

GRADUATION CEREMONY

Faculty of Health Sciences and Faculty of Law

14 December 2021

FACULTY OF HEALTH SCIENCES AND FACULTY OF LAW

Graduation ceremony held virtually on 14 December 2021 due to the COVID-19 pandemic.

ORDER OF PROCEEDINGS

The National Anthem.

The Registrar will make introductory comments.

The Chancellor will constitute the congregation.

The University Dedication will be read by the President of the SRC.

A message by the Dean of the Faculty of Health Sciences.

The Dean of the Faculty of Health Sciences will present the Fellowship Award to Professors M Ntsekhe, N Ntusi and K Sliwa-Hahnle.

A message by the Dean of the Faculty of Law.

The Dean of the Faculty of Law will present the Fellowship Award to Professor H Mostert.

The Chancellor will confer the qualifications.

Graduation poem by the imbongi.

Presentation of graduands' names.

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

The Chancellor will congratulate the new graduates and diplomates and dissolve the congregation.

Closing performance.

NATIONAL ANTHEM

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

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

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

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

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.

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.

DECLARATION FOR HEALTH SCIENCES GRADUANDS

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

I solemnly pledge to serve humanity

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

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

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

I will engage patients and colleagues as partners in healthcare

I will practise my profession with conscience and dignity

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

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

I commit myself to lifelong learning

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

FELLOWSHIP

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

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

2006:	F Brombacher
	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

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

2005:	HM Corder
2006:	D Visser
2015:	C Shearing
2018:	C Himonga

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

Professor Mpiko Ntsekhe

Department of Medicine

Professor Mpiko Ntsekhe is the Helen and Morris Mauerberger Professor and Chair of Cardiology at UCT and the Head of the Division of Cardiology at Groote Schuur Hospital. The cardiac unit he leads is internationally regarded as the leading academic unit on the continent for both research and postgraduate training. He obtained his medical degree from Columbia University in 1994 and his PhD from UCT in 2011. He is a Fellow of the American College of Cardiology and a Member of the Academy of Science of South Africa.

Professor Ntsekhe's scholarly focus has been on the intersection of cardiac medicine and infectious disease, in particular tuberculous pericarditis and the effects of HIV infection on the cardiovascular system. Tuberculous pericarditis is one of the most life-threatening forms of tuberculosis when the infection causes disease affecting the pericardial lining of the heart. Professor Ntsekhe's research has investigated the presentation of this condition in the context of HIV co-infection, pathogenesis, diagnosis and treatment. Over the past 15 years he has been co-Principal Investigator of a tuberculous pericarditis research programme comprised of prospective registries, clinical trials, and mechanistic studies: the Investigation of the Management of PericarditIs in Africa (IMPI) programme.

Within this research programme Professor Ntsekhe has led studies that have described pathogenic mechanisms associated with phenotypes or outcome, characterised in detail the effects of HIV on clinical presentation, distinguished important clinical phenotypes, and defined the role of corticosteroids in treatment of the condition. The findings have impacted recommendations and guidelines of local national and international societies and bodies such as the South African National TB guidelines and the World Health Organization guidelines on the treatment of TB in adults.

Before 2005, the only description of the cardiovascular manifestations of HIV came from the global north, where combination antiretroviral therapy (ART) was widely available, and the population demographics and underlying co-morbidities were very different to Africa. Over the last 15 years he has produced scholarly contributions that have characterised the epidemiology, aetiologies, natural history, treatment options and outcomes of cardiac disorders in people living with HIV in South Africa in the context of ART scale-up. The impact of this work is that it has increased awareness of these conditions and knowledge of their presentation and treatment in the medical community of practitioners, thereby contributing to improved care of people living with HIV.

In recognition of his scholarly contributions at the intersection of cardiac disease and these two prevalent infectious diseases, Professor Ntsekhe is frequently invited to international cardiology meetings to present, and invited to write reviews for leading international cardiology journals and chapters for textbooks on pericardial disease and HIV-related cardiovascular disease. He is a recognised leader in the field of cardiovascular medicine in Africa. Expertscape's PubMed-based algorithm places him as the world's leading expert on tuberculous pericarditis, and in the top 0.1% of scholars on pericardial disease.

Professor Ntobeko Ntusi

Department of Medicine

Ntobeko Ntusi is a cardiologist and a Professor of Medicine, currently appointed as the Chair and Head of Medicine at the University of Cape Town (UCT) and Groote Schuur Hospital, where he also provides the Clinical Lead for cardiovascular magnetic resonance (CMR). He is a Principal Investigator based at the Hatter Institute for Cardiovascular Research in Africa (UCT) and the Cape Universities Body Imaging Centre (UCT), as well as a Collaborating Investigator at the Wellcome Centre for Infectious Diseases Research in Africa (UCT). He is the Editor-in-Chief of the South African Heart Journal, an Associate Editor of Circulation and serves on Editorial Boards for numerous journals and provides regular peer review for granting agencies and scientific journals globally. He obtained a BSc in Molecular and Cellular Biology from Haverford College, USA followed by an MBChB from UCT. He obtained a DPhil in Cardiovascular Medicine and Cardiology from the Universities of Oxford and Cape Town, respectively. He completed his clinical training in Medicine and Cardiology from the Colleges of Medicine of South Africa.

Professor Ntusi's primary research interests comprise inflammatory heart disease, cardiomyopathy, and non-invasive imaging, in particular with CMR. He has in-depth training and expertise in CMR, and has extensive experience with basic science, translational and clinical research. He currently supervises postgraduate students and is conducting several single-centre mechanistic clinical studies, and international clinical trials, which are mostly CMR-based. Through his research, he has built strong links with colleagues in clinical cardiology, physics and biomedical engineering, tuberculosis and HIV medicine, rheumatology, immunology, molecular genetics, and biomedical statistics; and has shown capacity for performance in scientific investigational teams and is suited to being part of multi-disciplinary and multi-centre clinical studies. To date, he has published 157 articles, 2 guidelines, 10 book chapters and 261 peer-reviewed conference proceedings. He has 3,965 citations, an h-index of 29 and an i10-index of 53. In the past 10 years, he has attracted research funding more than R150 million rands.

His key contributions to science have occurred in five domains. First, he has been involved in novel description of the clinical features, outcomes, and genetic underpinnings of cardiomyopathy in South Africa, with several novel genes identified. For example, he was the first to demonstrate differences in clinical characteristics and outcomes in patients with familial and idiopathic dilated cardiomyopathy in Africa (Ntusi NBA, et al. Clinical characteristics and outcomes of familial and idiopathic dilated cardiomyopathy in Cape Town: a comparative study of 120 cases followed up over 14 years. SAMJ 2011;101(6):399-404). Second, he has led innovative applications of CMR in the study of cardiovascular structure and function, myocardial perfusion, 4-dimensional flow imaging, HIV-associated cardiovascular disease, and imaging in obesity. An exemplar was the first publication demonstrating feasibility and safety of a high-dose adenosine perfusion CMR, which has been highly cited, and established the standard of practice (Karamitsos TD, Ntusi NAB, et al. Feasibility and safety of high-dose adenosine perfusion cardiovascular magnetic resonance. JCMR 2010;12:66). Third, his work has improved understanding of imaging biomarkers, phenotypes, and pathogenesis of inflammatory heart disease. For instance, in rheumatoid arthritis, he demonstrated that subclinical cardiovascular disease is common with focal and diffuse myocardial fibrosis and inflammation, associated with disease activity and impairment in myocardial deformational characteristics (Ntusi NAB, et al. Diffuse myocardial fibrosis and inflammation in rheumatoid arthritis: insights from CMR T1 mapping. JACC Img 2015;8:526-536). Fourth, he and colleagues were the first to publish on systematic application of CMR and magnetic resonance spectroscopy (MRS) to understand the biology of HIV-associated cardiovascular disease. They described what has become axiomatic understanding of a high burden of cardiac steatosis, fibrosis, and alterations in cardiac function in individuals living with HIV on antiretroviral therapy without known cardiovascular disease (Holloway CJ, Ntusi N, et al. Comprehensive cardiac magnetic resonance imaging and spectroscopy reveal a high burden of myocardial disease in HIV patients. Circulation 2013;128(8):814-822). Finally, he has contributed significantly on how the use of CMR may improve assessment of myocardial inflammation, fibrosis and infiltration, with some of the earliest publications in these areas. For example, the first publication on application of CMR T1

mapping to stratify phenotypes of amyloidosis has been cited over 500 times and been considered the standard of practice (Karamitsos TD,... Ntusi NAB, et al. Noncontrast T1 mapping for the diagnosis of cardiac amyloidosis. *JACC Img* 2013; 488-497).

Professor Ntusi has been the recipient of numerous distinctions, fellowships and awards including the UCT Frank Forman Prize (2003), Mail and Guardian's 200 Most Influential Young South Africans Award (2011), National Research Foundation of South Africa Emerging Researcher Award (2015), National Research Foundation Science Team Award (2017), Walter Siegenthaler Medal (2019) and Fellowships from the Royal College of Physicians and the Royal Society of South Africa (2020).

Professor Karen Sliwa-Hahnle

Department of Medicine

Professor Karen Sliwa is a clinician researcher and the Director of the Cape Heart Institute (CHI) (formerly the Hatter Institute) of the Faculty of Health Sciences at UCT. Under her leadership CHI has expanded to more than 100 staff and postgraduate students. Karen has authored more than 350 publications and has an h-index of 84. She is an editorial consultant/board member of several prestigious journals including the Lancet, the European Heart Journal, Nature Reviews Cardiology, and the European Journal of Heart Failure.

Professor Sliwa is the recipient of Fellowships from the European Society of Cardiology and American College of Cardiology. She has received numerous prestigious awards, including the German Cardiac Society Paul Morwitz Award for Exceptional Cardiovascular Research (2013), an Honorary Doctorate from University Diderot-Sorbonne, Paris (2017), European Cardiac Society Geoffrey Rose Award for Population Sciences (2019) and the South African Medical Research Council Gold award (2020). She was President of the World Heart Federation (2019-2020) and is currently Vice-president of the Southern Region of the Pan African Society of Cardiology.

Professor Sliwa's major work is the establishment of a large prospective cohort study, the seminal Heart of Soweto Study, which reported on the prevalence, presentation and management of cardiac disease in an urban African population – these novel findings had major implications for the burden of cardiovascular disease in Africa, resulting in a publication in the Lancet in 2008. This cohort study has led to >25 publications describing e.g., the impact of HIV on cardiovascular disease, the prevalence of rheumatic heart disease diagnosed in adulthood, and the spectrum of conditions leading to heart failure. Under the umbrella of the 'Heart of Africa Studies', Professor Sliwa designed and implemented several multicentre, multi-country cardiovascular population studies in African such as the THESUS acute heart failure study, the BEHAF acute heart failure intervention study, the PAPUCO Pulmonary Hypertension in Africa study- amongst others (Damasceno et al. Arch Int Med 2012; Sliwa et al. Lancet 2016)

She has made major contributions to understanding the pathophysiology, treatment options and awareness of peripartum cardiomyopathy, a global disease particularly prevalent in African populations (Sliwa et al. Eur J Heart Fail 2010). She initiated and led research on a novel therapeutic option for peripartum cardiomyopathy, bromocriptine, which reduced morbidity and mortality. Her finding has been confirmed by others and has been included in guideline, resulting in a major impact on the health of women with peripartum cardiomyopathy (Sliwa et al. Eur Heart J 2020). To date bromocriptine is the only proven specific intervention for peripartum cardiomyopathy.

Professor Sliwa's status as a world leader in cardiovascular disease research is evidenced by her status as the Principal Investigator of the World Heart Federation's Global Study on COVID-19 and cardiovascular disease (20-country participation) and of the European Cardiac Society's international cohort study on peripartum cardiomyopathy (54-country participation).

The following member of the Faculty of Law has been elected to a fellowship.

Professor Hanri Mostert

Director: Research in Law and Society

Hanri Mostert is a Professor in the Faculty of Law, a position she has held since 2008. She holds also the prestigious NRF/DST SARChI Research Chair for Mineral Law in Africa (MLiA), a Research Chair sponsored by the National Research Foundation and the Department of Science and Technology. The MLiA Chair is now in its second 5-year cycle.

The brief for the position Professor Mostert currently holds, as SARChI Research Chair: Mineral Law in Africa has been to develop the discipline of Mineral Law in Africa, focusing specifically on the growing of African expertise at postgraduate and especially doctoral level. In pursuing the goals of this position, she has established an extensive network of African scholars. They collaborate on matters pertaining to an area of the law which is of utmost importance to the African continent, yet severely under-researched.

Professor Mostert approached her special interest in natural resource law (minerals, oil and gas, to be specific), from the broader yet strongly theorised discipline of Property Law. Her interest in Property Law related primarily to the public-law aspects thereof. Her doctoral work concerned the interpretation of constitutional property provisions, from a legal-comparative perspective. She was supervised at Stellenbosch University by the world-renowned Property Law scholar, Prof C G van der Merwe, and Prof J.M. Pienaar, who is widely regarded as the leading expert on land reform law in South Africa, and internationally highly acclaimed for her work in this field.

The law pertaining to minerals and mining is an area of expertise that requires insight into a wide range of other legal subdisciplines, from administrative and constitutional law, through mercantile and labour law, to property and contract negotiation. It is an area of the law which renders itself excellently placed for multidisciplinary collaboration. Professor Mostert has harnessed the potential of this subject to collaborate with colleagues from universities in Africa and abroad, in fields of law, engineering, science and economics. Some of the results of these collaborations are documented in the series of MLiA Occasional Papers (included among publications). Others are expressed in working papers and conferences. Professor Mostert has availed herself and the considerable capacity of her SARChI Chair to participate in large-scale interdisciplinary projects in respect of e.g. the rehabilitation of degraded mine-land, intragovernmental co-operation, mining and waste, and green mining. Details are included in the CV and supporting documents.

Professor Mostert has taught property law – which she describes as her "first love" – at the basic and advanced undergraduate levels, as well as at masters' level, for over fifteen years. Although the award of the SARChI Research Chair has shifted her deliverables solely to the minerals, oil and gas context, she continued to teach an LLM course in Property Law Theory (Property Law in a Constitutional Order) and supervised postgraduate research degrees in property-related topics until recently. Expanding operations of the SARChI Research Chair are limiting her input in this regard at present, but she remains an active participant in the Rethinking Expropriation expert group, operating from Groningen University, as well as the Progressive Property Scholars' reading group in the United States.

Professor Mostert's early-career exposure, while building a body of research, allowed her to become acquainted with both Common and Civil Law systems. These were opportunities presented, e.g. by her tenure as a Commonwealth Fellow (2006, Reading University, United Kingdom) and Von Humboldt Fellow (2006-2008, Freiburg University, Germany); and also her seven-year long position as a Visiting Professor at the Rijksuniversiteit Groningen in the Netherlands. The work emanating from these opportunities are mentioned in her publications list and should demonstrate the breadth of her comparative work with different legal systems.

In her position as SARChI Chair for Mineral Law in Africa, Professor Mostert has harnessed the abovementioned skills to devise a programme of research based on comparative legal methodology that involves a large number of different African jurisdictions across the Anglophone, Lusophone and Francophone legal systems of Africa. The programme will see the publication of several jurisdiction-specific books, and even more comparative work on various topics related to the extractives industry and the legal frameworks supporting it. Examples of such work are already present in her publications list (e.g. the collaborative work on Corporate Social Responsibility in the Mining Sectors of Africa, Namibia and Zambia).

FACULTY OF HEALTH SCIENCES

Dean: Associate Professor LP Green-Thompson

DOCTOR OF PHILOSOPHY

Abdelwahab, Mahmoud Tareq Ashour Thesis Title: *Population pharmacokinetic and pharmacodynamic modelling to improve tuberculosis treatment*

Mahmoud Abdelwahab holds а bachelor's degree in Pharmaceutical Sciences from the Faculty of Pharmacy, Helwan University, Egypt. He joined the pharmacometrics laboratory of within the Division Clinical Pharmacology in March 2018. Mahmoud Abdelwahab's thesis focuses on describing the concentrations and evaluating the safety of drugs used in adult patients with tuberculosis (TB). He applied mathematical and statistical models to analyse and interpret data from various clinical studies conducted in Africa. First, he described the pharmacokinetics of the drugs isoniazid, pyrazinamide and ethambutol during and after pregnancy. He then investigated how the concentrations of the newlyapproved TB drug pretomanid differ when given with ryfamicins, a class of potent anti-tuberculosis drugs. Then, he described drug concentrations and cardiac safety of clofazimine, a drug with a crucial role in TB treatment. He used mathematical simulation to explore different dosing scenarios that maximise efficacy and minimise patient risks. Lastly, Mahmoud Abdelwahab described the exposure of linezolid, a cornerstone drug against drug-resistant TB, and evaluated its safety following different dosing regimens in patients with TB.

Supervisor: A/Professor P Denti (Medicine)

Adewole, David Ayobami

Thesis Title: Geospatial patterns and determinants of choice of secondary health care facilities among National Health Insurance enrolees in Ibadan, Nigeria

David Adewole holds an MBChB from Obafemi Awolowo University Ile-Ife Nigeria and an MSc from the London SchoolofEconomicsandPoliticalScience, United Kingdom. He lectures in health policy and public health at the College of Medicine University of Ibadan, Nigeria.

David Adewole's thesis focuses on the uneven distribution of health care facilities and enrolees in these facilities under the National Health Insurance Scheme of Nigeria (NHIS) and the factors determining this distribution. Using mixed methods, the study uses geographic information systems to describe the geospatial distribution of health care facilities and enrolees. Quantitative and qualitative data were collected from selected enrolees to understand the reasons for their choices, together with further information from representatives of health maintenance organisations and NHIS officials. The study shows that low uptake of the NHIS among potential scheme beneficiaries can be attributed to low levels of trust in the working relationships between major stakeholders of the Nigerian health system. Strategies to build the trust of the public in the NHIS and the Nigerian health system in general is one of the ways to improve enrolment in the NHIS, thereby improving population health status and outcomes.

Supervisor: Professor S Reid (Public Health and Family Medicine) Co-supervisors: A/Professor T Oni (Public Health and Family Medicine); Dr SA Adebowale (University of Ibadan, Epidemiology and Medical Statistics)

Agbettor, Elizabeth Ladjer Bibi Thesis Title: Livelihoods development in the informal sector: the experience of women with vision impairments in Ghana

Elizabeth Ladjer Bibi Agbettor holds an MA in Development Studies from the

University of Ghana, Accra-Ghana. She has worked as an inclusive development practitioner for the Ghana Blind Union for 16 years. Her PhD provided an opportunity to consolidate her life-long learning with women with vision impairments.

Elizabeth Agbettor's thesis focuses on the livelihood development experience of women with vision impairments in the informal sector of Ghana. She investigates how livelihood development strategies offered by three service providers in the informal sector provided limited opportunities for self-employment and economic empowerment of these women. She theorises that non-involvement of women with vision impairments in service design, implementation and monitoring contributes to the exclusion of their unique needs for livelihoods development. Factors such as insufficient inclusive policy implementation, social protection interventions, negative societal attitudes and misconception about blindness also compounds the burdens of women with vision impairments in development. Elizabeth livelihoods Agbettor developed Inclusive an Livelihoods Development Framework as a guide for inclusive development studies for practitioners, researchers service providers and policymakers, not only in Ghana, but in Africa as a whole.

Supervisor: Professor T Lorenzo (Health and Rehabilitation Sciences) Co-supervisor: Adjunct Professor L Cockburn (University of Toronto, Occupational Science and Occupational Therapy)

Beckley, Samantha Joy Thesis Title: *Exploring a genetic contribution to knee joint laxity*

Samantha Beckley graduated with an MSc in Biochemistry from Rhodes University before joining UCT's Division of Exercise Science and Sports Medicine in 2015 for her PhD studies. Several connective tissue disorders, with joint hypermobility as a common clinical feature, are caused by rare mutations in genes encoding connective tissue components. Common DNA sequence variants within these genes modulate the risk of several connective tissue sporting injuries, including anterior cruciate ligament (ACL) ruptures within the knee. Some of these variants have also been associated with joint laxity measurements, a risk factor of ACL injury. Samantha Beckley's thesis therefore investigates and introduces novel common genetic variants that may regulate knee joint laxity measurements, possibly by affecting the absolute change of ligament length during knee movement. Exploring these genetic loci may help us better understand the aetiology of connective tissue injuries such as ACL ruptures, through the unravelling of how these genetic variants may modulate an individual's knee laxity measurements and risk of injury.

Supervisor: Dr M Posthumus (Human Biology) Co-supervisors: Professor AV September (Human Biology); Professor M Collins (Human Biology)

Chamba, Paulino Samuel Thesis Title: *Work-related asthma among workers in the Mozambique wood processing industry*

Paulino Chamba completed his medical degree at Kharkiv Medical Institute in the Ukraine and obtained an MPH from Eduardo Mondlane University in Mozambique. He enrolled for his PhD in the Occupational Medicine Division of the School of Public Health and Family Medicine in 2015. Paulino Chamba's study investigates the risk of work-related asthma and rhinitis associated with wood dust exposures in Mozambique. The prevalence of asthma was 7% with wood processing workers exposed to high inhalable wood dust particulate, endotoxin and mycotoxin levels. He also demonstrates that certain wood species such as African sandalwood (Spirostachys Africana Sonder) and Mahogany bean (Afzelia quanzensis Welw) as well as factory building characteristics (closed and semi-closed designs) are major determinants of high wood dust levels, while damp cleaning methods are associated with low levels.

Novel findings reveal an increased risk of work-related ocular-nasal symptoms with Missanda (Erythrophleum suaveolens Brenan), Mahogany bean (Afzelia quanzensis Welw) and Panga-panga (Millettia Stuhlmannii Taub) species, while Mutondo (Cordyla Africana) is associated with both ocular-nasal and asthma symptoms. Positive exposureresponse relationships for current and cumulative exposures relative to work-related ocular-nasal and asthma endpoints, suggest acute irritant airway effects accompanied by underlying chronic inflammation.

Supervisor: Professor MF Jeebhay (Public Health and Family Medicine) *Co-supervisor:* Dr R Baatjies (Public Health and Family Medicine)

Currin, Christopher Brian Thesis Title: *Investigating chloride dynamics in neurological processing and epilepsy using computational methods*

Christopher Currin completed his BSc in Biochemistry and Psychology at Rhodes University in 2013. Since then, he has pursued a BSc in Computer Science, BMedScHons in Neuroscience, MScMed in Neuroscience, and PhD in Neuroscience at UCT. Christopher Currin's thesis reports the novel development and application of computational models of chloride dynamics. He uses these models to explore the effects of chloride dynamics on fundamental neurological processing such as a neuron's firing rate and dendritic excitability. He reports how chloride changes at the synapse can affect a neuron's output, which has not been established previously. He goes on to characterise the optimal placement of inhibitory synapses on dendritic trees in a way that accounts for the impact of chloride changes over time. Finally, Christopher has built a spiking neural network model of unrelenting epileptic seizure activity that recapitulates experimental data. This model is the first of its kind and demonstrates its usefulness in suggesting optimal treatment strategies. His results enhance our understanding of the relevance of chloride ion dynamics for both basic neurological functioning and the management of epilepsy.

Supervisor: Dr JV Raimondo (Human Biology)

De Wet, Timothy Jack Thesis title: *CRISPRi-based high-throughput functional genomic approaches for use in mycobacteria*

Timothy de Wet is the first MBChB/PhD student in UCT's Intercalated Clinician-Scientist Training Programme. He began an MBChB degree in 2013, taking time out of clinical training between 2016 and 2019 to complete a BSc(Hons) and a PhD. He will complete his MBChB in 2022.

Timothy de Wet's thesis reports on the development of two high-throughput approaches that can be used to understand genetic function in mycobacteria. He utilised a gene editing technique called CRISPR-interference to create large libraries of mutant bacteria. These libraries were combined with next-generation sequencing, advanced microscopy and machine-learning to study the impact of mycobacterial genes on bacterial viability, and cell shape. The approaches developed in this work represent valuable technical advances and produce large datasets of functional genomic data. Taken individually, or in combination, these methodologies can be utilised to increase fundamental understanding of mycobacteria, including the pathogenic M. tuberculosis.

Supervisor: Professor D Warner (Pathology)

Co-supervisors: Professor M Mhlanga (Integrative and Biomedical Sciences); Professor V Mizrahi (Pathology)

Du Bruyn, Elsa

Thesis Title: *The T cell and inflammatory profile of HIV-1 infected and -uninfected patients with tuberculosis*

Elsa du Bruyn obtained her MBChB degree from the University of Stellenbosch in 2011, and joined the Wellcome Centre for Infectious Diseases Research in Africa (CIDRI-Africa) in 2015 for her PhD studies. Elsa du Bruyn's thesis investigates the evolving T cell and inflammatory profile of HIV-1 infected and -uninfected patients with tuberculosis (TB) undergoing antituberculosis treatment (ATT). She reports that the expression of CD153, a T cell marker of protection against TB in animal models, is significantly lower on Mycobacterium tuberculosis (Mtb)-specific CD4 T cells of patients with active TB, compared to those with latent TB infection (LTBI) and inversely associated with sputum bacillary burden. She demonstrates that successful ATT is associated with specific changes in the phenotype and function of Mtb-specific CD4 T cells and that the activation marker, HLA-DR, is particularly useful to track disease activity. Network analysis of plasma inflammatory markers highlights HIV-1 viraemia as driver of network connectivity during HIV-TB coinfection, with IL-17A related cytokine networks emerging as a significant contributor to HIV-TB associated inflammation.

Supervisor: Professor RJ Wilkinson (Medicine)

Co-supervisor: Dr C Riou (Pathology)

Evans, Robert William

Thesis Title: Innovative spinal cord injury rehabilitation in the context of a middle-income country: a pilot randomised control study investigating physiological and psychological effects

Robert Evans holds a BSc from Rhodes University. He joined the Department of Exercise Science and Sports Medicine at UCT in 2013 where he completed his honours, masters and PhD. studies. Whilst studying, he has worked as a Biokineticist, with a special interest in neurological and orthopaedic outpatient rehabilitation. Robert Evans' thesis focuses

on innovative rehabilitation techniques for individuals paralysed by spinal cord injuries (SCI). He investigates the feasibility of using new rehabilitation technologies, specifically robotic exoskeletons, within the South African context. His thesis primarily focuses on exploring the effects that exoskeleton-based rehabilitation has on an individual's cardiovascular system and psychological well-being. He finds that exoskeletons provide cardiovascular benefits, which in the absence of access to these technologies, may also be achieved through extended standing and aerobic exercise. He further reports that despite experiencing past trauma, participants possessed psychological resources which contributed to high perceptions of quality of life. He extends his research to explore the role of hope after SCI, finding that hope often centres around the desire to walk again, and this could be challenging for clinicians to manage. His findings support the need for larger, randomised control trials to further explore these findings.

Supervisor: Dr Y Albertus (Human Biology) Co-supervisors: Dr S West (Cape Peninsula University of Technology, Sport Management); Professor W Derman (Stellenbosch University, Institute of Sport and Exercise Medicine)

Fouefack, Jean-Rassaire Thesis Title: Towards a framework for multi class statistical modelling of shape, intensity, and kinematics in medical images

Jean-Rassaire Fouefack holds a BSc in Applied Mathematics from the University of Dschang and an MSc Mathematical Sciences in from AIMS-Cameroon. He joined UCT for his master's degree in Biomedical Engineering, and continued his studies through a joint PhD degree between UCT and IMT Atlantique, France. Jean-Rassaire Fouefack's thesis focuses on the development of statistical learning-based models for human joints from medical images. The main contribution is a new mathematical formulation to model musculoskeletal systems by developing a unified computational latent space that embeds shape, kinematics and intensity features from given observations. This new space provides a continuous model capable of generating instances leveraging learnt

feature correlations. A fitting method to apply models developed using this framework to unseen data is also proposed. The complete modeling and prediction framework is validated using bespoke synthetic data, showing that the framework faithfully encapsulates prescribed morpho-functional any relationships between objects, as well as their internal structural information. Finally, the framework is applied to the analysis of shoulder and hip joints from CT. The clinical interest is that the feature correlations learned by the model improve premorbid shape prediction and joint motion estimation accuracy, from two- and three-dimensional medical images.

Supervisor: A/P Tinashe Mutsvangwa and Professor Valerie Burdin *Co-supervisor:* Professor Tania Douglas and A/P Bhushan Borotikar

Giddey, Alexander Dyason Thesis Title: *Differential lipidomic and proteomic responses induced by sub-lethal drug challenge in susceptible and drug resistant Mycobacterium smegmatis*

Alexander Giddey completed his BSc and BScMedHons, and began his MSc at UCT, before upgrading to a PhD in 2015.

Alexander Giddey's thesis examines the effect of sub-lethal dosing of the frontline anti-tuberculosis (TB) drug rifampicin on Mycobacterium smegmatis' protein and lipid composition. Using high resolution liquid-chromatography mass spectrometry, he shows for the first time at the protein level in mycobacteria that both gene transcriptional and protein translational machinery are increased upon sub-lethal rifampicin challenge. By enriching for cell wall proteins, he found the important group of bacterial transport proteins, ABC transporters, to be generally decreased. He additionally found several important virulence factors are dysregulated and he shows that drug-exposed bacteria are empirically less infectious in an in vitro model. Finally, he found that the lipid composition of mycobacteria is strongly altered following drug exposure, likely reducing bacterial drug permeability.

These findings will help in understanding and preventing development of drug resistance.

Supervisor: Professor JM Blackburn (Integrative Biomedical Sciences) *Co-supervisor:* Dr NA da Cruz Soares (University of Sharjah, Medicinal Chemistry)

Gobe, Irene

Thesis Title: Disabling the intrinsic resistome of Mycobacterium tuberculosis: elucidating hierarchies of DNA repair and mutagenesis that undermine current antibiotic efficacy

Irene Gobe completed her MSc at the University of Surrey, UK, and undertook full-time study at UCT towards her PhD from 2016-2020. Irene Gobe's doctoral thesis aims to reveal potential targets for codrugs that might shorten tuberculosis (TB) treatment duration and reduce the risk of drug resistance as part of a novel approach designed to inhibit major DNA repair mechanisms in the causative agent, Mycobacterium tuberculosis. Applying genome-wide transposon mutagenesis and deep sequencing (TnSeq) to defined mutants deficient in UvrB-mediated nucleotide excision repair or DnaE2dependent translesion synthesis, her work identifies conditionally essential genes in core metabolic pathways and elucidates a previously unknown interaction between DNA repair pathways. Her results, which are validated at the single-gene level by CRISPR interference, support the utility of TnSeq-based whole-genome screens in revealing unexpected genegene interaction networks, and provide additional impetus to explore ancillary, non-essential metabolic functions as targets for novel combination therapies designed to cripple intrinsic mechanisms of mycobacterial resistance.

Supervisor: Professor D Warner (Pathology)

Co-supervisors: Professor V Mizrahi (Pathology); Professor TR Ioerger (Texas A&M University, Computer Science & Engineering)

Hardcastle, Natasha Sema Thesis title: Using SNAP tagbased antibody fusion proteins for immunofluorescence imaging of triple-negative breast cancer

Natasha Hardcastle completed her BSc, BSc(Hons) and MSc (Neuroscience) qualifications at UCT and began fulltime study towards her PhD in 2017. Natasha Hardcastle's thesis reports binding of fluorescently labelled SNAP tag-based antibody fusion proteins using different triple negative breast cancer (TNBC) cell lines. She goes on to investigate the efficient use of such labelled fusion proteins for the development of immunofluorescence imaging methods on publicly available samples from patients with breast cancer. This allows her to confirm the expression of cell surface receptors specific for TNBC on South African patient samples and confirms differential overexpression of these biomarkers in comparison to originating non-tumour tissue. Finally, these findings are useful for development of targeted downstream treatment of South African patients with TNBC, and potentially contribute towards reducing the mortality rate due to improved detection.

Supervisor: Professor Dr Dr S Barth (Integrative Biomedical Sciences)

Higgins, Ghodeejah

Thesis Title: *Studying the role of mechanical properties of cancer cells in tumour detachment, migration and secondary tumour formation*

Ghodeejah Higgins obtained a BEng in Mechanical Engineering from StellenboschUniversityin2015.Shejoined UCT's Department of Human Biology in 2016 to study towards an MSc(Med) in Mechanobiology and upgraded to a PhD in Biomedical Engineering in 2018.

Ghodeejah Higgins' thesis investigates how the cytoplasmic stiffness, cytoskeletal content and oncogenic potential of malignant cells change during migration and tumour formation in melanoma and breast cancer. Comparing melanoma cells at different disease stages, she observes that the stiffness of isolated cells decreases in two-dimensional but increases in threedimensional environments with disease progression whereas cells in clusters (tumours) do not change their stiffness. She further observes that the expression of the oncogenic factor TBX3 in latestage melanoma cells decreases as the rigidity of the cellular environment increases. For breast cancer, she determines that the cytoplasmic stiffness decreases when cells detach and migrate away from a tumour, for example in order to invade a different location in the body to metastasise. Her findings demonstrate the potential and importance of studying mechanical in addition to molecular and genetic mechanisms to improve our understanding and treatment options for cancer.

Supervisor: Professor T Franz (Human Biology)

Co-supervisors: Dr J Peres (Human Biology); Professor MH Zaman (Boston University, Biomedical Engineering)

Human, Anri

Thesis Title: *The effect of inspiratory muscle training on clinical outcomes and health-related quality of life in children with neuromuscular disease and respiratory muscle weakness*

Anri Human holds Bachelors and Master's degrees in Physiotherapy and a Postgraduate Certificate in Higher Education from the University of Pretoria. She is a full-time physiotherapy lecturer at the Sefako Makgatho Health Sciences University. She completed her PhD on a part-time basis through the Department of Health and Rehabilitation Sciences.

Anri Human's thesis focuses on the safety and efficacy of inspiratory muscle training in South African children with neuromuscular disease and associated respiratory muscle weakness. Results from an initial survey study of South African physiotherapists and a systematic review of the literature inform the development of an inspiratory muscle training protocol, which is first tested for safety and feasibility in a preexperimental study before implementing a prospective, randomised, cross-over trial. This trial confirms that inspiratory muscle training in children with neuromuscular disease is safe, feasible and has high levels of adherence and participant satisfaction. Furthermore inspiratory muscle training is associated with significant improvements in inspiratory muscle strength and cough efficacy, which may improve health and well-being amongst these children. These findings can be used to guide clinical practice and form the foundation for further research.

Supervisor: Professor BM Morrow (Paediatrics and Child Health)

Jabar, Ardil

Thesis Title: *The Cape Town Violence and Injury Observatory (VIO): validity and utility of data sources for a prevention-oriented VIO in urban Cape Town, South Africa*

Ardil Jabar is a registered medical doctor with six years general surgery and emergency medicine experience working in Palestine, Ireland, KwaZulu Natal and the Western Cape. He received distinctions for master's degrees in both Disaster Medicine from Italy's University of Del Piemonte Orientale and Public Health from UCT.

Ardil Jabar's thesis focuses on evaluating the VIO model as an intervention to reduce violence, and providing an evidence-based method to develop a VIO in South Africa. He evaluates the effectiveness of VIOs to reduce violence using the systematic review method - the first such evaluation in approximately 30 years. Drawing from an expert panel of violence reduction stakeholders he uses the Delphi method to identify the necessary research infrastructure and governance structures to guide the establishment of a VIO in the City of Cape Town. His final study demonstrates the utility of combining data on violence and injuries from different sources in a local setting. This study, which matches violence-related crimes reported to three police stations in Khavelitsha with cases reported to three health facilities for the corresponding time period, identifies an overall 82% increase in violent crimes and the characteristics of violent crime most likely to be underreported.

Supervisor: Professor R Matzopoulos (Public Health and Family Medicine) *Co-supervisors:* Professor L London (Public Health and Family Medicine); A/Professor M Engel (Medicine); A/Professor T Oni (Public Health and Family Medicine)

Kamkuemah, Monika Ndamanomagano Thesis Title: *The epidemiology of chronic non-communicable diseases (NCDs) and NCD risk factors in adolescents and youth living with HIV in Cape Town, South Africa*

Monika Kamkuemah completed her BBusSc and MPH at UCT and began full-time study towards her PhD in 2016. Before commencing her PhD, she worked on health systems strengthening, supporting local governments in Gauteng and Limpopo with primary health care reengineering and district health planning.

Monika Kamkuemah's thesis explores HIV and non-communicable disease (NCD) comorbidity and risk factors in adolescents and youth living with HIV in Cape Town, who are vulnerable to largely preventable NCDs. She investigates the prevalence of NCDs and risk factors including mental health hypertension, conditions, obesity, physical inactivity, diet, nutritional knowledge, smoking, alcohol and substance abuse in these adolescents across nine primary care facilities in Cape Town townships. Using a multilevel, socio-ecological approach, she integrates her findings to propose an integrated model to prevent and better manage NCD multimorbidity in adolescents and youth living with HIV. Her model, which incorporates physical, socio-cultural and environmental factors that drive health behaviours and outcomes, will be useful to inform the design of integrated models of care breaking siloed approaches to healthcare and improving broader health outcomes of young people.

Supervisor: A/Professor T Oni (Public Health and Family Medicine) Co-supervisor: Dr K Middelkoop (Medicine) Karen, Kengne Kamga Thesis Title: *Return of a Fragile X Syndrome genetic result: exploring the feedback of individual genetic findings and their relation to traditional knowledge in a village in Cameroon*

Kengne Karen holds a Doctor of Medicine degree from the University of Yaounde I, Cameroon. He joined the Faculty of Health Sciences at UCT in 2018 to complete a PhD in Genetic Counselling.

Kengne Karen's thesis uses an ethnographic approach to examine the impact of giving back positive Fragile X Syndrome (FXS) results in a rural Cameroonian family with several members affected by variable degrees of intellectual disabilities. He starts by conducting a scoping review of people living with FXS. He then conducts a qualitative research study that extends to ancillary care, including counselling and testing for FXS in this rural Cameroonian community. The pedigree analysis indicates that the royal family founder was a probable normal transmitting male. Moreover, the research reveals four explanatory models that family members and community members use to describe FXS, and reports a stigmapower dynamic between the community members and the royal family. His thesis shows that genetic information is understood and interpreted in ways that match people's pre-existing disease explanatory beliefs and frameworks.

Supervisor: Professor A Wonkam (Medicine) Co-supervisor: A/Professor J De Vries (Medicine)

Kasu, Sandra Wadzanayi Thesis Title: *Exploring pathways to work through skills development in sport for youth with intellectual disabilities in metropolitan Zimbabwe*

Sandra Kasu completed a BSc in Occupational Therapy at the University of Pretoria in 2006. She also studied for a Master of Science in Special Needs Education at the Zimbabwe Open University, graduating in 2013. Sandra Kasu's thesis aims to

explore how participation in activities related to sports organisations and events enables youth with intellectual disabilities to access livelihood opportunities to become economically active. Using qualitative research methods, she finds that there are work opportunities for youth with intellectual disabilities who participate in sports, however, these remain as lost opportunities as they are not fully utilised. The youths have potential enablers for employability but are not given access to work opportunities. Furthermore, the remote location of their vocational training centres renders these youths invisible to potential employers. This study establishes that parents need to take the initiative regarding the livelihoods' development of their children with intellectual disabilities. The youths and their parents need to take collective action and find their political voice to advocate for skills training and work opportunities to training centres, the community, potential employers and the government.

Supervisor: Professor T Lorenzo (Health and Rehabilitation Sciences) Co-supervisors: Dr A Sonday (Health and Rehabilitation Sciences); Dr T Mlambo (University of Zimbabwe, Occupational Therapy)

Kerschberger, Bernhard

Thesis Title: *The feasibility and effectiveness of universal antiretroviral therapy provision in adults: the Treat-All approach in the public-sector in rural Swaziland*

Bernhard Kerschberger is a medical doctor who holds a Master of Public Health from the University of Manchester. He joined the School of Public Health and Family Medicine at UCT in 2016 for his PhD studies while he continued working for the HIV/TB programme of Doctors without Borders in Eswatini. Bernhard Kerschberger's thesis focuses on the feasibility and effectiveness of universal antiretroviral therapy provision for people living with HIV – known as the Treat-All approach - particularly in the context of Eswatini. Firstly, he investigates HIV care outcomes before the implementation of

this new approach. Secondly, he describes treatment uptake and health outcomes of patients accessing care under Treat-All. Finally, he assesses the impact of HIV treatment expansion on the TB epidemic as a marker of population-level impact. His work concludes that the Treat-All approach is feasible in the public sector, with antiretroviral treatment initiation being high, health outcomes favourable and TB notifications declining. Starting antiretroviral treatment on the same day as HIV care enrolment may however require caution and careful consideration of which patients might benefit. His research contributes to ongoing health policy discussions and HIV care programme expansion in resource limited settings.

Supervisor: Professor A Boulle (Public Health and Family Medicine) Co-supervisor: Dr. rer. nat. M Schomaker (Public Health and Family Medicine)

Kgoadi, Khanyisile

Thesis Title: *The characterisation of dendritic cell, microglial, macrophage, and T cell responses during mycobacterial infection of the central nervous system*

Khanyisile Kgoadi completed her BSc at the University of Johannesburg, followed by a BSc(Hons) and MSc from the University of Pretoria. In 2015, she began full-time study towards her PhD in Clinical Science and Immunology at UCT.

Khanyisile Kgoadi's thesis investigates the role of immune cells that are recruited to the brain and cervical lymph nodes during central nervous system tuberculosis (CNS-TB) to elucidate mechanisms associated with this deadly form of tuberculosis. Her work provides new knowledge and mechanistic insights into the phenotypes and functional profiles of antigen presenting cells (dendritic cell, microglia, and macrophages) and T cells (CD4+ and CD8+ T cells) that contribute to protection against CNS-TB. Her work primarily focuses on the effects of dendritic cell (DC) modulation of T cells during immune protection against CNS-TB. She demonstrates that conventional DCs rather than plasmacytoid DCs induced T-helper 1 and regulatory T cell cytokine responses that offers protection against infection. Her work suggests targeting DCs for strategic therapeutic intervention will lead to improved host-directed therapy and vaccine development beneficial against CNS-TB.

Supervisor: Professor M Jacobs (Pathology) Co-supervisor: Dr R Keeton (Pathology)

Kodogo, Vitaris

Thesis Title: Characterisation of cardiac remodeling associated with pregnancy: providing insights to peripartum cardiomyopathy

Vitaris Kodogo holds a bachelor's in Biotechnology and a Master of Philosophy in Health Sciences from the University of Zimbabwe. He worked as a laboratory technologist in a pharmaceutical industry in Zimbabwe before joining UCT in April 2017 to pursue his PhD studies at the Hatter Institute. Vitaris Kodogo's thesis focuses on understanding the functional, structural and molecular changes that are involved in healthy pregnancy induced cardiovascular changes and the reverse remodeling process. He uses in vivo and in vitro models to investigate mechanisms employed by the heart to adapt to increased stress during pregnancy. He starts by monitoring heart function and morphological changes at different time points during pregnancy and postpartum in mice. A proteomic study on the hearts allows him to identify proteins and signalling pathways that are involved in regulating cardiovascular changes associated with pregnancy. The identified set of proteins could be used to monitor for any deviations from normal to pathological conditions during pregnancy. Furthermore, he also investigates the role played by pregnancy hormones in regulating cardiovascular changes.

Supervisor: Professor K Sliwa-Hahnle (Medicine)

Co-supervisors: Professor S Lecour (Medicine) and Dr F Azibani (Medicine) Le Roux, Stanzi Maria Thesis title: Growth, infectious morbidity, and neurodevelopment of HIV-exposed and HIV-unexposed infants in the context of lifelong maternal antiretroviral therapy and breastfeeding: a prospective cohort study

Stanzi le Roux holds an MBChB from Stellenbosch University and an MPH from UCT. She joined the School of Public Health and Family Medicine for doctoral studies in 2014. Before commencing her PhD research project, she worked in various paediatric HIV and tuberculosis trials as clinician and researcher. le Roux's thesis Stanzi compares the health outcomes of HIVexposed uninfected (HEU) infants of women living with HIV who received unrestricted antiretroviral therapy (ART) in pregnancy, to those of HIVunexposed (HU) infants of HIV-negative women from the same community. She enrolled pregnant women and followed them up with their breastfeeding babies until 12 months after birth, using repeated measurements to assess growth, infectious illness, and adverse exposures including maternal alcohol abuse, intimate partner violence and poor living conditions. Development was tested at 1 year of age. Compared to similar studies conducted prior to the widespread availability of maternal ART, HEU infants in this study are reported to have significantly improved health outcomes, with no differences by HIV status among optimally breastfed, fully vaccinated infants. Late ART initiation and failure to suppress HIV virus in pregnancy increases the risks of growth faltering, severe infectious illness, and developmental delays among HEU infants.

Supervisor: Professor L Myer (Public Health and Family Medicine) Co-supervisor: Professor KA Donald (Paediatrics and Child Health)

Lombard, Wayne Thesis Title: *Monitoring wellness, training load and neuromuscular performance: implications for assessing athlete training status*

Wayne Lombard holds a Bachelor of Sports Science and Honours in Biokinetics from the University of Kwazulu-Natal. While obtaining his MPhil degree at UCT, he worked at the High-performance Centre of the Sports Science Institute of South Africa. He has since worked with various Olympic level athletes around the world.

Wayne Lombard's thesis focuses on the process of monitoring athlete readiness-to-train, through the implementation of various monitoring strategies. An important focal point of his thesis is to ensure that these monitoring strategies can be applied in a real-world elite athlete setting. To make this transition from the laboratory to an applied field-based setting he investigates the use of neuromuscular performance measures, validity, and reliability in identifying meaningful changes in athletes training statuses. Furthermore, the use of wellness questionnaires as well as various objective and subjective training load variables are also investigated. Once extending his research to elite level athletes, he is able to establish the effectiveness of these monitoring strategies in athletes who are actively preparing for various world tournaments.

Supervisor: Professor MI Lambert (Human Biology)

Mahura, Olebeng Olive Thesis Title: *The acquisition of Setswana phonology in children aged* 2;0-6;5 years

Olebeng Mahura holds BSc and MSc degrees in Speech-Language Pathology from UCT. She is a speechlanguage therapist and lecturer in the Department of Health and Rehabilitation Sciences, and a co-director of Child Language Africa, a research unit focused on children's language development in sub-Saharan Africa.

Olebeng Mahura's thesis describes children's speech development in two dialects of Setswana. She describes the emergence of speech sounds and patterns in children aged between 2 and 7 years, providing a muchneeded 'blueprint' for how typicallydeveloping children acquire Setswana. This information is important for speech and language therapists and educators to help them evaluate children's speech, and identify any difficulties. This will ensure that those with speech sound disorders receive appropriate intervention. especially since the negative impact of speech disorders on a child's academic success and psychosocial wellbeing is well known. The study reports that most of the Setswana speech sounds are acquired as early as $2\frac{1}{2}$ years, with speech accuracy increasing with age. In addition to the normative data provided by this study, the thesis contributes the first assessment of Setswana speech acquisition for use by local clinicians, and detailed case studies of Setswanaspeaking children with speech difficulties.

Supervisor: A/Professor M Pascoe (Health and Rehabilitation Sciences) Co-supervisor: Honorary A/Professor H Brookes (African and Gender Studies, Anthropology and Linguistics)

Majara, Lerato Charlotte Thesis Title: *A genome-wide association study of schizophrenia in the South African Xhosa and generalizability of polygenic risk score across African populations*

Lerato Majara completed her BSc at UCT before joining the Division of Virology to complete a BSc(Hons) and an MSc in the same discipline. She enrolled in the Division of Human Genetics for her PhD studies in 2017.

Lerato Majara's thesis reports on the genetic basis of schizophrenia in the indigenous South African Xhosa population. Using a genome-wide association study design she identified a gene that may be of particular importance for the biology of schizophrenia in this population. Further, she investigates how well polygenic risk scores computed from European populations predict schizophrenia and anthropometric traits in and across various African populations. She finds that the prediction accuracy of polygenic risk scores is impacted by genetic ancestry and environmental factors. Findings from her PhD will be useful in future studies identifying genetic markers for schizophrenia in populations underrepresented in current large-scale genomics studies, and highlights the need for studies to include samples that represent the breadth of genetic and environmental diversity on the African continent.

Supervisor: Professor R Ramesar (Pathology) Co-supervisors: Professor D Stein

(Psychiatry and Mental Health), A/Professor E Chimusa (Pathology)

Matobole, Matthew Relebohile

Thesis Title: *Proteogenomic analysis to elucidate keloid disease pathogenesis during the wound healing process using sequential time point analysis*

Relebohile Matobole holds a BSc in Biotechnology from the National University of Lesotho. He subsequently obtained his MSc Biotechnology from the University of the Western Cape. Since July 2017, he has been working full time on his PhD thesis at UCT and aims to publish a significant original manuscript. Relebohile Matobole's thesis, for the first time, focuses on

proteogenomic analysis of temporal keloid scarring in human skin. His work successfully integrates proteomic and transcriptomic signatures in multiple tissue biopsies in order to identify and decipher possible molecular mechanisms implicated in keloid formation. He meticulously evaluates sequential time point analysis of wound healing in human keloid scars compared with normal skin, scars and FKN. His detailed analysis probes this unique gene and protein data using several reverse engineering prediction/statistical models and looks for molecular culprits and putative targets of interest in keloids. He then identifies novel pathways and potential candidate genes involved in keloid formation. His findings are further corroborated by specific gene and protein verification of relevant focused targets. In summary, his work provides fresh new insights and better understanding of keloid pathogenesis and suggests possible ideal time points for keloid treatment.

Supervisor: Professor NP Khumalo (Medicine) Co-supervisor: Professor A Bayat (Medicine)

Mpande, Cheleka Anne-Marie Thesis Title: Characterisation of T cell specificity, functional, activation and memory profiles associated with QuantiFERON TB Gold conversion and reversion

Cheleka Mpande completed her BSc in Biochemistry and Microbiology in 2012, and BScMedHons in Infectious Diseases and Immunology in 2013 at UCT. She began full-time study towards her MScMed in 2014, and subsequently upgraded to doctoral studies in 2017.

Mycobacterium tuberculosis is thought to cause life-long chronic infection in most individuals. Progression to disease occurs in 5-10% persons, most frequently after recent infection. Available diagnostics cannot distinguish healthy individuals at high risk of disease from those who have cleared infection. Cheleka Anne-Marie Mpande identifies a novel subset of M. tuberculosis-specific T cells associated with long-term memory, which could be an important target for novel vaccines. She defines a biomarker based on T cell activation that distinguishes individuals with recent tuberculosis infection from those with remote infection, that may enable targeted provision of preventative therapy to recently infected individuals who are at high risk of disease. She then characterises immune responses consistent with infection clearance or control in a subset of remotely infected individuals. Her findings challenge interpretation of current diagnostics for M. tuberculosis infection and significantly contribute to the understanding of the spectrum of M. tuberculosis infection.

Supervisor: A/Professor E Nemes (Pathology) Co-supervisors: Professor T Scriba (Pathology); Dr V Rozot (Pathology)

Mufweba, Alexis Joy Thesis Title: *The identification and characterisation of novel breast cancer therapeutics*

Alexis Mufweba holds a BSc in Biochemistry and Microbiology and a BSc(Hons) and MSc in Plant Molecular Biology from UCT. In 2014, she registered for a PhD in the Department of Human Biology.

Alexis Mufweba's thesis focuses on the identification of new drugs and drug targets for the treatment of breast cancer. She investigates the potential anti-breast cancer activity of drugs initially designed for the treatment of malaria. Using various experimental techniques, she identifies two promising drug candidates and goes on to further characterise these drugs in order to gain a better understanding of their effects and mechanisms of action in breast cancer. Furthermore, she investigates ways of inhibiting a protein, TBX2, shown to be critical in the development of several breast cancer types. To this end she seeks to identify and characterise genes that are affected by TBX2 and proteins that interact with it, thereby contributing to its cancer-promoting role in breast cancer. She identifies one gene and three proteins that may serve as novel targets to treat breast cancer.

Supervisor: Professor S Prince (Human Biology)

Co-supervisor: Professor K Chibale (Chemistry)

Muhwava, Lorrein Shamiso Thesis title: Formative research for the development of an appropriate, acceptable and feasible intervention aimed at reducing type 2 diabetes risk in disadvantaged women after gestational diabetes in South Africa

Lorrein Muhwava holds a BSc(Hons) degree in Biological Sciences (cum laude) from the University of KwaZulu-Natal and an MPH from UCT. She joined the Chronic Diseases Initiative for Africa (CDIA) at UCT in 2015 and began her PhD studies. Lorrein Muhwava's thesis explores the current health policies and clinical practices in the management of gestational diabetes (GDM) in South Africa and investigates women's lived experiences of GDM. She uses qualitative methodologies to identify barriers to and opportunities for a health systems' intervention to reduce the future risk of developing type 2 diabetes among women with GDM. She reports that the current management of GDM is foetalcentric and over-medicalised, focusing on clinical care processes to achieve glycaemic control and safeguard foetal health. She also establishes that postnatal care is lacking and that health policies that directly support continuity of care are urgently needed. Her findings further advocate for the development of tailored behaviour change interventions to target specific factors that influence women's capacity for lifestyle change. Her findings will inform the development and evaluation of a novel integrated health system intervention to be implemented in the public health sector.

Supervisor: Emeritus A/Professor K Murphy (Medicine)

Co-supervisors: Professor N Levitt (Medicine); Professor C Zarowsky (University of Montréal, Public Health and the University of the Western Cape, Public Health)

Muloiwa, Rudzani

Thesis Title: Epidemiology of pertussis in children hospitalised with respiratory tract infection

Rudzani Muloiwa completed his MBChB at the University of Natal and trained as a paediatrician at UCT. He later completed an MSc in Public Health at the London School of Hygiene & Tropical Medicine. Rudzani Muloiwa's thesis reports the high burden of pertussis (or whooping cough) in children hospitalised for severe lower respiratory tract infection. The thesis highlights the high risk of pertussis associated with HIV exposure (HIV-negative babies born to HIV-infected mothers), HIV infection, incomplete vaccination, and in young infants. The study identifies that mothers who are carrying the causative bacteria, Bordetella pertussis, are a key source of pertussis disease in their young babies. In addition, the thesis highlights the limitations of current clinical diagnosis of pertussis, with only a minority of children currently diagnosed according to World Health Organization criteria, emphasising the need for strengthening of laboratory diagnostics. These findings will be useful in planning public health measures to prevent, control and curb resurgent pertussis.

Supervisor: Professor Heather J. Zar (Paediatrics and Child Health) Co-supervisor: Professor Gregory D Hussey (Pathology)

Munambah, Nyaradzai Esther Thesis Title: *Development of a playbased intervention to promote play skills of children with HIV/Aids living in a low resourced setting'*

Nyaradzai Munambah holds a BSc in Occupational Therapy from the University of Zimbabwe, and an MSc in Occupational Therapy from UCT. She registered for her PhD in 2016 and pursued her studies while working full-time as a lecturer at the University of Zimbabwe.

Nyaradzai Munambah's thesis focuses on developing a play-based intervention for children with HIV/ Aids living in a low resourced setting. Through a systematic review, she finds a gap in literature on the play of children with special healthcare needs. Using the Test of Playfulness, she observes children with HIV/Aids playing at various settings, comparing them against age and gender-matched, typically developing children. These play profiles reveal that children with HIV/Aids are significantly less playful outdoors, with significant challenges in their social play. To understand this outcome in context, Nyaradzai Munambah conducts indepth interviews with caregivers of these children. She then extends her inquiry through a two-round Delphi Study with experts in the field, to draw insights on the components of a play-based intervention framework. The play-based intervention framework developed in this study will be useful to occupational therapists and other professionals working with children with HIV/Aids in low resourced settings.

Supervisor: Professor E Ramugondo (Health and Rehabilitation Sciences) *Co-supervisor:* Professor R Cordier (Northumbria University, Social Work, Education and Community Wellbeing)

Mwesiga, Emmanuel Kiiza Thesis Title: *Neuropsychological assessment for first-episode psychosis patients in low resource settings*

Emmanuel Mwesiga is а psychiatrist, who completed both his undergraduate and postgraduate medical specialisation in Uganda. He began his doctoral degree in 2016. Emmanuel Mwesiga's thesis highlights gaps in the current literature that limit routine neuropsychological assessment in patients with first-episode psychosis from low resource settings. He determines that most of the brief tests currently used for research on cognitive impairment in patients with psychotic disorders from low and middle-income countries are inappropriate. Also, the burden, profile and factors associated with cognitive impairment in one low resource setting were markedly different from those described in high-income settings. With this knowledge, he tests how well a smartphone application (NeuroScreen) could perform neuropsychological assessments in first-episode psychosis patients from low resource settings. The NeuroScreen could help overcome human resource limitations for neuropsychological assessment common in low resource settings but needs further work to improve its accuracy.

Supervisor: Professor DJ Stein (Psychiatry and Mental Health) Co-supervisors: Dr N Koen (Psychiatry and Mental Health); Dr D Akena (Makerere University, Psychiatry); Associate Professor Nakasujja (Makerere University, Psychiatry)

Nhunzvi, Clement

Thesis Title: A case study exploring an occupational perspective of social inclusion among young adults dually afflicted with substance use disorder and HIV/AIDS in Zimbabwe

Clement Nhunzvi completed his BSc (Hons) in Occupational Therapy at the University of Zimbabwe. He first joined the Department of Health and Rehabilitation Sciences at UCT for his MSc (OT) qualification. In 2016, he returned, as an African Mental Health Research Initiative (AMARI) Fellow, to commence his PhD studies. Clement Nhunzvi's thesis focuses on occupational perspectives of negotiating social inclusion amongst young adults with a dual affliction of substance abuse and HIV in Harare, Zimbabwe. Applying critical and decolonial perspectives in an instrumental case study design, he describes what social inclusion is for dually afflicted young adults, explicating the contributing factors. He asserts that the dynamic and interconnected processes shaping the everyday realities of social inclusion are significantly influenced by poverty, stigma and limiting dominant discourses. He illuminates how young adults with dual afflictions exert their agency and make diverse occupational choices to facilitate and navigate towards experiences of social inclusion. He theorises 'Activist occupational choice' as a category of occupational choices, for promoting agency. He shows how valuing diverse occupational choices in contexts, defying the taken-for-granted norms of engagement and breaking away from oppressive systems of social exclusion promotes agency and can advance social inclusion.

Supervisor: Professor R Galvaan (Health and Rehabilitation Sciences) Co-supervisors: Dr L Langhaug (University of Zimbabwe); Professor R Harding (King's College London, Palliative Care and Rehabilitation) Nseibo, Job Kofi Thesis Title: *Exploring the experiences of children and youth with mobility impairments in four basic educational settings in Ghana*

Job Kofi Nseibo holds an MSc in Disability Studies degree from the Kwame Nkrumah University of Science and Technology, Kumasi-Ghana. He joined the Division of Disability Studies at UCT in 2016 for his PhD studies. Job Nseibo's thesis focuses on

the experiences of children and youth with mobility impairments in four basic education settings in Ghana. He further investigates how education for children and youth with mobility impairments in the basic school settings were characterised by traditional beliefs about disability, inequality in the basic school curriculum across the school settings and inadequate educational support systems. He finds that negative beliefs about disability and inadequacy of educational support systems contributed to the struggle that children and youth with mobility impairments experienced during their educational trajectories. The findings allowed him to develop an inclusive schooling practices framework that will promote inclusive education in Ghana. The inclusive schooling practices framework will also assist policymakers, stakeholders of education and researchers to promote practices that encourage inclusive education not only in Ghana but in Africa as a whole.

Supervisor: A/Professor J McKenzie (Health and Rehabilitation Sciences) Co-supervisor: Dr J Kelly (Community Safety, Western Cape Government)

Okello, Dickson Rodney Otieno Thesis Title: *The leadership trinity: examining the interplay between healthcare organisational context, collective leadership and leadership effectiveness in the health sector - a multiple case study of district hospitals in the Western Cape Province, South Africa*

Dickson Okello holds a BVetMed degree from the University of Nairobi and an MPH from UCT. He first joined the School of Public Health and Family Medicine at UCT in 2012 for his master's degree and before joining UCT, worked as a Veterinary Surgeon in East Africa.

Dickson Okello's thesis reveals the complex interactions between organisational collective context, leadership, and leadership effectiveness, as reflected in staff satisfaction and morale, in district hospitals in the Western Cape province, South Africa. His theoretically grounded, empirical case study work reveals how leadership practices can promote or undermine satisfaction and morale as well as work to support, or constrain, the crossprofessional relationships and teamwork (collective leadership) important in patient-centred hospital care. Further, these experiences are influenced by organisational context. The wider public sector bureaucratic environment. histories of staff conflict and weak leadership, and professional hierarchies limit positive experiences. However, these limits can be offset through positive leadership practices that are sustained over time, support the development of teamwork cultures, and enable collective leadership. These findings demonstrate the importance of leadership in sustaining teamwork for patient-centred care and have implications for how to support leadership development in hospitals in the future.

Supervisor: Professor L Gilson (Public Health and Family Medicine) Co-supervisor: Professor G McGivern (Warwick Business School, University of Warwick, Organisation and Human Resource Management Group)

Patel, Fadheela

Thesis Title: Haemophilus influenzae colonisation patterns in young children in the Drakenstein Child Health Study, South Africa

Fadheela Patel holds a master's degree in Biomedical Technology from Cape Peninsula University of Technology. She worked in the academic and the private sector as a senior technologist, specialising in Microbiology, Mycobacteriology and Immunology, and registered for her PhD studies in 2015. Fadheela Patel's thesis

focuses on patterns of colonisation by the bacterium Haemophilus influenzae (H influenzae) in the upper airways of infants. H. influenzae causes ear infections, pneumonia, and meningitis in young children. One of the strengths of her study is the extensive sampling of the study participants, who were enrolled in a birth cohort. She investigates the presence and characterisation of H. influenzae using both standard and genomic laboratory techniques. Her data shows a rapid turnover of H. influenzae in the nasopharynx of the 137 infants in the study. Seasonality and household crowding were the risk factors most strongly associated with early acquisition and duration of colonisation. Furthermore, she shows that infants delivered by Caesarean section and those who have mothers who are smokers are at risk for longer duration of H. influenzae colonisation.

Supervisor: Dr L Ah Tow Edries (Pathology) Co-supervisor: Professor M Nicol (Pathology)

Paton, Glen James

Thesis Title: *Lumbosacral transitional vertebrae morphology: a South African population*

Glen Paton holds an MTech degree in Chiropractic from the University of Johannesburg (UJ). He is actively involved in lecturing and clinical training of chiropractic students at UJ. He began studying parttime for his PhD in mid-2016. Glen Paton's thesis focuses on the establishment of baseline data on the prevalence and morphological of characteristics lumbosacral transitional vertebrae (LSTV) in a South African population. This study incorporates an in-situ and an ex-situ investigation through the examination of the shape and structure of LSTV using images obtained from medical records and skeletal remains for descriptive analyses. He describes the prevalence of LSTV in the population as a whole and for the three largest ancestral groups within South Africa. The measurements of the cadaveric skeletal dataset identify numerous statistically significant variations in lumbar and sacral vertebrae morphology. Several original findings emerge including unusual articulations, namely between the lumbar spine and pelvis, the last two lumbar vertebrae at their transverse processes, and a novel triad-articulation-complex of the last lumbar vertebra, sacrum and pelvis. Three recommendations for the modification of the existing classification system of LSTV are suggested.

Supervisor: Emeritus Professor GJ Louw (Human Biology) Co-supervisors: A/Professor SA Williams (New York University, Anthropology, Evolutionary Morphology Lab); A/Professor S Nalla (University of Johannesburg, Human Anatomy)

Pigoga, Jennifer Lee Thesis title: *Derivation and validation* of a severity scoring tool for COVID-19 illness in low-resource settings

Jennifer Pigoga completed her MSc in Emergency Medicine at UCT in 2016 and her MPH in Global Epidemiology at Emory University in Atlanta, USA, in 2018. She began her PhD in 2018. Jennifer Pigoga's thesis focuses on the development and validation of a tool to assist frontline providers in predicting severe COVID-19 disease in low-resource settings. She conducts a scoping review to identify all studies describing screening, triage, and severity scoring of suspected COVID-19 patients worldwide. Tools are then compared to usability and feasibility standards for low-resource emergency units, to determine viable tool options for such settings. Following this, a systematic review and meta-analysis are undertaken to evaluate literature for potential associations between clinical characteristics and investigations, and COVID-19 illness severity. A metaanalysis is conducted to assess individual variables' predictive abilities. In the third study, machine learning is used on data from a retrospective cohort of Sudanese COVID-19 patients to derive the AFEM COVID-19 Mortality Score (AFEM-CMS), a contextually appropriate mortality index for COVID-19. Following this, a fourth study is conducted with a more recent Sudanese dataset to validate the tool.

Supervisor: Professor LA Wallis (Surgery)

Popovic, Ana

Thesis Title: An investigation into the phenotypic switching of dermal fibroblasts into cancer-associated fibroblasts in the melanoma tumour microenvironment

Ana Popovic obtained a BSc in Physiology and Microbiology, a BScMedHons and an MSc in Cell Biology from UCT. In 2015, she registered for a PhD in the Division of Cell Biology, in the Department of Human Biology.

Ana Popovic's thesis focuses on investigating the molecular mechanisms which drive normal skin fibroblasts cancer associated fibroblasts to (CAFs) in the melanoma tumour microenvironment. CAFs contribute to melanoma progression, metastasis, and drug resistance by, in part, remodelling the extracellular matrix. Using various experimental techniques, she implicates the cytokine, Transforming Growth Factor- β 1 (TGF- β 1) which is secreted by highly aggressive and invasive melanoma cells, to be responsible for transforming normal skin fibroblasts to CAFs. She further shows that the fibroblast activation protein-α (FAP-α) functions downstream of the TGF- β 1 pathway and that FAP- α expressing CAFs contribute to the aggressive behaviour of melanoma cells by remodelling the extracellular matrix in the tumour microenvironment. These findings have important implications for our understanding of the mechanisms underpinning melanoma progression and for novel therapies to treat this highly aggressive and deadly skin cancer.

Supervisor: Professor S Prince (Human Biology)

Co-supervisor: Dr S Tartare-Deckert (University Côte d'Azure)

Sawe, Hendry Robert Thesis Title: *Building a model for development of a national trauma registry: designing and implementing standardised trauma form at regional hospitals in Tanzania*

Sawe completed his MD Hendry and MMed degrees at Muhimbili University of Health and Allied Sciences, and holds an MBA from Mzumbe University, Tanzania. In 2017, he started his PhD studies at UCT. Hendry Sawe's thesis focuses on building a model for development of a national trauma registry in Tanzania. He starts by analysing the baseline capture rate of injury variables at regional hospitals, for which he establishes a low capture of these variables at the participating health facilities. He further investigates factors affecting trauma documentation practices and their impact on implementation of a standardised trauma form, which could inform a national registry. Using this information, and through engagement of providers at each facility, he develops and pilots a context appropriate trauma form with the dual function of clinical care and a source of injury data. The pilot implementation of the trauma form results in a substantial improvement of variables of injury from the baseline capture, enabling the accurate documentation of burden of injuries at these facilities. These findings will be useful in informing the implementation of registries in other low resource settings.

Supervisor: Professor LA Wallis (Surgery)

Co-supervisors: Professor TA Reynolds (WHO, Emergency, Trauma and Acute Care); Professor T Coats (University of Leicester, Cardiovascular Sciences)

Shackleton, Claire

Thesis Title: The effect of robotic walking and activity-based rehabilitation on functional capacity, secondary complications & psychological well-being in individuals with Spinal Cord Injury (SCI)

Claire Shackleton holds a BSc from Rhodes University. She joined the

Department of Exercise Science and Sports Medicine at UCT in 2016 where she completed her honours in Biokinetics. While completing her PhD, she has worked in outpatient rehabilitation for people with neurological conditions and diseases.

Claire Shackleton's thesis involves a randomised control pilot study comparing robotic walking to standardised exercise as a rehabilitation technique for individuals with spinal cord injuries. She explores the effects that exoskeleton-based rehabilitation has on individuals' physical abilities, health complications, and mental wellbeing. She finds that robotic walking may improve body strength and walking ability, and although there are only minimal health-related benefits, it still shows potential to improve perceptions of quality of life and decrease depression. She extends her research to explore the perspectives and experiences of the participants enrolled in the intervention through in-depth interviews and investigates the feasibility of using novel robotic training within the South African context. She highlights the inequality of spinal cord injury rehabilitation in this setting and provides recommendations improving the standard for of neurological care and research. Her work supports the investment of conducting large-scale, randomised control trials to further investigate these findings.

Supervisor: Dr Y Albertus (Human Biology)

Co-supervisors: Dr S West (Cape Peninsula University of Technology, Sport Management); Professor W Derman (Stellenbosch University, Institute of Sport and Exercise Medicine)

Smit, Karen

Thesis Title: Promoting the communication participation of vision impaired persons via digital inclusion: the role of a mobile network operator's processes

Karen Smit holds an MA in Social Work from the Stellenbosch University. She works in the information communication technology (ICT) industry, where her role is to drive digital inclusion for disabled consumers. She embarked on part-time study towards her PhD in 2017.

Karen Smit's thesis investigates the role of Mobile Network Operators' (MNOs) processes in promoting the digital inclusion of vision impaired persons in the Global South. Framed by the Diffusion of Innovation theory and the Social Model of Disability, the study identifies that MNOs must view disability inclusion as a commercial opportunity and not as charity. To achieve this, MNOs must embrace an inclusive culture that regards disabled persons as a viable consumer segment. Factors such as personal leadership and a purpose-led approach contribute towards diffusing technology and services that meet the needs of disabled consumers. Other factors which advance digital inclusion are affordability, connectivity and empathetic frontline staff. This study proposes that MNOs should implement processes that embed inclusion and inclusive design in their culture to ensure that vision impaired consumers do not only become part of a connected society; but are also able to participate in it.

Supervisor: Professor T Lorenzo (Health and Rehabilitation Sciences) Co-supervisors: Professor H Kathard (Health and Rehabilitation Sciences); Professor G Goggin (University of Sydney/Nanyang Technological University, Communications)

Taku, Ongeziwe

Thesis title: A study of Genital Human Papillomavirus (HPV) and evaluation of HPV Testing for cervical cancer screening in women from the Eastern Cape Province, South Africa

Ongeziwe Taku obtained her BSc degree in Microbiology and Biochemistry, BSc (Hons) in Microbiology and MSc in Microbiology at the University of Fort Hare. Ongeziwe Taku's thesis focuses on the prevalence and risk factors for HPV infection, and coinfection with sexually transmitted pathogens in women from the Eastern Cape. She finds a high prevalence of high-risk

HPV in women attending a community clinic, with significantly higher rates in HIV-positive than HIV-negative women. Sexual behaviour and HIV infection are the main risk factors for HPV infection. HPV35, HPV16, HPV58 and HPV45 are the most prevalent HPV types in women with cervical lesions. She further shows that self-sampling is acceptable, with equivalent detection of HPV infection to clinician-collected samples and good agreement between two HPV tests for detecting infection and cervical cancer. Women attending the community clinic have a high burden of sexually transmitted infections. These findings add to limited data on HPV and contribute to discussions on HPV testing as the primary screening strategy for cervical cancer as well as HPV vaccination in South Africa.

Supervisor: Professor A-L Williamson (Pathology)

Co-supervisors: Dr TL Meiring (Pathology); Dr ZZA Mbulawa (National Health Laboratory Service and Walter Sisulu University, Laboratory Medicine and Pathology,)

Tikiso, Tjokosela

Thesis Title: Population pharmacokinetic modelling to address the gaps in knowledge of commonly used HIV and TB drugs in children

Tjokosela Tikiso holds a master's degree in Pharmaceutical Sciences from the University of the Western Cape. He joined the Pharmacometrics group within the Division of Clinical Pharmacology for his PhD in 2016. Tjokosela Tikiso's thesis focuses on understanding factors that influence concentrations of HIV and TB drugs in children. He is particularly interested in the interaction between HIV and TB drugs when administered together. To achieve these goals, he uses mathematical models to analyse and interpret data from various HIV and TB paediatric clinical studies conducted in Africa. Amongst his observations, he notices decreased concentrations of an antiretroviral drug called abacavir when given together with TB drugs. He also observes that, using the current dose, concentrations of the TB drug ethambutol are lower in children than in adults, and even lower in children taking a protease inhibitor-based ARV regimen. He believes the negative interaction is caused by the perpetrator drug influencing a biological process limiting the uptake of the victim drug. With the use of this information, he uses mathematical simulations to suggest improved doses for children.

Supervisor: A/Professor P Denti (Medicine) Co-supervisor: Professor H McIlleron (Medicine)

Van Heyningen-Pienaar, Thea Margarethe Thesis Title: Screening for common perinatal mental disorders in South Africa

Thea van Heyningen-Pienaar holds an MA in International Relations from Stellenbosch University and an MA in Clinical Psychology from the University of Kwazulu-Natal. She worked as a researcher in the Alan J. Flisher Centre for Public Mental Health and the Perinatal Mental Health Project at UCT before commencing full-time PhD studies in 2013. Thea van Heyningen-Pienaar's thesis describes the diagnostic prevalence of common perinatal mental disorders (CPMD) amongst pregnant women attending primary level antenatal care in a low-resource setting. She also describes the prevalence and strength of association of psychosocial and socioeconomic risk factors amongst women living in adversity. She compares the performance of commonly used, mental health screening tools to detect cases of antenatal depression and anxiety amongst the sample of pregnant women. Finally, she uses these data to develop a short screening tool to detect CPMD in busy, low-resource primary care settings, which can be used by frontline health workers as part of routine antenatal care.

Supervisor: Professor L Myer (Public Health and Family Medicine) Co-supervisors: A/Professor S Honikman (Psychiatry and Mental Health); Professor M Tomlinson (Stellenbosch University, Institute for Life Course Health Research)

Van Schalkwyk, Catherina Thesis Title: *Modelling the impact of prevention strategies on cervical cancer incidence in South Africa*

Catherina van Schalkwyk completed her BCom in Actuarial Science and MCom in Mathematical Statistics at Stellenbosch University and has been working as a researcher in epidemiological modelling and analysis since 2010. She began parttime study towards her PhD in 2015.

Catherina van Schalkwyk's thesis extends an existing populationlevel epidemiological model of HIV infection in South Africa to include infection with human papillomavirus and its progression to cervical cancer. Using this model, which has been fitted to local human papillomavirus prevalence and cervical cancer data, she estimates the impact that the HIV epidemic has had on cervical cancer incidence in the country and the number of cancer cases the existing cervical cancer screening programme has prevented since 2000. She also estimates the future impact of vaccination against the human papillomavirus, scaling up the cervical cancer screening programme and switching to new screening technologies on cervical cancer incidence.

Supervisor: Dr L Johnson (Public Health and Family Medicine) Co-supervisor: Professor J Moodley (Public Health and Family Medicine)

Weimann, Amy Lynne Thesis Title: *Intersectoral policy approaches to healthy cities with a focus on built and food environments*

Amy Weimann holds a BSocSc, BSocSc(Hons), and MSocSc from UCT, and began her PhD in 2018. Since 2017 she has been working as a Junior Research Fellow at UCT in the urban health field.

Amy Weimann's thesis explores opportunities to integrate health considerations into food environment and human settlements policies. In addition to research on intersectoral policies at the African regional and South African national levels, her thesis adopts a transdisciplinary collaborative approach to explore opportunities to integrate health and human settlements data to inform informal settlement upgrading in the Western Cape. Her research highlights several missed opportunities for non-health sectors to adequately contribute to addressing health inequities; and the importance of collaboration across sectors, and between government and academia. This finding motivated her to develop an improved approach to improving health through urban planning interventions.

Supervisor: A/Professor T Oni (Public Health and Family Medicine) Co-supervisor: Professor L London (Public Health and Family Medicine)

Werner, Kalin Chan Thesis Title: Assessing the costeffectiveness of facility-based emergency care in low resource settings

Kalin Werner holds a BA from the University of California, Los Angeles and a MSc in Health Policy, Planning and Financing from the London School of Economics and London School of Hygiene and Tropical Medicine. She began fulltime study towards her PhD in 2018. Kalin Werner's thesis focuses on the economics of emergency care in low-income settings; the work estimates the cost-effectiveness of creating a systematic approach to provision of systems of emergency care. She measures the context-specific costs of delivering facility-based emergency care (that is, provided in a hospital) and uses these results alongside data reported in the literature to propose a conceptual framework for applying economic evaluation to emergency care. She extends the applicability of her cost-effectiveness model to successfully identify systematic approaches to facility-based emergency care as a very low-cost, high-yield intervention which is not only affordable, but leads to significant cost savings. These findings will greatly aid in sound planning and priority setting of countries carrying some of the highest burdens of morbidity and mortality related to emergency care treatable disease.

Supervisor: Professor LA Wallis (Surgery) Co-supervisors: Dr N Risko (Johns Hopkins University, Emergency Medicine); Dr TK Lin (University of

California San Francisco, Social and Behavioural Sciences); Dr TA Reynolds (WHO, Emergency, Trauma and Acute Care)

Wonkam Tingang, Edmond Thesis Title: *Identifying genes and novel* variants involved in non-syndromic hearing impairment, and assessment of the psychosocial burden of hearing impairment in Cameroon

Edmond Wonkam Tingang holds a MD from the University of Yaoundé I, Cameroon. He joined the Division of Human Genetics at UCT in 2018 to pursue his PhD studies. Prior to this, he worked as a medical officer in a regional hospital in Cameroon.

Edmond Wonkam Tingang's thesis aims at identifying the genes that contribute to hearing impairment (HI) of genetic origin in Cameroon, and assess the challenges faced by persons with HI. By the successive use of targeted gene screening and a wide broader approach, he identifies two novel genes, CLIC5 and DMXL2, as being associated with HI in Cameroon. His report is the first one worldwide to show the contribution of these two genes to HI in Africans. Additionally, through in-depth interviews, he shows that the cause of HI in Cameroon is associated to genetics, environmental factors, and a spiritual curse. He also finds reported cases of stigma and discrimination, and difficult access to education and healthcare services for persons with HI. These findings will allow early diagnosis of genetic HI cases in Africans, and help policy makers to develop strategies to overcome challenges faced by persons with HI in Cameroon.

Supervisor: A/Professor ER Chimusa (Pathology) Co-supervisor: Professor A Wonkam (Pathology)

MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

Doe-Asinyo, Rosemary Xorlanyo

MASTER OF MEDICAL SCIENCE IN GENETIC COUNSELLING

Lloyd, Deanah (with distinction in the dissertation)

MASTER OF MEDICAL SCIENCE IN NUTRITION

Malczyk, Sonia (with distinction)

MASTER OF MEDICINE

Adam, Claire-Louise (with distinction in the dissertation) Akpabio, Idorenyin Ubon Ally, Mohammed Ameen (with distinction in the dissertation) Araie, Farzana Ashour, Emad Mabrouk Alhaajhamad Botma, Nicolaas Hendrik Snibbe (with distinction in the dissertation) Chibuye, Kenward (with distinction in the dissertation) Claassens, Caren Conradie, Willem Stephanus (with distinction in the dissertation) Datay, Mohammed Ishaaq De Caires, Leonel (with distinction in the dissertation) De Vaal, Sybrand Johannes De Villiers, Christiaan Tertius (with distinction in the dissertation) Dhana, Ashar Vijay (with distinction in the dissertation) Din, Taseer Feroze Dladla, Khanyisile (with distinction in the dissertation) Du Toit, Michiel Adriaan Elfallah, Balgeis Ali Omar Fayanju, Olanrewaju Philips Ganas, Ushira Golden, Lauren Meagen (with distinction in the dissertation) Gondwe, Saulos Kalizga Gouws, Juan (with distinction in the dissertation) Govender, Sarisha (with distinction in the dissertation)

Grunewald, Kevin Kuno (with distinction in the dissertation) Human, Gercois Paul Jooma, Uzair (with distinction in the dissertation) Klassen, Thalia Kouvarellis, Alison Jean (with distinction in the dissertation) Lapere, Cherese (with distinction in the dissertation) Mabogoane, Tumiso Bridgette Modipadi with distinction in the dissertation) Makate, Sindiswa Amanda Mazondwa, Simthandile McAlpine, David John (with distinction in the dissertation) McMullen, Kate Elisabeth Midgley, Alexandra Mukabeta, Takura Darlington Maumbe Nathire, Mohammad El Hassed Nel, Daniel Benjamin Ntatamala, Itumeleng Mmoko Theophelus (with distinction in the dissertation) Obuseng, Odirile (with distinction in the dissertation) Opperman, Christoffel Johannes (with distinction in the dissertation) Orrie, Shameela Pamacheche, Patricia Pema, Mitesh Kanthi Pluke, Kent Pohl, Linda Martie Prinsloo, Dawid Nicolaas (with distinction in the dissertation) Purcell-Jones, Jessica Mary Adelaide (with distinction in the dissertation) Riedemann, Johann (with distinction in the dissertation) Siyotula, Thozama Violet Smit, Maretha Isabel (with distinction in the dissertation) Smith, Everhardus Johannes Snyders, Loreal Leslay Stander, Raphaella Anne Stegmann, George Frederik (with distinction in the dissertation) Stofberg, Johannes Petrus Jordaan Tayob, Imraan Ismail Tu, Sindy Jen-Yi (with distinction in the dissertation) Van Der Merwe, Freliza (with distinction in the dissertation) Van Der Merwe, Le Roux Van Der Merwe, Pieter Jacobus Stephanus

Van Wyk, Liana Van Zyl, Petrus Jasper Johannes Vogts, Elizabeth Marguerite Vorajee, Nadia Werner, Jesse Louise Wilson, Allanah Joan Yaloko, Kibeni Tryphon

MASTER OF PHILOSOPHY

Alberts, Lisa Antel, Katherine Rae (with distinction in the dissertation) Chasweka, Dennis Absalom Copelyn, Julie De Vos, Dellicia (with distinction) Enimil, Anthony Kwame Le Roux, Jacobus Johannes (with distinction) Mangiza, Marcia Mdlulwa, Ncediwe (with distinction) Mendes, Jacqueline Faria Musanhu, Christine Chiedza Mzingeli, Luvuyo (with distinction in the dissertation) Oshi, Mohammed Ahmed Mohammed Oyieke, Katherine (with distinction in the dissertation) Sebunya, Robert Kabuye (with distinction in the dissertation) Soshankana, Lithakazi (with distinction in the dissertation) Yassin, Aamir

MASTER OF PHILOSOPHY IN EMERGENCY MEDICINE

De Kock, Joalda Marthiné Geduld, Charlene Ursula (with distinction in the dissertation) Heuer, Calvin Grant (with distinction in the dissertation) Matalasi, Retselisitsoe Vincent Park-Ross, Jocelyn Frances Pule, Marwala Simon

MASTER OF PHILOSOPHY IN HEALTH INNOVATION

Wessels, Maatje

MASTER OF PUBLIC HEALTH

Blose, Ntombifuthi Joyce (with distinction) Bust, Lynn Hazel (with distinction) Falakhe, Zipho Gerber, Carmen Hamisi, Rashid Jaffe, Atara (with distinction in the dissertation) Lakoma, Leif Aleksi Lewis Ian Storm Matsela, Lineo Marie (with distinction) Mgoqi, Khusela Mthethwa. Mashudu (with distinction in the dissertation) Ncube, Mthabisi Arnold Nhemachena, Tsephiso Anotidashe (with distinction) Ofoegbu, Olubukola Oyinade (with distinction) Omondi, Robinson Oyando (with distinction) Phelanyane, Florence Malehlabathe (with distinction in the dissertation) Soboil, Joshua Ashley Steyn, Simone (with distinction in the coursework component) Sumboh, Jemima Ambamaah Catherine (with distinction in the coursework component) Waithaka, Dennis Wambiri (with distinction) Whiting, Amy Jane (with distinction in the dissertation)

MASTER OF SCIENCE IN AUDIOLOGY

Greeff, Wildine Marion Khatib, Nuha Naidoo, Tanaya Ellen Ravi

MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING

Arbi, Shameela Bardien, Moegammad Ameen (with distinction) Dawood, Tareen (with distinction) De Villiers, Tertius Gregoire (with distinction) Gordon-Grant, Catherine Gloria Lalla, Bhaveen Musasizi, Racheal Timm, Lara Claire

Trusler, Matthew Graham (with distinction in the dissertation)

MASTER OF SCIENCE IN EXERCISE AND SPORTS PHYSIOTHERAPY

Cox, Jose Jevon (with distinction in the dissertation) Glossop-Von Hirschfeld, Christine Isaacs, Neda Shmigelskis, Julia Anna Maria (with distinction) Visagie, Jacobus Abraham

MASTER OF SCIENCE IN MEDICINE

Banwell. Michelle Jeanne Bill, Claudine Sheilagh Blake, Kimberly Vanessa (with distinction) Booi, Zandile (with distinction) Chatiza, Tariro Alfa (with distinction) Drummond, Linda Anne Du Toit, Michelle (with distinction) Elhenghari, Emad Eljawadi Kabongo, Ntumba Etienne Mare, Karen Thea Mcdonald. Reece Brian Nell, Antonette Parsons, Hilda Jane (with distinction) Qumbelo, Yamkela Ramudzuli, Atondaho Angelah (with distinction) Rhoda, Cenza Danielle Rudner, Trinity Danielle Smith, Claudia Ann (with distinction) Tinelli, Sasha (with distinction) Todt, Davis Marshall (with distinction) Wimberley, Olivia Louise (with distinction) Zieff, Michal Rivkah (with distinction) Zuma, Phiwe (with distinction)

MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

Bock, Stacey Louisa Damonse, Shireen Toto, Sivuyisiwe Khokela (with distinction in the dissertation)

MASTER OF SCIENCE IN PHYSIOTHERAPY

Francis, Savarna Olivia Lawerteh, Stella Elikplim Naidoo, Shane

MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Bestenbier, Candice Elizabeth (with distinction) Rabbipal, Yajna

POSTGRADUATE DIPLOMA IN CLINICAL PAEDIATRIC EMERGENCY CARE

Afful, Augustine Kwame (with distinction) Chandigere, Phillemon Miyedzo

POSTGRADUATE DIPLOMA IN CLINICAL PAEDIATRIC RHEUMATOLOGY

Faleye, Ayodele Dasola (with distinction)

POSTGRADUATE DIPLOMA IN DISABILITY STUDIES

Banda, Priscilla Gregory Tshabalala, Phumlani Simon

POSTGRADUATE DIPLOMA IN HEALTH ECONOMICS

Nzuza, Mercury Siphiwe

POSTGRADUATE DIPLOMA IN HEALTH LEADERSHIP

Bruiners, Selvador Caesar, Warren Darron Du Plessis, Ronel Mariette (with distinction) Isaacs, Mogamat Waleed Jacobs, Paulus Jautse, Itsholeng Annie Kock, Yulene Norma Lucas, Jonathan Winston Mafika, Ziphozonke Mulutsi, Nkeng Eva Naidoo, Shirani (with distinction) Roomanay, Mahboob Shand, Lesley Ann (with distinction) Sonday, Mohamed Abrar Steinmann, Eberhard Waldemar (with distinction) Victor, Anna Elizabeth (with distinction)

POSTGRADUATE DIPLOMA IN INTERDISCIPLINARY PAIN MANAGEMENT

De Laan, Spasie

POSTGRADUATE DIPLOMA IN PALLIATIVE MEDICINE

Kuseni, Sibulelo Majaliwa, Esther Louis

POSTGRADUATE DIPLOMA IN PESTICIDE RISK MANAGEMENT

Mwanja, John Wabuzibu Phiri, Dominic Michael

POSTGRADUATE DIPLOMA IN TB-HIV MANAGEMENT

Mgoqi, Unathi (with distinction) Ramadwa, Tshifularo Beatrice

BACHELOR OF MEDICAL SCIENCE HONOURS

Mthembu, Mbalenhle Siwelile (first class)

BACHELOR OF MEDICAL SCIENCE HONOURS IN BIOKINETICS

Booi, Sonwabile Alfred Jnr Mtsweni, Vanessa Silindokuhle

BACHELOR OF MEDICAL SCIENCE HONOURS IN EXERCISE SCIENCE

Mthembu, Nonjabulo Thando

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

Mafuleka, Lebohang Linda Palframan, David Stephen Graham Ramogayana, Sedingwane Khutso Sodi, Mohale Cyril Stegmann, George Frederick

BACHELOR OF SCIENCE IN AUDIOLOGY

Mbonambi, Zanegugu Sinenhlanhla Mosoahle, Mpho Victor Sonday-Liberty, Marushka

BACHELOR OF SCIENCE IN OCCUPATIONAL THERAPY

Klaase, Jodine Elona

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

Hendricks, Sharee Simone Khomo, Zanele Happiness

BACHELOR OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Madikizela, Alizwa

FACULTY OF LAW

Dean: Professor D Chirwa

DOCTOR OF PHILOSOPHY

Adomako-Kwakye, Chris Thesis Title: *Transparency and accountability mechanisms in Ghana's Petroleum Revenue Management Act: a critical analysis and socio-political contextualisation with counterpoints from Norway and Botswana*

Chris Adomako-Kwakye holds a BA and an LLM degree from the University of Ghana and University of Bristol, United Kingdom, respectively. He is a senior lecturer at the Faculty of Law, Kwame Nkrumah University of Science & Technology (KNUST), Ghana. He joined UCT's Faculty of Law in 2017 for his doctoral studies. Chris Adomako-Kwakye's thesis considers whether Ghana's Petroleum Revenue Management Act (PRMA) has succeeded in dealing with the mismanagement of oil revenue. He investigates the Act's institutional duties and its transparency and accountability provisions and he evaluates reports issued by the Auditor-General and the Public Interest Accountability Committee on oil-revenue management. Drawing on a comparison with Norway and Botswana, he reveals weaknesses in Ghana's PRMA, including the discretionary powers it gives the Finance Minister regarding the Ghana Stabilisation Fund and its annual budgeting; and its inability to prevent expenditure of oil revenue in ways the Act does not provide for. He shows that, while the PRMA has its strengths, flaws remain; and that these surface especially in implementing its provisions. Having demonstrated that the Act's design creates a discrepancy between its objectives and its operation Chris Adomako-Kwakye argues that a paradigm shift is necessary prior to legislative reform.

Supervisor: Professor H Mostert (Private Law) Co-supervisor: Associate Professor T Gutuza (Commercial Law)

Banda, Gracian Zibelu Thesis Title: *Equity and the crisis of development in developing countries: a critical analysis of the environment and climate change regulatory framework in Malawi*

Gracian Banda holds an LLB (Hons) from the University of Malawi and an LLM in International Economic Law from the University of Warwick, United Kingdom. He commenced his doctoral studies at UCT in 2015. He practises law in Malawi and consults on environment and development law and policy. Gracian Banda's research examines the interface between development policy and environment- and climate-change regulation in developing economies. He uses the concept of equity as a benchmark to understand some of the common factors that affect sustainable development. He analyses the evolution of development policy focussing on the motivations and interests that have influenced environment- and climatechange regulation in Malawi. He finds that the main regulatory mechanisms, such as statute law, good governance principles and rights based approaches to development, have provided limited space for equity and have facilitated marginalisation and vulnerability of a majority of the population in developing countries. Highlighting the role climate change can play to facilitate the infusion of equity in environmental regulation, Gracian Banda argues that, because climate change erodes development gains, addressing the causes and impacts of climate change will yield significant dividends for a more responsive environmental regulatory framework.

Supervisor: Professor L Feris (Public Law)

Bruwer, Carina

Thesis title: *Global crime governance* off the eastern Africa littoral: does the response to piracy in the Western Indian Ocean provide a model?

Carina Bruwer holds LLB and LLM degrees from Stellenbosch University. She joined UCT in 2015 to pursue her PhD at the Faculty of Law's Centre of Criminology. She has since worked for the United Nations Office on Drugs and Crime and is currently working in wildlife conservation. Carina Bruwer's thesis

considers whether the global governance response to Somali piracy provides a model for responding to two other forms of transnational organised crime at sea, namely heroin and ivory trafficking between eastern Africa and Asia. Her findings suggest that, although counterpiracy holds valuable lessons for global crime governance at sea, a response mimicking counter-piracy is unlikely to be forthcoming in efforts to curtail other transnational organized crimes in the Western Indian Ocean. This is due to the different motivations and interests driving actors to respond to these crimes, as well as the prevalence of corruption, jurisdictional limitations inherent in applicable legal frameworks and human rights concerns. Counterpiracy is however found to hold two key lessons for global governance responses at sea – the inclusion of private actors and an overarching governing body coordinating the response. Based on these lessons, Carina Bruwer suggests alternative responses to heroin and ivory trafficking.

Supervisor: Professor E van der Spuy (Centre of Criminology) Co-supervisor: Dr M Shaw (Centre of Criminology)

Caswell, Grant Sinclair Thesis Title: Financing infrastructure at multilateral development banks: global administrative law and accountability reforms in infrastructure project financing in the BRICS bloc

Grant Caswell holds an LLB and an LLM in Constitutional and Administrative Law from UCT. Since qualifying as an attorney in private practice, he has spent his professional career in government and politics. Grant Caswell's thesis considers how the law can provide a framework to ensure accountability of multilateral development banks (MDBs). MDBs play a central role internationally in financing large-scale public-sector infrastructure projects through loan agreements concluded with governments, financial institutions and private sector entities. The rapidly industrialising economies of Brazil, Russia, India, China and South Africa (the 'BRICS bloc') face increasing demand for improved infrastructure. Yet infrastructure developments have widespread human-rights and environmental impacts including resettlement of local populations, transformation of indigenous lands, deforestation, pollution and changed conditions of employment. They consequently demand increased accountability regarding those impacts. Grant Caswell's thesis examines two mechanisms to achieve such accountability. Both are situated at the interface between global and domestic administrative law principles and are aligned with the BRICS bloc's core objectives and values. The first requires reconfiguring the role of domestic judicial forums; the second proposes an independent 'super mechanism' in the form of an international body providing effective oversight and enhanced accountability.

Supervisor: Emeritus Professor H Corder (Public Law)

Dent, Kate Jean

Thesis title: *Lawfare and legitimacy: the wicked problem of judicial resilience at a time of judicialisation of politics*

Kate Dent was born and raised in Pietermaritzburg. KwaZulu-Natal. She holds an LLB and LLM (cum laude) from UNISA. Kate Dent's thesis examines the causes and consequences of "lawfare" (the judicialisation of politics) in South Africa from 2009 to 2020 and its impact on judicial legitimacy. Lawfare describes the use of litigation to resolve broadly political matters, caused primarily through failures of other branches of government to fulfil their assigned constitutional obligations. Courts are then compelled to act to secure accountability to the Constitution and the law. The Constitutional Court has shown a remarkable ability to navigate lawfare through resolute fidelity to the Constitution, but, as she shows, this may erode public confidence which is a key element in establishing and maintaining judicial legitimacy. She argues that, without a broader culture of commitment to the rule of law, to civil education and to the expansion of constitutional responsibility within the population, the Constitutional Court will not be able to continue to shoulder this burden. Kate Dent's thesis depicts a "wicked problem" arising from a circular relationship between lawfare and legitimacy; and she finds that, whilst lawfare is predicated on judicial legitimacy, an overreliance on lawfare may destroy that legitimacy.

Supervisor: Emeritus Professor H Corder (Public Law) Co-Supervisor: Professor P de Vos (Public Law)

Esomeju, Nneka Cecilia Thesis Title: Improving the dispute resolution process for tax disputes in Nigeria and South Africa with emphasis on tax courts

Nneka Esomeju obtained an LLB degree from Nnamdi Azikiwe University Awka, Nigeria in 1991 and an LLM in Commercial Law from UCT in 2007. She commenced her PhD study in 2015 and currently works in the Federal Inland Revenue Service, Nigeria. Nneka Esomeju's thesis contained a historical and normative assessment of tax dispute resolution laws and practices in Nigeria and South Africa. A comparison of these laws and practices found that these laws and practices of the two jurisdictions scored well in many aspects of good dispute resolution, but not in all, such as lengthy times to resolve disputes. Particularly the Nigerian system could implement a more layered and structured process to improve the efficiency of tax dispute resolution. Disparity between levels of tax compliance in different regions of Nigeria and limited understanding of taxation and tax disputes resolution processes were further contributing factors. She recommends ways of improving the tax dispute resolution laws and procedures in Nigeria and South Africa. The findings are important as the continent moves towards more centralised trading agreements, as tax conditions across jurisdictions would aid improved trade.

Supervisor: Associate Professor J Hattingh (Commercial Law) Co-Supervisor: Associate Professor T Gutuza (Commercial Law)

Ezirigwe, Jane Chinyere Thesis Title: *Addressing conflicts that arise between farmers and pastoralists in Nigeria: a natural resource governance perspective*

Jane Ezirigwe holds an LLB from the University of Abuja, Nigeria, an MBA from ESUT Business School, Nigeria and an LLM from the University of London. She has seventeen years of experience in private legal practice, academia and research with twentytwo peer-reviewed publications.

Jane Ezirigwe's thesis focuses on demonstrating how the absence of a robust and sustainable governance framework on pastoralism in Nigeria exacerbates land-use conflict that arises between farmers and pastoralists in the region. She develops and then uses what shenames a Natural Resource Use Induced Conflict Area (NRUICA) framework to evaluate Nigeria's legal and regulatory regime on pastoralism. Using sociolegal methods, she further demonstrates how the poor implementation of these NRUICA principles contributes to conflict. She observes that the socioecological dynamics around the use of agricultural land and water in Nigeria both present themselves as problems for governance and arise from governance gaps. She attributes these gaps as partly due to Nigeria's federal system of government with its inadequacies in coordinating cooperation between state governments and other agencies, in effecting participatory processes and in enabling access to justice.

Supervisor: Emeritus Professor J Glazewski (Public Law) Co-supervisor: Professor L Feris (Public Law)

Gudo, Julieth

Thesis Title: The use of legal provisions by civil-society organisations to advance corporate governance in state-owned enterprises in South Africa

Julieth Gudo completed her LLB at the University of Limpopo and LLM at UCT. In 2017, she registered for doctoral studies at the Faculty of Law and conducted her research from the Faculty's Centre for Comparative Law in Africa (CCLA) in the Department of Commercial Law.

Julieth Gudo's thesis examines legal strategies used by civil society organisations (CSOs) to challenge poor corporate governance in state-owned enterprises (SOEs) in South Africa. The research brings clarity into the legal standing of civil society organisations, as representatives of citizen constituencies, to take steps to hold state-owned enterprises accountable for the impact of their actions on the public interest. The candidate reviews literature. discusses cases and conducts interviews with relevant civil society organisations to better understand the legal strategies and tools employed by them in their mission to secure public accountability from state-owned enterprises. Key findings point to the need for expressly worded legislation recognising and defining CSOs' watchdog role and standing to represent the citizenry in holding state-owned enterprises accountable for corporate governance failures. Also evident from the research, is the imperative to address the finding of lack of enforcement of the law against SOE-linked wrongdoers, which undermines the effort of civil-society organisations and the credibility of law enforcement structures and processes.

Supervisor: Professor A Ordor (Commercial Law)

Hagenmeier, Conrad Cornelius Andreas Thesis Title: *Equality in higher education partnerships: defining the concept in divergent contexts*

Cornelius Hagenmeier studied law at the Humboldt University of Berlin and qualified as Assessor Juris. He holds an LLB degree from the University of South Africa and an LLM from UCT. He is a non-practising attorney of the High Court of South Africa and serves as Director of the Office for International Affairs at the University of the Free State.

Cornelius Hagenmeier's thesis develops a theoretical framework for equal bilateral international higher education partnerships based on substantive equality. It explores present practises and conceptualisations of equality, specifically in partnerships between higher education institutions of divergent strength, through a literature study, a survey of university stakeholders responsible for the management of bilateral international university partnerships, four mini-case studies and a doctrinal review of the South African Constitutional Court's equality jurisprudence. The most notable insight from the empirical research is that no uniform understanding of equality in higher education partnerships exists. For partnerships to be considered equal, certain criteria from an open-ended list should be met. They include a foundation in values including mutuality, equity and fairness, and ubuntu; equally meaningful partnership contributions; the equal extent of achievement partner priorities; recognition and affirmation of their equal worth by partners; inclusive decisionmaking processes; and affirmation of the diversity of partner universities.

Supervisor: Professor Evance Kalula (Commercial Law) Co-supervisors: Professor Hans De Wit (Boston College); Professor Waheeda Amien (Public Law)

Harding, Joanne Thesis Title: *Women's legal consciousness in a poor urban community: Finding order in and around the law*

Joanne Harding holds a BA Social Work from Nelson Mandela University and MSocSc in Social Planning and Administration from UCT. She started her PhD studies in Public Law in 2016. Joanne Harding is the Director of the Social Change Assistance Trust (SCAT) a human rights non-profit organisation.

Joanne Harding's thesis is a qualitative empirical study investigating the legal consciousness of women in a poor urban community. Through indepth interviews with 52 women and a review of media, social media and film, this study explores the predominant problems faced by women in the Lavender Hill area of Cape Town, South Africa, and their experiences of engaging with systems 'in and around the law'. The context is one of neglect, with high levels of violence and insecurity, and with patriarchy as a dominant paradigm affecting women's choices in problem solving. However, the study shows that neighbourhoods like Lavender Hill cannot be viewed as homogenous and the thesis develops typologies tied to differentiated approaches to problem solving. This work in the field of law and society extends understandings of legal consciousness and women's agency in places where choice is constrained

by both local context and profound institutional failure.

Supervisor: Professor D Smythe (Public Law)

Harun, Ibrahim Thesis Title: *Federalism as an institutional device for peace in Somalia: prospects and Challenges*

Ibrahim Harun holds a BSc, BSc(Hons) and MPhil (Law) degree from the University of the Western Cape. He joined UCT in 2015 for his PhD studies. He has presented and published widely on Somalia.

Ibrahim Harun's thesis focuses on the links between federalism and peace in Somalia. While acknowledging the slow pace of constitutional development in Somalia, the research found that Somalia's provisional constitution, as currently structured, does not sufficiently address the sociocultural and socio-political challenges of Somalia, including age-long inter and intra clan antagonisms. The thesis argues that peace and stability in Somalia is contingent on a federal system that significantly recognises and incorporates time-tested Somali cultural values such as decentralised decision making, political consensus building, negotiation, power sharing, and reconciliationfocused dispute resolution, all of which are inherently federal in character. The thesis thus advocates, for Somalia, a federal constitution that reflects and entrenches these cultural values.

Supervisor: Professor S Mancuso (University of Palermo) Co-supervisors: Associate Professor A Ordor (Commercial Law); Dr O Kunji (Obafemi Awolowo University)

Kisla, Atilla

Thesis title: Two or more wrongs make a right? - The evolution of the customary right of self-defence in the post 9/11 era, and the effect of 'unlawful' state behaviour on the formation of custom on the right of self-defence against non-state actors

Atilla Kisla completed his study of law at the Goethe University in Frankfurt/Main, Germany, in 2014. In 2015, he completed his LLM in Public International Law at UCT. He began his full-time study towards his PhD at UCT in 2018.

Atilla Kisla's thesis examines states' right of self-defence against nonstate actors based in the territory of other states. He sets out the widely accepted legal framework for the formation of customary law, and establishes that most current scholarship does not recognise a customary right of self-defence against non-state actors on the territory of other states. He then proposes an alternative approach to customary international law in the form of the 'specially affected states' doctrine. He suggests the criteria under which customary international law might change if the 'specially affected states' doctrine were applied. Turning to situations in which states exercised their right of self-defence against nonstate actors in the post 9/11 era, Mr Kisla applies these criteria and argues that the right of self-defence has evolved to allow for the use of force in self-defence against non-state actors on the territory of another state if certain conditions are met. He concludes with a discussion of how customary international law may limit the abuse of the newly evolved rule.

Supervisor: Associate Professor C Powell (Public Law)

Kolawole, Omowamiwa Olugbenga Thesis title: *The right to health as a claim on dignity: implications for state accountability in Nigeria*

Omowamiwa Kolawole holds a LLB from the University of Lagos and a LLM from UCT. His doctoral research interests in health rights and health systems led him also to pursue an MPH, at UCT's Faculty of Health Sciences.

Omowamiwa Kolawole's thesis explores the nature of human dignity and examines its implication when made the guiding ethos in the realisation of the right to health. In it he contends that, due to a flawed understanding of the nature and intent of the right to health, there is a risk of undue deference to the State's framing of its obligations and ability to meet those obligations. He argues that an alternative perspective, one based on the centrality of human dignity, must compel claims for socio-economic justice and State accountability. Focusing on provision of health care by the Nigerian State, he shows that realisation of affordable, accessible, and quality health care provision by the Nigerian State must thus be seen as a necessary and legitimate benefit of the Nigerian people, a benefit of the kind set up in the social compact that gives the Nigerian State its legitimacy.

Supervisor: Professor D Smythe (Public Law)

Musiza, Charlene Tsitsi

Thesis Title: *The role of trademarks and* geographical indications in advancing economic development in developing countries in Africa: an investigation into Zimbabwe and South Africa

Charlene Musiza holds an LLB (Hons) from the University of Zimbabwe and an LLM specialising in Commercial Law from UCT. She is a registered legal practitioner in Zimbabwe and joined the Faculty of Law for her PhD studies in 2017.

Charlene Musiza's thesis focuses on how African countries can use branding strategies to improve market access for small scale producers. She investigates the legal protection regimes in Zimbabwe and South Africa to examine how these can be utilised by small scale producers. She uses a case study of small scale coffee growers in Zimbabwe to assess the appropriate legal protection for Chipinge coffee. She finds that the small scale growers want to adopt product branding to distinguish the coffee but lack the knowledge and that the institutional framework is inadequate. Charlene Musiza's thesis proposes legislative changes and creating clusters and associations of producers to enable small scale producers to use collective branding strategies.

Supervisor: Associate Professor T Schonwetter (Commercial Law)

Rugazia, Aloys Rwehabura Thesis Title: *The right to fair compensation for land acquired for petroleum activities: a critique of law and practice in Tanzania*

Aloys Rugazia holds an LLB from St. Augustine University of Tanzania, a Postgraduate Diploma from the Law School of Tanzania, and an LLM from the University of Bagamoyo. Before commencing PhD studies, he served as a Magistrate in North-Eastern Tanzania. Aloys Rugazia's study investigates into the extent the Tanzanian petroleum legal framework for land compensation is fair. To answer this question, the study draws on Rawls' theory of fairness, and analyses the jurisprudence of international human rights law to identify the elements of a fair land compensation regime in the context of petroleum projects. The study shows that, at the international level, the legal instruments and jurisprudence largely incorporate Rawls' theory of fairness by demanding that in acquiring land for petroleum projects the state must approach the landholders as equals. As such, the state must employ a participatory approach, which calls for consultation with the affected people, obtaining consent, make decisions by consensus where possible, and considering their livelihood situations in calculating compensation. While Tanzanian petroleum laws and practices recognise the duty to give fair compensation to the people affected by petroleum activities before acquiring their lands, the study highlights numerous shortcomings in these laws and practices that prove that the land compensation scheme for petroleum projects in Tanzania fails to meet the requirements of fairness.

Supervisor: Professor DM Chirwa (Law)

Van Niekerk, Julian Jesse Thesis Title: *The development and reform of the rules regulating authority to contract on behalf of companies in South African and English law*

Julian van Niekerk holds the following degrees: LLB (University of the Free State), LLM(University of Cape Town) and LLM (University of the Witwatersrand).

Julian van Niekerk's thesis deals with the rules which apply when a company's unauthorised representative purports to conclude a contract with a third party who is unaware of the representative's lack of authority to do so. In particular, the thesis investigates the evolution of those rules, taking into account relevant historical, judicial and legislative developments in English and South African law since the birth of the modern company. The thesis illustrates that there has been a shift, both in judicial analysis and legislation, to protecting the third party in such circumstances, especially by approaching corporate contracting from the perspective of the third party (and not the company). This 'third party perspective' is then applied to the largely untested provisions of the South African Companies Act, culminating in a proposal as to how unauthorised corporate contracting cases should be approached under that legislation.

Supervisor: Associate Professor J Yeats (Commercial Law)

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Note:

As of January 2015, the levels of individual donors' giving circles have changed as follows:

- Chancellor's circle: formerly R250 000+, now R500 000+;
- Vice-Chancellor's Circle: formerly R100 000 R250 000, now R250 000 R500 000;
- Dean's circle: formerly R60 000 R100 000, now R100 000 R250 000;
- Friends of UCT: formerly <R60,000, now <R100,000.

Please note that these changes only affect donations received after 1 January 2015. All donors who were members of particular circles prior to January 2015, will continue to be recognised in their original circles, until the rolling five-year giving period has elapsed.

We apologize for any omissions or errors. If you would like to query your donations totals, circle membership, or any other matter related to your gifts to UCT, please email giving@uct.ac.za.

A full list of UCT donors is also available at www.uct.ac.za/main/donating-to-uct/donor-recognition.

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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!