds, as well those that manifest as in other places which are generally relatively well-provisioned. His study shows the multiple relations people have with water in all their multifold complexities.

Supervisor: Professor FB Nyamnjoh (Anthropology) Co-supervisor: Professor H Chitonge (African Studies and Linguistics) Martinerie, Camille Thesis Title: *Deconstructing* "*de/colonized knowledge*" in South Africa: the case of radical academic history under apartheid (1960-1991)

Camille Martinerie holds degrees from Ecole Normale Supérieure and the University of Paris-Diderot (Paris VII) (MPhil). Her interdisciplinary doctoral study is in a joint-degree programme between Aix-Marseille University and the University of Cape Town. Camille Martinerie's thesis explores the complex legacies of colonialism and apartheid and their effect on knowledge production in historical studies in South Africa between 1960 and 1991. Through the collection of empirical evidence, and by analysing tertiary-level examination questions drawn from a case study, her thesis investigates the underlying assumptions behind the meaning of 'intellectual decolonisation'. She deconstructs radical academic history through undertaking a discursive analysis of history examination papers in which she interrogates their focus on the representation and agency of participants in South African history. By deploying quantitative and qualitative research methods, her study appraises various degrees of colonisation of knowledge and thereby contributes a refined conceptual and empirical understanding of the persistence of coloniality in historical knowledge and of its reproduction in the South African higher education context.

Supervisor: Dr J Bam-Hutchison (African Studies and Linguistics) *Co-supervisor:* Professor G Teulié (Etudes Anglophones)

Mguzulwa, Sisanda Millicent Thesis title: *An exploration of 'Gurans' phenomena: The face of youth violence in Khayelitsha Township* 

Sisanda Mguzulwa holds a BTech in Public Relations Management from the Cape Peninsula University of Technology, and a BSocSc(Hons) and MSocSc in Social Development from UCT. She completed her PhD studies in 2021. Sisanda Mguzulwa's thesis reports on the new form of youth violence, perpetrated by youths in social groups and broadly codenamed Gurans, which started to emerge around year 2000 in Khayelitsha and other surrounding Black townships in Cape Town. Her research was based on individual interviews with community members, Khayelitsha, teachers and crew members of Gurans violence crew members, as well as on focus groups discussions with affected youth. Highlighting the centrality of theories of social identity and violentisation for analysing and understanding violence among youths in contemporary South Africa, Sisanda Mguzulwa's study shows how the violent behaviours of township youth, in the midst of persistent poverty, continue to affect not only the perpetrators but also the entire community. It also shows that this kind of social behavior in Black townships represents the symptoms of a wounded society, a racialised history and present societal inequality.

Supervisor: A/Professor L Holtzhausen (Social Development) Co-supervisor: Dr KA Kubeka (Social Development)

Mugambi, Munene Mutuma Thesis Title: *Effects of Environmental Change and Climate Uncertainty on Maasai Pastoralists of Kajiado County, Kenya* 

Munene Mutuma Mugambi completed an BSc at Bowling Green State University, USA and an MSc at Egerton University (Kenya). In 2016 he began full-time PhD study in African Studies and has been affiliated to UCT's Environmental Humanities South Munene Mutuma Mugambi's thesis reports on the intersecting impacts of climate uncertainty and environmental change upon Maasai pastoralist communities in Kajiado, Kenya. In it he investigates how an increasing incidence of rangeland resource enclosure by the state and private investors for purposes of economic growth on effectively private property, has been reducing Maasai herders' access to critical water and grazing resources. And he shows how that, in turn, compromises the herders' ability to cope with the intersecting impacts of climate and environmental change. His thesis identifies the importance of democratizing water and grazing resources for purposes of facilitating equitable access and thereby mitigating the stresses on herders of climate change and environmental uncertainty. His findings provide vital guidance for the development of policies that govern common resources at a time of climate crisis.

Supervisor: Professor L Green (Anthropology) Co-supervisor: A/Professor F Matose (Sociology)

Ndinoshiho, Joseph Megameno Thesis Title: *The incorporation of web technologies by university libraries in the Southern African Development Community to implement user-centred services* 

Joseph Ndinoshiho holds a BA(Hons) and MPhil in Library and Information Studies from UCT. He started his PhD studies on a part-time basis in 2014 in the Department of Knowledge and Information Stewardship, while working as the University Librarian the University of Namibia. at Joseph Ndinoshiho's thesis focuses on the incorporation of web technologies into the services of university libraries in the Southern African Development Community (SADC) region. It is underpinned by the unified theory of acceptance and use of technology and the library 2.0 theory. He examines the factors that have influenced libraries in the SADC region to incorporate web technologies into their services. He finds that those factors include the performance and ease of use of a particular web technology and by the respective library's level of information and communication technology development. Having infrastructure also investigated users' perceptions of library services that are enhanced by web technologies, he finds that they hold positive perceptions of such services. Building on his findings has enabled him to develop a user-centred model for the incorporation of web technologies into university library services.

Supervisor: Emeritus A/Professor M Nassimbeni (Knowledge and Information Stewardship) Perez, Javier Ernesto Thesis Title: Bonded: Bonded: legacies of captivity and fugitivity from enslavement to incarceration in the Cape

Javier Ernesto Perez completed his BA qualifications at Swarthmore College, USA and began full time study toward his MA in 2015. In 2018, his MA was upgraded to PhD. Javier Ernesto Perez's thesis focuses on the relationship between slavery and contemporary incarceration. He does this by describing and analysing engagements by formerly incarcerated men in Cape Town with the history of slavery. These engagements occurred during a series of workshops. He uses a methodological approach that combines narrative analysis and poetic inquiry to analyse those formerly incarcerated men's creative writings and audio recordings, all gathered at those workshops. He finds that their narratives, as workshop participants, are haunted by the historical legacies of racialised captivity and disposability; and that they arrive at strategies for evading these hauntings by forming intimate group bonds.

Supervisor: Emeritus Professor A Sitas (Sociology)

*Co-Supervisor:* A/Professor A Pande (Sociology)

Rubin, Maxine Thesis Title: *Exit, voice, and loyalty: African states' behaviour in relation to the International Criminal Court* 

Maxine Rubin completed her BSocSc in Political Studies and BSocS (Hons) in Justice and Transformation at UCT and her MA in Post-war Recovery Studies at the University of York, UK. She began her PhD in UCT's Political Studies Department in 2018. Maxine Rubin's thesis focuses on the relationship between the International Criminal Court (ICC) and African ICC member states between 2008 and 2018. During this period, some African member-states called for mass withdrawal from the ICC while others advocated in favour of remaining members. Maxine Rubin accounts for these responses of the ICC's African members by applying Albert Hirschman's exit, voice, and loyalty model to the withdrawal debate, using discourse analysis to interpret African states' country statements at ICC-related international forums, and classifying each state as one described as exit, loyalty, or voice. She also explains the main factors influencing exit, voice, or loyalty behaviour. Her study demonstrates the applicability of Hirschman's model for the study of state-ICC relations and that the multicausality of African states' relations with the ICC suggests that it is erroneous to treat Africa as a single actor, at least when considering the ICC withdrawal debate.

Supervisor: Emeritus Professor A Seegers (Political Studies) Co-supervisor: A/Professor Z Jolobe (Political Studies)

#### Shain, Chloë-Sarah

Thesis Title: From care inside the laboratory to the world beyond it: A multispecies ethnography of TB science towards growing a decolonised science in South Africa

Chloë-Sarah Shain completed both her BA in Film and Media Production and her BSocSc(Hons) at UCT. In 2017, she began an MSocSc, which she upgraded to a PhD in 2019. Chloë-Sarah Shain's thesis draws on the long-term qualitative fieldwork she conducted with women at university-based scientists а tuberculosis research division. Focusing on the relationships between the scientists and the bacteria that cause tuberculosis, she observed how the scientists care for the bacteria and also for the cells and various species with which they work; and that this care extends well beyond the laboratory into society at large. Chloë-Sarah Shain brings these findings, which highlight the many layers of care in biomedical scientific research, into conversation with South African students' calls to decolonise science – calls that emerged in the context of the #RhodesMustFall student movement. She demonstrates how her research participants embodied a decolonised science, connecting the laboratory to society in meaningful, relevant and impactful ways. What her human participants cared about, and how they acted upon those cares, could serve as important guides for decolonising science and scientific institutions, thereby to connect knowledge institutions to the communities and contexts in which they exist.

Supervisor: A/Professor H Macdonald (Anthropology) Co-Supervisor: Dr A Abrams (Future Water Institute)

Sigauke, Esther Thesis Title: *Rethinking relationships with nature: human–wetland connections in Marlborough, Harare, Zimbabwe* 

Esther Sigauke holds a BA (Humanities and Social Sciences) from Africa University and an MSc (Environmental Policy and Planning) from the University of Zimbabwe. She joined UCT's Department of Anthropology in 2017 for her PhD studies. She previously lectured in Geography and Environmental Studies at Zimbabwe Open University Esther Sigauke's thesis is

an ethnographic study of the intricate relationship between humans and the Marlborough wetland in Harare, Zimbabwe. It focuses primarily on poor urban farmers and the wetland environment in which their foodgrowing activities are criminalised even while property developments, that may cause irreversible damage to the same environment, receive approval. She explores the underlying factors that push the farmers to engage in ostensibly illegal practices and thereby problematises the criminalisation of urban wetland agriculture. Her study uses an innovative and hybrid method of public engagement, applying design thinking to engage poor farmers in proposing solutions to achieve a win-win situation for the farmers and the wetland. Esther Sigauke calls for Harare's marginalised farmers to be given space to reconnect with the wetland and to be engaged in decision making about the environment. She also suggests that a human-centred approach to environmental management can potentially produce politically sustainable results.

Supervisor: Professor L Green (Anthropology) Co-supervisor: A/Professor F Matose (Sociology)

#### Tsawu, Simphiwe

Thesis Title: *Traditional authorities and* management of protected areas: the case of Dwesa-Cwebe Nature Reserve in the Eastern Cape, South Africa

Simphiwe Tsawu holds a BA from the University of the Western Cape and an MSc in Sustainable Development from Stellenbosch University. Having worked with TRALSO in the Eastern Cape, he joined UCT for his PhD in 2015. Simphiwe Tsawu's thesis focuses on the role of traditional authorities (chiefs) in the management of protected areas. He uses the Eastern Cape's Dwesa-Cwebe Nature Reserve as a case study since the population there comprise one of the earliest communities to create new landowner institutions under tenure reform policies. By engaging with two theoretical debates - one critical and the other supportive he assesses how these inform the role of traditional authorities in the context of protected area management. He traces the role of such authorities historically and ethnographically, and comes to a nuanced understanding of their role in the management of protected areas. He concludes that, as long as traditional authorities are empowered by the state and enjoy popularity among rural communities such as in Dwesa-Cwebe, their role in the management of protected areas will remain significant and necessary.

Supervisor: Emeritus Professor L Ntsebeza (African Studies and Linguistics) Co-supervisor: A/Professor F Matose (Sociology)

#### van Wyhe, Kaylee Shiela Thesis Title: *Effects of different antiretroviral treatment strategies on cognitive and behavioral performance in HIV-infected South African school-aged children: a longitudinal investigation*

Kaylee van Wyhe completed her BA degree at the University of the Western Cape, and her BSc(Hons) and MA (Research in Psychology) degrees at UCT. She began fulltime study toward her PhD in 2015. Kaylee van Wyhe's thesis examines the long-term cognitive and behavioural effects of early exposure to combination antiretroviral therapy (cART) in a South African sample of children living with HIV (CLWH). Participants enrolled in the Children with HIV Early AntiRetroviral (CHER) trial (some had had cART initiated before their first birthday whilst others had had it deferred) were compared against HIVuninfected control participants, with measures taken at ages 7 and 9 years. Kaylee van Wyhe's findings suggest that, even with early cART initiation, discrete cognitive deficits may persist in CLWH and can become severe at school age. However, CLWH exhibited favourable long-term behavioural outcomes, regardless of cART treatment strategy. Kaylee van Wyhe's study has direct clinical implications, especially regarding the consequences of the timing of cART initiation on long-term cognitive and behavioral outcomes in CLWH. It also provides empirical data relating to specific cognitive deficits that may affect CLWH, and it thus informs targeted rehabilitation efforts.

Supervisor: Professor KGF Thomas (Psychology) Co-supervisor: Professor M Cotton (University of Stellenbosch)

#### MASTER OF ARTS IN TEACHING FRENCH AS A FOREIGN LANGUAGE

Fazluddin, Raeesa Bibi (with distinction in the dissertation)

#### MASTER OF ARTS

Assim, Avesha Bieding, Natasha Abegail Brain, Sarah (with distinction) Clark, Vanessa Leigh Corbett, Nicholas Charles Davidson, Natalie (with distinction) Derbyshire, Daniel C (with distinction) Dyssell, Emily Leyden Faku, Ngabisa Field, Gemma Rebecca Fuller, Jainee Ann (with distinction) Gambade, Emilie (with distinction) Gcingca, Luvo Head, Vernon Richard Laurence Henning, Tiffany Joy Horn, Elizabeth Hundermark, Charne Lee (with distinction) Kela, Namubi Judith Koekemoer, Ronel Monet (with distinction) Mabogwane, Kamohelo Bohlale (with distinction) Mafu, Thubelihle Mazana, Nandipha Nwabisa Mbatsha, Tandile Melubakho (with distinction) Mjenxane, Lindela Lolo Mjoli, Zingisa Noluvuyo Mohlafuno, Tshireletso Moodley, Seshadari Jesse (with distinction) Moronell, Sebastian (with distinction) Mosiakgabo, Gogontle Rorisang (with distinction) Muraina, Luqman Opeyemi Ngwenyama, Nosisa Nolwazi (with distinction) Nisenson, Ann Evelyn (with distinction) Nkonyeni, Zamah Martiniah (with distinction) Owen, Catherine Patricia Phillips, Tyler Keagan (with distinction) Preston, Lara Peta Sawadogo, Denis (with distinction in the dissertation) Scott, Skye Rosemary Marr Selig, Sarah Belle Shale, Lehlohonolo Slingers, Joshua Liam Smith, Robert (with distinction) Suitt, William Taft-Dick, Joya Eleanor (with distinction) Tlhako, Manoko Francisca (with distinction)

Van Der Hoven, Shane (with distinction) Van Der Merwe, Christiaan Hendrik Gert Vushemasimba, Tsungai Melissa Yalala, Sefela Carla Londiwe (with distinction)

# MASTER OF ARTS IN NEUROPSYCHOLOGY

Christie-Taylor, Taryn Jane (with distinction) Mc Fie-Schwartz, Sarah Elizabeth (with distinction) Zeilinga, Abraham Dirk (with distinction in the dissertation)

#### MASTER OF EDUCATION

Boyd, Colleen Anne (with distinction) Cingo, Siviwe Innocent de Jager, Rae Hennie Georgeu-Pepper, Daniella Grüner-Hegge, Sophia Victoria Joseph, Sumaya (with distinction in the dissertation) Joubert, Leandri (with distinction in the dissertation) Kotze, Michelle (with distinction) Mate, Marisa Jeremias McNamara, Ellen Lynne (with distinction in the dissertation) Miguel, Elódia Júlia da Graça Msimango, Mfundo Jabulani Palte, Lauren Nicole (with distinction) Razak, Yumna (with distinction in the dissertation) Senekal, Nicole (with distinction in the dissertation)

#### MASTER OF FINE ART

Chydenius, Isabella Anna Maria (with distinction) Fortuin, Sam Seth Fraser, Nicole Clare (with distinction) Hambsch, Oliver (with distinction) Nyawose, Luvuyo Equiano (with distinction) Ocholla, Catherine Akinyi (with distinction)

#### MASTER OF LIBRARY AND INFORMATION STUDIES

Majackie, Collin Abraham Nkhahle, Rethabile Annah Ntja, Bulelwa Potgieter, Salome Radebe, Khawulile Ednah Smith, Julia Ann (with distinction in the dissertation)

#### MASTER OF MUSIC

Andrews, Brandon (with distinction) Comninos, Alexander William Cook, Shannon (with distinction) De Souza, Stephen Calvin (with distinction) Röntsch, Claire Thelma Zango, Candido Salomao (with distinction)

#### MASTER OF PHILOSOPHY

Adams, Robyne Clare (with distinction) Badenhorst, Patricia Patiance Nomsikelelo Baudin, Johanna Maria (with distinction in the dissertation) Borain, Joseph Luke (with distinction) Cannard, Jonathan Thomas (with distinction) Clark, Sarah Jane Hazar, Cenk Humphreys, Katharine Morgan (with distinction) Kolman, Kiki (with distinction) Maksudi, Bakenga Mampane, Jane Thandi (with distinction in the dissertation) May, Abigail Ihisa Mbombo, Thandazile Naiken, Tavinia (with distinction) Ndaba, Antoon Mpho Potgieter, Cathy-Ann Rakei, Simon (with distinction) Ramabulana, Fulufhelo Shirley Scott, Danica Erin Tambala, Henry Benjamin Tukela, Anelitha

#### MASTER OF SOCIAL SCIENCE

Bishop, James Andrew Bissolati, Chadley Jerome (with distinction in the dissertation) Carr, Kajal (with distinction) Eksteen, Rudi-Leigh Fuller, Emma-Jane (with distinction) Goolam Nabi, Zayaan Gray, Waioca Na Gweba, Ntombizanele Haynes, Zena Gwyneth (with distinction) Johnson, Madeline Jane Kenney, Mia Amanda (with distinction) Kgotlaetsile, Keagetswe Alex Kokolo, Busisiwe Kuah, Alison Sing Yee (with distinction) Mabaso, Karabo Makhosazana (with distinction) Madurai, Micheala Tyrelle (with distinction) Magangane, Yoliswa Mzuzile Makanda, Mfundo Xolo (with distinction in the dissertation) Manne, Stephanie Dayle (with distinction in the dissertation) Maposa, Siseko Kwalunga Masters, Emily Joan Matabane, Bongani Samuel Mathobie, Roxanne Maxine Mbamba, Thandeka Mbobo, Siyabonga Mukoni, Benita Ayanda (with distinction in the dissertation) Mwanga, Martha Oshosen (with distinction) Nair, Kartheyani (with distinction) Ndlovu, Duduzile Unathi (with distinction) Nhleko, Tengetile Wamkelwe (with distinction) Olsson, Emeli Eva Marie (with distinction) Osbourn, Clinton David Sauzier, Regine Francoise Eva Gabrielle Seti, Simamkele Kitso Thabethe, Wandile Israel Thiollet, Albane Marie Laurence Tinnion, Charlotte Van Der Merwe, Reon Carel Aron (with distinction) Van Staden, Quintin Andre

#### BACHELOR OF ARTS HONOURS

Benjamin, Yumna Du Pisani, Alana Fourie, Daniel Masitha, Imameleng Florence Mayuni, Deborah Prudence Mkosi, Lulutho Luviwe Poretti, Gemma Dimitra (in the first class) Soeker, Nuhaa Van Den Bergh, Louise

#### BACHELOR OF EDUCATION HONOURS

Dalvie, Ammarah Molefe, Mphidiseng Serfontein, Sune (in the first class) Thompson, Kyla Xabisa (in the first class)

#### BACHELOR OF SOCIAL SCIENCE HONOURS

Battle, Sage Sachiel Dhlomo, Khanyisile Adrianna Dondo, Ayanda Heuermann, Robin Hannah (in the first class) Knipe, Jodi Kwini, Nosiphiwo Lewis, Kaylene Courteney Lipparoni, Alexa Paris (in the first class) Madondo, Subulelo Sinethemba Mahlangeni, Vuyolwethu Mamabolo, Khomotso Charles Mapfumo, Ashley Marsh, Crystal Cadle Matiso, Luzuko Mupani, Helen Tevedzerai Myeko, Yandisa Narker, Rushdiyah Ngwendu, Ziyanda Penty, Abigail Perin, Ridah Reeves, Kate Anne Snyders, Nicholas Gaston (in the first class) Vries, Christelle Courtney

#### POSTGRADUATE CERTIFICATE IN FET TEACHING

Fisher, Kiarah Ashleigh Pedro, Thristan Normay

# POSTGRADUATE CERTIFICATE IN SENIOR PHASE & FET TEACHING

Allie-Ebrahim, Nabeel Mhlongo, Shalati Letah Mkhwamubi, Nontokozo Mogorosi, Itseng † Nyingwa, Luthando Queensy, Micaela Lu-Ene Reginald, Kimone Sabasaba, Maditsie

#### POSTGRADUATE DIPLOMA IN ADULT & COMMUNITY EDUCATION & TRAINING

Samuels, Farzanah

#### POSTGRADUATE DIPLOMA IN EDUCATIONAL TECHNOLOGY

Kweyama, Siphokazi Ndletyana, Mhizana Vuyo

# POSTGRADUATE DIPLOMA IN HIGHER EDUCATION STUDIES

Budree, Adheesh (with distinction) Lekhoana, Tankiso David

#### POSTGRADUATE DIPLOMA IN LIBRARY & INFORMATION STUDIES

Majebe, Zanele

#### ADVANCED DIPLOMA IN ADULT & COMMUNITY EDUCATION & TRAINING

Da Costa, Gadija (with distinction)

#### HIGHER DIPLOMA EDUCATION (POSTGRADUATE) PRIMARY

Tshetu, Sindiswa

#### BACHELOR OF ARTS IN FINE ART

Mould, Jemma Rose

#### BACHELOR OF SOCIAL WORK

Hendricks, Iman January, Raabia Josephus, Tarryn Anestacia Kondlo, Nomvano Kroutz, Collin Munsamy, Aqeelah Prins, Cassidy Leandre Slamang, Saarah

#### BACHELOR OF ARTS

Emjedi, Mogamad Natheer Fokkens, Victoria Helen Gwynne-Evans, Jessica May Hadebe, Mondli Mpumelelo Julius, Farren Majal, Raziq Makda, Laaiqah (with distinction in German Language & Literature) Nkone, Musa Steyn, Tayla Savannah Stuurman, Nicole Samantha Thomas, Liam Alexander Wentzel, Ryan John

#### BACHELOR OF SOCIAL SCIENCE

Abdullah. Saarah Brown, Lyle Dillon Cay, Kristen Joy Dudley, Safiyyah Funda, Zanele Geluk, Ziphezinhle Nomfundo Gqezengele, Luyolo Hulsman, Isabella Saffron Jacobs, Nandipha James, Samuel William Kanyangarara, Simbainashe Zacharry Kehayias, Amaarah Taugheeda Anne Ketani, Noma-Afrika Sylvia Khoza, Leroi Wilson Mulembwe Kwindla, Anita Linda, Ovayo Mandela, Asemahle Mfengu, Akho Ongezwa Mgodolisi, Ncebakazi Mhonda, Geoffrey Tapiwa Moodley, Shivani Devi Ngunga, Wendy Waruguru Ngwenya, Amanda Nompumelelo Thandiwe Njozela, Liyema Obrien, Kyle Orrill-Legg, Georgia Madeleine Pretorius, Thomas Henri Salomo, Brandon Sandak-Lewin, Samantha Claire Schemel. Coral Justine Shandu, Mandisa Sibhalala, Busisiwe

Silks, Ronan Leon Smith, Dylan Matthew Steiner, Daniella Stowe, Kate Anne Tshabalala, Mbali Samkelo Tuan, Yu-Chen

#### DIPLOMA IN AFRICAN STUDIES

Desai, Juliet Manjome, Clayton Elias Mlambo

#### DIPLOMA FOR EDUCATORS OF ADULTS

Koetzee, Elizabeth Francis

#### DIPLOMA IN SPECIALISED EDUCATION

Dibela, Moses Mbonisile

#### HIGHER CERTIFICATE IN ADULT & COMMUNITY EDUCATION & TRAINING

Dowman, Celeste Yolanda Dubazana, Nkrumah Mongameli, Noxolo Noleen

## FACULTIES OF ENGINEERING AND THE BUILT ENVIRONMENT AND SCIENCE

#### **ORDER OF PROCEEDINGS**

Welcome by the Master of Ceremonies.

The Presiding Officer will constitute and address the congregation.

Praise Poetry

The graduands will be presented to the Presiding Officer by the Deans of the Faculties.

The Master of Ceremonies will make closing announcements.

The Presiding Officer will dissolve the congregation.

### 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 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.

#### NAMES OF GRADUANDS

#### **1. FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT**

Dean: Professor A Lewis

#### DOCTOR OF PHILOSOPHY

Cheloti, Irene Naliaka Thesis Title: *Theory and Practice of Real Estate Valuation in Developing Countries: A Case Study of Kenya* 

Irene Cheloti holds a BA in Land Economics and an MA in Valuation and Property Management from the University of Nairobi, Kenya. She commenced her PhD studies at UCT in 2018. Irene Cheloti's thesis focuses on valuation problems in developing countries. She investigated why valuation problems such as valuation inaccuracies, client influence, and the use of heuristics persist despite efforts by researchers, governments, and policymakers to address these problems. Her main finding is that valuation problems persist because of the valuation environment in developing countries, characterised by market-related problems represented by limited and unreliable information. Yet, efforts to address these problems are mainly directed towards improving valuer conduct, neglecting marketrelated issues. She goes on to categorise valuation problems in practice in the context of three main categories, i.e., market-related problems, valuer conduct and problems related to the normative basis of the standard valuation theory. She recommends a structured way of addressing valuation problems based on the three categories. The findings will be useful in policy interventions aimed at addressing valuation problems in developing countries.

*Supervisor:* A/Professor MM Mooya (Department of Construction Economics and Management)

Amarasinghe Danapathi Arachchige, Sampath Duminda Jayalath Thesis Title: *Optimisation of magnetic* couplers for inductive power transfer applications

Sampath Amarasinghe holds a BEng (Hons) in Electronics Engineering from Sheffield Hallam University, UK, and an MSc in Electrical Engineering from UCT. He started a PhD in 2017 and joined the Department of Electrical Engineering at UCT as a full-time lecturer in 2019.

Sampath Amarasinghe's thesis focuses on improving the design and optimisation process of coils of inductive power transfer (IPT) systems used to transfer power wirelessly in charging applications for electric vehicles and consumer electronics. The thesis investigates key factors of the design process of IPT systems. It proposes a generalised design guideline for coils of IPT systems, which can be used in any IPT application. In addition, the thesis proposes two design methods to improve the existing coil design process by incorporating the tolerances and uncertainties associated with design variables, and misalignment of coils. The methods proposed will help to formalise the coil design and optimisation process and improve the robustness of an IPT system. The findings will be useful and applicable to the coil design and optimisation process of any IPT application.

Supervisor: Professor A Khan (Electrical Engineering)

Hammond, Sylvia Frances Thesis Title: *Cultural-historical investigations into the dialectics of skills development implementation and occupational identity in the informal construction Small and Micro Enterprise (SME) workplace* 

Sylvia Frances Hammond holds a BA(Hons) in Social Studies. Liverpool and, Polytechnic, from UCT, a Postgraduate Diploma in Employment and Labour Law, an MPhil in Advanced Labour Law, and a Certificate in Administrative and Constitutional Law.

Sylvia Hammond's multidisciplinary thesis of occupational identity was inspired by the roadside work-seekers displaying construction tools This cultural-historical study draws upon her professional background in human resource management and labour law, to explore the colonial and apartheid laws that excluded Black Africans from formal skills and occupations. Skills development implementation represents a means of overcoming historical exclusion. There is a mismatch, however, between the skills development procedures, the work practices of the construction informal SME workplace, and obstacles to formal recognition of skills. Occupational identity and skills are acquired through supportive family and informal associations, in the spirit of ubuntu. This thesis identifies how the mismatch between skills development procedures and contractor work practices perpetuate exclusion from skills recognition and the formal economy. Recommendations are to clearly differentiate skills development from education, in a format tailored to the construction sector, under Employment and Labour.

Supervisor: Professor Emeritus PA Bowen (Construction Economics and Management) Co-supervisor: A/Professor AE Muthivhi (Early Childhood Education, University of Pretoria) Co-supervisor: Professor KS Cattell (Construction Economics and Management)

Heiyantuduwa-Beushausen, Rukshani Thesis Title: *The influence of concrete mix composition and environmental exposure on long-term chloride ingress in concrete* 

Rukshani Heiyantuduwa-Beushausen completed her BSc(Eng) and MSc(Eng) qualifications at UCT, after which she was employed as a civil engineer before returning to begin full-time study towards her PhD. Rukshani Heiyantuduwa-Beushausen's thesis investigates the factors influencing long-term chloride ingress in concrete structures exposed to different marine environmental conditions in South Africa. Timechloride dependent ingress was measured over a period of approximately four years, with respect to the influences of binder type, w/b ratio and environmental conditions, exposing samples to submerged, tidal, splash/ spray and airborne chloride exposure zones in the Atlantic Ocean in Cape Town and the Indian Ocean in Durban. As a comparison, chloride ingress was measured under laboratory-controlled conditions. The data were analysed to identify the factors used in the modelling of long-term chloride ingress into concrete using Fick's laws of diffusion. The time-dependency of apparent diffusion coefficients and chloride surface concentrations was identified and used in the long-term service life prediction of RC structures in the marine environment.

Supervisor: Emeritus Professor MG Alexander (Civil Engineering)

#### Horn, Caryn Ashleigh Thesis title: *Investigating red pigment production by Penicillium purpurogenum DSM 62866*

Caryn Horn (nee Hobbs) completed her BSc in Genetics and Microbiology at UCT, followed by BSc(Hons) at Stellenbosch University before registering for MSc(Eng) through the Centre for Bioprocess Engineering Research in the Department of Chemical Engineering, UCT. She upgraded her registration to PhD in 2018. Caryn Horn's thesis focuses on producing a red pigment from the polyketide family using Penicillium purpurogenum. These polyketide pigments are nature-based, with potential antioxidant properties, responding to the consumer drive towards natural colourants in food, cosmetic and nutraceutical products. Following proof of concept of red pigment production by P. purpurogenum in a scalable process, it was demonstrated that the polyketide produced was non-growth associated, with productivity proportional to biomass concentration and sensitive to oxygen supply. Pigment production was correlated to the onset of sporulation and was influenced by medium composition. By optimising the C:N ratio, pigment yield on biomass and specific pigment production rate were enhanced by 2.1and more than 4-fold, respectively. Based on productivity, yield data and process scalability, the pigment has commercialisation potential in terms of stability, toxicity and process economics. Its production from by-products of other industries may enhance resource efficiency of the process. It has potential to expand the spectrum of available nature-based pigments.

Supervisor: Professor S Harrison (Chemical Engineering)

Horwitz, Roy Anthony Devoy Thesis Title: *Toward A comprehensive platform for simulating aeroelastic gust encounters: full and reduced order models* 

Roy Horwitz completed his BSc in Mechanical Engineering at UCT. He enrolled for full time MSc studies in 2016 and upgraded to a PhD in 2018.

Roy Horwitz's thesis addresses the current pressing need for the design of more efficient and environmentally neutral aircraft. This is done via the firstever development of a single simulation framework to enable the rapid and accurate simulation of aeroelastic gust loads, as required for design certification purposes. To achieve this he develops both novel full order as well as reduced order aeroelastic models to simulate aircraft at sub- and transonic flight speeds. The full order computational fluid dynamics model accurately accounts for flow turbulence, transonic shocks, wing motion and gust imposition. The new reduced order model employs artificial intelligence to achieve unprecedented computational efficiency. It replicates the full order model to within 90% accuracy while being between one and two orders of magnitude faster to compute.

Supervisor: Professor AG Malan (Mechanical Engineering) Khasu, Motlokoa William Thesis Title: *Perovskites as New Support Materials for the Iron Based Fischer-Tropsch Synthesis* 

Motlokoa Khasu completed his BScEng in Chemical Engineering at UCT in 2014 and continued studying towards his MSc in the Catalysis Institute, graduating with distinction in 2017. Shifting research topic slightly, he continued working in heterogeneous catalysis towards his PhD.

Motlokoa Khasu's thesis develops new synthesis techniques to prepare mixed metal oxides with various compositions. These novel materials are used as empowered catalyst carriers joining two fundamental catalyst functionalities, the structural support of the active phase and the activity/ selectivity improvement of promoters. These new materials were tested in the Fischer-Tropsch synthesis and demonstrated outstanding performance enhancements. The attractiveness of the concept is that it can potentially be applied for other industrially relevant catalytic systems unleashing the potential of promoter elements.

Supervisor: A/Professor N Fischer (Chemical Engineering) Co-supervisor: Professor M Claeys (Chemical Engineering)

Leo, Emmanuel Safari

Thesis Title: Development of low-clinker concrete: partial replacement of cement with calcined clay and limestone, based on selected African raw materials

Emmanuel Safari Leo received his BSc (Civil Eng) degree from the University of Dar es Salaam, Tanzania, and his MSc(Eng) from UCT. He began full-time study towards his PhD in 2018.

Emmanuel Leo's research addressed the development of lowclinker concrete by partially replacing cement with different calcined kaolinite clays and ground limestone. This required first identifying potential clay deposits in South Africa and Tanzania, obtaining clay samples from selected sites, and testing their performance. With this knowledge, he was able to develop a series of low-clinker mixes, by understanding the factors controlling the reaction of the materials, the hydration products formed and how they fill space in the binder matrix. The results suggest that, for optimum performance, regardless of the type of clay, the lowest practical clinker content is 55%, at which the amount of calcined clay is 35% and limestone is 10%. This enables minimising cost and environmental impact of such low clinker concretes, contributing to more sustainable future development of infrastructure in Africa.

Supervisor: Emeritus Professor M Alexander (Civil Engineering) Co-supervisor: Professor H Beushausen (Civil Engineering)

#### Letete, Thapelo Clifford Mohale Thesis Title: *Establishing relevant and high quality domestic MRV systems to support effective climate action*

Thapelo Letete holds a BSc in Applied Chemistry and Mathematics from the National University of Lesotho, and a BSc (Eng) and an MSc(Eng) in Chemical Engineering from UCT. He undertook PhD studies part-time while employed as Climate Change Director in a local engineering firm, and previously in a global environmental government. company and in Thapelo Letete's thesis investigates the factors that affect the success and failure of establishing country-level climate change measurement, reporting and verification (MRV) systems that are of high quality and fully relevant to the countries' domestic, regional and international climate change information needs. He applies the theory of results-based planning and logical modelling to MRV of climate action to develop a novel and comprehensive framework for climate change MRV. As countries that are party to the Paris Agreement prepare for the first reporting cycle under the Agreement's enhanced transparency framework from 2025, this framework offers a tool that countries can use to establish domestic MRV systems that compile and report relevant and high-quality data. This will, in turn, advance the global objectives of building mutual trust between countries and promoting effective implementation of the Paris Agreement.

Supervisor: Professor H Winkler (Engineering and the Built Environment) Co-Supervisor: Dr Brian Mantlana (Council for Scientific and Industrial Research, Ecosystem Services Department)

#### Madikizela, Kolosa

Thesis Title: *The relationship between diversity, leadership and innovation in the South African construction industry* 

Kolosa Madikizela holds a Master of Technology in Construction Management from the Cape Peninsula University of Technology. She has a 17year career spanning the engineering, facilities management property, and construction industries, and held Executive has Management roles in multinational organisations. Kolosa Madikizela's thesis focuses on the relationship between diversity, leadership and innovation in the South African construction industry. The study further investigates how leadership drives, influences and manages the relationship between diversity and innovation to advance organisational performance in the South African construction industry. She started by reviewing Global and South African literature on diversity, leadership and innovation. From this literature she identified the concepts of diversity management, workforce diversity, workforce innovation and transformational leadership. From these concepts she develops a theoretical and conceptual framework. Using a convergent parallel mixed method, including interviews with 24 leaders in the South African construction industry, Kolosa establishes that there is a relationship between leadership drive and management of diversity and innovation, and the organisations' innovation ability. She extends her research to investigate the impact of this relationship on organisational performance, finding that if effectively managed by leaders,

diversity can enhance an organisation's performance.

Supervisor: A/Professor K Michell (Construction Economics and Management) Co-Supervisor: Professor T Haupt (Mangosuthu University of Technology)

#### Marquart, Wijnand

Thesis Title: *Application of Molybdenum Carbide Catalysts for the CO2-assisted oxidative dehydrogenation of ethane* 

Wijnand Marquart holds a BSc degree in Chemical Engineering from the of Applied University Sciences, Utrecht, The Netherlands, and an MSc (Eng) degree in Chemical Engineering from UCT. He started his full-time study towards his PhD in 2018. Wijnand Marquart's thesis reports on the synthesis and application of molybdenum carbide-based catalysts for the catalytic co-activation of ethane, from natural gas, and captured CO2, as an alternative and more sustainable approach for the production of ethylene. Major challenges such as thermodynamically preferred side reactions and loss of catalyst lifetime need to be addressed for the process to become economically viable for large scale implementation. He performed an extensive exploratory study, evaluating a wide range of novel catalyst formulations prepared on several metal oxide support materials, as well as the effect of promoter addition. These catalysts were studied for their performance in the CO2assisted oxidative dehydrogenation of ethane (CO2-ODH), varying a range of reaction conditions such as the reaction temperature as well as the feed gas composition. He creates a catalyst system with an increase in catalytic stability, while maintaining high yields towards the desired CO2-OHD product, ethylene.

Supervisor: Associate Professor N Fischer (Chemical Engineering) Co-supervisor: Professor M Claeys (Chemical Engineering)

#### Mirembe, Rachael Daisy Thesis Title: *A Study on commercial property pricing in Uganda*

Rachael Mirembe holds a bachelor's in Entrepreneurship And Small Business Management, and a MSc in Banking and Investment from the Makerere University, Kampala, Uganda. She joined the Department of Construction Economics and Management in 2018. Before joining UCT, she was a University Lecturer in Makerere University. Rachael Mirembe's thesis focuses on how property stakeholders arrive at the rental prices that are charged to their tenants in commercial buildings. She explores the role of informal institutions found in the property market environment on price determination using New Institutional Economic theory. The study reveals that informal as well as formal institutions significantly impact price determination decisions. The study further facilitates an understanding of the behavioural impact associated with changing market-related institutional arrangements in an emerging country context such as Uganda.

Supervisor: A/Professor F Viruly (Construction Economics and Management) Co-Supervisor: A/Professor K Michell (Construction Economics and Management)

#### Mudenda, Lee

Thesis Title: An ecological risk assessment of metal mobilization at catchment scale from three mine wastelands for improved environmental management and risk assessment: integrating abiotic, biotic and agroecosystem approaches

Mudenda holds MPhil Lee an degree in Sustainable Mineral Resource Development from UCT. He has experience in the mining industry, and is an academic at the Copperbelt University in Zambia. The goal of Lee Mudenda's thesis is ecological risk assessment of copper mine waste to inform appropriate handling. He assesses generation of acid rock drainage (ARD) and associated

metal mobility using UCT biokinetic tests and column bioleach experiments. He recommends detailed mineralogical assessment of metal dissociation to avoid the ecological burden beyond acidification and salinization. He also uses ecotoxicology tools to identify impacts and potential benefits. Through studying several tailing storage facilities (TSFs) within a watershed and their impact in a single geographical region, attributes of the facilities were contrasted. His study brings together physico-chemical analysis, a macroinvertebrate study and monitoring of agricultural lands to assess impact. Lastly, he focuses on application of phytomining technologies in recovery of residual metals in TSF, as a viable approach for mitigation to minimise metal migration and land restoration, enabling both valorisation of waste and reduction of long-term liabilities, by exploiting the potential of using native herbaceous plant species.

Supervisor: Professor STL Harrison (Chemical Engineering) Co-supervisors: Professor K Hudson-Edwards (University of Exeter), Professor S Syampungani (Copperbelt University)

Ndimande, Conrad Bhekile Thesis Title: *A study of the charge structure and energy utilisation in a Stirred Media Detritor using DEM-SPH* 

Conrad Ndimande completed a BEng Chemical (Hons) qualification at Curtin University, and an MSc in Chemical Engineering at UCT's Centre for Catalysis Research. He then moved to the Centre for Minerals Research in the Chemical Engineering department for his PhD.

Stirred Media Detritors (SMD) are one of the commonly used stirred mills in plants that apply the leaching and floatation recovery processes. This is because they have a smaller footprint and are more energy efficient than tumbling mills in fine and ultra-fine grinding applications. In instances where this technology is applied, the particle fluid interactions are not fully understood. Due to this limitation, models for stirred mill design and optimisation have not yet matured. Conrad Ndimande's work focuses on studying charge dynamics, mixing, energy utilisation and the effect of impeller configuration on these crucial aspects of the comminution process in a SMD. This was done by using twoway coupled DEM-SPH modelling. The findings provide important information needed for design of impellers for stirred mills and model development for optimisation of already existing units.

Supervisor: Professor AN Mainza (Centre for Minerals Research) Co-supervisor: Professor PW Cleary (CSIRO Data61)

Pikinini, Sebia

Thesis Title: An investigation into the flotation response of sperrylite (PtAs2) by comparative evaluation of crystal structure and bonding atoms

Sebia Pikinini holds a BSc (Hons) Degree in Metallurgical Engineering from the University of Zimbabwe. She completed her MSc in Metallurgy and Materials Engineering with the University of Witwatersrand in 2016. She began fulltime study towards her PhD in the Centre for Minerals Research at UCT in 2018.

Sebia Pikinini's thesis investigates the selective beneficiation of an important platinum-containing mineral, sperrylite. This mineral is difficult to recover by the traditional beneficiation process of flotation and her thesis seeks to find reasons and remedies for this by performing a comparative study against other floatable mineral types. Her thesis successfully demonstrates the electrochemical inertness of the sperrylite mineral to reagent adsorption and offers potential remedies to this problem. The potential benefits of this work to the South African platinum industry, which provides the raw materials necessary for environmentally sustainable energy sources, are immense.

Supervisor: A/Professor B McFadzean (Chemical Engineering) *Co-supervisors:* Emeritus Professor C O'Connor (Chemical Engineering)

#### Raseale, Shaine

Thesis Title: Oxidative dehydrogenation of ethane with carbon dioxide over ironnickel nano-alloys supported on metal oxide overlayers

Shaine Raseale completed his BSc (Hons Chemistry) degree at the University of Limpopo in 2013. In 2014, he received the EUROSA scholarship to study towards his MSc in Chemistry at Leipzig University, Germany. After graduating in 2017, he joined the Catalysis Institute at UCT for his PhD studies. In his thesis, Shaine Raseale develops a synthesis technique for catalysts consisting of iron-nickel nano-alloys supported on metal oxide overlayers. These materials were tested in the oxidative dehydrogenation of ethane with carbon dioxide, a reaction which activates two waste streams into key chemical building blocks. His work clearly identifies the structure-function relationships that serve as a steppingstone for a targeted design of efficient catalysts for the valorisation of ethane and the greenhouse gas carbon dioxide, supporting a transition into a more sustainable industry.

Supervisor: A/Professor N Fischer (Chemical Engineering) Co-supervisor: Professor M Claeys (Chemical Engineering)

#### Ryseck, Bianca Beatrice Thesis Title: *Enabling Equitable Access* to Public Transport Information to

Enhance Hybrid System Use in Cape Town, South Africa

Bianca Ryseck completed her BA at Bard College in New York and her MSc in City Design and Social Science at the London School of Economics and Political Science, and began full-time study towards her PhD in late 2018.

Bianca Ryseck's thesis focuses on questions of information barriers to accessing multimodal public transport systems in emerging cities, specifically on the role of technology in enabling access to mobility in Cape Town for captive public transport users. Her investigation begins with qualitative interviews to gather a comprehensive view of users' information needs in planning journeys using scheduled and unscheduled modes. She then employs quantitative methods to gather a representative and ranked understanding of passenger information needs and capabilities to use technologies to access journey planning information. The outcomes of this multi-stage process revealed that there is a discrepancy in the information needs desired by captive users to plan multimodal trips in Cape Town and the information that is currently available. These findings have implications for cities with scheduled and unscheduled mobility systems where the lack of user information can pose a barrier to hybrid system use.

Supervisor: Professor R Behrens (Civil Engineering) Co-supervisor: Professor M Zuidgeest (Civil Engineering)

#### Shaik, Kathija Bi Bi

Thesis Title: Investigation of the electrochemical dissolution of sperrylite in cyanide-ferricyanide systems

Kathija Shaik obtained her BSc and BSc(Hons) at UCT and completed MSc(Eng) Chemical her in Engineering, also at UCT, in 2016. She enrolled for her PhD in 2017. Shaik's Kathija thesis presents the first systematic study of the dissolution of the refractory platinum mineral sperrylite (PtAs2) through aqueous cyanide media. Sperrylite occurs in many platinum group mineralbearing (PGM) ore bodies, but its recovery during conventional flotation processing is generally poor. Using electrochemical and surface analytical tools, she investigated the mechanisms of a direct chemical dissolution process involving cyanide as a complexing agent to stabilise the platinum in solution, and ferricyanide as an oxidant. Her work unravelled a complex electrochemical mechanism in which the dissolution of the sperrylite mineral competes with the direct oxidation of cyanide and precipitation of arsenic compounds as well as PtO2 on the mineral surface, gradually inhibiting further dissolution of the sperrylite. The study provides important pointers towards developing technology for the recovery of platinum through the reprocessing of historic PGM tailings and low-grade ore bodies.

*Supervisor:* Professor J Petersen (Chemical Engineering)

#### Shield, Stacey Leigh Thesis Title: A contact-implicit direct trajectory optimisation scheme for the study of legged manoeuvrability

Stacey Shield obtained her BSc (Eng) in Mechatronics from UCT in 2014. She joined UCT's African Robotics Unit (ARU) as a master's student in 2015, and upgraded to a PhD the following year. She has lectured in undergraduate courses in the Electrical Engineering department since 2019.

Stacey Shield's research focuses on legged locomotion and is relevant to the fields of robotics and biomechanics. Her thesis investigates how rapid stopping and turning manoeuvres are performed from high-speed gaits. Understanding this topic is essential to enable fastlegged robots to move safely outside predictable laboratory environments, yet it has not been widely researched. These manoeuvres are dangerous to perform, and highly sensitive to variables such as foot traction and the pose of the body at the moment they are initiated, so a simulation technique called 'trajectory optimisation' is used to safely and reliably generate example motions for study. The results of this thesis indicate how a variety of factors affect the execution of the manoeuvres considered, and advance the trajectory optimisation methodology applied to legged locomotion problems.

Supervisor: A/Professor A Patel (Electrical Engineering)

Taylor, John-Philip

Thesis Title: *ALCHA – Architectural Level Computational Hardware Abstraction: A New Programming Language for FPGA Projects* 

John-Philip Taylor competed his BEng and MSc (Eng) qualifications at Stellenbosch University, and began full-time study at UCT towards his PhD in 2015. The study was reduced to part-time in 2016, due to an employment opportunity at Reutech Radar Systems. Prior to starting his PhD, he worked at Necsa, Pelindaba. John-Philip Taylor's thesis focuses on increasing field programmable gate array (FPGA) firmware developer efficiency. He develops a new language aimed specifically at FPGA development, leveraging the flexibility that these devices provide. ALCHA supports a larger set of abstraction patterns and decreases the cost of maintenance compared to commonly used hardware description languages. His language incorporates modern software concepts, such as object orientation and a procedural programming model, and further provides fixed point arithmetic abstraction and a scripting frontend. The language is evaluated by means of a radar-based case study, and found to be about half as complex and twice as powerful as traditional hardware description languages, for this use-case.

Supervisor: Dr S Winberg (Electrical Engineering)

### White, Bronwyn Elizabeth

Thesis title: Beyond bottlenecks: expression of complementary enzymes and permeabilisation of cell membranes to improve performance of CYP153A6 in Escherichia coli whole cell biocatalysis

Bronwyn White graduated from UCT with a BScEng in Chemical Engineering. Wanting to bring together her process engineering skills and a deep interest in the potential of microorganisms to contribute to these, she began full-time study towards her MSc. She subsequently upgraded to a PhD. The activation of linear alkanes to more reactive and useful oxygenated products is recognised as a major catalytic challenge, with potential to enhance resource efficiency. Bronwyn White's thesis focuses on biocatalysis for conversion of octane into octanol catalysed by the P450 enzyme CYP153A6 grouping in genetically engineered bacterial systems. Her work demonstrates important mass transfer limitations and uses various techniques (process engineering and molecular

modification) to enhance the transport of octane and octanol across the cellular membrane, as well as to boost cellular energy availability by speeding up the regeneration of nicotinamide cofactors. The findings highlight the imbalances between substrate supply, energy supply, and biocatalytic enzyme expression levels that can arise in cellbased systems. The findings also provide valuable insights into the relationship between cell density, reaction rate and biocatalyst stability. These results are a step towards the development of more environmentally-friendly catalysts for the beneficiation of alkane feedstocks.

Supervisor: Professor STL Harrison (Chemical Engineering) Co-supervisors: Professor MS Smit (Biochemistry, University of the Free State), Dr C Fenner (Chemical Engineering)

### MASTER OF ARCHITECTURE

Jambaya, Tatenda Wellington Mawala, Lindokuhle Abygail Selepe, Phaswane Pamela Maphuthi September, Dane Brandon

### MASTER OF CITY AND REGIONAL PLANNING

Bhambatha, Vuyiseka Catherine Loofer, Daanyaal

### MASTER OF ENGINEERING

Ashipala, Aili Kanee Bergstedt, Roscoe Chingore, Paul Chakanetsa (with distinction in the dissertation) Ingle, Laura Ann (with distinction in the dissertation) Kaupa, Valentine Naka Chisomo Kritzinger, Johan Andries Makgata, Namudi Reginah Matlala, Kgothatso Leon Molefe, Lihlonono Hopewell (with distinction in the dissertation) Mpeta-Phiri, Tina (with distinction in the dissertation) Van Heerden, Lourens (with distinction in the coursework component)

### MASTER OF GEOTECHNICAL ENGINEERING

Cock, Brent Frederic Da Cruz, Patricia Raquel Salles Govender, Denishree Upindi, Victoria Tegelela

### MASTER OF LANDSCAPE ARCHITECTURE

Baeta, Daniel Inacio

### MASTER OF PHILOSOPHY

Adetooto, Johnson Damilola (with distinction) Ahmed, Muhammad Ebtisam (with distinction in the coursework component) Anwar, Muhammad Mubeen (with distinction) Collier, Mishkah (with distinction) Cronje, Carla (with distinction) Gasela. Mchasisi (with distinction in the dissertation) Hussain, Jahanzaib (with distinction) Khoza, Rirhandzu Anneline (with distinction in the dissertation) Lehloenya, Mahoati Arthur Mehmood, Nasir (with distinction in the coursework component) Motau. Simon Mosotho Naveed, Mohammad (with distinction in the coursework component) Ngewu, Mandla Rehman, Saeed Ur (with distinction) Sasman, Nicola Anne (with distinction)

### MASTER OF SCIENCE IN ENGINEERING

Ajibare, Adedotun Temitope (with distinction) Aldera, Gianluca Ugo (with distinction in the coursework component) America, Tyler Daniel Angula, Shalongo Tulonga Tuyenikumwe (with distinction in the dissertation) Caine, Jonathan Andrew (with distinction in the coursework component) Charamba, Apollonia Anesu (with distinction) Churu, Varaidzo Amanda

Coothen, Yuva Nayegen (with distinction in the coursework component) De Jongh, Quintin Oliver (with distinction) Feng, Kai-Yu (with distinction) Govender, Neeren (with distinction in the coursework component) Hartzenberg-Aeroe, Ellen Katherine Hockey, James Temlett (with distinction) Hyde, Rhonda Yolanda (with distinction in the coursework component) Hytoolakhan Lal Mahomed, Nasseela (with distinction) Kadish, Shai Dakota (with distinction) Knemeyer, Alexander Lutz (with distinction) Kyd, Haemish Llouellyn (with distinction) Lin, Xuefeng (with distinction in the dissertation) Mabiza, Audrey (with distinction) Maharaj, Dasmi Malindi, Mihlali Manzila, Archippe Ngwey Marais, Darrian Jorge Pires (with distinction) Martin, Richard Bradley (with distinction in the coursework component) Mashaba, Dineo Lucia (with distinction) Matjelo, Lehlomela Raymond Mavundla, Kgomoangwato Paul Kruger (with distinction in the dissertation) Mbaba, Ongezwa (with distinction) Molefe, Lerato Molope, Lazarus Molahlegi (with distinction) Moolla, Muhammad Ameen (with distinction in the dissertation) Moremi, Makhosi Edith Mullins, Christopher (with distinction) Mupwedi, Emilia Joyce Muriithi, Grace Karimi (with distinction) Mwale, Mwana (with distinction) Mzulwini, Mduduzi Comfort Namalomba, Paul (with distinction in the dissertation) Ndakola, Hilja Ndeutapo, Samuel Effata Damakondjovo (with distinction) Ndila, Noluvuyo Ngwenya, Mixo Nkwentsha, Xolisani Nyakunu, Chenesai Nesisa

Olando, Alexander Gordon (with distinction in the coursework component) Oodally, Adam (with distinction) Padayachee, Veroushia Patel Papathanasiou, Shameez (with distinction) Raidoo, Renita Anand Ranganthan, Omishka Ross. Michael Anthony Jared Shaer, Gianluca Sasha Salvatore Ganter Simon, Jaziitha (with distinction in the coursework component) Sithebe, Ngcebo Simphiwe Slabber, Martin Johannes (with distinction) Stott, Rory (with distinction in the coursework component) Sylivery, Victor Kajungu (with distinction) Tafirenyika, Tanaka Phillip (with distinction) Thela, Njabulo (with distinction in the dissertation) Thewlis, Geordie Douglas (with distinction in the coursework component) Titus, Matthew Vincent Watitwa, Jeff Kimasere Windapo, Mobolaji Oladipupo Wolpe, Luka James Kwezi (with distinction in the coursework component)

#### MASTER OF SCIENCE IN PROJECT MANAGEMENT

Abay, Teferi Mekonnen Antonio, Wilton Michael Dosantos (with distinction) Du Plessis, Ashlea (with distinction) Makalichi, Silas Mberema,Maria-Magdalena Simbara Nackerdien, Rashied Negussie, Menelik Gizaw (with distinction in the dissertation) Spolander, Robyn Anne Vahed, Faheem

### MASTER OF SCIENCE IN PROPERTY STUDIES

Aldera, Daniela Sapia Bailey, Anelle Barnard, Shaun Smuts Buchner, Lafras Jonathan, Lesley-Anne Maria Jumbe, Comfort Wathu John Mercy Katjihingua, Else Knight, Jason Michael Mapiye, Karen Tashinga Molapo, Lerato Jeanmarie Salome Van Eeden, Marile Visser, Daniel

#### MASTER OF TRANSPORT STUDIES

Mabusela, Khutlang Elias

### BACHELOR OF CITY PLANNING HONOURS

Mofokeng, Tiisetso Dieketseng Xulu, Zakithi

### BACHELOR OF HONOURS IN GEOGRAPHICAL INFORMATION SYSTEMS

Bara, Nkcubeko Jobela, Palisa Mngqakababa, Lusizo Zakaapi, Elizabeth Undjaa

# BACHELOR OF SCIENCE HONOURS IN CONSTRUCTION MANAGEMENT

Chambers, Bryce Lionel

### BACHELOR OF SCIENCE HONOURS IN MATERIALS SCIENCE

Nkadimeng, Mahlogonolo

### BACHELOR OF SCIENCE HONOURS IN PROPERTY STUDIES

Nyamudeza, Cynthia Amanda Van Der Merwe, Ivan Friedrich

### BACHELOR OF SCIENCE HONOURS IN QUANTITY SURVEYING

Ituwe, Doreen Eliona Ngomane, Thembeka Zama

### BACHELOR OF ARCHITECTURAL STUDIES

Mombo, Munashe Christian

### BACHELOR OF SCIENCE ENGINEERING IN MECHANICAL & MECHATRONIC ENGINEERING

Ameer, Azraa Cross, Michaela Anne Hogwe, Michael Kahanovitz, Leo Thabani Majokweni, Siyavuya Bunono Sekhasembe, Shela Martina Stevenson, Giles Gordon Sinclair Swales, Diana Leigh

### BACHELOR OF SCIENCE IN ENGINEERING IN ELECTRICAL & COMPUTER ENGINEERING

Barbas, Luca Phengari Dimi Bourn, William James Kateera, Kudzai Chris Louw, Sachin Raytheo Mbiya, Samuel Kalenga Molloy, Declan Kyle Nukeri, Blessing Lerato Phihlela, Petersen Mphareng Poonsamy,Shahil Thomi, Steven Kiago (with honours)

### BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Lumbela, Naledi Diana Matau, Samuel Materure, Tanaka Nicole Nkhabanyane, Lefa Agentious Nyota, Simbarashe Ashton Ramsuroop, Jyestha Sibanda, Thabo Bhuti Zimu, Njabulo

### BACHELOR OF SCIENCE ENGINEERING IN CIVIL ENGINEERING

Ainembabazi, Bridget Barnes, Joshua Daniel Dlalo, Sanginkosi Sangy Dondo, Mufaro Ephraim (with honours) Leonard, Faatimah (with honours) Linda, Lulama Nokwazi Mack, Daryl Keenan Makole, Karabo Moleta Manthata, Paballo Katlego Edgar Mata, Camagu Matolengwe, Qama Mbatha, Thobekani Andile Mqadi, Thobekani Andile Mqadi, Thobani Ndlovu, Talia Popho Netshisaulu, Rotondwa Noqayi, Banele Wan'a Mutomb, Patrick Mulang Zondo, Khanyisile Mabontsi

### BACHELOR OF SCIENCE IN ENGINEERING IN ELECTRICAL ENGINEERING

Bushidi, Ramazani (with honours) Gara, Audrey Chiedza Maphumulo, Velani Mbuso Prince Mongwe, Mughondzo Bevan Phokoane, Lepadima Victor Ranakasi, Molefi Sithebe, Bongi Gift

### BACHELOR OF SCIENCE IN ENGINEERING IN MECHANICAL ENGINEERING

Bapela, Sello July Blackbeard, Aviwe Modumo, Tshepiso Letlhogonolo Moloisane, Gift Gaseitsiwe Munyai, Murendeni Nkosi, S'thembiso Knowledge Notununu, Sinalo Phaila, Sello Cyprianus Thakhisi, Nthabiseng Bridget

### BACHELOR OF SCIENCE IN ENGINEERING IN MECHATRONICS

Ally, Mogamat Nur Berry, Liam Cauldwell, Brynn Robert Couperthwaite, Kerry-Ann Ebrahim, Azhar Hall, Dougen Jake Hawthorn, Jessica Jane Jacobs, Mansur Kenene, Songezo Khama, Relebohile Maswanganye, Xiluva Palesa Mopeli, Moka Motaung, Tefo Advent Ngqwemla, Sizamkele Gift Shuro, Tatenda Taonanyasha

### BACHELOR OF SCIENCE IN GEOMATICS

Mahlo, Thato Makwarela, Ntsumi Samuel, Christin Chelsea Sara

### BACHELOR OF SCIENCE IN CONSTRUCTION STUDIES

Boosey, Michael Thomas Hungwe, Tanyaradzwa Thelma Phaswana, Elelwani Mathilda Wong, Jun-Kay Herman

### BACHELOR OF SCIENCE IN PROPERTY STUDIES

Bernitz, Marc Harrison, Maxine Penelope Malapermal, Kirana Mankayi, Sive Siyanda Pratt, Angus Clive

## 2. FACULTY OF SCIENCE

### Dean: Professor M Ramutsindela

The symbol † indicates that the qualification is awarded posthumously

Doctor of Philosophy Abotsi, Regina Esinam Thesis Title: *The effect of longterm azithromycin treatment on the respiratory microbiota of HIV-infected children with chronic lung disease* 

Regina Abotsi completed her BPharm(Hons) and MPharm qualifications at Kwame Nkrumah University of Science and Tehcnology and the University of Kwazulu-Natal respectively. Before starting her PhD at UCT in 2019, she worked as a pharmacist and Assistant Lecturer of Pharmaceutical Microbiology at the University of Health and Allied Sciences, Ghana. Regina Abotsi's thesis uses next-generation sequencing technology and bacterial culture to examine the respiratory bacterial determinants of HIV-associated chronic lung disease (HCLD) in a clinical trial involving children in Zimbabwe and Malawi. She further studied the effect of long-term treatment with an antibiotic called azithromycin on these respiratory determinants. HCLD is a novel chronic lung disease reported in three out of ten HIV-infected children in sub-Saharan Africa. Her work showed that children with HCLD are more likely to carry bacteria that cause respiratory infections than children without this condition. Importantly, longterm azithromycin treatment reduced the prevalence of these bacteria but increased antibiotic resistance that persisted six months after treatment cessation. Her findings suggest that although azithromycin may be beneficial in HCLD, the risk of antibiotic resistance must be considered. Her findings will guide clinicians in riskbenefit assessment of antibiotic treatment plans and provide insights into developing other therapies for HCLD.

Supervisor: Dr F Dube (Molecular and Cell Biology) Co-supervisor: Professor M Nicol (School of Biomedical Sciences, University of Western Australia)

Adekola, Oluwadunsin Emmanuel Thesis Title: *Moult as a dynamic link in the annual cycle of birds: insights from seabirds and a long-distance migratory raptor* 

Oluwadunsin Adekola holds BTech and MTech degrees in Wildlife Management from the Federal University of Technology, Akure (FUTA), Nigeria, and an MSc in Conservation Biology from University of Jos, Nigeria. Before coming to UCT in 2018 for his PhD studies, he worked as a research assistant at FUTA.

Oluwadunsin Adekola's thesis explores how large birds balance moult with other aspects of their annual cycles. He analyses large moult data sets to answer questions relating to timing, duration, intensity, symmetry and sequence of moult in seabirds and a longdistance raptor. Specifically, he assesses how long-winged birds manage to replace their large number of secondaries, including strategies to limit the impact of intensive secondary moult in terms of loss of wing area in long-winged birds. He also tests whether nestlings compromise flight feather quality in a long-distance migratory raptor. Birds with better body condition tend to have longer and heavier feathers. Several lines of evidence indicate that moult may be used as an index of condition and ultimately as an indicator of fitness.

Supervisor: Professor PG Ryan (FitzPatrick Institute of African Ornithology)

Anyango, Jecton Tocho Thesis Title: *An investigation of a game generator tool to teach recursion* 

lecton Tocho Anyango holds а BEd degree with a specialisation in Mathematics from Kenyatta University and a master's degree in Information Systems from the University of Nairobi, both in Kenya. He joined the Department of Computer Science in 2018 for his PhD studies. He is working as a Computer Science lecturer in Kenva. thesis Jecton Anyango's focuses on making Computer Science teachers effective at teaching introductory programming, in line with current debates in education that underscore the importance of the teacher in teaching and learning. He notes that game-based learning has been proven to be effective, but teachers do not possess the skills and resources to create suitable serious games. He starts by conducting user requirement studies, whose findings inform the design of a prototype game generator tool. He then evaluates the effectiveness of the prototype toolkit with higher education teachers from Kenva, South Africa and other parts of the world. In addition, he evaluates the educational potential of the generated games. He finds that game generators could be useful and effective tools for supporting teachers with little or no game programming skills to easily create customisable educational games. In addition, he finds that students consider the generated games to have educational potential.

Supervisor: Professor H Suleman (Computer Science)

### Becker, Carina Helene Thesis Title: *Using ecological concepts to restore the drylands of Namaqualand, South Africa*

Carina Becker completed her National Diploma at the Namibia University of Science and Technology, followed by MSc and BTech qualifications in nature conservation at Nelson Mandela Metropolitan University. She began fulltime study towards her PhDat UCT in 2013. Carina Becker's thesis investigates the ecological functioning of patch dynamics in two vegetation types in Namaqualand, namely Succulent Karoo and Renosterveld. Through vegetation surveys, soil sampling and seed bank analyses of fallow fields ranging in age since abandonment, the impact of cultivation and the rate of recovery of natural vegetation was assessed. After 70 years little recovery of the vegetation was evident. She explored the theory that pioneer shrubs can be used to recreate the vegetation patch structure of natural environments to improve restoration success. She conducted a three year, seed-based, in-field experiment by applying treatments that mimicked aspects of a patch to determine what conditions are beneficial to a variety of growth forms. Her results contribute to the emerging field of restoration ecology. They highlight that different growth forms have different requirements and demonstrate that active restoration is required through seedling and shelter provision.

Supervisor: Professor M T Hoffman (Biological Sciences) Co-supervisor: Dr P J Carrick (Nurture Restore Innovate)

### Buyse, Mélie Linda Rose Thesis Title: *Beak and feather disease virus vaccines and challenge material produced in plants and cell culture*

Mélie Buyse holds BSc and MSc degrees in Veterinary Medicine from Ghent University in Belgium. After working as a veterinarian for four years, she joined the Biopharming Research Unit at UCT in 2015 to pursue a PhD in Molecular and Cell Biology.

Mélie Buyse's thesis focuses on Psittacine Beak and Feather Disease (PBFD) caused by the beak and feather disease virus (BFDV), which causes a lethal and debilitating disease in psittacine birds globally. Her thesis focused on optimisation of expression of plant-based vaccine candidates to be used in a proof-of-concept animal study, and the production of infectious challenge material in plant- and avian cell culture against BFDV. She successfully produced BFDV virus like particles (VLPs) in N. benthamiana plants which were able to elicit an immune response in quails. The lack of challenge material available for testing BFDV vaccines was addressed through exploring a synthetic dsDNA clone by expressing it in both N. benthamiana and a quail (QM7) avian cell line. Electron microscopy shows that both plant- and QM7 produced products appear to assemble into putative virions resembling native BFDV virions. Her results show great promise for the development of a viable BFDV challenge model in plants and cell culture.

Supervisor: Associate Professor II Hitzeroth (Molecular and Cell Biology) Co-supervisors: Dr A Van Zyl (Molecular and Cell Biology) and Professor EP Rybicki (Molecular and Cell Biology)

Clark, Allan Ernest Thesis Title: *Fast and efficient approaches to large-scale occupancy models* 

Allan Clark completed his BBusSc in Quantitative Management in 2001, and MSc in Mathematical Statistics in 2004, both at UCT. He began fulltime study towards his PhD in 2014.

Allan Clark's thesis develops new algorithms for fitting occupancy models. Occupancy models are used in ecology to describe where organisms occur and where they do not occur, while accounting for the fact that organisms can go undetected during surveys. Occupancy models are increasingly used to analyse large data sets that cover large spatial scales and many species simultaneously. Such large data sets pose a number of challenges, especially when the models are fitted within a Bayesian framework. In his thesis, Allan Clark solves many of these problems by developing new algorithms for socalled single-season occupancy models, occupancy models that account for spatial correlations, and occupancy models that describe biological communities with multiple species. He tested the models on data from the Southern African Bird Atlas Project and a data set of mammals collected using camera traps. He developed a package for the open-source program R to fit the models.

Supervisor: Associate Professor R Altwegg (Statistical Sciences)

### De Vos, Marc

Thesis Title: Modelling waves and near-shore circulation around the Cape Peninsula: towards enhanced predictions for South African coastal activities

Marc de Vos completed his BSc, BSc(Hons) and MSc qualifications at UCT. He began part-time study towards his PhD in 2018, whilst a researcher at the South African Weather Service Marine Unit Marc de Vos's thesis addresses gaps in the marine environmental information space. These were identified during his work at the intersection of operations, academia and industry, via frequent engagement with role players at different stages of this information chain. These ranged from geophysical researchers to operational producers, as well as end users, such as mariners and search and rescue operators. Analysis begins with hazard modelling to investigate the risks posed by marine weather and surface ocean dynamics to different users, in different places around the South African coastline. The capability to simulate these coastal dynamics and associated hazards around the Cape Peninsula is then developed through hydrodynamic modelling. The ability to support coastal ocean applications is thereby enhanced. Finally, the hydrodynamic model is used to further our physical understanding of a geophysical feature identified in Table Bay, which has potential implications for search and rescue, maritime safety and coastal ecology.

# Supervisor: A/Professor M Vichi (Oceanography)

*Co-supervisor:* Dr. C Rautenbach (Oceanography, National Institute of Water and Atmospheric Research)

### Dusoye, Avishek

Thesis Title: A disformally coupled quintessence mimicking the ACDM background

Avishek Dusoye obtained his BSc(Hons) in Physics with Computing at University of Mauritius and his master's in Astronomy at UCT. Avishek Dusoye's thesis addresses two main issues of the standard Concordance cosmological model of Universe. Firstly, it cannot untangle the unknown nature of the cosmological constant in the Einstein Field Equations, which is responsible for the accelerated cosmological expansion. Secondly, it cannot explain the Hubble tension, which occurs because the constraints upon galactic clustering by Planck Satellite for an early universe deviate from what the Dark Energy Survey Telescope measures for the present universe. This thesis uses a scalar field, namely the quintessence to substitute the cosmological constant and considers a new cosmological model, which mimics the expansion history of the Concordance model. In this paradigm, certain theoretical scenarios which causes the observed accelerated

cosmological expansion were found. The formation of cosmological structures at large scale for this new model was compared with Redshift Space Distortion data. The Hubble tension between the early and late universe appears to be relaxed by the studied model.

Supervisor: Professor P Dunsby (Mathematics and Applied Mathematics) Co-supervisors: Dr Á de la Cruz-Dombriz (Mathematics and Applied Mathematics); Professor N Nunes (University of Lisbon)

### Hall, Candice

Thesis Title: An assessment of four decades of wave power variability - a critical requirement for coastal resilience.

Candice Hall completed her MSc in Physical Oceanography at UCT 2008. full-time in and began study towards her PhD in 2018. Candice Hall's thesis assesses wave power trends that are crucial for coastal management and resilience, as increases in wave power introduce significant risks of flooding and shoreline erosion. To do this, Candice Hall evaluated four decades of wave power at 29 moored buoy sites with associated model estimates across four ocean regions. Her work provides the first conclusive study to show spatially and temporally comparative observational and model wave power trends, and provides new information on the accuracy of model wave estimates. To achieve these results, Candice Hall developed the first published methodology that successfully minimizes data discontinuities detected within wave power parameters, and produced a public database of best available, self-describing historical observations. Ultimately Candice Hall's results validate the need for accurate and consistent observational data as they are essential for credible estimations of local wave climate studies - a vital requirement for all coastal risk management considerations.

# *Supervisor:* Professor I Ansorge (Oceanography)

*Co-supervisors:* Dr RE Jensen (U.S. Army Corps of Engineers) and Dr DW Wang (US Naval Research Laboratory)

### Hanief, Nasheeta Thesis Title: *Single Electron Transport in Semiconductor Nanostructures*

Nasheeta Hanief obtained her BSc in Molecular and Cell Biology and subsequent BSc(Hons) and MSc in Materials Engineering all at UCT, before moving to the Department of Physics to carry out her PhD. Nasheeta Hanief's thesis focused on the fabrication of nanosized finger-finger and finger-split gate quantum electron pump (OEP) devices using Electron Beam Lithography with subsequent testing at ultra-low temperatures in a cryogen-free dilution refrigeration unit. Single electrons were manipulated at high accuracy towards realising a new electrical current standard. The QEPs were studied at various temperatures from 40 mK - 9 K and at low magnetic fields from 1 T to -1 T. Changes in the QEP maps due to these effects were shown to affect the accuracy and the robustness of the quantum electron pumps. A model was developed linking the temperature dependence of pumping with quantum back-tunnelling leading to the unwanted loss in pump current. The effect of low magnetic field on pumps operating in the short pumping regime and long pumping regime were investigated with clear differences in the affect the field has on accuracy in both regimes.

Supervisor: A/Professor MD Blumenthal (Physics)

Hatamkhani, Narges Thesis Title: Deep NIR imaging of galaxy clusters in the Vela Supercluster

Narges Hatamkhani completed a BSc in Solid Physics at the Damghan University (2005), followed by a Master of Science from Alzahra University (2010), both in Iran. At the end of 2016 she joined UCT to follow her dream in pursuing a PhD in observational extragalactic astronomy.

Narges Hatamkhani's thesis focuses on a deep near-infrared imaging survey of galaxy clusters situated in a supercluster in the Vela constellation. This overdensity had not been identified because of dust obscuration by the Milky Way. Using the InfraRed Survey Facility of the 1.4m telescope in Sutherland she obtained deep, spatially resolved images over a large area of the clusters. The data reduction resulted in a photometric catalogue of the 1715 identified galaxies. Determining their cluster membership using the Red Sequence method, she then performed an in-depth analysis of the clusters themselves, their richness as implied from iso-density contours, radial density profiles and their K-band luminosity functions. She found the clusters to be more massive than expected, which is indicative of the richness of the supercluster. It is therefore likely to have a non-negligible effect on the cosmic flow field of our surroundings, despite is large distance of ~850 million lightyears.

Supervisor: Professor R Kraan-Korteweg (Astronomy) Co-supervisor: A/Professor S Blyth (Astronomy)

Head, Howard Vincent Thesis Title: *The Karoo sand sea in changing climates: Early Jurassic interdune lakes and erg dynamics in southern Africa* 

After completing his BSc(Hons) degree in Geology at UCT in 2013, Howard Head worked in the mineral industry for five years where he developed an interest in aeolian sedimentation. He returned to UCT in 2018 to begin his PhD study on an iconic Karoo rock unit in southern Africa.

Head's Howard thesis investigates the sedimentary geology in one of the largest desert systems in Earth's history. Sedimentation in this ancient sand sea occurred in wind-blown dunes, major dust storms, temporary streams, ponds and lakes that sustained a thriving ecosystem. In addition, by utilising U-Pb radioisotopic age dating of detrital zircons, a broad time frame for this ancient desert system was established together with the duration of its large-scale climatic events. The palaeo-climatic trends in these desert rocks are similar to those documented from other parts of supercontinent Pangaea, and thus this study improves our view of global climate changes in the late Early Jurassic.

Supervisor: A/Professor EM Bordy (Geological Sciences)

Kamunya, Stephanie Gathoni Thesis Title: *Design of selective Plasmodium falciparum kinase inhibitors using computer-aided drug discovery* 

Stephanie Kamunya completed a BSc in Chemistry and Mathematics at the University of Nairobi, Kenya in 2017. She joined the Department of Chemistry at UCT as a PhD candidate in 2019. Stephanie Kamunya's thesis reports on the repurposing of an anticancer drug to an antimalarial due to its ability to inhibit the human malaria parasite Plasmodium falciparum kinase enzymes. Using the three-dimensional structure of the target kinases and computer-aided drug discovery methods, several analogues hypothesized to have enzyme inhibitory activity were designed. In order to experimentally validate the hypothesis, a limited set of these compounds were chemically synthesized and tested against the targets and for in vitro activity against the parasite. They were also screened against human kinases to establish selectivity. The findings, together with chemoinformatic strategies, were then used to screen an existing chemical library to identify new inhibitors. Additionally, these strategies were used to virtually screen a collection of molecules with known biological activity, leading to the identification of novel inhibitor chemotypes. These findings can be used to inform the design of selective Plasmodium kinase inhibitors.

### Supervisor: Professor K Chibale (Chemistry) Co-supervisor: Dr L Arendse (Institute

of Infectious Diseases and Molecular Medicine)

### Kotze, Christen Robynne Thesis Title: *Lion population status and ecology in a seasonally-flooded wetland, the Okavango Delta*

Christen Robynne Kotze completed her BSc and BSc(Hons) degrees at the University of Pretoria, and her MSc at the University of the Witwatersrand, before beginning her PhD at UCT in 2019. Christen Robynne Kotze's thesis reports on how spatial and temporal variation in flood conditions in the Okavango Delta influence lion numbers and ecology. She found that lion density and movement was closely linked to indices of habitat quality, rather than prey availability. She also found that lion density was lowest close to human settlements, and that human settlements along the edge of the Okavango limit dispersal to neighbouring populations and increase the risks of genetic isolation. During phases of high floods, lions must adapt to fragmentation of core habitat by increasing home range size, exposing them to threats on the Delta's edge. By contrast, low water conditions promote connectivity and access to core habitat, but reduce the carrying capacity of the region to prey species. These results are contextualised with existing and emerging anthropogenic threats, including expanding human and domestic animal populations, bushmeat harvesting, climate change and water abstraction.

Supervisor: Professor J O'Riain (Biological Sciences) Co-supervisor: Professor A Loveridge (Zoology, University of Oxford)

Maharaj, Iyra Esmen Maeve Thesis Title: *The palaeobiology of the late Permian dicynodont Endothiodon (Therapsida, Anomodontia)* 

Iyra Maharaj holds a BSc in Microbiology and Genetics, and a BSc(Hons) in Genetics from the University of KwaZulu-Natal. She joined the Department of Biological Sciences at UCT in 2016 to pursue a MSc degree, and thereafter registered for her PhD.

Iyra Maharaj's thesis focuses on unravelling the biology of *Endothiodon*, a mammal-like reptile that lived about 257 million years ago. By analysing the anatomy of the *Endothiodon* skulls recovered from east Africa, South Africa, and India, she resolved a longstanding taxonomy issue, by determining precisely which species within the genus are valid. Through an assessment of dental microstructure, she showed that the teeth in the multiple-rowed lower jaws were replaced faster than the single-rowed teeth of the upper jaws, which most likely aided this specialised herbivore to feed. In addition, using a well-preserved skeleton of *Endothiodon*, she was able to digitally reconstruct the animal's posture, which she determined held its hindlimbs more upright than its forelimbs. Overall, Iyra Maharaj's thesis has substantially advanced our understanding of the biology of this enigmatic extinct herbivorous reptile from the Karoo Basin of South Africa.

### Supervisor: Professor A Chinsamy-Turan (Biological Sciences) Co-supervisor: Professor R Smith (Evolutionary Studies Institute, University of the Witwatersrand and Karoo Palaeontology, Iziko South African Museum)

### Mahlaza, Zola

Thesis Title: Foundations for reusable and maintainable surface realisers for isiXhosa and isiZulu

Zola Mahlaza completed his BSc, BSc (Hons) and MSc in Computer Science at UCT. Before pursuing postgraduate studies, he briefly worked as a Software Engineer in Cape Town. He is now employed as a lecturer at the University of Pretoria.

Zola Mahlaza's thesis focuses on creating algorithmic and model-based foundations to support the generation of text in isiZulu and isiXhosa. His work contributes to the body of work on creating computational resources for these languages, with an emphasis on obtaining easy-to-maintain and reusable solutions. He developes an architecture, an ontology, an algorithm, and gathered empirical evidence for easy-to-maintain and reusable techniques for generating texts from data or logical theories. He has shown that the created proof-of-concept tools support the generation of correct isiXhosa weather forecasts and correct isiZulu questions to be used to validate logical theories. The work is significant because organisations such as the South African Weather Service can use such tools to generate weather reports using computer programs instead of manually writing them every time.

*Supervisor:* A/Professor CM Keet (Computer Science)

Maoyi, Molulaqhooa Linda Thesis Title: Simulating the characteristics and influences of the Botswana High over Southern Africa using the Model for Prediction Across Scales (MPAS)

Molulaqhooa Linda Maoyi completed his BSc, BSc (Hons) and MSc degrees at UCT and began fulltime study towards his PhD in 2016. Molulaqhooa Linda Maoyi's thesis investigated the characteristics of the Botswana High and its influences on Southern African drought modes and the influence of the El Niño Southern Oscillation (ENSO) on the high using a variable-resolution Global Climate Model called Model Prediction Across Scales (MPAS). To simulate the characteristics of the Botswana High and its influence on drought modes, the MPAS model was applied to simulate the global climate at 240 km guasi-uniform resolution for the study period 1980-2010. To investigate the response of the Botswana High to ENSO, two MPAS model experiments were carried out. The first model experiment used observed sea surface temperatures (SSTs) everywhere during the study period, while the second experiment used observed SSTs everywhere except over the Pacific Ocean, where monthly climatological SSTs were imposed. The results show that the MPAS model replicates all essential features in the climatology of climate variables over Southern Africa, including spatio-temporal variation of the Botswana High. It is suggested that MPAS can be applied for seasonal forecasting and as a drought early warning system over Southern Africa, especially for predicting the influence of the Botswana High variability on the annual variation of summer rainfall.

*Supervisor:* A/Professor BJ Abiodun (Environmental and Geographical Science) Mburu, Christine Wanjiru Thesis Title: *Preemie Care: a codesigned digital tool to improve communication between health personnel and parents of preterm infants* 

Wanjiru Mburu holds BSc and MSC degrees from Moi University, Kenya and UCT, respectively. She enrolled for her PhD studies in the Department of Computer Science in 2017. Prior to this, she worked as a project manager in a digital health industry in Kenya.

Wanjiru Mburu's thesis focuses on revealing the design mechanisms for a digital health intervention meant to bridge communication gaps among Neonatal Intensive Care Unit (NICU) stakeholders. She employed co-design methods to engage NICU stakeholders in a 32 months design process of a possible NICU communication intervention. Together with NICU stakeholders, she co-designed an education resource tool that disseminated digital health videos in multiple languages. She deployed the system in the NICU for eight months, where she interacted with PMC users and monitored its usage logs to evaluate its efficacy. Findings revealed that access to health information empowered parents and their social networks to engage with their peers and NICU staff. However, bilingual parents prefer accessing health information in multiple languages to help them improve their medical vocabulary and understandability. Hence, this research provides the design mechanisms for a NICU intervention to bridge communication gaps between bilingual parents and NICU staff.

Supervisor: A/Professor M Densmore (Computer Science) Co-supervisor: Dr Y Joolay (Paediatrics and Child Health) Morake, Mokhitli Thesis Title: Elaboration 4'-Phosphopantetheine Adenylyltransferase (PPAT) inhibitors and benzoxaboroles as antimalarial agents

Mokhitli Morake completed his BSc and BScMed(Hons) qualifications at UCT and obtained his MSc in Pharmaceutical Chemistry at North-West University. He began his PhD at UCT in 2018. Mokhitli Morake's thesis designed, synthesized and evaluated the antiplasmodium activity of 4'-Phosphopantetheine bacterial Adenylyltransferase (PPAT) inhibitors and benzoxaboroles against the human malaria parasite Plasmodium falciparum (Pf) in vitro. The series of PPAT inhibitors exhibited weak antiplasmodium activity against both the drug-sensitive PfNF54 drug-resistant *PfK1* strains. and However, he found that the compounds target other pathways beyond PPAT inhibition, which suggests intricate and multitarget activity of the studied PPAT inhibitors in *Pf* as opposed to the effect in bacteria. From the benzoxaboroles series he identified active compounds which inhibited both *PfNF54* and *PfK1 in vitro*. He also found that this class exerts its antiplasmodium activity through novel mechanism of action, thus making this benzoxaboroles class a unique chemotype against Pf. These findings provide novel antimalarial chemical scaffolds that can be used for future development of novel antimalarial lead molecules in drug discovery programs.

*Supervisor:* Professor K Chibale (Chemistry)

*Co-supervisor:* Dr G Basarab (Drug Discovery and Development Centre, H3D)

### Naik, Myra

Thesis Title: Potential impacts of climate change and land-use change on hydrological droughts in the Western Cape (South Africa)

Myra Naik completed her BSc, BSc(Hons) and MSc degrees at UCT, and began full-time study towards her PhD in 2017.

Myra Naik's thesis examines the characteristics of meteorological and hydrological droughts over the Western Cape (South Africa) in present-day climate, projects the impacts of climate change on the characteristics of future droughts, and investigates the extent to which various land use/land cover scenarios may alter the impacts over regional river basins. Different types of datasets, including gridded and station observation datasets, regional climate model simulations, and hydrological simulations, were analysed for the study. The results project a warmer and drier future climate over the region, show that the future climatological and hydrological droughts may be more severe and more frequent, and indicate that the impacts of land use/land cover scenarios on the projections are relatively small. As such, the thesis suggests that land use/land cover changes may not be an efficient strategy for mitigating climate change impacts on hydrological droughts over the region. The findings give valuable insight into the characteristics of Western Cape droughts and provide a useful guide on the effectiveness of using land cover to mitigate the severity of hydrological droughts over river basins in the region.

Supervisor: A/Professor BJ Abiodun (Environmental and Geographical Science)

Ribeiro, Vera Thesis Title: *Quirimbas: A society reconfigured by nature* 

Vera Ribeiro holds BScHons (Geography) and MSc (Environment) qualifications from the University of Pretoria and University of Melbourne, respectively. She began her PhD studies in 2015. Vera Ribeiro's thesis uses two interrelated theories of the social construction of nature and nature assemblage to challenge binary approaches to nature conservation that not only separate 'nature' and 'culture' but that also shape socio-ecological relations. Her thesis draws on the case of the Quirimbas National Park in Mozambique to demonstrate the ways in which the establishment of the national park disrupted the livelihoods of local people and the organizational structure of society. It traces such disruption to the imposition of imaginations of nature and dominant conservation narratives on African landscapes. The thesis highlights the categorization of local people in relation to conservation projects in colonial and post-independence Mozambique, and the ways in which livelihood strategies are systematically criminalized. It centres the struggles of local people in conservation enterprises in Africa and elsewhere in the Global South, while also challenging dominant ideas of nature.

Supervisor: Professor M Ramutsindela (Environmental and Geographical Science)

Rodseth, Edmund Schram Thesis Title: *The genetics of plumage polymorphism in the black sparrowhawk* 

Edmund Rodseth holds a BSc in Ecology and Evolution and a BSc(Hons) in Molecular and Cell Biology, both from UCT. He was awarded a Harry Crossley Foundation Research Fellowship and NRF DAAD scholarship to undertake his PhD studies.

Edmund Rodseth's thesis investigates the molecular basis of melanin-based plumage polymorphism in the black sparrowhawk (Accipiter melanoleucus), a widespread sub-Saharan raptor that occurs in two colour morphs - light and dark. He demonstrates that plumage colouration in adult birds is due to differences in the eumelanin content of breast feathers and that this correlates tightly with expression levels of the gene encoding agouti signalling protein, an antagonist of the melanocortin 1 receptor that plays a key role in melanogenesis. He goes on to demonstrate that the highly variable rufous coloured plumage of juvenile birds results from continuous variation in tightly coupled eumelanin and pheomelanin levels, which also correlates with expression of agouti signalling protein. Finally, he shows that the increased parasite load associated with light morph birds in the Cape Peninsula is not associated with telomere shortening.

Supervisor: A/Professor R Ingle (Molecular and Cell Biology) Co-supervisor: A/Professor A Amar (Biological Sciences)

Vicatos, Alexios Ivan Thesis Title: *The supramolecular derivatisation of pharmaceutically relevant compounds via cocrystallization and cyclodextrin inclusion complexation* 

Alexios Vicatos joined the Centre for Supramolecular Chemistry Research at UCT in 2016 where he registered for the MSc degree in Chemistry, specialising in the area of crystal engineering of pharmaceutically relevant compounds, including the antiepileptic drug valproic acid. He subsequently registered for PhD studies in the Centre in 2018.

Alexios Vicatos' thesis focuses on improving the aqueous solubility of several poorly bioavailable candidates, namely new drug leads designed for the treatment of bilharzia, the antioxidant pterostilbene and the steroid hormones beta-estradiol and progesterone. Alexios Vicatos commences his investigation by using current predictive computational methods to establish the potential for modifying the solid-state properties of the bioactive candidates. For the drug leads, predicted approaches are found to be limited and he duly devises a different experimental strategy for preparing derivatised solid forms. He demonstrates that the remaining bioactive compounds are instead amenable to complexation with cyclodextrin carrier molecules and succeeds in isolating the target complexes. These new products are comprehensively characterised by physicochemical techniques including solubility measurement, the latter revealing that the solubilities of the bioactive compounds in the form of these supramolecular systems significantly

exceed those displayed by the untreated compounds and hence have considerable potential for pharmaceutical application.

*Supervisor:* Emeritus Professor MR Caira (Chemistry)

### Wambua, Lynn Mutio

Thesis Title: Investigating the structurefunction relationships of Plasmodium Haem Detoxification Protein and Phosphatidylinositol 4-kinase

Lynn Wambua completed her BSc, BSc(Hons) and MSc qualifications at Rhodes University before beginning fulltimestudy towards her PhDin2018atUCT.

Lynn Wambua's thesis reports studies on two human malaria parasite Plasmodium proteins essential for parasite survival: Haem Detoxification Protein (HDP) and the clinically validated Phosphatidylinositol drug target 4-kinase (PI4K). Her work focused on optimising the recombinant expression and purification of HDP for functional studies using the  $\beta$ -hematin formation assay. Homology modelling was used to predict the structure of HDP, providing further insights into protein structure-function relationships. Using site-directed mutagenesis, biochemical assays and mass spectrometry, she has established a set of assays to characterise reversible and irreversible inhibitors of Plasmodium PI4K. These assays provide insight into key interactions responsible for inhibitor potency and selectivity and were used to assess a novel class of PI4K covalent inhibitors designed to target a cysteine residue unique to Plasmodium PI4K. These findings will provide valuable insights into the design of future antimalarial inhibitors of Plasmodium PI4K

Supervisors: Professor TJ Egan (Chemistry; deceased) and Professor K Chibale (Chemistry) Co-supervisor: Dr LB Arendse (H3D)

### Woodgate, Zoë Anne Thesis Title: *Multiscale patterns of mammal diversity and occurrence in the Karoo*

Zoë Woodgate completed her BSc and BSc(Hons) qualifications at UCT. Zoë Woodgate's thesis focuses on understanding how biophysical drivers and intraguild interactions have shaped the distribution of mammals at different spatial scales throughout South Africa's Karoo. She investigates how different land-uses have impacted mammal communities, paying particular attention to the role of private protected areas in promoting biodiversity in drylands. Using camera trap surveys conducted at different geographic extents, she reveals how the Karoo's farmlands, despite centuries of use for small livestock grazing, supported a diverse community of mostly medium-sized generalist species. Larger and specialist species were typically restricted to protected areas. She goes on to develop a reliable method to detect the critically endangered riverine rabbit (Bunolagus monticularis) and showes that their occurrence is conditional on the absence of closely related competitors. These findings provide an important baseline of the extant mammal communities across the Karoo.

Supervisor: Professor MJ O'Riain (Biological Sciences) Co-supervisor: Dr G Distiller (Statistics)

### MASTER OF PHILOSOPHY

Campbell, Andrea (with distinction in the coursework component) Dipura, Romeo Simbarashe (with distinction) Du Toit, Christo (with distinction) Galant, Rushin Ryan Jackson, Jinty Anne (with distinction in the coursework component) Mugabe, Bedone (with distinction) Nakkungu, Mildred (with distinction in the coursework component) Nyambiya, Humphrey Oosthuizen, Dominique (with distinction in the coursework component) Quarcoo, Joseph Dennis Nii Noi (with distinction in the coursework component) Taylor, Salwah Vicedom, Stefan Klaus (with distinction in the coursework component) Wise, Carly Elana

### MASTER OF SCIENCE

Abramowitz, Sasha Luca Adetitun, Busuyi Christian Allie, Mogammad Ighsaan (with distinction in the dissertation) Andra, Kayla Ann (with distinction in the coursework component) Antonopoulos, Helen Grace Armitage, Michael Philip Anthony (with distinction) Asumadagwine, Godwin Auditore, Lisa-Marie (with distinction) Azevedo, Alexandra Babasanmi, Opeoluwa Victor (with distinction in the coursework component) Baderoon, Muneeb Baiju, Vedanth Baker, Clayton Kevin (with distinction) Bangiso, Aphiwe Barreiros, Andre Sanches Beetar, Cameron Matthew Maytham (with distinction) Bennett, Michael Andrew Bichanga, Brian Ongeri Momanyi Brandt, Silke Freia (with distinction) Brey, Khadija (with distinction) Brokensha, Rouane Mai (with distinction) Bruce-Chwatt, Tomas Antyony Wedege (with distinction) Buchanan, Erin Chikomba, Farai (with distinction) Chimukuche, Nyaradzai Mitchell Dakwa, Farisayi Daniel, Michael Talbot (with distinction) Danisa, Siphelele Daws, Warrick De Beer, James Charles Denner, Candice (with distinction) Disraeli, Chiara (with distinction) Donkin, Paige Tayla (with distinction) Dreyer, Ashleigh Dubazana, Yakhuluntu Dunn, Jarryd William Dowie (with distinction) Du Plessis, Nicola Sarah (with distinction in the coursework component)

Dyers, Grant Kevern Edwards, Gareth Reeve Erasmus, Sané (with distinction) Evert, Francois (with distinction in the coursework component) Finlayson, Clare Rose Fouad, Aya (with distinction) Gant, Michael John (with distinction) Gardner, Kathryn Lynda Debra (with distinction) Geffen, Hayli Natanya (with distinction) † Guta, Ricardo José Hargey, Ayesha Siddeeqa Harnaker, Zahraa (with distinction) Harris, Eesaa Henry, Magdalena June Ramilo (with distinction in the coursework component) Hodson, Rowan Dean (with distinction) Houliston, Rebecca Amy Houston, Charles Robert (with distinction) Ingreso, Maria Kristina Jericevich, Ivan Nicholas (with distinction) Jones, David Griffin (with distinction) Junglee, Yovna Lakshmee (with distinction) Kaplan, Anna Leah Karamanof, Leonidas Marthinus (with distinction) Keresztesi, Maximillian Ludwig (with distinction) Khumalo, Wendy Hlengiwe Lazar, Ryan Dean (with distinction) Lees, Robert Cameron (with distinction) Lennox, Emma Katharine Maccallum, Robert Peter (with distinction) Madzingira, Tinotenda (with distinction) Maguim Silatsa, Carine Makinde, Akintunde Israel (with distinction) Mansoor, Rukaya Ebrahim (with distinction) Marsh, Peter Anthony Martinez Rodriguez, Irvin Fabian (with distinction) Maré, Charné (with distinction) Mashanda, Nyasha Ernest (with distinction in the dissertation) Matowe, Chiratidzo Mayembe, Rose Mbewu, Thomas David (with distinction) Mkhize, Sinethemba (with distinction) Moodley, Nicole

Mountford, Timothy Frederick Tyrer (with distinction in the coursework component) Moya, Mandisi Donald Mpungose, Nomvula Bongekile Munamati, Kakale Ndaba, Abusisiwe Ndimande, Njabulo Sipho Nefdt, Leila Netshivhambe, Nomonde New, Thomas Christopher (with distinction) Nicklin, Emily Catherine (with distinction) Niit, Lizelle Nkata, Zimkita Zenande Nkoma, Tsungai Nurmahomed, Yassin Gonçalves Ochs, Tobias Omar, Shabbeer (with distinction in the coursework component) Oyatoye, Abioye Elijah Paterson-Jones, Guy Edward (with distinction) Pitcher, Courtney Richard Plaistowe, Jonathan Christopher Michael (with distinction) Rakgoale, Amos Ramalatswa, Katlego Jafta (with distinction) Ramsarup, Neha (with distinction) Rance. Dean (with distinction) Redelinghuys, Joshua Peter (with distinction) Roelf, Timothy Brian Ross, Melinda Crystal (with distinction) Ross, Michael Duncan Saben, Vaughn (with distinction) Schönfeldt, Abram (with distinction) Sekyi, Emmanuel Kwame Sewpersad, Tashiv (with distinction) Shingange, Fortunate Malwase (with distinction in the coursework component) Sinclair, Neil Ian (with distinction) Singo, Unarine Smith, Shantelle (with distinction) Sole, Chloe Liesel (with distinction) Steenkamp, Ebrahim (with distinction in the coursework component) Swingler, James Stewart Taylor, Brenden (with distinction in the coursework component) Taylor, Daniel Petrus (with distinction) Tema, Seturumane Johannes Thwala, Setsabile Tladi, Mpho (with distinction) Viljoen, Anton

Walker, Gemma Chisomo (with distinction in the coursework component) Widegger, Abigail Sarah Ann Williams, Edwina Gillian Wolpe, Zach Colin (with distinction) Woodley, Tiffany Deanne (with distinction in the coursework component)

### BACHELOR OF SCIENCE HONOURS

Ahmed, Mahnoor Bukuru, Roger Kasa, Sisipho Lefisoana, Thabang Mfana, Siwaphiwe Mojalefa, Tshwarelo Medelace Motimele, Stefane Ramalala, Avhusaho Seloi, Neo Stuurman, Lazahn (in the first class)

### BACHELOR OF SCIENCE

Ahmed, Tauhir Christi Michael, Gabriel Connolly, Austin Bruce De Kock, John Christopher De Morny, Chelsee Jacquié Franke, Owen Christopher Gibbs, Calvin Luke Goolab, Alisha (and that the degree was awarded with distinction in Applied Statistics and the degree with distinction) Heldsinger, Shane Joshua Hendricks, Storm Marc Hood, Warren Kyle Kathrada, Aamira Mafunu, Linda Majola, Slindile Nothile Mamogwane, Mosebjadi Dihubane Anasticia Manciya, Xola Patric Matamela, Phindulo Millicent Mokotedi, Resegofetse Kutlwano Hope Mseleku, Lwandle Sifanele Muller, Marion Nassone, Benedito Vesta Chimutsanga Nkosi, Thabisile Prudence Oloo, Samoy Pottinger, Alexandra Allard Pryde, Zackary Ramohlokoane, Nthabiseng Sithole, Kenneth Mxolisi

Slamang, Amin Tsewu, Lunga Van Der Heyden, Kirsten Alexandria Van Jaarsveld, Jacq Weihe, Max Wustrow, Zoa Onke Amalia Yeung, Devon

# FACULTIES OF HEALTH SCIENCES AND LAW

# **ORDER OF PROCEEDINGS**

Welcome by the Master of Ceremonies.

The Presiding Officer will constitute and address the congregation.

The Master of Ceremonies will present the Fellowship Award to Professor A Figaji, Professor E Meintjes and Professor S Prince.

The Orator will present Professor L Rispel for the award of an honorary degree.

Praise Poetry.

The graduands and diplomats will be presented to the Presiding Officer by the Deans of the Faculties.

The Master of Ceremonies will make closing announcements.

The Presiding Officer will dissolve the congregation.

# 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%

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

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.

# **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.

# 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.

# **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
	P Meissner
2008:	HJ Zar
2010:	EV Lambert
	A-L Williamson
2011:	DJ Stein
2014:	ED Sturrock
	C Williamson
2015:	G Hussey
	N Levitt
2016:	K Dheda
	G Maartens
	B Mayosi
	V Mizrahi
	R Ramesar
2017:	N Mulder
2018:	K Barnes
	M Collins
	L Gilson
	M Lambert
	C Lund
	G Meintjes
2019:	T Douglas
2020:	P Zilla
2021:	L-G Bekker
	J Blackburn
	J Fagan
	L Myer
2022:	M Ntsekhe
	N Ntusi
	K Sliwa-Hahnle

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

# PROFESSOR ANTHONY FIGAJI DIVISION OF NEUROSURGERY

Anthony Figaji completed his MBChB at UCT in 1994, and after internship at Groote Schuur and a short period abroad, he was recruited by Professor Jonathan Peter to train in neurosurgery, obtaining the specialist qualification FCNeurosurg(SA) in 2003, together with the degree MMed(Neurosurgery) in 2005.

After a fellowship in paediatric neurosurgery, Professor Figaji was appointed as a consultant at Red Cross War Memorial Children's Hospital in 2004. In 2009 he became the fourth and now longest-serving head of the Pediatric Neurosurgery Unit. Tony rapidly showed his ability as a clinician scientist, promoted to Associate Professor (2009), Professor (2012) and then National Research Foundation (SARChI) Chair of Clinical Neurosciences (2015), the first and only surgeon to occupy such a chair in our country.

Professor Figaji leads a rapidly growing, diverse, translational, and multidisciplinary research team whose goal is to elucidate the mechanisms of acute brain injury in a range of conditions that cause disability and death in children, with a strong emphasis on the implications for clinical care and improved treatment paradigms. His work exemplifies this translational bench- tobedside approach to research, and has focused on two common and devastating conditions that affect children in South Africa, namely traumatic brain injury (TBI) and meningitis (in particular, tuberculous meningitis or TBM), both of which contribute significantly to the global burden of disease.

Professor Figaji's unit is at the forefront of advanced brain monitoring in children using a multimodal approach, measuring a wide range of physiological parameters in the injured brain. He has reported the world's largest experience with monitoring brain oxygenation and brain chemistry in children, the aim of which is to understand underlying brain mechanisms of disease, produce guidelines for clinical care, and ultimately develop new therapies for acute brain injury.

He pioneered multimodality monitoring for TBI in South Africa, leading to a PhD. The exceptional quality of his thesis was recognised with the Bronte Stewart Research Prize for the most meritorious PhD thesis in the Faculty of Health Sciences, as well as a University of Cape Town Fellows' Award in 2008 and the Raimondi Award of the International Society for Pediatric Neurosurgery in 2009. Most significant of all, the active approach to managing children with TBI that characterised this period saw a fall in mortality of severe TBI from over 50% to around 12%, truly an astonishing example of the beneficial impact of research on clinical care.

His subsequent work in pediatric traumatic brain injury (TBI) has built on this foundation in advancing our understanding of brain pathophysiology and the implications for clinical care, leading to the largest international experience with advanced methods such as brain oxygen monitoring and microdialysis in children, with more than 300 children having undergone advanced monitoring.

This brought Professor Figaji to the attention of the Tuberculous Meningitis International Research Consortium, a global consortium of researchers collaborating to address research priorities in TB meningitis. His group was able to show differences in brain-derived and blood-derived biomarkers in different compartments of the central nervous system with imaging studies disclosing possible reasons for these compartmental differences.

In summary, Professor Figaji has studied tuberculous meningitis as a clinical model of brain injury in meningitis and his group is exploring similarities with other forms of brain injury in children, including the development of secondary injury mechanisms such as brain inflammation and ischemia, the role of biomarkers of injury, and implications for management and long term outcome. This unit is now the leading center globally for studying this disease using advanced brain monitoring techniques and his current work extends to using site-of-disease specimens to perform proteomics, transcriptomics, and drug recovery using brain microdialysis.

It is important to note that Professor Figaji has developed his highly productive research programme while leading a nationally unique and clinically demanding service that requires 24 hour a day cover given the nature of neurosurgery. He also leads the paediatric brain tumour neurosurgical service and has introduced sophisticated intraoperative neurophysiological monitoring to enable safer, more aggressive surgery to be performed in South Africa. He is closely involved in registrar teaching and training, as well as research supervision with an astonishing 45 past or current postgraduate students ranging from honours to doctoral.

Professor Figaji's contributions to the field of neurotrauma have been recognized through election as president of the International Neurotrauma Society (2016-2018) and his appointment as Pediatric Lead for the US-based Brain Trauma Foundation (2020-present), the most influential neurotrauma organisation worldwide.

His scientific leadership has seen him elected as scientific chair for various organisations, including the International Society for Pediatric Neurosurgery (ISPN), the Society of Neurosurgeons of South Africa (SNSA), and Scientific Chair of the 18th World Congress World Federation of Neurosurgical Societies. Other leadership roles include serving on the Executive Board of the International Society for Intraoperative Neurophysiology (ISIN), secretary of the ISPN (current), and president-elect of SNSA (current).

Furthermore, Professor Figaji is the first (and so far only) surgeon to be inducted as a Member of the Academy of Sciences of South Africa and was recently awarded a B-1 rating by the NRF.

## PROFESSOR ERNESTA MEINTJES DEPARTMENT OF HUMAN BIOLOGY

Ernesta Meintjes is Professor of Biomedical Engineering in the Faculty of Health Sciences at the University of Cape Town, a position she has occupied since 2015. From 2007 to 2021, she held the prestigious South African Research Chair in Brain Imaging, and currently serves as director for magnetic resonance imaging (MRI) at the Cape Universities Body Imaging Centre (CUBIC) and head of the Division of Biomedical Engineering. Professor Meintjes earned BSc (Hons) and MSc degrees in physics from the University of KwaZulu-Natal, followed by MS and PhD degrees, also in physics, from Oregon State University (OSU) in the USA.

Since joining UCT as a postdoctoral fellow in 1998, Professor Meintjes has built on her PhD research on magnetic resonance at OSU to establish herself as South Africa's pre- eminent medical scientist working in the field of MRI as applied to cardiac and brain function. She was a co-founder of, and key contributor to the establishment of the MRC/UCT Medical Imaging Research Unit in 2000, and inaugural director of CUBIC, a joint research facility with Stellenbosch University. With her training in nuclear magnetic resonance and pulse sequence programming, Professor Meintjes performed the first functional MRI studies in South Africa.

Professor Meintjes has investigated the effects of early life insults – such as maternal drinking during pregnancy, and the human immunodeficiency virus (HIV) – on brain development. This has been with a view to improving management strategies and evaluating target interventions. Certain high-risk communities in South Africa are significantly impacted by conditions such as fetal alcohol syndrome, HIV, and drug abuse. Since the long-term implications of these on brain development are not well understood, her research uses non-invasive MRI to examine the effects of these insults – and treatments such as antiretrovirals – on brain structure and function. Most recently, Professor Meintjes and her colleagues have demonstrated improved postnatal growth and cognitive function in newborns prenatally exposed to alcohol when their mothers have been administered choline supplementation during pregnancy.

Professor Meintjes has trained a large cohort of MRI scientists, many of whom have taken up positions at prestigious universities and leading imaging companies around the world. She has supervised to completion 24 master's students, with another 3 in progress, 22 PhD candidates, with another 6 in progress, and served as mentor to 18 postdoctoral fellows. Her commitment to capacity building is further demonstrated in her efforts to improve MRI knowledge of clinicians. Under her leadership, CUBIC hosts hands-on basic MRI courses where radiographers, radiologists and cardiologists are given the opportunity to advance their understanding of the principles of MRI. Through her leadership, CUBIC supports more than 30 projects at any given time, involving collaborations with 80 institutions worldwide, and currently generates more than 60 original publications per annum in international journals.

In the past 25 years, Professor Meintjes and her colleagues have published 128 original articles in high impact journals such as *Magnetic Resonance in Medicine and IEEE Transactions on Biomedical Engineering*. To date, these papers have garnered 4,495 citations, while Professor Meintjes has an h-index = 39. She has been the principal investigator (PI) or local PI on 21 grants funded by the National Institutes of Health (NIH) in the United States, bringing in more than US\$7.5 million to UCT, thus making a substantial contribution to the training and support of many students and post-doctoral fellows. Professor Meintjes is the recipient of a Fulbright Research Fellowship and last year was awarded a B2 rating by the National Research Foundation.

## PROFESSOR SHARON PRINCE DEPARTMENT OF HUMAN BIOLOGY

Sharon Prince is a Professor in Cell Biology and Head of the Department of Human Biology at UCT. She obtained a BSc, a BSc(Hons) and a PhD in Cell Biology, all from UCT. Following her PhD, Sharon's research was initiated through a prestigious Wellcome Trust Postdoctoral fellowship, which enabled her to spend time at the Marie Curie Research Institute in the United Kingdom. On her return to SA, she established an independent research programme in cancer biology at UCT in 2002, was appointed as lecturer in 2005 and was promoted ad hominem to Senior Lecturer in 2008, Associate Professor in 2012 and full Professor in 2016.

Professor Prince is an internationally renowned researcher in the field of cancer biology, where she has made significant contributions to the understanding of the role and regulation of the developmentally crucial T-box transcription factors, TBX2 and TBX3, in cancer. Indeed, she is well recognised nationally and internationally as a leader in the field of T-box transcription factors and their role in cancer aetiology. Her international reputation rests on her pioneering work in identifying the potential of T-box factors as novel targets in the development of effective anticancer therapeutics in addition to the use of organometallic compounds as cancer drugs, and the repurposing of existing non-cancer drugs for cancer therapies. Much of her research has

focused on the homologous T-box transcription factors, TBX2 and TBX3, which are overexpressed in a range of cancers. She has published several seminal papers on their different but critical oncogenic roles and their contributions to key oncogenic signalling pathways in among other cancers breast cancer, melanoma, and a wide range of sarcoma subtypes. Her laboratory was one of the first to identify TBX2 as a powerful anti- senescence and pro-proliferative factor with a role in anticancer drug resistance and TBX3 as a key factor in tumour formation and invasion. Notably, her paper in one of the leading cancer journals *Cancer Research* was one of the first to describe a role for TBX2 in the cell cycle and to elucidate the mechanism by which it contributes to cancer progression. This paper has been cited over 120 times. Her work has been published in more than 75 high-impact international journals and has garnered over 4969 citations (Scopus). Moreover, she has co-authored two book chapters and has 1 patent.

Integral to Sharon's research is her highly effective training of postgraduate students and postdoctoral fellows from previously disadvantaged groups. Sharon is regularly invited to give public talks on cancer and actively contributes to advocacy and highlights the burden of cancer in our society. Her laboratory also regularly hosts learners from disadvantaged schools.

Sharon has received several awards and recognitions for her academic scholarship. She received the NRF Hamilton Naki award in 2021, was elected a member of The Academy of Science of South Africa (ASSAf) in 2017 and was recognised by UCT as one of its leading women innovators in 2018. In 2019, she was appointed a visiting Professor at the University of São Paulo, Brazil, and a visiting researcher at the University Côte d'Azur, Nice, France and was invited as a Visiting Fellow at the SRM University, Chennai, India. She received the Oppenheimer Memorial Trust Fellowship in 2019 and 2011, the Harry Crossley Senior Clinical Fellowship in 2010, was appointed the Director of a breast cancer consortium funded by the Department of Science and Technology and Cancer Research Initiative of SA and is an Associate Editor for Molecular and Cellular Oncology (specialty section of Frontiers in Oncology and Frontiers in Cell and Developmental Biology).

# **HONORARY DEGREE**

# PROFESSOR LAETITIA RISPEL DOCTOR OF SCIENCE IN MEDICINE (honoris causa)

Laetitia Rispel is a nurse by profession who is an accomplished academic and public health leader, both nationally and internationally. She is Professor of Public Health at the University of the Witwatersrand where she holds a SARChI Chair, entitled "Research on the Health Workforce for Equity and Quality." She has published extensively on different aspects of health policy and systems research, informing the re-structuring and transformation of the South African healthcare system. As stated by her Oxford collaborator, Professor Surender: "Her expertise, both as a theoretician and experienced practitioner, has meant she has made valuable contributions to both academic scholarship and policy making in the real world. Her work has provided critical analysis of the challenges and solutions facing health systems in the Global South and she has added substantively to our knowledge and understanding about them. She has been and continues to be a forceful and incisive contributor to current debates about the politics of policy making."

Professor Rispel is the consummate academic scholar, widely published with 5 books and 52 journal articles in the past eight years, supervisor and mentor to 7 PhD and 10 Master's students over the same period, who is a world leader in her field. In 2020, she completed a two-year term as the president of the World Federation of Public Health Associations (WFPHA), the first woman from Africa, and the third in the more than 50- year history of the Federation elected to this prestigious position.

Laetitia Rispel's educational background includes a BSc (Nursing) from UCT in 1982, where she was the top student, a BSc (Hons) in Epidemiology and Biostatistics with distinction from Stellenbosch University in 1987, an MSc and a PhD in Medicine from the University of the Witwatersrand, earned in 1991 and 1998, respectively. In the recent past, Professor Rispel has won several national and international awards, including South African Shoprite Woman of the Year Award in the health category (2003); International Nurse Researcher Hall of Fame (2013); inaugural member of the International Academy of Quality and Safety in Health Care (2018); and, most recently, a prestigious Senior Africa Oxford fellowship (2020).

Professor Rispel is a true trailblazer who lives the values of her alma mater and is the embodiment of a Vison 2030 scholar. She has worked tirelessly to develop other African scholars, in particular black women leaders: she mentored the current President of the Colleges of Medicine of South Africa, who is the first black woman and the first public health specialist to hold this role. In addition, Professor Rispel is a thought leader for social justice and a woman who has endeavoured to ensure that the ethos of the health system in South Africa, Africa and the world is one that puts people at the centre. She is a UCT alumna who has brought great credit to this institution, and it is fitting that her contributions are recognised with an honorary doctorate.

### NAMES OF GRADUANDS

### 1. FACULTY OF HEALTH SCIENCES

Dean: Associate Professor L Green-Thompson

### DOCTOR OF PHILOSOPHY

Abdulrehman, Shahin Thesis Title: *The role of tissue inflammation in Kenyan women with breast cancer* 

Shahin Abdulrehman holds an MBChB and an MMed degree in Human Pathology from the University of Nairobi, Kenya. She is a fellow of the Royal College of Pathologists, UK. She joined the Division of Anatomical Pathology at UCT in July 2016 for her PhD studies on a part time basis. Shahin Abdulrehman's thesis

focuses on the tumour microenvironment in breast cancer (BC) subtypes from Kenya. She further investigates the role of tumour infiltrating lymphocytes (TILs) and molecules that tumour cells and TILs produce called cytokines to understand how the tumour microenvironment may be driving the differences observed in breast cancer subtypes. She uses a previous collection of nationally representative confirmed breast cancer tissue blocks from various experiments to further categorise breast cancer into molecular subtypes and describe the TILs, immune cell types and cytokines. She finds that TILs are enriched in more aggressive breast cancer subtypes although she observes differences in location of the TILs and expression of cytokines between the two common BC subtypes. These differences can be targeted for therapeutic approaches as well be useful as biomarkers of diagnosis and prognosis.

Supervisor: Emeritus Professor D Govender (Pathology) Co-supervisor: A/Professor R Naidoo (Pathology)

### Arendse, Liesl Margo Thesis Title: Growth analysis of mixed ancestry infants aged 0 – 18 months, South Africa

Liesl Arendse completed her National Diploma in Oceanography at Cape Technikon, and then her BSc (Zoology), PGCE (Senior Phase) and (Anatomy) qualifications MSc at UCT. She completed her BSc(Hons) in Human Biology at the University of the Witwatersrand. She began fulltime study towards her PhD in 2018. Liesl Arendse's thesis obtained

anthropometric measurements on mixed ancestry or 'Coloured' infants in Cape Town aged 2 weeks to 18 months to evaluate their linear growth progress according to the World Health Organisation (WHO) child growth standard. Additionally, she evaluated their growth or any growth faltering that may have occurred due to sociodemographic and socio-economic factors. Her results indicate that although the WHO growth standard was appropriate for estimating growth progress of these infants, they tended to be shorter and weighed less than the norm of the WHO growth standard. She determined that maternal age and education, along with optimal infant feeding practices were important factors that positively affected an infant's growth. This research contributes to the knowledge of global and local populational growth trajectory differences of healthy, full-term infants that may inform the aetiology of adultonset non-communicable diseases such as diabetes and high blood pressure.

*Supervisor:* A/Professor VE Gibbon (Human Biology)

*Co-supervisors:* Professor EV Lambert (Human Biology), A/Professor D Brits (School of Anatomical Sciences, University of the Witwatersrand) Blake, Lauren Thesis Title: Modelling the pathophysiology of schizophrenia and methamphetamine-induced psychosis: a structural magnetic resonance imaging and cytokine study

Lauren Blake completed her undergraduate studies in Biochemistry at the University of the Free State and obtained her Master's degree in Pharmaceutical Chemistry at the University of KwaZulu-Natal, before joining the Department of Psychiatry and Mental Health at the University of Cape Town in 2017.

Lauren Blake's thesis focuses on neuroinflammation and structural brain differences in schizophrenia (SCZ) and methamphetamineinduced psychosis (MAP) and whether methamphetamine (MA) use duration contributes to these differences. She found that amygdala volumes and frontal cortical thickness are reduced in both disorders, associated with longer MA use duration in MAP. Basal ganglia (BG) volumes are enlarged and associated with longer illness duration in SCZ compared to MAP and healthy controls. BG volumes are associated with increased MA use in MAP. Neuroinflammation was not observed. She attributes BG enlargement in SCZ to longer illness duration, whilst in MAP these differences are attributed to longer duration of MA use, suggesting different pathophysiological mechanisms in these disorders. However, reduced cortical thinning in both disorders, implicates similar pathophysiological processes, stemming from neurodevelopment in SCZ and MA use duration in MAP. This contributes a novel understanding of factors contributing to structural brain aberrations in MAP.

Supervisor: Professor DJ Stein (Psychiatry and Mental Health) Co-supervisors: Professor F Howells (Surgery); Dr A Uhlmann (Technische Universität Dresden, Child and Adolescent Psychiatry)

### Brand, Dominique

Thesis Title: Disability and participation in physical activity and non-elite sport environments: a critical investigation of persons with disabilities' experiences

Dominique Brand completed her BSc in Human Life Sciences, honours in Psychology and postgraduate diploma in Monitoring and Evaluation at Stellenbosch University. She completed her MSocSc in Psychology at UCT and in 2015 continued her studies towards her PhD. Dominique Brand's thesis investigates the meaning persons with disabilities residing in the Western Cape province in South Africa attach to their experiences of inclusion in, or exclusion from, non-elite sport participation. The study participants comprised ten persons with disabilities from diverse socioeconomic and cultural backgrounds, for whom participation in sport was a deeply held value. The research confirms a range of personal, social and health-related benefits afforded by sport participation, and provides a framework conceptualising personal meanings and effects non-elite athletes with disabilities associate with both inclusion and exclusion. Based on the study findings, Dominique Brand offers a language with which to critically analyse forms of participation achieved in the face of adversity, as well as modes of organisational and cultural exclusion. She also asks critical questions regarding the development and sport sector's practices of claiming inclusion without taking responsibility for addressing systemic disablism.

Supervisor: Dr B Watermeyer (Centre for Disability and Rehabilitation Studies, Department of Global Health, Stellenbosch University) Administrative Supervisor: Professor T Lorenzo (Health and Rehabilitation Sciences) Co-supervisor: Professor L Swartz (Department of Psychology, Stellenbosch University)

### Breed, Dorothy

Thesis Title: *Physiological responses of wild antelope to exercise training as a prospective treatment to prevent capture myopathy* 

Dorothy Breed holds a BVSc degree in Veterinary Science from the University of Pretoria and a MSc in International Animal Health from the University of Edinburgh. She began her part-time study towards her PhD at UCT in 2015. She works as a wildlife veterinarian for the City of Cape Town.

Dorothy Breed's thesis investigates the use of exercise training to prevent capture myopathy. Capture myopathy is the most prevalent, lethal condition associated with stress and exertion during wildlife capture. For this study, forty blesbok were obtained of which twenty were exercise trained for four weeks. Following training, ten of the exercise trained and ten of the untrained blesbok were exposed to a wildlife capture stress event, immobilised and physiological variables recorded up to five days after. The data analysis revealed typical physiological responses to capture stress and immobilisation, but also that the exercise trained blesbok showed fitness related adaptations. The trained blesbok showed a decreased blood lactate, increased pH stability and blood buffering ability. Evidence of improved glucose regulation, renal function and haemodynamics require further investigation. The findings support exercise training prior to wildlife capture is feasible and that it does reduce capture stress, thus improving wildlife health and welfare.

Supervisor: Professor TA Kohn (Medical Bioscience, University of the Western Cape) Administrative Supervisor: Emeritus Professor M Lambert (Human Biology) Co-supervisor: Professor LR Meyer

*Co-supervisor:* Professor LR Meyer (Paraclinical Science, University of Pretoria)

### Chihana, Menard Laurent

Thesis Title: A multisite analysis of population based cross-sectional HIV/ AIDS data to assess the cascade of care in the era of widespread preventive and treatment programs in four sub-Saharan countries: Malawi, Kenya, South Africa and Zimbabwe

Menard Chihana holds an MSc in Epidemiology from the London School of Hygiene and Tropical Medicine, United Kingdom and a BSocSc in Economics from University of Malawi. He joined the School of Public Health and Family Medicine in 2017 for his PhD studies.

Menard Chihana's thesis focuses on assessing the impact of the World Health Organisation's universal anti-retroviral therapy (ART) recommendation on the number of people living with HIV (PLHIV) who would become ART eligible and the cascade of care of subgroup populations i.e. PLHIV in discordant relationships and those with advanced HIV in 5 districts across 4 countries: Malawi, Kenya, Zimbabwe and South Africa. He uses district level population data from HIV impact surveys conducted by Médecins Sans Frontières between 2012 and 2019. He worked as a part time statistician on 4 of the 7 surveys gaining valuable experience in conducting large population surveys, data management and analysis. He shows that universal ART would disproportionately affect adolescents as well as countries who were still initiating PLHIV on ART only at CD4<350 cells/µl. He further shows progress has been made but exposes gaps in the HIV cascade of care among the subgroup populations.

Supervisor: Professor M-A Davies (Public Health and Family Medicine) *Co-supervisor:* Dr D Maman (Public Health and Family Medicine)

### Damian, Damian Jeremia Thesis Title: *Enumerating and estimating maternal and neonatal deaths in the Western Cape Province, South Africa*

Damian Damian is a Tanzanian biostatistician who holds a Master's degree in Biostatistics from The University of Manchester. In 2014 he was awarded a Fogarty scholarship to undertake a PhD at the University of Cape Town. Damian's Damian thesis focuses on the extent to which underascertainment of maternal and neonatal mortality could change the interpretation of the burden of disease, and trends in and associations with these critical health outcomes. After systematically reviewing prior estimates, through the application of capture-recapture statistical methods to routine administrative health data, he demonstrates that there is likely substantial under-ascertainment, more so for maternal than neonatal mortality. This implies greater gaps between global targets and current outcomes than might otherwise be appreciated. The use of expanded datasets did not materially change estimates of associations with maternal and neonatal mortality; and emphasised the importance of good antenatal clinical management of maternal medical conditions concurrent with pregnancy.

Supervisor: Professor A Boulle (Public Health and Family Medicine) Co-supervisor: Dr G Distiller (Statistical Sciences)

### Edu, Sorin

Thesis Title: *The management of the retained haemothorax after penetrating trauma in a level 1 South African trauma centre* 

Sorin Edu qualified as a General Surgeon in 2002 after completing training at Groote Schuur Hospital and the University of Cape Town. He was awarded the Trauma Surgery subspecialist qualification in 2008 and has worked in the Groote Schuur Hospital Trauma Centre for the past 17-years as a trauma surgeon.

Sorin Edu's thesis examines the best way to treat a collection of

clotted blood in the chest after stab and gunshot wounds. He used a randomised controlled study design, to investigate the use of keyhole video surgery to drain these collections of blood. This novel use of keyhole video surgery is shown dramatically to reduce complications and prevent the need for further surgical procedures, and has become the new standard of treatment.

Supervisor: Professor A Nicol (Surgery)

### Geza, Ephifania

Thesis Title: *Investigating local ancestry inference models in mixed ancestry individual genomes* 

Ephifania Geza holds a BSc Mathematics Hons Degree from the Midlands State University, MSc in Operations Research and PGDHE from the National University of Science and Technology, Zimbabwe, where she was a teaching assistant. Before starting her PhD at UCT in 2015, she completed an MSc in Mathematical Sciences.

Ephifania Geza's thesis focuses on understanding individuals formed when two or more previously isolated populations interbreed for G generations. She first appraises existing models based on existing studies, and pinpoints current challenges. To address some of the challenges, she eases the process of pinpointing ancestry along mixed individual genomes and promotes model assessment by developing a unified framework that integrates eight cutting-edge models. The framework requires easy to manipulate inputs and standardises outputs to a user-defined format. Using the framework, she replicates existing studies and benchmark models on different admixture scenarios. She concludes the thesis by suggesting a new avenue of accounting for natural selection and population relationships when deconvolving ancestry in multiway admixtures which is relevant for both medical and population studies. Therefore, her study improves estimates accuracy, thus improving studies that uncover the genetic basis of complex diseases, which may help individuals to have control over their health.

Supervisor: the late Dr GK Mazandu (Pathology) Co-supervisors: A/Professor ER Chimusa (Pathology), Professor NM

Mulder (Integrative Biomedical Sciences)

Gina, Ntombenhle Phindile Thesis Title: *In vivo and in vitro studies to investigate the role of autophagy in human tuberculosis* 

Phindile Gina holds an MBBCh degree from the University of Witwatersrand, an MMed from UCT, FCP (SA), and a Diploma in HIV Man (SA). Phindile Gina's thesis investigates the role of autophagy induction in tuberculosis in bronchoalveolar cells. monocyte derived macrophages and peripheral mononuclear cells in Tuberculosis (TB) susceptible individuals. Despite the progress in TB drug discovery, new TB treatment regimens are urgently needed because of the complexity and toxicity of current TB treatment as well as developing drug resistance and drugdrug interactions, particularly with antiretroviral drugs. Phindile Gina found that autophagy induction with Metformin and nitazoxanide using broncho-alveolar cells, monocyte derived macrophages and peripheral mononuclear cells resulted in enhanced mycobacterial containment. Thus, this study supports the notion that induction of autophagy could serve as a potential adjunctive therapeutic option for TB. Additionally, she also found that the in vivo BCG vaccine is a potent inducer of autophagy in bronchoalveolar cells, which could be explored for improving efficacy of BCG vaccine to protect against TB infection.

Supervisor: Professor K Dheda (Medicine) Co-supervisor: Dr M Davids (Medicine)

### Haase, Stephanie Thesis Title: Sexual health decisionmaking and service utilisation among Kenyan queer womxn and trans men

Stephanie Haase completed a Bachelor of Health in Physiotherapy from the Amsterdamse Hogeschool voor Paramedische Opleidingen and a MSc in Health Sciences from the Vrije Universiteit Amsterdam, and began study towards her PhD in 2017, while working as Global Programs Director at the Amani Institute in Nairobi. Stephanie thesis Haase's focuses on sexual health decisionmaking and service utilisation in queer womxn and trans men in Kenya. She used surveys and interviews with 335 participants and 33 informants. This study found that societal, community, relationship, and internal factors, and proximal and distal minority stressors, affect the sexual health status, sexual health behaviour. decision-making, and the use of health services in this population, leading to negative sexual health, as well as overall health and wellbeing outcomes. The discrimination and violations experienced by Kenyan queer womxn and trans men can be considered a human rights concern. The findings add to the emerging body of evidence on the needs of sexual and gender minorities from low- and middle-income countries, as well as serving as evidence for discrimination that could be used in future efforts to repeal the criminalising sections of the Kenyan Penal Code.

Supervisor: A/Professor V Zweigenthal (Public Health and Family Medicine) *Co-supervisor:* A/Professor A Müller (Gender, Health and Justice Research Unit)

Kriegler Foster, Katherine Ruth Thesis Title: *Determination of total, unbound, and intracellular concentrations of the antiretroviral drugs efavirenz, lopinavir, and ritonavir* 

Katherine Kriegler Foster joined the Division of Clinical Pharmacology for her BMed.Sci (Hons) degree in 2016, after completing a BSc undergraduate degree at UCT. She began her MSc in 2017 which she later upgraded to a PhD in 2019.

Katherine Kriegler Foster's thesis focuses on the development and validation of bioanalytical methods to measure intracellular and proteinunbound concentrations of the antiretroviral drugs efavirenz, lopinavir, and ritonavir. These methods allow one to measure the drug concentrations at the target site within HIV-infected cells and may provide a more accurate depiction of drug exposure compared to traditional therapeutic drug monitoring. The methods were successfully used to assist clinicians with a complicated patient case and to analyse blood samples from a proof-of-concept correlation study. The findings show the utility and validity of these methods in a clinical setting to provide an overall view of treatment response and support their application in individualised patient care in South Africa.

Supervisor: A/Professor L Wiesner (Medicine) Co-supervisor: Dr T Kellermann (Clinical Pharmacology, Stellenbosch University)

Londt, Rolanda Sabrina Thesis Title: *Development of an autologous human dendritic cell vaccine against Mycobacterium tuberculosis in patients with extensively drug-resistant tuberculosis* 

Rolanda Londt holds an MPhil in Biomedical Forensic Science from UCT. Before commencing with her PhD Studies in 2017, she worked as Research Assistant at the Tygerberg Medical Campus and is currently working as a Laboratory Manager at the Centre for Lung Infection and Immunity at UCT.

Extensively drug-resistant tuberculosis (XDR-TB) is an increasing global public health concern due to the rapid development of drug resistance and limited availability of effective treatment options. Rolanda Londt's thesis addresses this by developing and evaluating the efficacy of a therapeutic dendritic cell vaccine using mononuclear cells from patients with XDR-TB and presumed latent TB infection (sleeping TB). She started by investigating the immunophenotype of dendritic cells isolated from both the blood and lung compartments. Thereafter, she addressed her primary study objective by first culturing mature pro-inflammatory Th1polarising dendritic cells. She then assessed the efficacy of the constituted dendritic cell vaccine by examining the effector T cell response and killing activity against Mycobacterium tuberculosis (the organism that causes TB). The novel immunotherapeutic intervention created has the potential to serve as an adjunctive treatment for XDR-TB and future phase I and II clinical trials are now warranted.

Supervisor: Professor K Dheda (Medicine, University of Cape Town, and the South African Medical Research Council; Immunology and Infection, London School of Hygiene & Tropical Medicine) *Co-supervisor:* Dr M Tomasicchio (Medicine, University of Cape Town and the South African Medical Research Council)

Martin, Zela Alexandria-Mae Thesis Title: *The roles of DNA damage responses and replication fidelity in mycobacterial evolution* 

Zela Martin completed her BSc in Biochemistry, Genetics and Psychology with distinction in 2012 and her BSc (Medical) Honours in Infectious Diseases and Immunology with distinction in 2013, before commencing fulltime study towards her PhD in 2014.

Zela Martin's thesis utilises quantitative single-cell time-lapse fluorescence microscopy to investigate promoter activity of the recA gene in *Mycobacterium* smegmatis during various genotoxic stress conditions. She investigated a panel of reporter mutants, demonstrating that the P2 promoter is dominant; the P1 promoter is noisier in most conditions; and both increase promoter activity in response genotoxic stress. Surprisingly, to promoter activity reduction was biphasic during recovery from genotoxic stress. Using genetic knockout strains containing inducible alleles of the major mycobacterial replicative DNA polymerase, *dnaE1*, overexpression of mutant alleles in which the DnaE1 PHP domain is inactivated resulted in a prominent mutator phenotype. This is neither a result of known nor suspected sources of mutation, highlighting the importance of the PHP domain of DnaE1 in proofreading during DNA replication. These findings refine current models of stress response regulation and DNA replication in mycobacteria, potentially facilitating development of anti-evolution drugs for tuberculosis management.

# Supervisor: Professor D Warner (Pathology)

*Co-supervisors:* Professor V Mizrahi (Pathology); Professor J McKinney (Global Health Institute, École Polytechnique Fédérale de Lausanne)

### Mendelsohn, Simon Carl

Thesis Title: Evaluation of parsimonious host blood tuberculosis transcriptomic signatures in HIV-infected and HIVuninfected individuals

 $Simon\,Mendelsohn holds an\,MBChB\,from$ UCT and MSc degrees in Immunology and International Health and Tropical Medicine from the University of Oxford. Prior to joining UCT for his PhD in 2017, he worked for Médecins Sans Frontières implementing HIV and tuberculosis programmes in Malawi prisons. Approximately four million tuberculosis cases worldwide remain undiagnosed and untreated annually; sensitive non-sputum diagnostic tests are urgently needed to detect disease earlier and interrupt transmission. Simon Mendelsohn's thesis investigates hostblood gene signatures for diagnosing and predicting progression to tuberculosis in adults with and without HIV. He used blood samples from large prospective observational studies, which screened over 20,000 South Africans from five endemic communities, and measured nine gene signatures using microfluidic real-time PCR. The gene signatures performed well at diagnosing symptomatic tuberculosis, and predicting progression to disease within 6-12 months in HIV-negative participants, and through 15 months in those with HIV, and warrant translation to point-of-care testing devices. He further demonstrated that gene signatures performed poorly in individuals with asymptomatic tuberculosis, a very common form of the disease. In HIV-infected individuals he attributed low specificity of the signatures to underlying viraemia, which resulted in an immune response similar to tuberculosis.

Supervisor: Professor M Hatherill (Pathology) Co-supervisor: Professor TJ Scriba (Pathology)

### Msosa, Chimwemwe

Thesis Title: *Mechanics of the invasion* of plasmodium falciparum merozoites into human erythrocytes

Chimwemwe Msosa holds a BSc in Mechanical Engineering from the University of Malawi, Zomba, Malawi, and a Master's in Biomedical Engineering from Huazhong University of Science and Technology, Wuhan, China. Chimwemwe Msosa's thesis mathematically and computationally investigates the mechanics involved in a Plasmodium falciparum merozoite (a malaria parasite) invading a human red blood cell. He first develops an analytical model to predict the physical forces required to wrap the red blood cells' membrane around the malaria parasite. He further creates a mathematical model to describe the damage a malaria parasite induces enzymatically in the cell membrane to facilitate wrapping and invading the red blood cell. After implementing the mathematical damage model in a finite element analysis software package, he computationally studies the parasite invasion mechanics. He shows that increased malaria invasion resistance in individuals with hereditary disorders such as spherocytosis, affecting the red blood cells' shape, is in part physically mediated. He further identifies a mechanical assay based on nanoindentation with the potential to screen new anti-malaria invasionblocking drugs.

Supervisor: Professor T Franz (Human Biology)

### Mufford, Maryanne Sophia Thesis Title: *Amygdala nuclei: genetic architecture and association with PTSD and related symptom measures*

Mufford Mary completed her BSc, BSc (Hons) and MSc(Med) qualifications at UCT and began fulltime study towards her PhD in 2019. Marv Mufford's thesis reports, for the first time, the genetic architecture of nine amygdala subfield volumes in a cohort of 36,000 healthy participants. She identified novel genetic loci, significant heritability, unique genetic underpinnings, and genetic overlap for each of these subfields with various neuropsychiatric disorders. She further identified altered volumes of specific amygdala subfields related to the symptoms of post-traumatic stress disorder (PTSD) and physical childhood trauma amongst 1,500 participants. These findings will be useful in future research investigating the pathophysiology of disorders associated with the amygdala, particularly PTSD.

Supervisor: Dr S Dalvie (South African Medical Research Council) Co-supervisors: Professor D Stein (Psychiatry and Mental Health); Professor R Ramesar (Pathology); Dr D van der Meer (Pathology)

Mulenga, Humphrey

Thesis Title: Factors affecting diagnostic and prognostic performance of a transcriptomic signature of risk of tuberculosis in HIV-uninfected South African adults

Humphrey Mulenga holds a BSc (Hons) from the University of Greenwich and an MPH (Epidemiology) from UCT. He worked in clinical research in Zambia before joining the South African Tuberculosis Vaccine Initiative as Data Manager and started his PhD studies in the Department of Pathology in 2017.

Humphrey Mulenga's thesis examines host and pathogen factors that affect performance of a blood transcriptomic signature of tuberculosis risk (RISK11). In longitudinal and crosssectional studies, he investigates the extent to which host factors and upper

respiratory organisms, respectively, are associated with changes in RISK11 score, and their effect on the ability of RISK11 to differentiate tuberculosis disease from other health states. He finds that the RISK11 signature score is elevated in individuals with tuberculosis, particularly those with cough symptoms, and in individuals without tuberculosis who experience night sweats, flu-like symptoms, and viral infections. He further finds that, in those without tuberculosis, these host factors do not affect the ability of RISK11 to differentiate tuberculosis from other health states, but viral coinfection does negatively affect RISK11, such that RISK11 cannot differentiate viral co-infection from tuberculosis. These findings will inform future design and discovery of diagnostic and predictive transcriptomic signatures for tuberculosis.

Supervisor: Professor M Hatherill (Pathology) Co-supervisor: Professor T Scriba (Pathology)

Nutbeam, Timothy Peter Thesis Title: *The development of evidence-based guidelines to inform the extrication of casualties trapped in motor vehicles following a collision* 

Timothy Nutbeam completed his medical degree in the United Kingdom in 2004 and Emergency Medicine training in 2013. He began study towards his PhD in 2020. Timothy Nutbeam's thesis reports the development of new evidence-based guidance for the extrication (assisted removal) of injured patients following a motor vehicle collision. He demonstrates the lack of evidence base for current practice and applies an evidence-based medicine approach to resolving this. He reports a series of retrospective cohort studies which describe the injuries and excess mortality associated with

and excess mortainty associated with entrapment; key differences related to age and sex of patients are explored. Four biomechanical studies report the movements of the spine associated with different extrication techniques. The patient experience is explored utilising qualitative techniques. Finally, a Delphi study and consensus work benefit from multidisciplinary subject matter experts from clinical and rescue backgrounds to develop new approaches to extrication. This new extrication guidance has been adopted by national level stakeholders in the UK and has the potential to reduce the mortality associated with motor collision's wherever they occur.

Supervisor: Dr W Stassen (Surgery) Co-supervisors: Professor J Smith (Academic Department of Military Emergency Medicine, UK); Professor Lee Wallis (Surgery)

### Patel, Bhavna

Thesis Title: *Exploring the contribution* of a leadership development program on the implementation of improvement projects at a South African central hospital

Bhavna Patel completed a BSc degree before obtaining her MBChB at UCT. She also holds two master's degrees in Family Medicine and in Bioethics and Health Law and has a Fellowship in both Family Medicine and Public Health. She started her PhD in 2018.

Bhavna Patel's thesis focuses on health leadership at a large tertiary hospital in South Africa. Her study was based on the development and implementation of a home-grown leadership development programme, exploring how the hospital leaders drew on learnings from the programme to facilitate improvement processes within the hospital. Her study showed that in a complex health system, there is a need to craft a contextualized leadership development programme to build leadership through self-awareness, developing the team through building relationships and enhancing the growth of the leader by challenging them to be innovative and create change. The research further offered standardized tools and lessons learnt on how to sustain such improvements and create an organization wide improvement capability. Her study adds value in the South African context and can be used as a model by other public health institutions that wish to develop leadership and hospital improvement.

Supervisor: A/Professor M Shung King (Public Health and Family Medicine) *Co-supervisor:* Professor L Gilson (Public Health and Family Medicine)

Patten, Gabriela Elzbieta Margaret Thesis Title: Understanding the persistent challenge of HIV-related morbidity and mortality in Southern Africa: advanced HIV disease and treatment failure in the era of antiretroviral therapy

Gabriela Patten holds a BSc from UCT and an MSc in Epidemiology from the University of London. Before joining UCT for her PhD studies, she worked as a field epidemiologist with Médecins Sans Frontières on HIV and ART programs in South Africa. Gabriela Patten's thesis demonstrates extremely poor and post-discharge persistent outcomes among hospitalised people living with HIV. Using observational cohort data, she analyses the evolution of advanced HIV disease in the era of antiretroviral therapy among adults and children in Southern Africa. She also describes and compares strategies for managing virologic failure among children and adolescents, and the use and outcomes of an emerging new treatment option. Her findings demonstrate that treatment failure and advanced HIV disease among the most vulnerable people living with HIV continue to be significant challenges facing antiretroviral therapy programmes, urgently requiring attention if further reductions in HIVrelated morbidity and mortality are to be realized.

Supervisor: Professor M-A Davies (Public Health and Family Medicine) Co-supervisor: Dr N Ford (Public Health and Family Medicine)

### Ralefala, Dimpho Thesis Title: Expectations and preferences of parents and adolescents regarding feedback of individual genetic findings in an HIV-TB genomic research project in Botswana

Dimpho Ralefala holds a MSocSc degree from the University of KwaZulu-Natal, and a PGDE and BA from the University of Botswana. She has over ten years of Research Ethics administration experience from UB. She joined the Department of Medicine at UCT in 2018 for her PhD studies. Dimpho Ralefala's thesis focuses on participants' expectations and preferences for the return of individual genetic results from genomics research in Botswana. She used deliberative focus group discussions and in-depth interviews to explore participants' views on what genetic results they would like to receive, why they would like to know them, how and when they would like to receive such results. Her study reveals that solidarity and reciprocity underpin the desire of Botswana research participants to receive individual genetic results. She also finds that although participants generally express a desire to have their genetic results returned, these preferences vary according to severity, preventability and actionability of the results. Her study further reveals that participants would prefer to receive their results in person, supported by counselling and that obtaining informed consent for return of results is crucial in ensuring that participants' rights and wellbeing are protected in research.

# *Supervisor:* A/Professor J de Vries (Medicine)

*Co-supervisors:* Dr M Kasule (Botswana-Baylor Children's Clinical Centre of Excellence), Assistant Clinical Professor M Matshaba (Botswana-Baylor Children's Clinical Centre of Excellence)

### Ramnath, Udhir

Thesis Title: *Physical activity, physical fitness, functional capacity and cognitive performance in older adults: effects of interactive video gaming* 

Prior to joining UCT, Udhir Ramnath completed his Sports Science degree at the University of KwaZulu-Natal. He joined the Department of Human Biology at UCT in 2010 and graduated with a BSc(Hons) Biokinetics degree. He started an MPhil in Biokinetics in 2011 and his PhD in 2014. Udhir Ramnath's thesis investigates the feasibility and effectiveness of active video-gaming, using X-box, on cognitive and functional performance in older adults. He conducted a series of intervention studies in older adults, ranging from those with no memory complaints to those with some level of memory complaints. Results from the feasibility studies showed that active-video gaming was equivalent to moderate intensity physical activity, and participants enjoyed playing the games. His research shows that participants in the intervention group (X-box) demonstrated significantly improved executive function and global cognitive function scores compared to those in the 'traditional' exercise group. Furthermore cardio-respiratory fitness, mobility and balance improved significantly in the intervention group. These findings show that active-video gaming improves cognitive and functional performance, and should be promoted among older adults, especially for those with memory complaints who might face barriers such as travel and access to exercise facilities.

Supervisor: A/Professor T Kolbe-Alexander (School of Health and Wellbeing, University of Southern Queensland, Ipswich, Australia) Co-supervisor: Professor EV Lambert (Human Biology)

### Ramorola, Beatrice Relebogile Thesis Title: *Molecular characterisation of diffuse large B-cell lymphoma in South Africa*

Beatrice Ramorola holds a BSc in Biochemistry and Genetics, a BSc(Med) (Hons) in Medical Biochemistry and an MSc(Med) in Haematology, all from UCT. Her PhD journey began in August 2018.

Beatrice Ramorola's thesis reports on the molecular characterisation of pathogenic features which contribute to the development and progression of Diffuse Large B-cell Lymphoma (DLBCL), an aggressive and complex lymphoma, which disproportionally affects people infected with HIV. Her research began by investigating and comparing the immune landscape of newly diagnosed, chemotherapy-naïve HIV-positive and HIV-negative patients with DLBCL by assessing peripheral lymphocyte cell populations. Thereafter, she determined the prevalence of activating mutations in two oncogenic genes in a group of DLBCL tumours, an investigation yet to be reported in an African population. Finally, she examined the potential function of another gene in the pathogenesis of DLBCL using in vitro and in silico methods. This work has revealed novel insights on the complexity of the pathobiology of DLBCL, specifically in an HIV-positive background. In future, these findings will assist in implementation of differential, personalised approaches to treatment to benefit lymphoma patients.

Supervisor: A/Professor S Mowla (Pathology)

*Co-supervisors:* Dr K Antel (Pathology); Dr D Chetty (Pathology)

Senthebane, Dimakatso Alice Thesis Title: *The role of the tumour microenvironment components in cancer cell behaviour and drug response* 

Dimakatso Senthebane holds a BSc in Biochemistry and Microbiology with Distinction from the North-West University. She completed her BSc (Honours) in Medical Biochemistry at UCT in 2016. In 2017, she registered for an MSc degree in Medical Biochemistry, which was upgraded to PhD in December 2018. Dimakatso Senthebane's thesis focuses on how the tumour microenvironment influences cancer progression and drug response in oesophageal and breast cancers. Her research investigates the role played by stomal cells such as mesenchymal stem cells and cancer-associated fibroblasts that are recruited to tumours. Dimakatso Senthebane's research also involves evaluating the involvement of cancer stem cells and the extracellular matrix in tumorigenesis and chemoresistance. Her results demonstrate that stromal cells associated with tumours such as cancerassociated fibroblasts can be targeted by various drugs. Furthermore, this is the first study to show the presence of cancer stem cells in oesophageal biopsies. Her work also reveals that the extracellular matrix, influences cancer growth, migration, and protects cancer cells from the effects anticancer drugs. Lastly, she developed a 3D tumour model that mimic solid tumours in structure and response to drugs that can help in revealing complex interactions of tumour cells and drugs.

Supervisor: Professor I Parker (Integrative Biomedical Sciences) Co-supervisor: Dr K Dzobo (Medicine)

Sheward, Daniel James Thesis Title: *Neutralizing antibody responses in HIV dual infection: lessons for vaccine design* 

Daniel Sheward completed his BSc at the University of KwaZulu Natal. Thereafter he joined UCT, completing a BSc (Hons) in Infectious Diseases and Immunology, and an MSc and PhD in Medical Virology. Daniel Sheward's thesis focuses on people infected with HIV

more than once. He developed a computational framework to identify these individuals based on sequencing of the viral genomes. By characterising the antibody responses in these dually infected individuals, Daniel Sheward promotes a foundational understanding of how the immune system responds to multiple, variant antigens. These findings contribute to the design of improved vaccines.

Supervisor: Professor C Williamson (Pathology) Co-supervisor: Professor P Moore

(National Institute for Communicable Diseases - NICD)

#### Spies, Maximilian Jan

Thesis Title: *The effect of clothing and carrion biomass load on decomposition and scavenging in a forensically significant thicketed habitat in Cape Town, South Africa* 

Maximilian Spies completed his BSc and BMedSc (Hons) degrees at UCT. He began full-time studies towards an MSc in 2018 and upgraded to a PhD in 2020.

Maximilian Spies' thesis establishes baseline data on the effect of clothing and carrion biomass load on rates of decomposition and scavenging activity in a forensically significant habitat in the Cape. This helps estimate time-since-death for local forensic death investigations to identify skeletonised human remains. He measured the decay rates of domestic pig carcasses as proxies for humans, comparing samples of clothed, unclothed, single, and multiple carcasses across two summers and winters. He correlated the decay with weather and scavenging by the Cape grey mongoose. He indicates that clothing alters scavenging patterns across seasons and delays decomposition in winter but is negligible in summer due to high summer temperatures. He observed increased scavenging and more rapid decay when only a single clothed carrion source was available, indicating that decomposition studies should use single clothed carcasses to ensure accurate and forensically realistic data

Supervisor: A/Professor V Gibbon (Human Biology) Co-supervisors: Dr D Finaughty (Human Biology); A/Professor L Friedling (Human Biology)

### Venter, Phillip

Thesis Title: Structural and enzymatic characterization of a novel ornithine acyl-ACPN-acyltransferase and overexpression of its biosurfactant product

Phillip Venter completed his BSc, BSc(Hons) and MSc qualifications at the North-West University and began fulltime study toward his PhD at UCT in 2019.

Phillip Venter's thesis reports on the structure and characteristics of the novel ornithine acvl-ACP N-acyltransferase (OlsB) that produces a promising biosurfactant and which may be a viable candidate for commercial production. He performs in-silico structural predictions which he validates using solution state nuclear magnetic resonance. This enables him to elucidate OlsB's active site and to describe the specific interactions that OlsB has with its substrate. He develops analytical methods for the detection of the biosurfactant and uses these methods to produce a biosurfactant overexpression system. He discovers novel forms of the biosurfactant and describes methods by which the biosurfactant can be manipulated. These results will enable the future evaluation of OlsB as a biosurfactant producer and enhance its viability by increasing the enzyme's biosurfactant yield.

Supervisor: Emeritus Professor BT Sewell (Integrative Biomedical Sciences) Co-supervisor: Professor M Trindade (Institute for Microbial Biotechnology and Metagenomics, University of the Western Cape)

### Whittle, Leah

Thesis Title: Development of a dual vaccine against East Coast fever and lumpy skin disease

Leah Whittle completed her BSc and BSc(Hons) degrees at UCT in the Department of Molecular and Cell Biology. She began her MSc in 2018 and upgraded to a PhD in 2019. Leah Whittle's thesis describes the development of novel vaccines that primarily target the parasite *Theileria*  parva which causes East Coast fever in cattle. She constructed DNA-based vaccines, characterised them and demonstrated their high immunogenicity in mice using antibody assays that she developed. Based on these results, she further made East Coast fever vaccines vectored by live lumpy skin disease virus, which is a pox virus that affects cattle. One of these vaccines is highly immunogenic in mice. She showed that an additional vaccine she constructed is genetically unstable, however overcame this by redesigning the vaccine and in turn developed a novel protein. These vaccines have the potential to protect cattle against both East Coast Fever and lumpy skin disease.

Supervisor: Dr R Chapman (Pathology) Co-supervisors: Professor A-L Williamson (Pathology); Professor E Rybicki (Molecular and Cell Biology)

Zhang, Wan Zhu

Thesis Title: Detecting subclinical anthracycline therapy related cardiac dysfunction in low income country (SATRACD study)

Wan Zhu Zhang completed her MBChB and MMed in Tijin Medical University, China, and Makerere University, Uganda respectively. Before she joined UCT for her PhD, she worked as a cardiologist in the Uganda Heart Institute. Wan Zhu Zhang's thesis is about subclinical anthracycline therapy related cardiac dysfunction (ATRCD), a common cardiac side effect of chemotherapy in Ugandan patients with cancer. She first describes the cardiovascular risk factors of the study population before chemotherapy. She further investigates the incidence of subclinical ATRCD and its predictors, using a novel diagnostic tool: Speckle tracking image and troponin I. She also reports the roles of easily available conventional image parameters on detecting subclinical ATRCD. Lastly, she analyses the impact of anthracycline therapy on patients' lipid subtraction. Her research findings fill the knowledge gaps about anthracycline treated patients in Uganda and helps to establish a local guideline on effective cardiac monitoring in Ugandan cancer patients with available resources, in order to prevent the severe form of ATRCD. Further studies are needed to address the longterm lipid profile shift after anthracycline therapy and its cardiovascular outcome implications.

Supervisor: Professor K Sliwa (Medicine) Co-supervisors: Professor F Azibani (Medicine); Professor E Okello (Medicine, Makerere University)

### MASTER OF MEDICAL SCIENCE IN GENETIC COUNSELLING

Cameron-Mackintosh, Sinead

# MASTER OF MEDICAL SCIENCE IN NUTRITION

Oyetunji, Iyanuoluwa Oyedeji

### MASTER OF MEDICINE

Almgla, Naser Khalifa (with distinction in the dissertation) Aronson, Tatum Denese (with distinction in the dissertation) Avik, Goud Deng Diing Bachan, Varushka Ranjina Behari, Dinell (with distinction in the dissertation) Blumenthal, Abigail Shoshana Booysen, Gillian Boskovic, Viseslav-Willy Camroodien, Sedick Ahmed Chanda, Raphael Chang, Ju-Mei (with distinction in the dissertation) Chen, Emily Chilton, Gareth Harvey Chironga, Kudzai Deedat, Raees (with distinction in the dissertation) De Wit, Thandi Maya Gondwana (with distinction in the dissertation) Dzamatira, Davison (with distinction in the dissertation) Eldurssi, Omar Ibrahim Emhemed, Mohamed Omar El Mehdi Gabriels, Cindi Gatley, Elizabeth Marguerite Gerber, Carmen (with distinction in the dissertation)

Gunter, Hannah May (with distinction in the dissertation) Hannington, Matthew Ross Hashlan, Mohammed Hussain Holtzhausen, Jeanette (with distinction in the dissertation) Honnet, Simon Michael Jaga, Rudhir (with distinction in the dissertation) Keenoo, Faadhila Kriek. Jozef Albertus Kruger, Jean-Jacques (with distinction in the dissertation) Kuhn, Suzanne Majangara, Munyaradzi Blessing Mhini (with distinction in the dissertation) Marais, Gert Johannes Kruger (with distinction in the dissertation) Matimati. Bornaventure Mbena, Bulelwa Priscilla Mgugudo-Sello, Ziyanda Ntombizethu Molabe, Hunadi Mondleki, Enkosi Moreri-Ntshabele, Badani Mugla, Walid Khalifa Munsaka, Effraim Frackson Munsie, Robert David Musimar, Zola Aime Blaise Nagar, Bhavesh (with distinction in the dissertation) Ngarivume, Kurai Nshuti Shema, David Ortel, Randall Shane Osman, Naeem Panchoo, Pravesh (with distinction in the dissertation) Pillay, Vashini Rensburg, Tristan Rikhotso, Tshikani Norman (with distinction in the dissertation) Robertson, Caroline Helen Romburgh, Bailee Jean Shapaka, Johanna Tekla Sibanda, Linos Mutsa Sihlahla, Irvine Soldati, Vuyolwethu Sonwabile (with distinction in the dissertation) Steyn, Francois Anton (with distinction in the dissertation) Stevn. Johannes Hermanus Tait. Déan Tangane, Gomolemo Tlopo, Canicia Puleng Tromp, Sean Andrew Van Der Westhuizen, Diederick Johannes (with distinction in the dissertation)

Viljoen, Gerrit Viranna, Santhuri Waghid, Sihan Yousef, Mazen (with distinction in the dissertation)

### MASTER OF PHILOSOPHY

Abdalhai, Khalid Abdallah Abugrain, Khadija Ali Adebayo, Adetayo Jolade (with distinction) Barday, Zibya Carlisle, Tayna Leigh Chonyera, Rumbidzai Lorraine Stephanie Daniels, Alexandra Jacqueline Day, Christel (with distinction in the dissertation) De Wet, Wardie De Wit, Marizanne Du Plessis, Karlien El Zouki, Zaineb Ashour Yousif (with distinction in the dissertation) Ganda, Janesh Pradipkumar Gebremicael, Mulugeta Naizgi Govender, Radha (with distinction in the coursework component) Hamadziripi, Dirk Manatsa (with distinction in the dissertation) Kavetuna, Julieta Vatjizaiye Kebede, Tigist Zerihun (with distinction in the dissertation) Majangara Karaga, Rumbidzai Makgai, Lesiba Meshack (with distinction) Matlebjane, Sefule Anastacia Mkoko, Philasande Mnisi, Precious Zemvelo Mosalakatane, Thembisile Dintle (with distinction in the dissertation) Moshani, Nomakhawuta Lettitia Muleya, Jane Mahlatse (with distinction in the dissertation) Oghenechovwen, Ogheneochuko Mary Oliver, Kedebone Pholi, Kuda Grace Pillay, Calandra Ross, Tayla Jane (with distinction) Sebolai, Masego Jessica Shamavinda, Charles Mungenisa Soeker, Farzaanah Thela, Lindokuhle Thungana, Yanga Timothy, Nastassia Ethel Tshegetsang, Bokamoso Isago Bianca

Van Der Hoven, Jani (with distinction in the dissertation) Venketsamy, Yomika Vogts, Ferdinand Wilhelm (with distinction in the dissertation) Williams, West

### MASTER OF PHILOSOPHY IN EMERGENCY MEDICINE

De Beer, Willem Joseph Benson Govender, Sarojini Venter, Monique

### MASTER OF PHILOSOPHY IN HEALTH INNOVATION

Ndarhwa, Nyamwezi Parfaite

### MASTER OF PUBLIC HEALTH

Arendse, Gwendoline (with distinction) Auckloo, Marie Belle Kathrina Mendoza (with distinction) Bald, Sarah Mac Gregor (with distinction) Bhenxa, Namhla (with distinction in the dissertation) Brassell, Maxine Marie Burger, Hester Maria (with distinction in the dissertation) Chitsa, Ndakapara Davies, Bronte Robyn (with distinction in the dissertation) Deglon, Michaele Eryn (with distinction) Fareed-Brey, Waarisa (with distinction in the coursework component) Fieggen, Joshua James (with distinction) Fihla, Achuma Gizamba, Jacob Mugoya (with distinction) Hotchner Blaser, Rebecca Catherine (with distinction in the coursework component) Iyun, Oluwatosin Busola Jacobs, Solomon Marthinus (with distinction) Kadota, Molly Kaelin (with distinction) Kannemeyer, Natasha (with distinction) Khama, Stephen Khan, Muhamed Adil Mahlaba, Harmony Boiketlo Mautsa, Tafadzwa Forsina (with distinction in the dissertation) Moirana, Elizabeth Lorivi

Molope-Serudu, Naledi Laughter (with distinction in the dissertation) Mwalve, Pumulo Justine Nanji, Nadine Ndlovu, Davies Nel, Amy Elizabeth (with distinction) Noholoza, Sandisiwe Zelda (with distinction in the dissertation) Phakisi, Tshepo Kingsley Qayiya, Yamkela (with distinction in the dissertation) Sonday, Leilah (with distinction) Tshabalala, Phumzile Kimberly Useh, Ebruphiyo Ruth (with distinction in the dissertation) Wylie, Joanne Elisabeth (with distinction in the dissertation) Zwane, Phindi

### MASTER OF SCIENCE IN AUDIOLOGY

Blasl, Danielle Clarke, Richard Matthew Liu, Chiawen Mustapha, Safoora Ntshangase, Ntombenhle Sekoto, Lieketseng Victoria (with distinction)

### MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING

Guess, Christie Rosslee (with distinction) Kiwanuka, Martin Krause, Gerhard Jaco (with distinction) Magondo, Ndivhuwo (with distinction) Mc Ewan, Sarah Ann (with distinction) Taylor, Jade Vahed, Ashraf Ebrahim (with distinction)

### MASTER OF SCIENCE IN EXERCISE AND SPORTS PHYSIOTHERAPY

Bailey, Tamlin Tarry-Lee (with distinction in the dissertation)
Brebner Service, Philippa Jane (with distinction in the dissertation)
De Klerk, Stephanus Abraham (with distinction in the dissertation)
Durand, Paul Jacobus (with distinction in the dissertation)
Rule, Samantha Kate (with distinction in the dissertation)

# Tully, Paula Lauren (with distinction in the dissertation)

#### MASTER OF SCIENCE IN MEDICINE

Africa, Samantha (with distinction) Ahmed, Riyaadh Bam, Jenna Leigh (with distinction) Belachew, Fitsum Kifle Benn, Kealan Timothy (with distinction) Bourn, Jessica Jean (with distinction) Buck. Chloe Victoria Chineka, Anesuishe Nicole (with distinction) Choga, Wonderful Tatenda (with distinction) de Klerk, Arne (with distinction) Fillmore, Stephanie (with distinction) Gamieldien, Raabieah (with distinction) Gangiah, Tamlyn Kirstey (with distinction) Hudson, Peter Andrew John (with distinction) Kabagenyi, Fiona (with distinction) Kew, Gregory Paul Khumalo, Fezokuhle Ncedile Lee, Shao-Hsuan Stephanie (with distinction) Lourens, Rentia Francis (with distinction) Lurie, Micaela Malek, Sadiyah (with distinction) Mateza, Somila (with distinction) Musa, Glory Chinuru Ndlovu, Minkateko (with distinction) Ngomti, Amkele Pollock, Jonathan Ingo (with distinction) Scott, Michelle Ashleigh (with distinction) Sebaa, Shorok Singh, Gabriela Swart, Tania Theresa (with distinction) Traviss, Riley James Van Der Berg, Hendrik Johannes (with distinction)

### MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

Ebrahim, Faatima Omarjee Mbuya, Bertha Kanith

### MASTER OF SCIENCE IN PHYSIOTHERAPY

Amien, Razia

Anieto, Ebuka Miracle (with distinction) Anjos, Ana Alexandra Da Cunha Pereira (with distinction) Francis, Glenda Chantelle

### MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Husselmann, Nicole Elizabeth (with distinction) Kaylor, Stephanie Anne Smith, Louise Nicole Theron, Caroline Mair

### BACHELOR OF MEDICAL SCIENCE HONOURS

Lesch, Robyn

### POSTGRADUATE DIPLOMA IN HEALTHCARE TECHNOLOGY MANAGEMENT

Bengeza, Mthanjiswa Mothiba, Confidence Sedupe

### POSTGRADUATE DIPLOMA IN CLINICAL PAEDIATRIC CARDIIOLOGY

Ngeno, Mercy (with distinction)

### POSTGRADUATE DIPLOMA IN DISABILITY STUDIES

Ellan, Subhashini (with distinction) Moswela, Emmanuel (with distinction) Peters, Anastagia Elizabeth

### POSTGRADUATE DIPLOMA IN HEALTH ECONOMICS

Khetsiwe, Vuyokazi Nakafingo, Erwin Njeza, Nontutuzelo Okotah, Archibald Nii Boye

### POSTGRADUATE DIPLOMA IN HEALTH PROFESSIONAL EDUCATION

Gamieldien, Hammaad Bin Faaik

### POSTGRADUATE DIPLOMA IN OCCUPATIONAL HEALTH

Mbovane, Christian Zolia

### POSTGRADUATE DIPLOMA IN HEALTH LEADERSHIP

Williams, Eddison Gabriël

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### 2. FACULTY OF LAW

Dean: Professor D Chirwa

### DOCTOR OF PHILOSOPHY

Agbo-Ejeh, Christiana Inebu Thesis Title: *Asymmetrical power relations: a legal analysis of the European Union and Economic Community of West African States Economic Partnership Agreement* 

Christiana Agbo-Ejeh holds a Bachelor of Laws degree from the University of Jos, Nigeria and a Master of Laws from the University of Warwick. She teaches international economic law at Baze University, Nigeria. Christiana Agbo-Ejeh's thesis comprises a legal analysis of the Economic Partnership Agreement (EPA) between the European Union (EU) and the Economic Community of West African States (ECOWAS). She critiques the power asymmetries which characterise the relationship between the EU and Africa, and finds the provisions of the General Agreement on Tariffs and Trade (GATT) on special and differential treatment inadequate in relation to ECOWAS. She examines the dynamics of EU-ECOWAS EPA negotiations and canvasses reasons for the differences between Ghana's and Nigeria's country responses. Among others, Christiana Agvo-Ejeh makes a key recommendation: for ECOWAS to undertake a rigorous engagement with the African Continental Free Trade Agreement (AfCFTA) in order to address the impact of power asymmetries.

Supervisor: Professor F Ismail (The Mandela School of Public Governance) *Co-supervisor:* Professor A Ordor (Commercial Law)

### Essop, Fatima

Thesis Title: *The intersection between the Islamic law of inheritance and the South African law of succession* 

Fatima Essop holds BA, LLB and LLM degree from UCT, and a BA in Islamic law from the Islamic Peace College of South Africa. Before joining UCT, she practiced as an advocate of the High Court of South Africa. Fatima Essop's thesis describes

how South African Muslims include and implement Islamic inheritance laws in their wills and estates. Using socio-legal data collected within the Cape Town metropolitan area, she identifies various legal challenges encountered by people implementing Islamic inheritance laws within the framework of South African common law and statutory succession laws. She also identifies potential conflicts that may arise between the provisions of Islamic inheritance law and the rights enshrined in the South African Constitution. She then suggests how the courts could and should balance various constitutional rights so as to give effect to the religious freedoms of members of the Muslim community. Fatima Essop's thesis makes various recommendations regarding protection of members of vulnerable groups, such as women and children, when implementing Islamic inheritance laws in the South African context.

Supervisor: Professor M Paleker (Private Law)

### Lorizzo, Concetta

Thesis Title: Non-state forms of conflict resolution: opportunities for improving criminal justice – a case study of community courts in Mozambique

Concetta Lorizzo holds an LLB from Bologna University, Italy, completed her master's degree at UCT and began study towards her PhD in 2013. She is Adjunct Professor in the Faculty of Law at the University of the Western Cape and Research Associate of Africa Criminal Justice Reform. Concetta Lorizzo's thesis focuses on community courts in Mozambique. In it she explores the opportunities potentially utilisable by community courts as a means for highlighting the significant role they can play in the Mozambican state's criminal justice system. As background, she examines the literature on legal pluralism and demonstrates that the state has historically ignored the role that community courts play in criminal justice. She explains that this is because criminal justice discourses and practices, including in the community courts, are situated within a Eurocentric dominant discourse that hinders the courts' capacity to improve access to criminal justice for petty crimes. Applying a postcolonial analysis of community court practices, Concetta Lorizzo identifies community courts as operating through forms of local knowledge that offer opportunities for community courts, as non-state mechanisms of conflict resolution, to enable forms of restorative justice that might alleviate pressures on Mozambique's current criminal justice and prisons systems.

Supervisor: A/Professor W Amien (Public Law)

### Mavhuru, Luck

Thesis Title: A comparative analysis of the regulations governing mobile money services in South Africa and Zimbabwe and their impact on sustainable financial inclusion of the poor and vulnerable people

Luck Mavhuru holds a LLB degree from the University of the Witwatersrand. He

joinedUCTin2016 for his master's studies, specialising in International Trade Law, and thereafter proceeded to PhD studies. Luck Mavhuru's thesis examines the legal challenges that have impeded the successful implementation of Mobile Money Services (MMS) provided by Mobile Network Operators (MNO) in South Africa and Zimbabwe. In it he explores the consequences of these obstacles in the fight against financial exclusion. Using a comparative study, Luck Mavhuru found that South Africa and Zimbabwe have similar financial regulations that limit the participation of MNOs in banking sectors. The MMS fortunes of these two countries were quite different, however. MNOs in South Africa were permitted to offer mobile money services, but only within the existing regulatory framework. As a result, it was difficult for South Africa's MNOs to deliver MMS, thus limiting their ability to reduce financial exclusion. In the Zimbabwe case, government directives and exemptions have led to the relaxation of financial regulations and these have resulted in a successful mobile money sector and a significant increase in financial inclusion.

Supervisor: Professor A Hutchison (Commercial Law)

### Mvulane, Sebolelo Constance Thesis Title: *National Council of Provinces Rhetoric in overseeing the implementation of South Africa's National Development Plan*

Sebolelo Mvulane holds a BSocSc and an MPhil in Rhetoric Studies from UCT. She joined the Centre for Rhetoric Studies in the Department of Private Law in 2018, to study towards a PhD. She has worked at the Parliament of the Republic of South Africa, focusing on public policy implementation and oversight strategies. Sebolelo Mvulane's thesis focuses on the role of the National Council of Provinces (NCOP) in overseeing the implementation of South Africa's National Development Plan (NDP). She investigates the NDP's public policy implementation challenges by unpacking the political rhetoric of NCOP oversightpolicy debates in context of the NCOP being as an apex chamber responsible

for three sphere policy oversight. She finds that the NCOP's policy oversight and debate environment is extensively impacted by exogenous factors which in turn contribute towards weakening its three sphere oversight processes; and that that exacerbates the slow implementation of NDP decisions. She also establishes that, were effectively implemented three sphere oversight processes in the NCOP to be implemented, that would result in improved three sphere coordination of public policy initiatives and would accelerate the overall implementation of the NDP's processes and decisions.

Supervisor: Distinguished Professor P-J Salazar (Private Law)

Rahman, Zarina Thesis Title: *A missed opportunity: the rhetoric of social cohesion in parliamentary debates - 1994 – 2014* 

Zarina Rahman holds a BA in History and an MA in Rhetoric Studies from UCT. She started her PhD in 2016 while continuing to work as part of the National Planning Commission secretariat in the Presidency.

Rahman's Zarina thesis analyses parliamentary rhetoric in the first two decades of democracy to investigate whether leaders in Parliament considered the extent of the social fractures that existed in South Africa from 1994 and, in this respect, to investigate their role in promoting social cohesion. To demarcate the data from this extended period, three debates relating to crises under each President in that period - Mandela (the Truth and Reconciliation Commission), Mbeki (HIV/Aids) and Zuma (the Marikana killings) - were chosen, based on relevance and as the rhetoric in these debates would illustrate the respective leaders' ethical values. Zarina Rahman's analysis finds that while rhetoric promoting social cohesion was evident during the Mandela presidency, it dwindled in the subsequent 15 years as party positions took precedence over building public trust and tolerance. It shows also that this had the effect of maintaining divisions which were exaggerated by the persistent adherence to past identities.

*Supervisor:* Distinguished Professor P-J Salazar (Private Law)

Sinkala, Ruth Mulenga Thesis Title: *Protection of traditional knowledge, an incomplete victory? Towards inclusion of gender considerations in traditional knowledge protection: a Zambian perspective* 

Ruth Sinkala holds an LLB from the University of Botswana, and a Master's in Intellectual Property Law (LLM) from Uppsala University, Sweden. She began her PhD studies with UCT in the School of Law in late 2019. Ruth Sinkala's thesis investigates the importance of including gender considerations in the protection of traditional knowledge (TK). Her thesis focusses on the current status of Zambia's TK protection system. She finds that it is neither gender sensitive nor gender responsive. This is evidenced by the gender-blind protection offered in specific laws and the absence of TK protection in the Zambian Constitution. She also finds that gendered TK protection can play a vital role for Zambia in achieving national and international development goals. Overall, Ruth Sinkala's research demonstrates that legal reforms to reflect gender considerations in TK protection are necessary to achieve complete TK protection for women and to make strides in Zambia's development. Further, she provides suggestions for reforms to Zambian TK protection laws that are partially based on Kenya's model of TK protection.

*Supervisor:* Professor C Ncube (Commercial Law)

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Law:	Danwood Mzikenge Chirwa, LLB(Hons) Malawi LLM Pret PhD UWC
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## Dean of Higher Education Development

Kasturi Behari-Leak, BA(Hons) HDE BEd Durban-Westville, MEd Cape Town PhD Rhodes

# Director of the Graduate School of Business

Catherine Duggan, BA Brown PhD Stanford

Welcome, Wamkelekile, Welkom – today is not the end of your relationship with the university but the beginning of a new phase in your continuing relationship with UCT, one that you share with the UCT community of over 100 000 alumni.
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 – <u>http://www.uct.ac.za/dad/alumni/update/</u> - 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!