



UNIVERSITY OF THE FREE STATE  
UNIVERSITEIT VAN DIE VRYSTAAT  
YUNIVESITHI YA FREISTATA

# GRADUATION CEREMONY

BLOEMFONTEIN CAMPUS

FRIDAY | 17 APRIL | 08:30

## Faculty of Natural and Agricultural Sciences

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Bachelor's degrees, honours degrees, postgraduate diplomas,  
Master's degrees, and doctoral degrees

20  
26



UNIVERSITY OF THE FREE STATE  
UNIVERSITEIT VAN DIE VRYSTAAT  
YUNIVESITHI YA FREISTATA

# PROGRAMME

17 APRIL 2026 | 08:30

BLOEMFONTEIN CAMPUS

CONSTITUTION OF THE CONGREGATION

OFFICIAL WELCOME

MUSICAL ITEM

PRESENTATION OF CANDIDATES

NATIONAL ANTHEM OF SOUTH AFRICA

DISSOLUTION OF THE CONGREGATION

In order to maintain the dignity of the ceremony, you are requested to take note of the following:

- Please stand as the procession enters the hall
- Do not move around during the ceremony in order to take photos
- Please refrain from unacceptable actions such as whistling
- Please put your cellphone on silent so as not to disturb the proceedings
- We strive to conduct the ceremonies in a dignified manner
- Please do not leave the hall before the graduation proceedings have been concluded
- Family and friends who are unable to attend may watch the full graduation ceremonies through our livestream link at <https://livestream.ufs.ac.za>

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## PLEASE NOTE

List of candidates receiving degrees, diplomas, and certificates:

Degrees, diplomas, and certificates of candidates who are unable to attend the graduation ceremony will be conferred in absentia.

An\* next to a name indicates that the degree, diploma, or certificate is awarded with distinction.

By attending the graduation ceremony, you agree that the UFS may use photographs taken by the official photographer in which you appear for marketing purposes.

By attending the graduation ceremony, you agree that the UFS may use video footage taken by the official videographer in which you appear for marketing purposes.

# ABOUT THE UFS



## BLOEMFONTEIN, QWAQWA, AND SOUTH CAMPUSES

The University of the Free State (UFS) has a proud history as one of the oldest institutions of higher education in South Africa. It opened its doors in Bloemfontein in 1904 as the Grey University College with six students in The Humanities. Today it is a multi-campus institution with two diverse campuses in Bloemfontein and one in Qwaqwa in the scenic Eastern Free State, accommodating more than 39 000 students in its seven faculties (Economic and Management Sciences, Education, Health Sciences, The Humanities, Law, Natural and Agricultural Sciences, Theology and Religion), with a significant number of international students and associates, and an ever-widening scope of active involvement in and contribution to its surrounding communities.

For more than 120 years, the University of the Free State has been delivering quality graduates who have made their mark in various sectors. What distinguishes the university is its holistic student support initiatives that enable it to achieve some of the highest success rates in the country.

Preparing students who are in high demand in the global job market remains a top priority. A strong network of established industry partners and close collaboration with the public and private sectors, as well as a continuing

commitment to transformation and curriculum renewal all converge to produce graduates who are ready to make an impact.

The UFS' research efforts are driven by dedicated scholars, some of whom are international leaders in their fields, with industry and social impact and real-world application.

Through the principle of engaged scholarship, the university responds to societal needs by applying its scholarly and professional expertise with an intentional public purpose and benefit.

The University of the Free State is an institution fully committed to offering students and staff an exceptional university experience. Its work is anchored in the values of excellence, impact, accountability, care, social justice, and sustainability.

The UFS aspires to be an innovative research-led, student-centred, and regionally engaged university that contributes meaningfully to responsible societal futures.

It is committed to cultivating thoughtful leaders and pioneering knowledge, guided by its North Star – shaping responsible societal futures for its surrounding communities and beyond.

*Inspiring excellence, transforming lives through quality, impact, and care.*

# MESSAGE FROM VICE-CHANCELLOR AND PRINCIPAL: UNIVERSITY OF THE FREE STATE

## Welcome to the graduation ceremony of the University of the Free State (UFS).

**T**oday is indeed a special day. Few occasions hold as much significance as your graduation, both for you and for those who have supported you along the way. Many of you have had to overcome numerous challenges during your journey to get to where you are today. Many of you are the first in your families to reach this significant milestone. You have earned this moment, and you should be extremely proud of your achievement.

Graduands, you have had the honour of studying at a reputable, caring institution with a history spanning more than 120 years. Always acknowledge and recognise the significance of your achievements as you transition from being a University of the Free State (UFS) student to a UFS graduate. I invite you to stay connected to your alma mater as proud alumni.

Although the mission of our university has always been to equip you with the knowledge and skills needed to make a difference in your field of study, we are also mindful that values are just as important for you to make a difference in your community. The University of the Free State places great emphasis on ensuring that students have an outstanding university experience. In our pursuit of excellence, we are proud that our environment is conducive to intellectual and personal growth. As such, our values of excellence, impact, accountability, care, social justice, and sustainability are embedded in all activities across the institution.

As you step into the world beyond the University of the Free State, remember that your education is a powerful tool. I urge you to use this tool to pursue our university's quest to create responsible societal futures – using your knowledge and skills to shape a more humane, more just, and more equitable world for future generations. Use it to create positive change, to question the status quo, and to pursue your passions with determination. The future may seem uncertain, but it is filled with possibilities waiting for your unique talents and contributions. As you embark on your next adventure, carry with you the lessons you have learned and the courage to forge your own path.

Celebrate your success, cherish the memories, and embrace the opportunities that lie ahead. The world is yours to explore, and we cannot wait to see all the incredible things you will do and accomplish.

Congratulations to all our Kowsie graduands. May you have continued success in all your endeavours!

Best wishes

**PROF HESTER C. KLOPPER**

**VICE-CHANCELLOR AND PRINCIPAL**



## Welkom by die gradeplegtigheid van die Universiteit van die Vrystaat (UV).

**V**andag is voorwaar 'n spesiale dag. Min geleentede hou soveel betekenis in as 'n mens se gradeplegtigheid, sowel vir julle as vir diegene wat julle langs die pad ondersteun het. Baie van julle moes talle uitdagings te bowe kom tydens julle reis om te kom waar julle vandag is. Baie van julle is die eerste in julle gesinne om hierdie belangrike mylpaal te bereik. Julle het hierdie oomblik verdien en julle kan baie trots wees op jul prestasies.

Graduandi, julle het die eer gehad om aan 'n gerespekteerde, sorgsame instelling te studeer met 'n geskiedenis wat oor meer as 120 jaar strek. Erken en herken altyd die betekenis van julle prestasies waar julle nou beweeg van studente van die Universiteit van die Vrystaat (UV) na UV-gegraduateerdes. Ek nooi julle uit om as trotse alumni by julle alma mater betrokke te bly.

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Alhoewel die missie van ons universiteit nog altyd was om julle toe te rus met die kennis en vaardighede wat nodig is om 'n verskil in julle studievervelde te maak, is ons ook bedag daarop dat waardes net so belangrik is vir julle om 'n verskil in julle gemeenskappe te maak. Die Universiteit van die Vrystaat lê groot klem daarop om te verseker dat studente 'n uitnemende universiteitservaring het. In ons strewe na uitnemendheid is ons trots daarop dat ons omgewing bevorderlik is vir intellektuele en persoonlike groei.

As sodanig is ons waardes van uitnemendheid, impak, aanspreeklikheid, omgee, sosiale geregtigheid en volhoubaarheid ingebed in alle aktiwiteite oor die instelling heen.

Waar julle die wêreld buite die Universiteit van die Vrystaat betree, onthou dat opvoeding 'n kragtige hulpmiddel is. Ek moedig julle aan om hierdie hulpmiddel te gebruik om ons universiteit se strewe na die totstandkoming van verantwoordelike maatskaplike toekoms te streef – deur julle kennis en vaardighede te gebruik om 'n meer menslike, meer regverdige en meer billike wêreld vir toekomstige geslagte daar te stel. Gebruik dit om positiewe verandering teweeg te bring, om die status quo te bevraagteken en om julle passies met vasberadenheid na te streef. Die toekoms lyk dalk onseker, maar dit is gevul met moontlikhede wat wag vir julle unieke talente en bydraes. Waar julle nou die volgende avontuur aanpak, neem die lesse saam wat julle geleer het, asook die moed om julle eie weg te baan.

Vier julle sukses, koester die herinneringe en omhels die geleenthede wat voorlê. Die wêreld lê oop voor julle om te verken, en ons kan nie wag om al die ongelooflike dinge te sien wat julle sal doen en bereik nie.

Baie geluk aan al ons Kowsie-graduandi. Mag julle volgehoue sukses in al julle ondernemings hê!

Beste wense

**PROF HESTER C. KLOPPER**

**VIKANSIELIER EN PRINSIPAAL**

## Re a le amohela moketeng ona wa dikgau le dikapeso tsa Yunivesithi ya Freistata (UFS).

**L**etsatsi la kajeno efela e le le ikgethileng. Ke diketsahalo tse mmalwa tse nang le bohlokwa jwaloka mokete wa hao wa dikapeso, molemong wa hao esita le bao ba nnileng ba o tshheheta nakong ena yohle. Ba bangata ba lona ba ile ba lokela ho hlola diphephetso tse ngata nakong ya leeto lena ho tla fihla moo le leng teng kajeno. Ba bangata ba lona le ba pele malapeng a bolona ho fihlella mokolokotwane ona wa bohlokwa. Le sebeditse ka thata ho fihla nakong ena, mme le lokela ho ba motlotlo ka phihlello ena ya lona.

Lona boradikgau, le bile le tlotla ya ho ithuta yunivesithing e nang le dilemo tse 121. Kamehla le amohela le ho ananela bohlokwa ba diphihlello tsa lona ha le fetola maemo a ho ba baithuti ba Yunivesithi ya Freistata (UFS) mme jwale le se le ba boradikgau ba UFS. Ke le kopa ho dula le ikamahanya le mohlodi ona wa lona wa dikgau tsa thuto, le le boradikgau ba motlotlo.

Le hoja sepheo sa yunivesithi ya rona e nnile ya ba ho le hlomella ka tsebo le ka boitsebelo ba mesebetsi e hlokehang bakeng sa ho etsa diphetoho mafapheng a dithuto tsa lona, re ntse re tseba hore makgabane a molemo ho wena ho etsa diphetoho setjhabeng sa heno. Yunivesithi ya Freistata e hatella haholo ho etsa bonnete ba hore baithuti ba na le boiphihlelo bo hlwahlwa ka yunivesithi. Mabapi le kgothaletso ya rona ya boipabolo bo hlwahlwa, re motlotlo hore tikoloho ya rona e tshheheta kgolo ya kelello le mahlale esita le ntshetsopele ya botho. Ka tsela e jwalo, makgabane a rona a boipabolo bo hlwahlwa, boitshimollelo, sekgahla, boikarabello, tlhokomelo, toka ya setjhaba, le tshwarello, di kenyeditswe mesebetsing yohle ya institjushene kapa setsha sena sa thuto.

Ha e le mona le kena lefatsheng le ka nqane ho meedi ya Yunivesithi ya Freistata, hopolang hore thuto ke sesebediswa se matla. Ke le kopa hore le e sebedise ho sibolla diphetoho tse molemo, ho nahanisisa ka hohle ka maemo a bophelo a hona jwale, esita le ho ntshetsa pele ditabatabelo tsa lona ka boikemisetsa. Bokamoso bo ka bonahala bo sa kgolwehe, empa bo tletse maemo a kgonahalo a emetseng dineo tsa lona tse ikgethileng esita le tsona diabo tsa lona. Ha le tswela pele ka sepheo sa lona se latelang bophelong, hlomellang ka dithuto tseo le ithutileng tsona le tshepo ya ho ipetlela tsela ho ya pele.

Ketekang katleho ya lona, thabelang mehopollo ya mahopotsane, mme le amohela menyetla e tlang. Lefatshe lena ke la lona hore le le sibolle, mme re ke ke ra emisa ho tadima ka tebello dintho tse makatsang tseo le tla di etsa le hona ho di fihlella.

Ditakaletso tsa mahlohonolo ho baithuti ba rona ba Kowsie ba amohetseng dikgau. E se eka le ka ba le katleho e tswelapeng pele mererong yohle ya lona ya boiteko!

Madume

**MOPROFESA HESTER C. KLOPPER**

**MOTLATSİ WA MOTJHANSELA LE MOOKAMEDİ**

# OFFICE-BEARERS



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**Professor of Practice**  
**(JBS)**  
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**INNOVATION AND**  
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**INITIATIVES,**  
**INTERNATIONAL**  
**AND**  
**INSTITUTIONAL**  
**AFFAIRS**  
**(DESIGNATE)**



**Ms E Radebe**  
**ISRC: PRESIDENT**  
**GENERAL**

# DEANS



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PhD (UFS)

DEAN:  
ECONOMIC AND  
MANAGEMENT SCIENCES



**Prof LC Jita**  
PhD (MSU)

DEAN:  
EDUCATION



**Prof DR Phetlhu**  
PhD (NWU)

DEAN:  
HEALTH SCIENCES



**Prof MA Masoga**  
PhD (UFS)

DEAN:  
THE HUMANITIES



**Prof SD Kamga**  
LLD (UP)

DEAN:  
LAW



**Prof P Oberholster**  
PhD (UP)

DEAN:  
NATURAL AND  
AGRICULTURAL SCIENCES



**Prof JS Klaasen**  
DTh (US)

DEAN:  
THEOLOGY AND RELIGION



DEAN |

**PROF PJ OBERHOLSTER**

## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ACTUARIAL SCIENCE

**BLOMERUS**, Jan Marthinus

Jan Blomerus was born on 24 February 1978 in Bellville, South Africa. He matriculated from Oudtshoorn High School in 1996 and completed a BCom in Actuarial Science at Stellenbosch University in 1999. He qualified in 2007 as a Fellow of the Institute and Faculty of Actuaries (UK) and the Actuarial Society of South Africa. After fourteen years in the private sector, in 2014, he joined the University of the Free State as a lecturer and completed a Master's degree in Actuarial Science in 2015. He continues to contribute to actuarial education and research.

With his thesis titled: **LONG-TERM LIFE INSURANCE VALUATIONS MEET DEEP LEARNING**, the candidate's research lies at the intersection of actuarial science, computational modelling, and artificial intelligence. His work focuses on the application of deep learning techniques to long-term life insurance valuation, with particular emphasis on improving efficiency, scalability, and regulatory compliance in large policy portfolios. By integrating traditional actuarial principles with modern machine learning methodologies, his research contributes to the development of robust surrogate modelling frameworks capable of replicating complex valuation systems. Beyond reserve estimation, his broader academic interests include deterministic modelling, risk management, and the responsible application of artificial intelligence in financial services. This doctoral study marks the first PhD in Actuarial Science to be awarded at the University of the Free State, representing an important milestone in the advancement of actuarial research at the institution.

**Supervisor:** Prof A Ring

**Co-supervisor:** Prof K Essel-Mensah

### DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ASTROPHYSICS

**MADZIME**, Spencer Tendai

Spencer Tendai Madzime was born in Chipinge, Manicaland, Zimbabwe on 10 May 1988. He received his secondary education in Chipinge and Marondera, completing his Ordinary Level studies in 2006 and Advanced Level studies in 2009 at Mafumise High School. He obtained a Bachelor's degree in Physics and Astrophysics in 2016, followed by an Honours degree in Astrophysics in 2017, both at the University of the Free State. In the same year, he was inducted into the Golden Key International Honour Society in recognition of his academic excellence. He subsequently completed a Master's degree in Astrophysics with distinction in 2021, also at the University of the Free State. He also served as a relief teacher in Mathematics and Science from 2010 to 2013 and as a part-time Physics lecturer at the Central University of Technology from 2019 to 2021.



With his thesis titled: **THE SEARCH FOR GAMMA-RAY EMISSION FROM HIGHLY MAGNETIZED WHITE DWARFS USING FERMI-LAT DATA**, the candidate makes a significant contribution to the field of high-energy astrophysics and the study of compact objects. In this study, he systematically tests the long-standing theoretical prediction that highly magnetised white dwarfs can accelerate particles and emit gamma rays. The candidate implemented special selection criteria to isolate short intervals of enhanced emission from a dominant background. By combining methodological innovation with a long baseline dataset, his investigation provides the strongest evidence to date that highly magnetised white dwarfs are indeed faint and transient gamma-ray sources, while also demonstrating the power of refined data-filtering techniques in revealing weak and intermittent emission. This work was presented at four international conferences and resulted in four international peer-reviewed conference proceedings.

**Supervisor:** Prof PJ Meintjes

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN BIOCHEMISTRY**

**GIDAGA**, Mphumzi Songezo

Mphumzi Songezo Gidaga was born in Butterworth on 3 May 1991 and matriculated from George Randell High School in KuGompo in 2008. He first trained in wildlife management, earning a Game Ranch Management Diploma in 2011 and worked as a wildlife ranger and guide in South Africa's private reserves and national parks. He returned to university in 2015, completing a BSc in Biochemistry and Microbiology with distinction in 2017, a BSc Honours degree in 2018, an MSc in Biochemistry with distinction in 2020, and completed his PhD at the University of the Free State.

With his thesis titled: **INVESTIGATING ELECTRON TRANSFER AS A BOTTLENECK TO  $\alpha,\omega$ -DIACID PRODUCTION BY CYP52 HYDROXYLASES**, the candidate addresses a key limitation in biocatalytic  $\alpha,\omega$ -diacid synthesis catalysed by CYP52/CPR systems, contributing to the fields of biocatalysis and structural biology. The research focused on characterising multiple fungal cytochrome P450 reductases to identify enzymes with improved electron transfer efficiency towards CYP52 hydroxylases. In addition, the candidate solved the structures of two fungal CPRs, expanding the limited pool of available CPR structural data. Through complementary studies using bacterial and yeast whole-cell systems, the work provides an important foundation for the future development and optimisation of CYP52/CPR-based whole-cell biocatalysts.

**Supervisor:** Prof DJ Opperman

**Co-supervisors:** Prof MS Smit, Dr AC Ebrecht and Dr C Tolmie

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN CHEMISTRY**

**BOSMAN**, Azania Lerato

Azania Lerato Bosman was born on 22 April 1994 in Hartswater in the Northern Cape province, South Africa. She matriculated from St Boniface High School Kimberley in 2012 and later attained a Bachelor's degree majoring in Chemistry and Biochemistry at the University of the Free State. She graduated with a BSc Honours degree in Chemistry in 2019 and an MSc cum laude in 2022, both at the University of the Free State.



With her thesis titled: **COMPARATIVE INVESTIGATION OF RHODIUM NAPHTHYLIDENE AND SALICYLIDENE AS REACTIVE SPECIES**, the candidate contributes to organometallic structural dynamics chemistry and early-stage anti-cancer drug development. The study examines the structural and electronic characteristics of a range of rhodium intermediates using NMR, IR, UV-Vis spectroscopy, single-crystal and high-pressure X-ray diffraction, and oxidative addition kinetics to clarify reactivity patterns, and ligand-dependent behaviour. Comparative insights reveal how electronic tuning influences intermediate stability and substrate activation. Based on these findings, the candidate designed related rhodium complexes for preliminary anti-cancer screening, exploring structure-activity trends. The work advances the understanding of reactive rhodium species while defining their relevance to metallodrug discovery. This work has already produced two publications in association with the University of Warsaw, Poland, and another three publications are being finalised.

**Supervisor:** Prof A Brink

**Co-supervisor:** Dr DV Kama

### **MASHWEU, Adelaide**

Adelaide Mashweu grew up in Limpopo, where she completed her primary and secondary education. She subsequently enrolled at the University of Pretoria, earning a BSc degree in Biochemistry and Chemistry. She continued her studies at the University of the Witwatersrand, obtaining both her BSc Honours and MSc degrees in Chemistry. During this time, she developed a strong commitment to chemistry. Following a one-year practical research internship with natural oils at SEOBI, she joined the University of the Free State in 2021 to pursue a PhD in Organic Chemistry.

With her thesis titled: **SYNTHESIS OF DONOR- AND ACCEPTOR-SUBSTITUTED NON-CANONICAL AMINO ACIDS FOR THE STABILIZATION OF PEPTIDE-BASED HYDROGELATORS**, Adelaide Mashweu contributes to the design and synthesis of non-canonical amino acids – molecular building blocks that do not occur naturally but can be engineered to provide new chemical and physical properties. By developing efficient synthetic routes to these compounds, she expanded the toolbox available for constructing advanced peptide-based functional materials. A central aspect of her work involved transforming selected non-canonical amino acids into small molecules capable of forming hydrogels, soft materials that can absorb large amounts of water while maintaining structural integrity. Such materials have potential applications in areas ranging from biomedical technologies and drug delivery to material science. Through systematic molecular design, careful synthesis, and detailed characterisation, her research has contributed to the broader effort to create tailored peptide-based molecular systems.

**Supervisor:** Prof VA Azov

### **OTUKILE, Kgalaletso Precious**

Kgalaletso Precious Otukile was born on 4 December 1994 in Tlakgameng village, North West province, South Africa. She began her academic journey at Maikao Primary School (2001–2006), where she built a strong foundation rooted in discipline and academic commitment. She continued her studies at Thuso Thebe High School (2007–2012), where her interest in science was first sparked and steadily nurtured. Driven by her growing passion for science, she enrolled at North-West University, where she completed a BSc degree in Environmental and Biological Sciences in 2017. Her strong academic performance during this period earned her the University Merit Award and National Research Foundation – Sasol Inzalo Bursary, reflecting her dedication, discipline, and commitment to excellence. She proceeded to complete an Honours in Chemistry in 2018, followed by an MSc in Chemistry with distinction



in 2020. During her postgraduate studies, she developed a profound interest in theoretical and computational chemistry, laying the groundwork for her future research career.

With her thesis titled: **UNRAVELLING THE LOW-TEMPERATURE COMBUSTION MECHANISMS AND KINETICS BETWEEN HYDROCARBON RADICALS AND MOLECULAR OXYGEN**, the candidate makes a significant contribution to the field of theoretical combustion chemistry, particularly to the understanding of elementary radical-oxygen reaction kinetics relevant to low-temperature combustion. With this contribution, she seeks to provide accurate thermochemical data and pressure- and temperature-dependent rate constants for a representative series of alkyl and cyclic hydrocarbon radicals reacting with molecular oxygen, using high-level ab initio calculations combined with advanced kinetic modelling. The comprehensive kinetic results of this investigation serve as a clear indication of the value that state-of-the-art quantum chemical and RRKM-based approaches hold for resolving uncertainties in radical oxidation mechanisms and for improving predictive kinetic models aimed at cleaner, more efficient combustion technologies.

**Supervisor:** Prof L Moskaleva

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN DATA SCIENCE**

**DOLLMAN**, Gavin John

Gavin Dollman was born in Cape Town on 27 May 1983. He received his secondary education in Cape Town and matriculated from Sea Point High School in 2000. He obtained a BCom (Information Technology) in 2008, a BCom Honours in 2009, and an MSc in 2013, all at the University of the Free State. He began his academic career at the University of the Free State in 2008 and is currently a lecturer in the Department of Computer Science.

With his thesis titled: **EVALUATING A DEEP LEARNING APPROACH FOR FOSSIL PROSPECTING IN THE TRIASSIC LOWER ELLIOT FORMATION, SOUTH AFRICA**, the candidate contributes to automated fossil prospecting by applying interpretable deep learning to remote-sensing data. Fossil exploration in the Lower Elliot Formation is labour-intensive and typically depends on expert-led field surveys across large areas. In his research, the candidate focuses on automating prospecting by classifying land patches at multiple spatial scales, while retaining interpretability to support scientific decision-making. He makes a three-fold contribution: first, by proposing a multi-resolution framework for broad-to-fine targeting; second, by developing complementary models for satellite-based area prioritisation and drone-based land-cover mapping of erosion-related classes; and third, by integrating hyperspectral drone data for fine-grained fossil prospecting. The study demonstrates that deep learning can reliably support fossil exploration in the Lower Elliot Formation.

**Supervisor:** Prof JE Kotzé

**Co-supervisors:** Prof AB Heckert and Prof JN Choiniere

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN DISASTER MANAGEMENT**

**NDLOVU**, Tobias

Tobias Ndlovu was born on 28 July 1974 in Matobo District, Matabeleland Province, Zimbabwe. He matriculated from Ekusileni High School in 1992 and obtained a Diploma in Purchasing and Supply from Bulawayo Polytechnic



in 1998. In 2004, he graduated with a Diploma in Development and Disaster Management from the National University of Science and Technology, Zimbabwe. In 2013, he earned an Advanced University Diploma in Disaster Management, followed by a Master's degree in Disaster Management in 2021, both from the University of the Free State. He joined an international NGO, where he currently serves as a Senior Global Humanitarian Advisor.

With his thesis titled: **EXPLORING THE CAPABILITIES OF INFORMAL SETTLEMENTS: A REFLECTION ON POVERTY REDUCTION IN URBAN ZIMBABWE**, the candidate makes a significant contribution to scholarship on urban poverty and disaster risk reduction in informal settlements. The study investigates the capabilities that residents of informal settlements value in their pursuit of poverty reduction and improved well-being. Drawing on Nussbaum's capability approach and critical realism, the candidate employed a multi-case study design involving 243 residents from four informal settlements in Bulawayo, Zimbabwe. Data were collected through surveys, focus group discussions, and key informant interviews to identify priority capabilities and the structural constraints affecting their realisation. The findings indicate that Nussbaum's central human capabilities are essential for poverty reduction; however, personal, social, and environmental conversion factors influence how these capabilities are achieved and prioritised. The study proposes a capability-based framework to guide inclusive urban policy, strengthen community participation, and enhance poverty reduction efforts in informal settlements.

**Supervisors:** Prof A Ncube

**Co-supervisor:** Dr T Ndlovu

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ENVIRONMENTAL MANAGEMENT

**MAREMANE, Sekato Rocky**

Sekato Maremane, born in Polokwane on 7 February 1994, holds a strong academic foundation in water sciences. He earned a BSc in Water and Sanitation (University of Limpopo, 2017), an Honours in Environmental Management (UNISA, 2020), and an MSc in Integrated Water Management (University of the Free State, 2024). His professional career began as a process controller intern in the Department of Public Works (2017). Since 2018, he has served as a process controller at Lepelle Northern Water, applying his expertise to water resource management.

With his thesis titled: **CONTAMINATION OF SURFACE WATER RESOURCES BY RESIDUES OF SELECTED REPURPOSED COVID-19 DRUGS AND METAL ELEMENTS: SOURCES, PATHWAYS, FATE, RECEPTORS AND HUMAN AND AQUATIC HEALTH RISK** The study provides knowledge to the national and international community on the occurrence and fate of key pharmaceuticals of emerging concern, repurposed for COVID-19 treatments, in water resources and sediments, as well as the risks posed by these drugs and their metabolites to the aquatic ecosystem and human health. The study revealed severe contamination of Mangaung surface water with all pharmaceuticals, especially azithromycin, which poses a high ecological and human health risk. For metals, all 28 analysed exceeded WHO limits, with arsenic and chromium presenting a cancer risk. A major contribution in this project is the development of a novel hybrid framework for integrated assessment of pharmaceutical, metal, and mixed pollutants, addressing a critical gap in water management. The findings provide essential evidence for implementing comprehensive strategies to safeguard water resources and public health.

**Supervisor:** Prof Paul Oberholster

**Co-supervisors:** Dr Gladys Belle and Dr Elizabeth Omotola



## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN GEOGRAPHY

### **CHIRISA**, Halleluah Mangombe

Halleluah Mangombe Chirisa is the Director of Research and Innovation at the Zimbabwe Ezekiel Guti University (ZEGU). After graduating with her Honours degree in Mathematics and Geography from Bindura University of Science Education (BUSE) in Zimbabwe in 2005, she taught at both rural and urban schools. In 2009, she graduated with her Master's in Population Studies from the University of Zimbabwe (UZ) and worked for an NGO focusing on HIV programming in Zimbabwe. In 2022, she enrolled for her PhD in Geography, exploring how climate extremes intersect with public health in marginal communities in South Africa. Overall, her work centres on marginality, health, and environmentalism.

With her thesis titled: **EXPLORING THE NEXUS BETWEEN EXTREME CLIMATE EVENTS AND SPATIO-TEMPORAL HEALTH CHALLENGES IN MARGINAL SPACES FOR ENHANCED COMMUNITY RESILIENCE IN MANGAUNG MUNICIPALITY IN SOUTH AFRICA**, the candidate contributes to the study of medical geography. Using a mixed-method approach and two case sites in Mangaung Municipality, respondents were purposively selected in Botshabelo and Bochabela. A 30-year climate dataset was analysed to establish temperature and rainfall trends and patterns in the study sites. It was established that there was an increase in temperature trends in the study area, and this was confirmed by the residents, citing negative impacts on their daily living and health, especially the young and elderly. Building on the communities' and other key stakeholders' responses, the researcher then developed a framework that communities in marginal spaces can adopt to improve community resilience against extreme climate events such as heat waves, floods, and cold waves.

**Supervisors:** Prof AB Matamanda

**Co-supervisors:** Dr A Van Der Walt and Dr M Mulondo

### **MUKWEVHO**, Rinae

Rinae Mukwevho was born on 13 February 1995 in Vhurivhuri village, Limpopo, South Africa. She matriculated at Thengwe High School in 2013. She obtained a BSc in Geology in 2016, a BSc Honours in Geography in 2018, and an MSc in Geography in 2022, all at the University of the Free State. She is currently completing her PhD in Geography at the same university, with expected completion in 2026. She started her academic career as a student assistant at the University of the Free State in 2017. Since 2022, she has been a lecturer and coordinator in the Department of Geography at the University of the Free State, where she continues to teach, conduct research, and coordinate field-based learning activities.

With her thesis titled: **INTEGRATING REMOTE SENSING AND GEOSPATIAL TECHNIQUES FOR EARLY DETECTION AND MANAGEMENT OF BRACKEN FERN (PTERIDIUM AQUILINUM) IN MOUNTAINOUS REGIONS**, the candidate contributes to scholarship on invasive species monitoring and ecological management. She develops an integrated framework combining multi-sensor satellite data, phenological modelling, and advanced machine learning to enhance early detection and monitoring of bracken fern in the Cathedral Peak Reserve. By addressing the challenges of detection in complex mountainous environments, her research provides methodological insights and practical approaches that support proactive conservation, improve mapping of invasive vegetation, and inform evidence-based ecological interventions in montane landscapes.

**Supervisor:** Prof SA Adelabu

**Co-supervisors:** Dr AJ Van der Walt and Dr CM Jackson



## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN GEOHYDROLOGY**

### **LIGAVHA-MBELENGWA, Lufuno**

Lufuno Ligavha-Mbelengwa was born on 30 April 1992 in Limpopo, South Africa. She matriculated from St Brendan's Catholic Secondary School in 2009 and began a BSc in Applied Chemistry at the University of Venda in 2010. In 2011, she transferred to the University of the Free State, completing a BSc Geology in 2013. She obtained her BSc Honours in 2014, MSc Geohydrology in 2017, and PhD in 2025, beginning her career as a hydrogeologist at the Council for Geoscience. She has published in peer-reviewed journals and conference proceedings and presented at more than 10 local and international conferences.

With her thesis titled: **APPLICATION OF EMERGING ORGANIC CONTAMINANTS AS TRACERS OF GROUNDWATER FLOW AND CONTAMINATION SOURCE DELINEATION**, the candidate integrated emerging organic contaminants (EOCs) into a multi-tracer approach to assess groundwater flow dynamics, delineate contamination sources, and trace water ingress into mine voids within complex karst and mixed-source contamination environments. Her work advances tracer-based methodologies for characterising lateral and vertical groundwater flow regimes. The multi-tracer approach enabled the establishment of local EOCs' threshold values to support groundwater vulnerability and regulatory risk assessments. Notably, bisphenol A displayed a concentration pattern similar to chloride, behaving like a conservative tracer. This suggests that, under prevailing conditions, bisphenol A is sufficiently persistent to serve as an ideal groundwater flow tracer and a compound of concern requiring long-term monitoring. The research also demonstrated an innovative application of EOCs as tracers of water ingress in mining areas. The work produced two peer-reviewed publications, with the third accepted.

**Supervisor:** Prof M Gomo

**Co-supervisors:** Prof D Lapworth and Dr G Madzivire

### **MWETULUNDILA, Asteria-Lea**

Asteria-Lea Mwetulundila was born in Oshikuku, Namibia on 31 May 1989. She completed her secondary education at Gabriel Taapopi Secondary School in Ongwediva, matriculating in 2006. She obtained a BSc Honours in Geology from the University of Namibia in 2011 and was recognised as the best student in research. She obtained her MSc in Geohydrology with distinction in 2020, receiving the Dean's Medal, and her PhD in Geohydrology in 2026, both from the University of the Free State. She has served in the Department of Water Affairs within the Ministry of Agriculture, Fisheries, Water and Land Reform since 2011 and is currently Chief Hydrologist.

With her thesis titled: **MATHEMATICAL MODELLING OF CONTAMINATION TRANSPORT AND EFFECTS OF IN SITU LEACH MINING ON THE STAMPRIET TRANSBOUNDARY AQUIFER SYSTEM, NAMIBIA**, the candidate develops a scenario-based modelling framework to assess the migration of in-situ leaching (ISL) solutions and reaction products in a confined, heterogeneous aquifer with geological faults and fractures, focusing on the Auob aquifer. The model incorporates advection, dispersion, chemical reactions, ion exchange, and fault-controlled flow, simulating contaminant transport before, during, and after fault transits. Governing equations were solved using Crank–Nicolson and upwind schemes, with stability analyses confirming robustness. Simulations capture field-scale features such as non-symmetric plume migration and rapid spread of uranyl–sulphates. Built on realistic theoretical assumptions, the framework can be calibrated with site-specific data to predict ISL impacts, guide monitoring, inform



remediation strategies, and support sustainable groundwater protection in Namibia's first proposed ISL uranium operations.

**Supervisor:** Prof A Atangana

**Co-supervisor:** Dr E Atangana

**SAVECA**, Paulo Sérgio Lourenço

Paulo Saveca was born on 6 June 1980 in Chipenhe Xai-Xai, Gaza Province, Mozambique. He completed his secondary education with distinction at Chókwe Secondary School in 2001. In 2011, he obtained a BSc Honours degree in Agronomic Engineering at the Eduardo Mondlane University. He completed a second BSc Honours degree in Geohydrology at the University of the Free State in 2015, followed by a Master's degree in Geohydrology in 2017. His career as a teacher and researcher began in 2012 when he was appointed at the Higher Polytechnic Institute of Gaza as a lecturer in Hydraulic Engineering and Rural Water.

With his thesis titled: **HYDRODYNAMIC AND HYDROCHEMICAL ASSESSMENT OF A SAND RIVER AQUIFER SYSTEM IN THE LOWER LIMPOPO RIVER IN MOZAMBIQUE**, the candidate contributes to climate co-adaptation and resilient water management, focusing on the potential of sand river alluvial aquifer systems to promote sustainable development along the Lower Limpopo River. Using integrated hydrogeological methods, geospatial analysis, and field investigations, the candidate investigated a stretch of the Limpopo River in Mozambique to understand hydrological processes and identify the hydrogeological mechanisms that connect the river to the groundwater system. The results of the investigations show that, even in the dry seasons when the river does not flow, the riverbed and its margins store sufficient freshwater to sustain multiple water uses while maintaining the ecological reserve. The study presents scientific evidence that sand river aquifers offer the potential to promote resilient livelihoods in African dryland areas.

**Supervisors:** Prof FD Fourie

**Co-supervisors:** Dr E Lukas and Prof T Stigter

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN GEOINFORMATICS**

**GCAYI**, Siphokazi Ruth

Siphokazi Ruth Gcayi, born on 22 January 1990 in Ntshiqo Village, Tsolo, Eastern Cape, South Africa, is a doctoral candidate in Geo-informatics at the University of the Free State. She matriculated from Mariazell High School (2007) and obtained a BSc degree majoring in Geography and Geographical Information Systems in 2014 from the University of Fort Hare, a BSc Honours in Geography in 2015 from the University of the Witwatersrand, and an MSc in Geography in 2019 from the University of the Free State. She began her career in 2016, joining a Postgraduate Development Programme (PDP) at the Agricultural Research Council.

With her thesis titled: **INVESTIGATING THE IMPACTS OF BUSH ENCROACHMENT (VACHELLIA KARROO) ON GRASSLANDS AND SAVANNA ECOSYSTEM SERVICES OF EASTERN CAPE: A REMOTE SENSING APPROACH**, the candidate makes a significant contribution to bush encroachment research focusing on Vachellia karroo with the application of remote sensing. She demonstrates the important role played by remote sensing data



and machine learning algorithms in discriminating between invasive and encroaching *Vachellia karroo* at species level and shows its impacts on grass nutrients. With this contribution, the findings of the study provide a strong scientific basis for the application of remote-sensing-based monitoring approaches to support sustainable rangeland management, ecological restoration, and evidence-based policy interventions in the grasslands and savannas of the Eastern Cape and comparable ecosystems across southern Africa.

**Supervisor:** Prof SA Adelabu

**Co-supervisor:** Prof JG Chirima

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN GEOLOGY**

**MUTELE, Litshedzani**

Litshedzani Mutele was born on 15 April 1984 in the Muledane area of Thohoyandou, Limpopo province, South Africa. He matriculated from Sam Mavhina Secondary School in 2001 and enrolled for a BSc Honours in Geology at Rhodes University in 2008. He completed his studies in 2011. In 2020, he graduated with an MSc in Geology from the University of KwaZulu-Natal. His career as a geologist began in 2012 as an intern, and he rose through the ranks to become a research scientist at the Council for Geoscience.

With his thesis titled: **STATISTICAL ANALYSIS OF GOLD PRODUCTION AND RESOURCES-RESERVES IN SOUTH AFRICA: EXTRAPOLATING FUTURE PRODUCTION, RESOURCES-RESERVES AVAILABILITY, AND IMPLICATIONS ON THE EXPLORATION STRATEGY**, the candidate contributes to a new overview on gold exploration and production, focusing on potential future trends, exploration maturity of goldfields and their residual resources, and the scarcity of deposit discovery in South Africa. With this contribution, he demonstrated that dormant gold metallogenic terranes still contain resources that can supplement the current resource and reserve inventory and potentially increase gold production. The results further showed that the available regional geoscientific datasets, covering most of the metallogenic terranes, are suitable for generating mineral prospectivity maps to delineate new exploration targets. The study also demonstrated that machine learning algorithms are effective tools for the integration of multi-layered and complex geoscientific datasets. The study recommends that the results be considered in strategic mineral policy formulation.

**Supervisor:** Prof EJM Carranza

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN INTEGRATED WATER MANAGEMENT**

**SEKALELI, Tsepo Stephen**

Tsépo Sekaleli was born on 6 March 1985 in Maseru, Lesotho. He matriculated from Adventville High School in 2003 and obtained a BSc in Agriculture (Soil Science) from the National University of Lesotho in 2010, followed by an MSc in Forestry from Bangor University, United Kingdom, in 2014. He began his career as a district forestry officer in 2010, was promoted to senior district forestry officer in 2016, and lectured at the Lesotho Agricultural College from 2018 to 2020. In 2020, he joined the Department of Agricultural Research as a chief research officer, a position he currently holds.



With his thesis titled: **THE ECOHYDROLOGY OF HEADWATER PEATLANDS IN THE MALOTI MOUNTAINS, LESOTHO AND IMPLICATIONS FOR SUSTAINABLE MANAGEMENT**, the candidate contributes to the field of peatland hydrology and the impact on hydrological functioning. The candidate used an ecohydrological approach to assess groundwater dynamics, hydrochemistry, and the physical peat properties of two selected peatlands in the Maloti Mountains, Lesotho. These gullies alter the geomorphology of peatlands, thereby disrupting the hydrology and impacting the spatial patterns of vegetation cover. These changes lead to the socio-economic impact on local communities and water security for downstream users in southern Africa. Furthermore, the candidate properly classified the peatlands of Lesotho using accepted peat classification typologies as groundwater-dependent fens instead of rain-fed bogs as they were previously classified. Guidelines were developed to manage and conserve these peatlands. This thesis is an original contribution to the field of study and considerably advances international peatland knowledge.

**Supervisor:** Dr P Grundling

**Co-supervisor:** Dr AJM Jansen

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN MATHEMATICAL STATISTICS**

**KWARAMBA**, Nicholas Tichaona

Nicholas Tichaona Kwaramba, born on 11 October 1991 in Mutare, Zimbabwe, completed his schooling at St John's College in 2009. He obtained a BSc in Econometrics (2018), an Honours in Risk Analysis (2019), and an MSc in Applied Statistics with distinction (2021) from the University of the Free State. He enrolled for a PhD in Mathematical Statistics in 2022. As a committed sportsman, he represented the University of the Free State in football and captained the men's basketball team. He began his career as a biostatistician in 2022, focusing on clinical research in the pharmaceutical industry.

With his thesis titled: **BAYESIAN INFERENCE ON BIVARIATE EXTREME VALUE ASYMPTOTIC DEPENDENCE**, the candidate makes a substantive contribution to the field of multivariate extreme value analysis by advancing Bayesian inference methodologies for bivariate extremes. Multivariate extreme value theory seeks to characterise dependence structures among rare events, elucidate the implications of such relationships, and support informed decision-making under extreme and unexpected conditions. This study addresses both theoretical and data-driven challenges arising across diverse application domains, with particular emphasis on environmental rainfall modelling. In a field traditionally dominated by frequentist approaches, the candidate compellingly advocates for Bayesian frameworks in multivariate extreme value analysis. Through extensive simulation studies, he demonstrates that Bayesian methods for estimating dependence structures in multivariate extremes offer notable advantages over conventional classical techniques.

**Supervisor:** Prof A Verster

**Co-supervisor:** Prof D Chikobvu

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN MATHEMATICS**

**SWARTZ**, Elize

Elize Swartz, born in 1997, obtained a BSc degree majoring in Mathematics and Chemistry with distinction in 2018, a BSc Honours majoring in Mathematics and Applied Mathematics with distinction in 2019, and an MSc majoring in



Mathematics with distinction in 2021. She received two Dean's medals for the best results in respect of a Bachelor Honours degree and a Master's degree in our faculty in 2019 and 2021, respectively. She is currently a lecturer in the Department of Mathematics and Applied Mathematics, and we are happy and proud to have her as our colleague.

With her thesis titled: **GENERAL SUM-CONNECTIVITY AND GENERAL RANDIĆ INDEX OF GRAPHS**, Elize Swartz contributes to the field of extremal graph theory. She focuses on two general indices of graphs, namely the general sum-connectivity index and the general Randić index. The study undertakes an in-depth investigation on these two indices for two classes of graphs, namely trees and unicyclic graphs. In this study, she presents extremal graphs for different graph parameters, specifically focusing on graphs of given order and maximum degree, and graphs of given order and number of pendant vertices. She uses a combination of combinatorial transformations of graphs and analytical methods to compare indices of different graph structures. With this contribution, she successfully advanced the field by solving a range of previously open problems and extending numerous known results to broader ranges of parameters.

**Supervisor:** Prof T Vetrík

**Co-supervisor:** Dr ECM Maritz

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN MICROBIOLOGY**

**MALIEHE, Maphori**

Maphori Maliehe was born in Virginia, Free State on 15 July 1995. She completed her secondary education in Bloemfontein, matriculating from Brebner High School in 2013. She pursued her tertiary studies at the University of the Free State, earning a BSc degree majoring in Microbiology and Biochemistry in 2017, followed by a BSc Honours in Microbiology in 2019. She completed her MSc in Microbiology with distinction in 2021 and was awarded a PhD in Microbiology in 2026. In the same year, she commenced her academic career at the University of the Free State as a postdoctoral fellow and stand-in lecturer.

With her thesis titled: **EVALUATION OF THE GROWTH INHIBITORY PROPERTIES OF ARTEMISININ ON *CRYPTOCOCCUS NEOFORMANS* CELLS**, the candidate makes a meaningful contribution to anti-fungal drug repurposing research targeting cryptococcal infections. With this contribution, she attempts to evaluate the efficacy of artemisinin against *Cryptococcus neoformans* and elucidate its potential mechanisms of action using integrated microbiological and molecular approaches. The study assesses anti-fungal activity, effects on virulence-associated traits, and therapeutic relevance. Notably, this work has yielded one published paper, with a second manuscript currently under review, and has been presented at international conferences. The candidate has also disseminated her findings through the "Yeast" newsletter, the official publication of the International Commission on Yeasts of the International Union of Microbiological Societies (IUMS). The comprehensive results of this investigation indicate the value of drug repurposing strategies to address anti-fungal resistance and expand treatment options for cryptococcosis.

**Supervisor:** Prof OM Sebolai

**Co-supervisor:** Prof J Albertyn



## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN STATISTICS**

**NDLOVU, Thabani**

Thabani Ndlovu was born on 12 March 1989 at Esigodini Hospital in Matabeleland South, Zimbabwe. He completed his secondary education at Milton High School in Bulawayo, where he matriculated in 2008. He earned his Bachelor's and Master's degrees from the National University of Science and Technology (NUST) in 2013 and 2019, respectively. He commenced his professional career as a high school teacher, a role he held from 2014 to 2019. Between 2019 and 2020, he served as a monitoring and evaluation officer for a non-governmental organisation based in Harare. In 2023, he joined the NUST as a lecturer in Financial Engineering.

With his thesis titled: **QUANTIFYING AND COMPARING RISKS IN BITCOIN AND THE SOUTH AFRICAN RAND USING STATISTICAL LOSS DISTRIBUTION-BASED RISK MEASURES**, the candidate advances the empirical and methodological literature on financial risk measurement by rigorously modelling extreme risk using fat-tailed loss models. The study demonstrates that extreme

value-based frameworks like GEVD, GPD, GARCH-EVT models, and GARCH-EVT-Copula are superior tools for quantifying risks of assets that possess heavy tails, volatility clustering, and tail dependence as observed in Bitcoin and the South African Rand. The empirical findings show that Bitcoin is riskier than the Rand, using risk measures like VaR, ES, and EVI. In the portfolio context, the Gumbel copula yields more accurate estimates of joint risk modelling. Furthermore, the results reveal a small marginal diversification benefit in aggregate portfolio risk compared to the sum of the individual asset risks. Finally, the study concludes that Bitcoin can act, at best, as a weak safe-haven asset for Rand investors.

**Supervisor:** Prof D Chikobvu

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ZOOLOGY**

**BOPHEKA, Luthando**

Luthando Bopheka was born in Sterkspruit, Eastern Cape. He received his secondary education in Potchefstroom and Bloemfontein, matriculating from Bloemfontein High School in 2010. He obtained his BSc degree in 2013, BSc Honours (Zoology) in 2014, and MSc in Zoology in 2018, all from the University of the Free State. He started his career as a laboratory and teaching assistant in the Department of Zoology and Entomology at the University of the Free State in 2014. In 2020, he was appointed as a professional services officer in the same department and currently still serves in this role.

With his thesis titled: **MORPHOLOGY AND MOLECULAR ANALYSIS OF TRYPANOSOMES FROM CATFISH SPECIES, ORANGE-VAAL RIVER SYSTEM, FREE STATE PROVINCE**, the candidate makes a novel contribution to the understudied field of African freshwater fish trypanosomes. This first integrative morphological, molecular, and in vitro culturing investigation focused on catfish hosts in the Free State province. Using extensive fieldwork, microscopy, rRNA sequencing, and in vitro culturing, 12 fish species, as well as *Batracobdelloides tricarinata* (leeches), were collected and screened for *Trypanosoma* infections. Most isolates aligned with *Trypanosoma*



mukasai Hoare, 1932. A previously, undetected cryptic lineage (*Trypanosoma* sp.) with borderline interspecific divergence was identified. Successful culturing of epimastigote, promastigote, and metacyclic stages, was also achieved. Direct genetic matches between leeches and catfish from Soetdoring Dam established *B. tricarinata* as a confirmed biological vector. This study extends the known distribution, host range, vector ecology, and developmental biology of these parasites, providing critical new baseline data for southern African trypanosome research.

**Supervisor:** Prof LL van As

**Co-supervisors:** Dr J van As and Dr CA Cook

**MASTER'S DEGREES**

**MASTER OF DISASTER  
MANAGEMENT**

CHAUKE, Shame Shadreck  
MANZI, Asanda Odwa  
MATHONSI, Bongani Shadrack  
MONGALE, Thatoyamodimo  
Winnie  
MOTLOU, Retshepile Precious  
MPSHANE, Koketso Muriel  
MTHEMBU, Anele Ntokozi Pearl  
OLIFANT, Tebatso  
TALJAARD-NILSEN, Nadia

**MASTER OF SCIENCE IN  
NANOSCIENCE**

HAREJANE, Karabo Rethabile  
KUNENE, Neliswa Lindelo  
MALIMABE, Ramokwai Jan\*  
MASILELA, Karabo Lurcender  
Bridgette

MATHAPO, Katleho  
NCHE, Pule\*  
SPEEK, Danielle  
ZIKALALA, Sizwe Mcebisi

**MASTER OF SCIENCE  
MAJORING IN BOTANY**

**GIDDY, Joshua Nicholas**  
**Dissertation Title:** A  
PHYTOSOCIOLOGICAL STUDY  
OF THE DRAKENSBERG-  
AMATHOLE AFROMONTANE  
FYNBOS (GD6) WITHIN THE  
GOLDEN GATE HIGHLANDS  
NATIONAL PARK  
**Supervisor:** Dr AC van Aardt  
**Co-Supervisor:** Prof EMI Adam

**MASTER OF SCIENCE  
MAJORING IN BOTANY**

**MOTSHEGWA, Gaopalelwe  
Samuel**  
**Dissertation Title:** DROUGHT-  
STRESSED EDAMAME:  
IMPACT ON PHOTOSYNTHESIS

PERFORMANCE AND  
PRODUCTION OF  
OSTEOPOROSIS-PREVENTIVE  
PHYTOCHEMICALS

**Supervisor:** Dr MJ Moloi  
**Co-Supervisor:** Dr M Razwinani

**MASTER OF SCIENCE  
WITH SPECIALISATION IN  
AGRICULTURAL ECONOMICS**

**JORDAAN, Hermanus Coffee\***  
**Dissertation Title:** AN  
ANALYSIS OF THE IMPACT OF  
AGRICULTURAL DROUGHT  
RESILIENCE ON THE WELFARE  
OF COMMERCIAL LIVESTOCK  
HOUSEHOLDS IN NORTHERN  
CAPE PROVINCE, SOUTH  
AFRICA  
**Supervisor:** Prof YT Bahta  
**Co-Supervisors:** Prof FA Mare  
and Dr HN van Niekerk

**VILJOEN, Gareth\***  
**Dissertation Title:**  
DETERMINANTS OF MAIZE  
PRODUCERS' INTENTIONS



TO ADOPT PRICE RISK  
 MANAGEMENT TOOLS IN THE  
 FREE STATE, SOUTH AFRICA:  
 AN EXTENDED THEORY OF  
 PLANNED BEHAVIOUR MODEL  
 APPLICATION

**Supervisor:** Mr. MO Monteiro

**Co-Supervisors:** Prof YT Bahta  
 and Prof H Jordaan

**MASTER OF SCIENCE WITH  
 SPECIALISATION IN APPLIED  
 MATHEMATICS**

VAN DER WALT, Corlé\*

**Dissertation Title:** TOWARD  
 CREATING AN IMAGE OF THE  
 RESONANT EFFECTS AROUND  
 SGR A\*

**Supervisor:** Prof J Brink

**MASTER OF SCIENCE WITH  
 SPECIALISATION IN APPLIED  
 STATISTICS**

ADONS, Mpumelelo

**Dissertation Title:**  
 SPATIOTEMPORAL ANALYSIS  
 WITH APPLICATION TO  
 PRECIPITATION AND  
 TEMPERATURE DATA FOR THE  
 FREE STATE PROVINCE IN  
 SOUTH AFRICA

**Supervisor:** Prof FM Correa

MPHANYA, Amos Mohau\*

**Dissertation Title:**  
 INTERRUPTED TIME SERIES  
 ANALYSIS TO ASSESS THE

IMPACT OF THE PANDEMIC ON  
 THE SOUTH AFRICAN TOURISM  
 SECTOR

**Supervisor:** Mr. SC Shongwe

**Co-Supervisor:** Mr. TE Masena

**NOPHALE, Palesa Nandipha**

**Dissertation Title:** SPATIAL  
 ANALYSIS OF ACCESS  
 TO HEALTHCARE IN  
 BLOEMFONTEIN: LINKING  
 DISTANCE, SOCIOECONOMIC  
 AND PUBLIC ACCESS  
 PERCEPTIONS

**Supervisor:** Mr. SC Shongwe

**MASTER OF SCIENCE  
 WITH SPECIALISATION IN  
 ASTROPHYSICS**

IMMELMAN, Reuben\*

**Dissertation Title:** MODELLING  
 THE SYNCHROTRON  
 SPECTRUM OF SUB-PARSEC  
 SCALE ACTIVE GALACTIC  
 JETS WITH RELATIVISTIC  
 MAGNETOHYDRODYNAMIC  
 SIMULATIONS

**Supervisor:** Mr. IP van der  
 Westhuizen

**Co-Supervisor:** Dr JM Maritz

**MASTER OF SCIENCE  
 WITH SPECIALISATION IN  
 BIOCHEMISTRY**

**JACOBS, Ruan**

**Dissertation Title:**

MODIFICATION OF THE VP8\*  
 GLYCAN BINDING DOMAIN  
 OF A SOUTH AFRICAN G9P[6]  
 ROTAVIRUS STRAIN

**Supervisor:** Prof HG O'Neill

**Co-Supervisors:** Prof AA van Dijk  
 and Prof DJ Opperman

**MHLANGA, Banele Rudolf\***

**Dissertation Title:**  
 RECOMBINANT PRODUCTION  
 OF PORCINE FOLLICLE  
 STIMULATING HORMONE IN  
 CHO-K1 CELLS

**Supervisor:** Dr FH O'Neill

**Co-Supervisors:** Prof HG O'Neill  
 and Dr C Tolmie

**SUTER, Sinèad\***

**Dissertation Title:**  
 BIOCATALYTIC PRODUCTION  
 OF CHIRAL SULFOXIDES USING  
 UNSPECIFIC PEROXYGENASES

**Supervisor:** Prof DJ Opperman

**Co-Supervisors:** Prof MS Smit  
 and Dr AC Ebrecht

**MASTER OF SCIENCE WITH  
 SPECIALISATION IN CLIMATE  
 CHANGE**

MABEBE, Tshepo Walter

NGEVA, Zinziswa\*

SEHOOLE, Omphile Paul



**MASTER OF SCIENCE  
WITH SPECIALISATION  
IN CONSTRUCTION  
MANAGEMENT**

**BALOYI**, Julius Tsakani

**Dissertation Title:** AN  
ASSESSMENT OF SOUTH  
AFRICAN BUILDING  
CONTRACTORS' KNOWLEDGE  
OF SUSTAINABLE PRINCIPLES

**Supervisor:** Prof C Amoah

**Co-Supervisor:** Dr OI Akinradewo

**MASTER OF SCIENCE  
WITH SPECIALISATION IN  
ENTOMOLOGY**

**SABISA**, Ntsoaki Wistorinah\*

**Dissertation Title:**  
INVESTIGATION OF THE  
REPELLENT AND INSECTICIDAL  
ACTIVITIES OF THREE  
INVASIVE ALIEN PLANTS  
AGAINST SPODOPTERA  
FRUGIPERDA (LEPIDOPTERA:  
NOCTUIDAE) IN SOUTH AFRICA

**Supervisor:** Dr N Dube

**Co-Supervisor:** Dr O Uyi

**MASTER OF SCIENCE  
WITH SPECIALISATION IN  
ENVIRONMENTAL GEOLOGY**

**GCASAMBA**, Sisanda Prudence

**Dissertation Title:**  
GEOTECHNICAL  
CHARACTERISTICS OF COAL

FLY ASH AS A MINE BACKFILL  
MATERIAL

**Supervisor:** Dr VRK Vadapalli

**Co-Supervisor:** Prof B Yibas-  
Babso

**MASTER OF SCIENCE  
WITH SPECIALISATION  
IN ENVIRONMENTAL  
MANAGEMENT**

MEHLOMAKHULU, Mqondisi  
Enoch

MOGOFE, Clement Moswine\*

SEBETLELE, Ipeleng Desiree

SIVANDA, Aimin Shaquille

**MASTER OF SCIENCE WITH  
SPECIALISATION IN FOOD  
SCIENCE**

**BEHRENS**, Jacobus Marthinus\*

**Dissertation Title:** THE EFFECT  
OF STUNNING METHODS ON  
CROCODILE MEAT QUALITY

**Supervisor:** Prof J.G. Myburgh

**Co-Supervisor:** Prof. A. Hugo

**OLIVIER**, Jana

**Dissertation Title:** GELLING  
AND QUALITY PROPERTIES OF  
SCOPY/BACTERIAL CELLULOSE  
IN A DRIED FRUIT AND/OR  
VEGETABLE SNACK

**Supervisor:** Dr C Bothma

**Co-Supervisor:** Prof CJ Hugo

**MASTER OF SCIENCE WITH  
SPECIALISATION IN FORENSIC  
CHEMISTRY**

**BOTHA**, Juan Cyril

**Dissertation Title:** FORENSIC  
INVESTIGATION OF ILLICIT  
PSYCHEDELIC COMPOUNDS  
FOUND IN MAGIC  
MUSHROOMS: EXTRACTION,  
SYNTHESIS AND TAXONOMIC  
ANALYSIS

**Supervisor:** Dr JA Viljoen

**Co-Supervisors:** Dr AEM  
Noreljaleel and Prof M Gryzenhout

**MASTER OF SCIENCE WITH  
SPECIALISATION IN FORENSIC  
GENETICS**

**SINGH**, Mogambal\*

**Dissertation Title:** THE  
FEASIBILITY OF IMPLEMENTING  
FAMILIAL SEARCHING  
TO ASSIST WITH THE  
IDENTIFICATION OF MISSING  
PERSONS AND UNIDENTIFIED  
HUMAN REMAINS IN SOUTH  
AFRICA

**Supervisor:** Dr K Ehlers

**Co-Supervisor:** Dr JH Smith

**MASTER OF SCIENCE WITH  
SPECIALISATION IN FORENSIC  
INTERDISCIPLINARY**

**DU PREEZ**, Madré



**Dissertation Title:** ESTIMATION OF LIVING STATURE FROM LOWER LIMB MEASUREMENTS IN A YOUNG ADULT SOUTH AFRICAN SAMPLE

**Supervisor:** Prof P Maass

**Co-Supervisor:** Dr K Ehlers

**NKOSI, Bongani**

**Dissertation Title:** THE SIMULTANEOUS ANALYSIS OF STEROIDS AND STIMULANTS IN HUMAN URINE USING GC-MS/MS

**Supervisor:** Miss E Grobbelaar

**MASTER OF SCIENCE WITH SPECIALISATION IN GEOGRAPHY**

**JANSEN VAN VUUREN, Febe**

**Dissertation Title:** ASSESSMENT OF SUSPENDED SEDIMENT SOURCES POST-FAILURE OF THE JAGERSFONTEIN TAILING STORAGE FACILITY

**Supervisor:** Dr MH Stander

**Co-Supervisor:** Dr RN Hansen

**MAKHUBO, Xolani Sinethemba Samson**

**Dissertation Title:** EXPLORING URBAN (IN) SECURITY AND TRANSPORT INFRASTRUCTURE NEXUS THROUGH A GENDERED LENS: CASE OF PHAHAMENG

**Supervisor:** Prof RA Matamanda

**Co-Supervisor:** Dr. P. Makati

**WEISS, Colby Leigh**

**Dissertation Title:** HYDROLOGICAL MODELLING ON SUB-ANTARCTIC MARION ISLAND USING THE SWAT MODEL

**Supervisor:** Prof. D.W. Hedding

**Co-supervisor:** Dr EM Rudolph

**MASTER OF SCIENCE WITH SPECIALISATION IN GEOHYDROLOGY**

**CLAASSEN, Adri\***

**Dissertation Title:** ASSESSMENT OF AQUIFER VULNERABILITY USING GIS-INDEX BASED MODELS IN LIMPOPO PROVINCE, SOUTH AFRICA

**Supervisor:** Prof M Gomo

**KRUGER, Daniel**

**Dissertation Title:** THE INFLUENCE OF A SHEAR ZONE ON BOREHOLE YIELD AND GROUNDWATER OCCURRENCE IN THE ARCHAEOAN BASEMENT GRANITES OF THE JOHANNESBURG DOME, SOUTH AFRICA

**Supervisor:** Dr PJH Lourens

**MUGUDAMANI, Tendani Ayanda\***

**Dissertation Title:** EXPLORING THE INFLUENCE OF LANDFILL LEACHATE ON GROUNDWATER QUALITY AND THE ENVIRONMENT

**Supervisor:** Prof A Atangana

**NGOEPE, Ouma Matlou**

**Dissertation Title:** HYDROGEOCHEMICAL ANALYSIS OF CLIMATE CHANGE IMPACTS ON GROUNDWATER IN THE NORTHEASTERN UPPER KAROO HYDROGEOLOGICAL REGION, SOUTH AFRICA

**Supervisor:** Dr AJ Allwright

**Co-supervisors:** Dr PJH Lourens and Dr RN Hansen

**THINYANE, Moliehi\***

**Dissertation Title:** KARST AQUIFERS: FLOW, TRANSPORT, AND FLOOD PREDICTION USING MATHEMATICAL MODELLING

**Supervisor:** Prof A Atangana

**VAKALA, Asanda**

**Dissertation Title:** GEOHYDROLOGICAL INVESTIGATION AND CHARACTERISATION OF THE UFS EXPERIMENTAL FARM: ASSESSING GROUNDWATER VULNERABILITY AND SUSTAINABILITY FOR AGRICULTURAL ACTIVITIES

**Supervisor:** Dr PJH Lourens



**MASTER OF SCIENCE  
WITH SPECIALISATION IN  
GEOINFORMATICS**

**NKWE**, Tlotlo

**Dissertation Title:** INTEGRATING AUTOENCODER EMBEDDINGS WITH PRESTO-UMAP-HDBSCAN AND RF/HGB FOR GROUNDWATER RECHARGE HOTSPOT DETECTION (TWI-REFINED)

**Supervisor:** Prof SAA Adelabu

**Co-Supervisor:** Dr. CM Jackson

**MASTER OF SCIENCE WITH  
SPECIALISATION IN GEOLOGY**

**MABOGO**, Nomonde Shantel  
Tshiwela

**Dissertation Title:** AN EVALUATION OF THE USE OF HIGH-RESOLUTION RGB AND MULTISPECTRAL IMAGING AS A POTENTIAL TOOL FOR DRILL-CORE LOGGING OF THE ROCKS OF THE BUSHVELD COMPLEX

**Supervisor:** Prof F Roelofse

**Co-Supervisor:** Dr MD Clark

**MAHLAPHA**, Karabo Elsie

**Dissertation Title:** EFFECTS OF INCREASING THE DIMENSIONS OF CONVOLUTIONAL NEURAL NETWORK (CNN) ON ITS PERFORMANCE AND ACCURACY FOR ORE GRADE ESTIMATION FROM DRILL CORE HYPERSPECTRAL DATA

**Supervisor:** Prof EJM Carranza

**MALEBATI**, Johannes

**Dissertation Title:** IN SITU MULTIPLE SULPHUR ISOTOPE ANALYSIS BY SIMS OF PYRRHOTITE, PENTLANDITE, AND CHALCOPYRITE IN THE FLATREEF, NORTHERN LIMB, BUSHVELD COMPLEX

**Supervisor:** Dr JJ Keet

**Co-Supervisor:** Prof CD Gauert

**MATIMBI**, Dzhavhelo Keystone

**Dissertation Title:** COMBINING DRILL-CORE HYPERSPECTRAL AND GEOCHEMICAL DATA BY DEEP LEARNING TO ENHANCE DRILL-CORE MINERAL MAPPING

**Supervisor:** Prof EJM Carranza

**NDOU**, Tshimangadzo

**Dissertation Title:** GEOSTATISTICAL SIMULATION OF ORE GRADE IN A DEPOSIT WITH MULTI-CORRELATED METALS

**Supervisor:** Prof EJM Carranza

**MASTER OF SCIENCE  
WITH SPECIALISATION  
IN INTEGRATED WATER  
MANAGEMENT**

**BAFSHOE**, Ikgopoleng Agnes

**LUDIDI**, Nokulunga

**MASHABA**, Owami

**MBUYANE**, Shadreck Sibusiso

**PETER**, Chulumanco Vuyokazi

**PRINGLE**, Jo-Anne

**RAMOTHELLO**, Anna Mamotho

**SMIT**, Lizanne\*

**Dissertation Title:** ASSESSING THE IMPACT OF GROUNDWATER ABSTRACTION ON THE CENTRAL SANDVELD AQUIFER SYSTEMS, SOUTH AFRICA

**Supervisor:** Prof S Esterhuysen

**MASTER OF SCIENCE  
WITH SPECIALISATION IN  
MATHEMATICAL STATISTICS**

**MAGWANGU**, Pindai\*

**Dissertation Title:** THRESHOLD SELECTION METHODS WITH FOCUS ON THE MIXTURE OF EXTREME VALUE DISTRIBUTIONS

**Supervisor:** Prof A Verster

**MAKGALE**, Katlego Tshepang

**Dissertation Title:** TESTING THE EFFICIENCY OF VARIOUS GOODNESS OF FIT TECHNIQUES FOR CAPITAL MODEL VALIDATION

**Supervisor:** Mr. FF Koning

**MOFOKENG**, Thapelo Andries\*



**Dissertation Title:** A COMPARATIVE STUDY OF SAMPLING TECHNIQUES IN SUPERVISED MACHINE LEARNING MODELS AND ADVERSARIAL MACHINE LEARNING FOR FRAUD DETECTION

**Supervisor:** Mr. JM Blomerus

**MOREMOHOLO, Kgotso Rudolf\***

**Dissertation Title:** MODELLING THE PROBABILITY OF DEFAULT TERM STRUCTURE UNDER INTERNATIONAL FINANCIAL REPORTING STANDARD (IFRS) 9

**Supervisor:** Mr. SC Shongwe

**STUMPFE, Siegfried Fredrich\***

**Dissertation Title:** COMPARATIVE ANALYSIS AND OPTIMIZATION OF MACHINE LEARNING MODELS FOR REGRESSION AND CLASSIFICATION ON STRUCTURED TABULAR DATASETS

**Supervisor:** Mr SC Shongwe

**VORSTER, Phillip Andrew**

**Dissertation Title:** EXPLORING THE UPPER LIMIT OF HUMAN LIFE: A BAYESIAN EXTREME VALUE APPROACH

**Supervisor:** Prof A Verster

**MASTER OF SCIENCE WITH SPECIALISATION IN MICROBIOLOGY**

**MATHANGANA, Sanelisiwe**  
Patience\*

**Dissertation Title:** HARNESSING QUORUM SENSING FOR ENHANCED BIOLEACHING OF RARE EARTH ELEMENTS FROM ALKALINE MINE TAILINGS

**Supervisor:** Dr JC Castillo Hernandez

**Co-Supervisors:** Dr A Gomez-Arias, Dr MM Maleke and Miss PS Cebekhulu

**RAPESO, Monni Paulina\***

**Dissertation Title:** EVALUATION OF THE ANTI-CRYPTOCOCCUS NEOFORMANS ANTIFUNGAL PROPERTIES OF REFORMULATED ASPIRIN

**Supervisor:** Prof OM Sebolai

**Co-Supervisor:** Prof CH Pohl-Albertyn

**WILLIAMS, Tori Shay**

**Dissertation Title:** UNRAVELING BACTERIAL INTERACTIONS AND THEIR FUNCTIONAL ROLES IN A BIOFILM INHABITING A 1.2 KM DEEP AQUIFER

**Supervisors:** Dr C Castillo Hernandez and Prof ED Cason

**Co-Supervisor:** Dr MM Maleke

**ZAPKE, Anazea Elli\***

**Dissertation Title:** CHARACTERISATION OF METHYLOTROPHS AND GENE TRANSFER FACILITATING THE SELECTIVE UPTAKE OF RARE EARTH ELEMENTS FROM ENRICHED ALKALINE TAILINGS

**Supervisors:** Dr JC Castillo Hernandez and Prof ED Cason

**Co-Supervisors:** Prof DJ Opperman and Dr MM Maleke

**MASTER OF SCIENCE WITH SPECIALISATION IN MINERAL RESOURCE MANAGEMENT**

**BRONKHORST, Jacobus**

**DEBIPERSADH, Sanjeev**

**GREEN, Courtney Lashua-Lasdine**

**MKHIZE, Nolwazi**

**SCHEEPERS, John Daniel**

**MASTER OF SCIENCE WITH SPECIALISATION IN PHYSICS**

**DLAMINI, Nkosikhona Thando\***

**Dissertation Title:** LOW TEMPERATURE VOLATILE ORGANIC COMPOUNDS GAS SENSING CHARACTERISTICS OF SrTiO<sub>3</sub>/Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> AND Ag-LOADED SrTiO<sub>3</sub>/Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> NANOSTRUCTURES

**Supervisor:** Prof DE Motaung

**Co-supervisors:** Dr PJH Lourens and Dr RN Hansen



**LEMENA, Jodinio\***

**Dissertation Title:** FABRICATION OF W18O49 and Ti3C2Tx-BASED SENSORS FOR THE DETECTION OF VOLATILE ORGANIC COMPOUNDS AT LOW OPERATING TEMPERATURES

**Supervisor:** Prof DE Motaung

**Co-supervisors:** Prof RA Harris and Prof JJ Terblans

**MASIU, Lethabile Mojalefa\***

**Dissertation Title:** SYNTHESIS AND CHARACTERIZATION OF GREEN EMITTING SrAl2O4:Eu2+,Dy3+ FOR PERSISTENT LUMINESCENCE

**Supervisor:** Dr M Duvenhage

**Co-Supervisor:** Mr. MYA Yagoub

**SELOANE, Kholofelo Mohloishane\***

**Dissertation Title:** INFLUENCE OF BINARY AND TERNARY STRUCTURES BASED ON p-n Cr2O3/SnO2 AND p-p-n CuO/Cr2O3/SnO2 AND Ag-LOADING ON THE GAS SENSING APPLICATIONS

**Supervisor:** Prof DE Motaung

**Co-supervisors:** Dr R Makole and Dr S Cronje

**VAN WYK, Danell\***

**Dissertation Title:** A COMPUTATIONAL EVALUATION OF THE STRUCTURAL STABILITY, INTERACTION AND TOXICITY OF BIOMOLECULES ON Fe3O4 NANOSTRUCTURES

**Supervisors:** Prof RA Harris and Prof M Gulumian

**Co-Supervisor:** Dr S Cronje

**MASTER OF SCIENCE WITH SPECIALISATION IN PLANT PATHOLOGY**

**COETZER, Amy\***

**Dissertation Title:** CHARACTERISATION OF PUCCINIA STRIIFORMIS f. sp. TRITICI AND WHEAT RESISTANCE IN SOUTH AFRICA

**Supervisor:** Prof WHP Boshoff

**Co-Supervisor:** Prof B Visser and Dr TG Terefe

**MASTER OF SCIENCE WITH SPECIALISATION IN QUANTITY SURVEYING**

**MPELI, Matsatsi Rosalea**

**Dissertation Title:** QUANTITY SURVEYORS' COMPLIANCE LEVELS WITH THEIR PROFESSIONAL CODE OF CONDUCT

**Supervisor:** Prof K Kajimo-Shakantu

**Co-Supervisor:** Prof C Amoah

**MASTER OF SCIENCE WITH SPECIALISATION IN RISK ANALYSIS**

**BUTHELEZI, Thusang Johannes\***

**Dissertation Title:** DETERMINING THE MOST SUITABLE DISTRIBUTION AND ESTIMATION METHOD FOR EXTREMES IN FINANCIAL DATA WITH DIFFERENT VOLATILITY LEVELS

**Supervisor:** Mr SC Shongwe

**GREYLING, Zander\***

**Dissertation Title:** INTEGRATING COMPOSITE MODELS FOR ENHANCED RISK ASSESSMENT OF INDICES AND CRYPTOCURRENCIES

**Supervisor:** Mr SC Shongwe

**MASEKO, Ndadlana Piet\***

**Dissertation Title:** TWO PERSPECTIVES FOR DESIGNING A PHASE II CONTROL CHART WITH ESTIMATED PARAMETERS: THE CASE OF THE SHEWHART (X-bar R) JOINT CONTROL CHART

**Supervisor:** Dr MD Diko

**MOTHIBE, Lira\***

**Dissertation Title:** MODEL AVERAGING AND GRID MAPS FOR MODELING HEAVY TAILED INSURANCE DATA

**Supervisor:** Mr SC Shongwe



**MASTER OF SCIENCE WITH  
 SPECIALISATION IN ZOOLOGY**

**BARNARD, Monique\***

**Dissertation Title:** THE  
 DIVERSITY OF SPECIES  
 OF HAEMOGREGARINA  
 (APICOMPLEXA:  
 HAEMOGREGARINIDAE)  
 INFECTING FRESHWATER  
 TERRAPINS IN AFRICA

**Supervisor:** Dr. H.R. Dutton

**Co-Supervisor:** Prof DM Codron

**CAMPHER, Grethe Marie**

**Dissertation Title:**  
 INVESTIGATING FACTORS TO  
 IMPROVE A RAT-HELMINTH  
 MODEL FOR SCREENING OF  
 NEW ANTHELMINTIC DRUGS

**Supervisor:** Prof DM Codron

**Co-Supervisor:** Dr L van der  
 Mescht

**POSTGRADUATE DIPLOMAS**

**POSTGRADUATE DIPLOMA IN  
 DISASTER MANAGEMENT**

ADEJINMI, Ayodeji Babajide

BILIBANA, Blessing Ntsikelelo

DLEKEDLA, Theophulus Phila

FAKUDE, Nokusa Ncamsile

FETSHA, Lubabalo

HAMUTENYA, Abel

HESHU, Phakama

HLELA, Sabelo

KAMUNINGA, Rachel

KHAN, Mohamed Hussain

KHUMALO, Tengetile

LUBBE, Antonie Jurgens

LUTHULI, Andreas Sibusiso

MABENA, Moleboeng

MADIKIZELA, Sibabalwe Sandiso

MALEKA, Busisiwe Christinah

MASOMA, Mokgaetsi Elizabeth

MASONDO, Buhle Lindokuhle

MEMANI, Lita

MHLONGO, Velemseni Treasure

MOGAFFE, Tshepiso Claudina

MOKOENA, Blessing

MOKOENA, Thapelo Johannes

MOKWENA, Matthews Gopolang\*

MPANZA, Bongani Trinity

MTHEMBU, Mhleli Njabulo

NGO, Blessing Fatima

NHLAPO, Sihle Philani

NTLAMA, Nwabisa

RAKGWALE, Mamotshabo  
 Malebogo Rachel

RAMAKOLOI, Mantsoi Alice

RAMAQELE, Mathabo

RAMOSHEBI, Kekeletso

RANTSHO, Pule Tshegofatso

Theophillus

RAPHIRI, Tshepang Refilwe

RASEI, Nozindaba Evodia

SEBOKO, Palesa Julia

SEOKA, Mahlodi Mmamosotse  
 Mmabatho

SIHLOBO, Zizipho

SINGH, Malcolm

SITHOLE, Khulisiwe Faith

TAU, Ororiseng Gloria

VAN DER HORST, Conrad William

XOKWE, Madoda

XOSENI, Olwethu

**POSTGRADUATE DIPLOMA  
 IN INTEGRATED WATER  
 MANAGEMENT**

CHAUKE, Sarah Nyiko

HLONGWANA, Sixolile

KETELO, Mihle Simnikiwe

KGOASE, Mpine Tracy

KOSI-MABUZA, Dunyiswa

KUMBI, Relebohile Rachel

KWENANE, Kgaogelo Buti Joseph

MAKHARI, Fulufhelo Arnolda

MARIPANE, Merriam Moitheri

MATHE, Sifundo

MATIYA, Sibusisiwe Charity

MATJILA, Botshe Mmule

MHANGANI, Tebogo Jannet



MOLELEKWA, Kagisho Wilfred  
MOTSUMI, Tebogo Christopher  
MZIZI, Ngaka Peter  
NDLHOVU, Tshilidzi Phyllis  
NNZIMENI, Mpho  
SMIT, Anneke  
SMIT, Jakobus Adriaan

### **HONOURS DEGREES**

#### **BACHELOR OF COMPUTER INFORMATION SYSTEMS HONOURS**

KASUMBA, Buhle Bashi\*  
LEKGETHO, Kananelo Martin  
MAHLASI, Vuyani\*  
MALAZA, Langelihle Mpumelelo\*  
MALHO, Demi Wilmese\*  
MANYERUKE, Lario Rangarirai\*  
MAZIBUKO, Aphiwe  
Samukelisiwe\*  
MOKOENA, Seele  
MOLOI, Neo\*  
MPHAHLELE, Sekhute  
Kgoboketso\*  
RADEBE, Asande Senamile\*

#### **BACHELOR OF SCIENCE HONOURS**

ADIB, Nibras  
ALUM, Hope Ogechukwu\*

BADUZA, Olwethu Athenkosi\*  
BASSON, Nicole  
BEKELA, Hlanganisa  
BESTER, Tineke\*  
BLANDILE, Nikita  
BOTES, Moné\*  
CEDRAS, Britney Nicolle\*  
CHOKOE, Onthatile Promise  
CINDI, Thabo Gift  
CODRON, Ethan\*  
DHLAMINI, Tshepang  
DIBECO, Galaletsang  
DIBETSOE, Olebogeng  
DIKOTLA, Mpho Pitsi Lambert  
DIMBA, Felicia Luyanda\*  
DITLHAGE, Keotshepile  
DLAMINI, Kattleho Moses  
DOOKA, Puso Kgalalelo  
DU PREEZ, Isabelle Annette\*  
DUBE, Nonhlanhla Thembisile  
FALTEIN, Lilitha  
FERREIRA, Johandri Elna  
GAILELE, Ogone  
GAMA, Siphosethu  
GININDA, Sinothando  
GROBLER, Marthinus Johannes  
Petrus\*  
GUMEDE, Thandumusa  
GWICANA, Simamkele Samanda  
HENDRICKS, Bronwin Veronica

HEYMANS, Jakobus Hendrikus  
HLONGWANE, Scelo  
HOFFMANN, Christoffel  
Hieronymus  
KHAKA, Itumeleng Esther\*  
KHAWULA, Thubelihle Treasure  
Prosperity\*  
KHULASHE, Siphosetu\*  
KODIBONA, Mathule  
KOEBERG, Zayneal Barquinique\*  
KOMAZI, Zintle Bridgette Elsie  
KOMETSI, Maruping Khanya  
Keketso\*  
KOOPMAN, Cara\*  
KRUGER, Wian Lesley\*  
KUMALO, Nelisiwe Thabile  
LACKAY, Lizelle Lisa  
LANGA, Zanokuhle  
LANGEVELDT, Leyya\*  
LEBETA, Emily Keneilwe\*  
LEKGARE, Oneetse Fortune  
LESSING, Kyla\*  
MABASO, Melissa Thandiwe  
MABIZELA, Nomthandazo Yvone  
MADI, Slindelokuhle  
MAENZANISE, Keith Takudzwa  
MAGOLEGO, Kgotsfatso\*  
MAHLAKANYA, Ulley\*  
MAHLALE, Nthabeleng  
MAHOMMED, Yusuf  
MAHOPE, Kedirile Gosiamé



MAKASANE, Tsakani	MHLONGO, Mbuyelo Papi	NALA, Kamogelo
MAKHANYA, Vhutshilo	MKIZE, Fanele Nosibusiso	NCANANA, Kwanele Muziwendoda Thuthukani
MAKHERANA, Mutshidzi	MNCWABE, Asanda	NCONGWANE, Dumisile Precious
MAKHUBU, Thalente Mary	MOCOAKAE, Tumisang Phemelo	NETHANANI, Rinaye Raynah
MAKOLE, Neo Isaac	MODUPE, Makoki	NGAKANTSI, Ontiretse Shannon
MALEBO, Khontse	MOFOKENG, Lerato Katleho Hope	NGWENYA, Praise
MALULEKE, Moses Muxe	MOKETI, Minentle	NGXITHO, Owam Sinentlahla
MARAI, Isabella Frances*	MOKGOTHO, Tshireletso Divine	NHLAPHO, Gugulethu Zethu Samukele*
MAREDI, Madimetja Reginald	MOKHATHOLANE, Moses*	NKEJANE, Lehlonono*
MARWANQA, Abulele	MOLEHE, Bonolo	NKOSI, Mkhulekeli Shadreck
MASALLA, Neilen Marco	MOLONGWANA, Oratile Innocent*	NKOSI, Nondumiso*
MASEMOLA, Kedibone Patience	MONA, Ayabonga*	NKOSI, Princess
MASHISHI, Kutlo	MONYANE, Thabiso	NKUNA, Sizwe
MASONDO, Mgciniseni Nkosinathi*	MORAKE, Itumeleng Innocent*	NKWADIPO, Kelebogile Reitumetse
MATANGA, Fholisani	MOSALA, Gomolemo	NONYANE, Katleho
MATHE, Khanyisa Comfort	MOTLOHI, Keabetsoe Lesedi	NTEO, Keamogetswe
MATHUNJWA, Sibongakonke	MPHAPHULI, Karabo	NTOVANA, Bokang
MATLEBE, Dineo	MPHULO, Lehlohonolo Levy	NTSIMBI, Sive
MATSANE, Mavuyelo Erick	MTHETHELELI, Sbusiso	NXUMALO, Melokuhle Nomlindelo
MATSEO, Karabo Vivian	MTHETHWA, Slindile S bongakonke	OBIECHEFU, Ada Victoria Chidimma*
MATSETELA, Kgabo Madira	MTSEWU, Sinenkosi	ONYEARI, Ugonnaya Paulos
MATSOETLANE, Tebello	MUDALY, Louven	OPARA-NADI, Chimobi Motsile
MAZONDO, George	MUGWABANA, Edzani Daisy	PATOSE, Tsepo Elias
MBELE, Thato Samson	MULAUDZI, Buhle Penelope	PHAKATHI, Mnelisi*
MBONGWA, Phumzile	MÜLLER, Joni*	PHOHLELI, Itumeleng
MBULI, Siyanda Sinethemba*	MUNYAI, Prince*	PRETORIUS, Lizemarie
MEHLOMAKULU, Sakhile	MUNYINPULI, Zanele Pretty	RADEBE, Sambulo Roman
MEYER, Gilbert Miles	MVELASE, Siphesihle Siphwe*	
MFAMANA, Sisipho		



RADEBE, Thokozile Lucia  
RAKAU, Maitsego Rakau  
RAMAHLELE, Sebakeng  
RAMASIKE, Boitumelo Adelaide\*  
RASUPU, Keneuoe Rachel  
REDDY, Drianca  
REDELINGHUYS, Jacques Dawid  
ROSSOUW, Christine\*  
SEBEKO, Makomane Jermina  
SEMENYA, Atheogile France  
SENATLA, Limpho\*  
SENATLE, Omphile Kagisho  
SEOETE, Ntaoleng Gladys  
SESINYI, Kgotso Simon  
SETHOSA, Felicia Mokibelo  
SHABALALA, Thandeka  
SHEZI, Nhlonipho Melokuhle\*  
SHONGWE, Bonisiwe  
SHOPANE, Khumoetsile  
SIBANDA, Justina Esnath\*  
SIBANDE, Siphamandla  
Siyabonga\*  
SIBEKO, Samkelisiwe  
SIFUMBA, Lulo  
SIKHAFUNGANA, Nwabisa  
SIOBO, Lutendo Nontokozo  
SITHOLE, Xoliswa  
SITYA, Asemahle Sisipho  
SKEYI, Ovuyo  
SMIT, Barend Christiaan

SMITH, Fortune Simangalis  
SOBHUZA, Liyabona  
SOKO, Enock  
SOMI, Avuyile  
STEENKAMP, Rika Mine\*  
STEINMANN, Rudolph\*  
STEWARTSON, Olivia  
STOTT, Sean Robert  
SWART, Jaco Le Roux  
TCHEBAYOU, Keanu Funé  
TSUBELLA, Mercy Nthabeleng  
Kgopotso\*  
TYALITI, Vuyani Ndumi  
VAN DEN BERG, Sintie-Shay\*  
VAN DER MESCHT, Aileen  
Celeste\*  
VAN DER WATT, Kara-Lee  
VAN DER WESTHUIZEN,  
Jessica\*  
VAN VUUREN, Erik  
VAN WYK, Caitlin Genevieve\*  
VAN WYK, Riechard\*  
WITTHUHN, Jan Joubert  
XABA, Lwazi\*  
XABELA, Litha\*  
XIPU, Babalo Obakeng\*  
ZOZI, Ezile  
ZULU, Mduduzi Knowledge  
ZUNGU, Owami  
ZWANE, Samkelisiwe Happy

## **BACHELOR'S DEGREES**

### **BACHELOR OF COMPUTER INFORMATION SYSTEMS**

AKINDELE, Oluwakanyinsola  
Esther  
BAHOLO, Kamohelo Gesh  
BALOYI, Shivono Blessing  
BALOYI, Sindiswa Selinah  
BERA, Vuyolwethu  
CELE, Busiswa  
CHONGO, Talent Musa  
CONRADIE, Annica  
DWEBA, Moipone  
JIANA, Solomon Willy  
KUBHEKA, Nompumelelo  
LOTTER, Steffann  
LUNINGO, Delisile Precious  
MAKUA, Calvin Temoso  
MALEMA, Phuti Ross  
MAOKO, Dayle Hlologelo  
MAPHISA, Kamohelo Gift  
MASEKO, Hlengiwe Primerose  
MASILELA, Sanele Mabele  
MATLOU, Tshogfatso  
MATUBENI, Msisele  
MDINGAZWE, Sanelisiwe  
MDLETSHE, Lunga Mhlengi  
MHEMBERE, Tawanashe Leonard  
MHLAMBI, Setumo Simon  
MNDEBELE, Siphesihle  
Prominent



MNGXOZANA, Sesethu

MOHAMED, Sadaat

MOKALAPA, Lotanang

MOLOI, Pontsho Juliet

NEKU, Likhona Likhaya

NGUBANE, Siyethemba Luyanda

NGXONGO, Nombuso

NKOSI, Darrell Velenkosini

NKOSI, Thobile Tamah

NOBEL, Tiyane Arnold

NOOR, Abdulrazak

NTSHINGILA, Relebohile Tebogo

PHUNGULA, Thobani

QUARCOO, Lisakhanya Kelvin

RAMARU, Ompha

RANA, Mpho Chantel

SEKHABISA, Karabo Jeanet

SEMPE, Mpho Teboho Hector

SIMONDILE, Temogo Mangaliso

SITHOLE, Sifiso Mcedisi

SOPHILASE, Phila

THOKA, Tumelo Patience

THWALA, Malibongwe Praisegod

TSHABALALA, Sandile

TSHIPEPELE, Moyahabo  
Poeletso

## BACHELOR OF SCIENCE

ANJUM, Laaiba

AYNALEM, Hewet

BALOYI, Judy Vutivi

BASIE, Clausinda Joshlin

BENYA, Andile

BIYASE, Ayanda Jeffery

BODUMELE, Omaatla Horatio

BONO, Yamkela

BOTES, David\*

BOTHA, Ninke\*

BOTSANE, Katleho

BUNHU, Theresa Chiedza

CASSIM, Muhammad Suhail\*

CATA, Toni Jnr

CHABALALA, Nkhaviso Ethney  
Manana

CHAKALANE, Tshireletso  
Tlhokomelo

CHAUKE, Elizabeth Phangweni

CHAUKE, Shichavo Advise

CHOMA, Mofenyi Gabriel

DAMANE, Mamello

DAVHANA, Maanea

DIPICO, Keaobaka Kano

DISEKO, Oatlegile

DISEMELO, Paballo Malebogo

DISWANE, Galeitsiwe

DLAMINI, Siyabonga Siphesihle

DLAMINI, Zanele

DOPOLO, Sindisiwe

DU TOIT, Danica

DUMAKUDE, Mbulelo Walter

DUNLOP, Hannah Rose

FAAS, Babalo

FODO, Zonke

FOURIE, Leonard Johan

FREDERICKS, Tammy-Lee  
Catherine

GADISI, Lufuno Phoebe

GROBBELAAR, Tiana\*

GROOTBOOM, Owethu Lutho  
Muriel

HADEBE, Philisile Nomahlubi  
Thabisile

HLAKOANE, Lesedi Mampitsi

HLALUKANE, Kholeka  
Sinethemba

HLATSHWAYO, Thabo

HLONGWANE, Siphokazi Ruth

JACOBS, Johannes Lodewicus  
Ludwig

JIJANA, Mfuneko\*

JOJI, Endinako

KALANE, Ithabeleng Vanessa

KAPP, Manie

KAPPMEIER, Liezel Emma

KATZKE, Cara

KGANYAGO, Reneilwe Makitimela

KHESA, Palesa Nthabiseng

KHESWA, Anele

KHIBA, Bonolo Lee-Ann

KHOATHANE, Dimakatso

KHOZA, Rispa Ntombikayise

KHOZA, Tsakane Sandisile\*



# FACULTY OF NATURAL AND AGRICULTURAL SCIENCES

KHUMALO, Ernest	MAHLANGENI, Athini Khanyo Temera	MASHILWANE, Thabiso Ernest
KHUMALO, Ivy Mbalehle	MAHLANGU, Siyabonga	MASHININI, Mafa Johannes
KHUNYELI, Mpho Kabelo	MAHLONGOLWANE, Tshireletso	MASHUBA, Setty Masentle
KIBINYE, Nthabiseng Precious*	MAHUNGELA, Confidence	MASIA, Koketso Prudence
KOENSE, Aaliyah Shakira Caren	MAILE, Victoria Puseletso	MASUKELA, Wandisile Priscilla
KOMANE, Tekekgoadi William	MAIMELA, Unarine Perseverance	MATHABATHA, Katlego Moremadi
LAGRANGE, Stephan Paul*	MAKARINGE, Fionah Hlewana	MATHEBULA, Nompumelelo Nobuhle
LEHOKO, Lerato	MAKATE, Arnold Jonathan	MATHOLE, Kegomoditswe Rose
LEKHOOA, Mpho	MAKATE, Buhle Ntokozo	MATLOU, Boikarabelo
LENCOE, Tshepo Moses	MAKGOPA, Matlhatse Chantelle	MATSHIDISO, Palesa Entle
LENYANE, Refiloe Lebohang	MAKHANYA, Noluthando	MATSIELA, Ofentse
LEPHUTHING, Thato Vincent	MAKHASA, Palesa Beauty	MAVANA, Asiphe
LESABANE, Lehlogonolo	MAKHUBALO, Khanyisa Nelisa	MAVUSO, Mandla Brian
LETSHUFI, Nomsa Monica	MAKOKO, Atlehang	MAZIBUKO, Khanyisile Ntanganedzeni
LETSOALO, Dintle	MAKUNGO, Rotondwa	MAZONGOLO, Sibabalwe
LETSOALO, Mathapelo	MALAKOANE, Lebohang Lisbeth	MBELE, Liyanda Excellent
LETSOALO, Mokgadi Margaret	MALANGENI, Indwe	MCCARTHY, Llenay Nicolynne*
LIEBENBERG, Jacoba Danilina	MALULEKE, Enny Mokgadi	MCHUNU, Sinenhlanhla Nongcebo*
LUHABE, Lisanda Zintle	MALULEKE, Ntsako	MDATYULWA, Zamubuntu
LUVUNO, Pretty Deneo	MAMPANE, Lethabo Nompumelelo	MDHLULI, Brighten Zwelithini
MABASO, Amukelane Walter*	MAPANA, Mohlomi Success	MDINGI, Sbusiso Siphoo
MABASO, Sinokuhle Fezeka	MAPOTA, Reneilwe Mapule	MENGE, Evanrie
MABINA, Angel Fikile	MARAIS, Emma Jennifer	MGOLOMBANE, Awonke Mashesha Mashesha
MABUNZI, Lukho Siyabonga*	MARIBE, Lesedi Tlhabologang	MHLANTULO, Xhantithu Mapelo
MABUZA, Evidence Mbali	MAROKANE, Kholofelo Kamogelo	MHLONGO, Blessing Vutivi
MADLODLO, Ayesanda	MASELWA, Nonkululeko	MINNIE, Johannes Brazelle
MADUNA, Paballo	MASHALA, Kagoentle Ikantseone	MKANDLA, Andile Kimberly
MAGWAZA, Owethu	MASHILOANE, Tsaru Joseph	
MAHAMBABA, Buhle		
MAHAMBABA, Konke Mandiphiwe		



MKHIZE, Fuzile Olwethu	MOSEKI, Regopotswe Aobakwe	NGUBANE, Nothando Janet
MKONTWANA, Alfred	MOSIA, Mmapula Teballo	NGUBENTOMBI, Sisipho
MLANGENI, Noluthando Selusiwe	MOSIMANEENG, Thebeyame Myshield	NKOLONYANE, Usindiso
MLENZANA, Lithelihle Onwaba	MOTAUNG, Maditaba	NKONTWANA, Nothando Xoliswa
MNCUBE, Nhlakanipho Lungelo	MOTAUNG, Nkululeko Zanele	NQODOLWANA, Bubele
MNDAWENI, Naledi Lebogang Lwethu	MOTHEPU, Retsepile John	NTSASA, Lerato Vanessa
MNISI, Khethukuthula Maxwell	MOTHIBEDI, Tshireletso	NXUMALO, Zicabangele Kwenzakufani
MNISI, Wandile Lerato	MOTHOGWANE, Tshotlego Innocentia	NYALUNGU, Sifiso
MOFUBELU, Naleli	MOTITSOE, Mpho Portia	NYANZANE, Bongani
MOGAECHO, Ann Kingsley*	MPHUTHI, Reitumetse*	NYATHI, Nomusa
MOGOANE, Lesego Hapyness	MPOLOKENG, Refiloe-Hape Karabo	PERRY, Pieter Daniël
MOHALE, Aobakoe Bonolo	MPULO, Lindokuhle	PHEKONYANE, Onalenna Tshegofatso
MOHALE, Reamohetse	MQAISE, Siyabonga Corne*	PRETORIUS, Madelein Charmaine Estelle
MOKHABUKHI, Wesley	MTHIMUNYE, Moses Dumisani	PRETORIUS, Nadine
MOKOENA, Neo Ivy	MTHULI, Mthobisi Innocent	PRINSLOO, Amy
MOKWENA, Koketso Sewela	MUDAU, Phumudzo	PUDUMO, Tshegofatso Brian
MOLEKO, Pheny Sebaetseng Kimberley	MURIBWATHOHO, Dakalo	QWABE, Thandokuhle Nonkululeko
MOLEME, Karabo Bennett*	MYEKI, Siyasamkela Okuhle	RADEBE, Singumndeniwamahlubi Ath'Enkosi
MOLETSANE, Rorisang Matlhabi	NDAMASE, Palesa	RAMOTHIBE, Regomoditswe
MOLOI, James Lehlohonolo	NDANGANENI, Mulamuleli Conny	RANDALL, Jade
MOMOZA, Khuselwa Ruth	NDLOVU, Mpumi	RANGWATO, Katlego*
MONAGENG, Omphemetse Letizia	NDLOVU, Xivumbeko Headman	REBLIN, Lisa
MONARENG, Boitumelo	NDOU, Ompha	RIBA, Phemelo
MONENE, Oamogelegile Bontle	NDUKU, Zintle	RICHARDS, Kayla*
MONTOEDI, Mookho Alina	NETNOU, Sulungeka	RICHI, Labonno Akhter
MONYAKI, Galaletsang Olivia	NETSHIDZIVHANI, Murunwa	RIGDEN, Gareth Paul
MOREETSI, Naledi Osego	NGOBESE, Nothile	ROBERTSON, Ellenise
MOROBI, Kgosietsile	NGOEPE, Kgabo Mosa	



# FACULTY OF NATURAL AND AGRICULTURAL SCIENCES

ROUX, Marilize Carolina  
SEBOLAI, Tshepo Daniel  
SEFALI, Lerato  
SEFULARO, Didintle Sebatatso  
SEKOBOTO, Matau Letta  
SELE, Xhantilomzi  
SEMELA, Mclean Billy  
SEOKA, Bolalane Palesa  
SEROBATSE, Oratile  
SESANA, Kebogile  
SESWIKA, Keletso Sharleen  
SHABALALA, Gcina Kwanda  
SHABALALA, Thembisile Trustworth  
SHONGWE, Nontobeko Bridgette Meggan  
SIBANDA, Vivian  
SIBITANE, Thonek Gezani  
SIDDIQUE, Fatima Salma  
SIFUMBA, Olwethu Lukhanyo  
SIIMA, Oratile Mantikana  
SIMAYI, Sinalo\*  
SITHOLE, Lorna Sivile  
SITHOLE, Nonjabulo Mbalenhle  
SITHOLE, Vuyiswa Nombulelo  
SIWISA, Esihle  
SKHONDO, Sinalo Steven  
SULEMAN, Talha  
SWAARTBOOI, Mamela  
TAWANE, Donald Karabelo  
THAVHIWA, Mpho  
THEKISO, Mojaki Thabang

THITE, Karabelo Khahliso Tabitha  
THOO, Motumi Toka  
TJELE, Lebohang  
TLHONE, Tshegofatso  
TSHABALALA, Duduzile  
TSHABALALA, Khosi Nomusa  
TSHISIMBA, Adivhaho Makhadzi  
TSHIVHENGWA, Rotondwa Faith  
TSITA, Simamkele  
TWALA, Clinton  
VAN COLLER, Caitlyn Hope  
VAN EEDEN, Rebecca\*  
VAN STADEN, Janita  
VAN WYK, Logan  
VISSER, Megan Louise  
VOLLENHOVEN, Eagan Ryan  
VUSO, Yoliswa Noxolo Brandy  
WAITHAKA, Karen Happuch Muthoni  
YOUNG, Ruhan Beyers  
ZINATSA, Ropafadzo Charis  
ZULU, Nosipho  
ZULU, Siyabonga Makhosonke  
ZWANE, Buhle Shantel  
ZWANE, Nhlalanhle  
  
**BACHELOR OF SCIENCE IN  
INFORMATION TECHNOLOGY**  
  
CHUENE, Temosho  
CLAASSENS, Devon Hein

COERTZEN, Za-Neil\*  
DE LANGE, Johannes Hendrik\*  
DLAMINI, Sibusiso Siphesihle  
GALANE, Welcome Mashilo  
GWEBE, Owethu  
HLONGWANE, Jabu Joy  
KALANE, Aotumisoe Albright  
KALASHE, Lukhanyo Floris\*  
KASUMBA, Tumelo Musoke  
KHUMALO, Sanelisiwe Nokwazi  
KOLANCHU, Kamohelo  
KUNAKA, Ryan Tawananysha  
LEBEYA, Nakedi  
MADZWUHE, Shonisani  
MAKALA, Emihle  
MAKOTANYANE, Sekwati Kabelo  
MALEDU, Tshiamo Warren  
MALINGA, Ziphezinhle Omuhle  
MASANGANE, Xolile Livingstone  
MAVIMBELA, Kegomoditswe Faith  
MOAGI, Esther  
MOCUMI, Tihalefo  
MOFATE, Olebogeng Ronald  
MOFOKENG, Kananelo Nyakallo  
MOLOTO, Mpho\*  
MOOSA, Irfan  
MOTLHALE, Tsholofelo Nomhle  
MPOFU, Oliver  
MSIMANGA, Bongane  
MUDAU, Thendo



MUKWEVHO, Takalani*	RANGATA, Mokhunyela Dikeledi
MUTODI, Ivy Tinotenda*	RHEEDER, Christian
NGOBENI, Ultimate	SEIPONE, Amogelang Alicia
NKWEBE, Nosiselo Judy	SHOKE, Galaletsang Kelebogile
PHARASI, Bophelo Keitumetse*	SHUMBA, Charles Kudzai
PHILANDER, Alicia Heléne	SINGH, Liano
PIETERSEN, Darian Frank*	SPIES, Johannes Hermanus*
PRETORIUS, Marco*	VAN ZYL, Valeska Bernice*
RAMETSE, Khumo Rulani*	VOLSCHENK, Gerhard
RAMPAL, Bongani Joseph	WILSON, Vanisha Penelope

**DEAN'S MEDALS**

**AWARDED TO A STUDENT WHO ACHIEVED THE BEST RESULTS IN RESPECT OF A THREE-YEAR BACHELOR'S DEGREE IN THE FACULTY OF NATURAL AND AGRICULTURAL SCIENCES**

MUKWEVHO, Takalani

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

**AWARDED TO A STUDENT WHO ACHIEVED THE BEST RESULTS IN RESPECT OF A BACHELOR'S HONOURS DEGREE IN THE FACULTY OF NATURAL AND AGRICULTURE SCIENCES**

RAMASIKE, Boitumelo Adelaide

BACHELOR OF SCIENCE HONOURS

# UFS Honorary Awards | UFS Honorary Doctorates

<b>1950</b>	GLP Moerdyk – DLitt (h.c.)		J du P Scholtz – DPhil (h.c.)
<b>1951</b>	NC Havenga – LLD (h.c.)	<b>1986</b>	S Grové – DMus (h.c.)
<b>1952</b>	Thos Blok – DEd (h.c.)		FP Retief – DMed (h.c.)
	SHS Rubidge – DSc (h.c.)		JA Stegmann – DCom (h.c.)
<b>1955</b>	CR Swart – LLD (h.c.)	<b>1987</b>	WA Joubert – LLD (h.c.)
	CA v Niekerk – LLD (h.c.)		B Kok – DPhil (h.c.)
<b>1958</b>	CPB Brink – LLD (h.c.)		WP Venter – DCom (h.c.)
	CF Visser – DEd (h.c.)	<b>1988</b>	JJN Cloete – DAdmin (h.c.)
<b>1959</b>	DB Bosman – DLitt (h.c.)		FC Fensham – DLitt (h.c.)
	SP le Roux – DScAgric (h.c.)		JW vd Riet – DPhil (h.c.)
	DF Malherbe – DLitt (h.c.)	<b>1989</b>	BJ Meyer – DSc (h.c.)
	GH v Rooyen – MA (h.c.)		N van Uden – PhD (h.c.)
<b>1960</b>	SPE Boshoff – DLitt (h.c.)	<b>1990</b>	MG Corbett – LLD (h.c.)
<b>1961</b>	T Boydell – DPhil (h.c.)		JS Rabie – DLitt (h.c.)
<b>1962</b>	ES Botes – DEd (h.c.)	<b>1991</b>	SS Brand – DCom (h.c.)
	PE Rousseau – DSc (h.c.)		JWL de Villiers – DSc (h.c.)
<b>1963</b>	EH Louw – LLD (h.c.)		GT Fagan – DArch (h.c.)
	EN Roberts – DSc (h.c.)		JH Hofmeyer – PhD (h.c.)
	JGF (Kaalkop) vd Merwe – DCom (h.c.)		E v Heerden – DLitt (h.c.)
	HF Verwoerd – DLitt et Phil (h.c.)	<b>1992</b>	JP Louw – DLitt (h.c.)
<b>1966</b>	PSZ Coetzee – DPhilTh (h.c.)		H Olivier – DSc (h.c.)
	PJ du Toit – DSc (h.c.)	<b>1993</b>	JD Anderson – DMed (h.c.)
	MS Louw – DCom (h.c.)		RR Arndt – DSc (h.c.)
<b>1967</b>	SM Naudé – DSc (h.c.)		SJ Naudé – LLD (h.c.)
	LC Steyn – LLD (h.c.)	<b>1994</b>	JJ Human – DPhil (h.c.)
	BJ Vorster – LLD (h.c.)		JA Myburgh – DMed (h.c.)
<b>1968</b>	SJ Naudé – DCom (h.c.)		JP vd Walt – DSc (h.c.)
<b>1969</b>	CW (Nellie) Swart – DPhil (h.c.)	<b>1995</b>	WA Landman – DEd (h.c.)
	AJJ Wessels – DCom (h.c.)		WL Mouton – DPhil (h.c.)
<b>1970</b>	GS Nienaber – DLitt (h.c.)	<b>1996</b>	WDO Marasas – DSc (h.c.)
	HO Mönnig – DSc (h.c.)		NE Wiehahn – LLD (h.c.)
<b>1971</b>	N Diederichs – DCom (h.c.)	<b>1997</b>	AP Brink – DLitt (h.c.)
	RS Verster – DPhil (h.c.)		B Hurwitz – DPhil (h.c.)
<b>1972</b>	LW Hiemstra – DPhil (h.c.)	<b>1998</b>	FC Müller – DMed (h.c.)
	PJ Meyer – DPhil (h.c.)	<b>1999</b>	FM Claerhout – DPhil (h.c.)
<b>1975</b>	PJ Nienaber – DLitt (h.c.)		JJF Hefer – LLD (h.c.)
	De la H de Villiers – DScAgric (h.c.)		S Nigam – DSc (h.c.)
	GJ Stander – DSc (h.c.)		WL Nkuhlu – DCom (h.c.)
<b>1976</b>	AJA Roux – DSc (h.c.)		MA Ramphele – DPhil (h.c.)
<b>1978</b>	SP Botha – DSc (h.c.)		HJO van Heerden – LLD (h.c.)
	EM van Zinderen Bakker – DSc (h.c.)		FJ van der Merwe – PhD (h.c.)
	HB Thom – DEd (h.c.)	<b>2000</b>	MH Daling – DCom (h.c.)
<b>1979</b>	FCL Bosman – DPhil (h.c.)		TN Liversedge – PhD (h.c.)
	G Cronjé – DSocSc (h.c.)		I Mahomed – LLD (h.c.)
	CJF Human – DCom (h.c.)	<b>2001</b>	BP Gilbertson – DCom (h.c.)
<b>1980</b>	G Boonzaier – DPhil (h.c.)		NR Mandela – LLD (h.c.)
<b>1981</b>	PW Botha – DPhil (h.c.)		EC Taglauer – DSc (h.c.)
	B Human – DCom (h.c.)	<b>2002</b>	BH Meyer – PhD (h.c.)
	SG Shuttleworth – DSc (h.c.)		BAK Rider – LLD (h.c.)
<b>1982</b>	BLS Franklin – DPhil (h.c.)		CF Slabber – PhD (h.c.)
	GvN Viljoen – DEd (h.c.)		JM Stetar – DEd (h.c.)
<b>1983</b>	L Luyt – DCom (h.c.)	<b>2003</b>	EWA de Corte – DEd (h.c.)
	SF Zaaiman – DPhil (h.c.)		HA Serebro – DPhil (h.c.)
<b>1984</b>	HS Steyn – DSc (h.c.)		AG Sykes – DSc (h.c.)
	FR Tomlinson – DScAgric (h.c.)	<b>2004</b>	S Badat – DPhil (h.c.)
	JH vd Berg – DMed (h.c.)		R Bringle – DPhil (h.c.)
<b>1985</b>	L Alberts – DSc (h.c.)		J de Wet – DMus (h.c.)
	GG Cillié – DPhil (h.c.)		CF Fauconnier – DSc (h.c.)
	SPD le Roux – DLitt (h.c.)		GJ Gerwel – DPhil (h.c.)
	A Polson – DPhilMed (h.c.)		WD Jonker – DTh (h.c.)

	A Krog – DLitt (h.c.)		
	K Mokhele – DPhil (h.c.)		
	CJC Nel (Posthumous) – PhD (h.c.)		
	L Quayle – DMus (h.c.)		
	T (Karel) Schoeman – DLitt (h.c.)		
	YK Seedat – DMed (h.c.)		
	MK Seely – DSc (h.c.)		
	C Seerveld – DPhil (h.c.)		
	F van Z Slabbert – DPhil (h.c.)		
	JC Steyn – DLitt (h.c.)		
	PA Verhoef – DTh (h.c.)		
	L van den Heever – LLD (h.c.)		
	HA Wessels – LLD (h.c.)		
<b>2005</b>	A du P Heyns – DMed (h.c.)		
	JJF Durand – DPhil (h.c.)		
	JA Groenewald – DSc (h.c.)		
	WH Neuser – DTh (h.c.)		
	M Ramos – PhD (h.c.)		
	SJ Terreblanche – DCom (h.c.)		
<b>2006</b>	T Moss – PhD (h.c.)		
	PV Cox – PhD (h.c.)		
<b>2007</b>	BJ (Bannie) Britz – DArch (h.c.)		
	KPD Maphalla – PhD (h.c.)		
<b>2008</b>	D Ferreira – DSc (h.c.)		
<b>2009</b>	JC Loock – PhD (h.c.)		
	LTC Harms – LLD (h.c.)		
<b>2010</b>	P Gordhan – PhD (h.c.)		
	BBS Ngubane – PhD (h.c.)		
	AH Strydom – PhD (h.c.)		
	M Jones – PhD (h.c.)		
<b>2011</b>	D Tutu – DTh (h.c.)		
	P Fourie – DLitt (h.c.)		
	OG Winfrey – DEd (h.c.)		
	RWM Frater – PhD (h.c.)		
	A Sawyer – DEd (h.c.)		
<b>2012</b>	RJ Goldstone – LLD (h.c.)		
	ER v Heerden – DLitt (h.c.)		
	M Nussbaum – DLitt (h.c.)		
	OW Prozesky – MD (h.c.)		
	FDJ Brand – LLD (h.c.)		
		<b>2013</b>	ZKG Mda – DLitt (h.c.)
		<b>2014</b>	ML Blum – PhD (h.c.)
			L Mulvey – DLitt (h.c.)
		<b>2015</b>	L Brahimi – DPhil (h.c.)
			JM Samuel – DEd (h.c.)
			MA Oduyoye – DTh (h.c.)
			JD Sachs – DEcon (h.c.)
		<b>2016</b>	RJ Khoza – DEcon (h.c.)
			TA Manuel – DEcon (h.c.)
			M du Preez – PhD (h.c.)
			J Samoff – DPhil (h.c.)
			F Haffajee – PhD (h.c.)
		<b>2017</b>	PH Holloway – DSc (h.c.)
			M Botha – LLD (h.c.)
		<b>2019</b>	BL Fanaroff – DSc (h.c.)
			J Mofokeng wa Makhetha – DLitt (h.c.)
			MB Molemela – LLD (h.c.)
		<b>2021</b>	ZM Yacoob – LLD (h.c.)
			SM Pityana – DPhil (h.c.)
			RJ van Niekerk – DLitt (h.c.)
		<b>2022</b>	WK Byanyima – PhD (h.c.)
			DM Davis – LLD (h.c.)
			DE Moseneke – LLD (h.c.)
			AL Sachs – LLD (h.c.)
			MJ Wingfield – DSc (h.c.)
		<b>2023</b>	M Musk – DDiet (h.c.)
			A Ekwamu – DSc (h.c.)
			D Pepler – DSc (h.c.)
			PCJ Vale – PhD (h.c.)
		<b>2024</b>	Salim Abdool Karim – PhD (h.c.)
			Thabo Cecil Makgoba – PhD (h.c.)
			Murray Leibbrandt – PhD (h.c.)
			Bineta Diop – PhD (h.c.)
		<b>2025</b>	RMM Zondo – LLD (h.c.)
			T Falola – LLD (h.c.)
			J Siwani – PhD (h.c.)
		<b>2026</b>	I G Gouws – DLitt (h.c.)
			Z Wanner – DLitt (h.c.)
			R Moletsane – DEd (h.c.)
			M S Sisulu – DEd (h.c.)

## Shields of Honour, Council and Chancellor's Medals

<b>1994</b>	Prof FO Müller (Shield of Honour)	<b>2008</b>	Ludo Helsen (Shield of Honour)
	RE Schoombie (Shield of Honour)	<b>2009</b>	Prof JU Grobbelaar (Council Medal)
<b>1995</b>	Prof FO Müller (Chancellor's Medal)	<b>2010</b>	Mrs AM Dippenaar (Chancellor's Medal)
	RE Schoombie (Chancellor's Medal)	<b>2014</b>	Dr H Verster (Chancellor's Medal)
<b>1996</b>	Prof S Mittman (Shield of Honour)	<b>2014</b>	Mr JL Pretorius (Chancellor's Medal)
<b>1997</b>	Prof M Jansens (Shield of Honour)	<b>2016</b>	Mr AD Osler (Chancellor's Medal)
<b>1998</b>	Prof CJC Nel (Chancellor's Medal)		Ms M van der Merwe (Chancellor's Medal)
	Prof C Swanepoel (Chancellor's Medal)	<b>2017</b>	Ms JS Isaacs (Chancellor's Medal)
<b>1999</b>	WJ (Hansie) Cronje (Shield of Honour)	<b>2019</b>	Mr JF de Villiers (Chancellor's Medal)
	Prof David Justice (Shield of Honour)		Ms EM Oosthuizen (Council Medal)
<b>2000</b>	Prof P Rosseel (Shield of Honour)	<b>2022</b>	Dr N Pearce (Chancellor's Medal)
	Prof MJ Viljoen (Chancellor's Medal)		Mr N Janse van Rensburg (Council Medal)
<b>2001</b>	Prof PC Potgieter (Chancellor's Medal)	<b>2023</b>	Prof MG Lötter (Chancellor's Medal)
<b>2002</b>	T Moss (Shield of Honour)		Prof SC Brown (Council Medal)
	Prof CD Roode (Chancellor's Medal)	<b>2026</b>	Prof A van der Westhuizen (Council Medal)
<b>2003</b>	Prof HC Janse van Rensburg (Council Medal)		
	Prof SA Petersen (Shield of Honour)		



# NATIONAL ANTHEM OF SOUTH AFRICA

Nkosi sikelel' iAfrika  
Maluphakanyisw' uphondo lwayo,  
Yizwa imithandazo yethu,  
Nkosi sikelela, thina lusapho lwayo.  
Morena boloka setjhaba sa heso,  
O fedise dintwa le 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.



# CONGRADULATIONS,

Class of 2025, on your graduation! You are now officially alumni of the University of the Free State (UFS) and part of an ever-growing community of excellence. We are proud of your achievements and excited to see what your future holds and to connect with you in the bright future ahead of you.

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