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**DIPLOMA AND DEGREE CEREMONY / DIPLOMA- EN GRADEPLEGTIGHEIDSEREMONIE /  
KALOSO YA DIDIPOLOMA LE DIDIKERII / MOKETE WA KABO YA DIPLOMA LE DIKRI**

**MAHIKENG CAMPUS / MAHIKENGKAMPUS / KHAMPHASE YA MAHIKENG**

**3 October/ Oktober / Diphlane / Mphalane 2024  
10:00**

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**Monametsi Peter Chiepe**

**Faculty / Fakulteit / Legoro / Mafapha**

**Economic and Management Sciences /Ekonomiese en Bestuurswetenskappe /  
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**ORDER PROCEDURES DURING THE CEREMONY / ORDEREËLINGS TYDENS DIE PLEGTIGHEID /  
DITHULAGANYO TSA TSAMAISO YA KALOSO / MOKGWA WA TSAMAISO NAKONG YA MOKETE**

You are requested to rise when the academic procession enters the hall and to remain standing until the congregation has been constituted.

U word versoek om op te staan wanneer die akademiese prosesie die saal binnekom en om te bly staan tot na die samestelling van die kongregasie.

O kopiwa gore o eme fa mmopelelo wa baakatemi o tsena mo holong mme o eme fela jalo go fitlhela phuthego e tlhomiwa.

Le kopuwa ho ema ka maoto ha bahlomphehi ba thuto ba kena ka holong mme le tswelopele le eme ho fihlela phutheho e le dibakeng tse loketseng

~

The candidates are introduced / Die kandidate word voorgestel / Baamogeladidikerii ba a itsisiwa /  
Baithuti ba a bitswa

~

You are requested to stand for the singing of the National Anthem and to remain standing until the academic procession has left the hall.

U word versoek om op te staan vir die sing van die Nasionale Lied en om te bly staan totdat die akademiese prosesie die saal verlaat het.

O kopiwa gore o eme fa go opelwa Pina ya Bosetšhaba mme o nne o eme go fitlhela mmopelelo wa baakatemi o tswa mo holong.

Le kopuwa ho ema ha ho binwa Pina ya Setjhaba mme le tswelopele le eme ho fihlela bahlomphehi ba thuto ba tswile ka holong.

~

For the sake of order, you are requested not to leave your seat during the ceremony.

Ter wille van orde word u versoek om nie u sitplek tydens die verrigtinge te verlaat nie.

Go tshegetsana tolamo, o kopiwa gore o se tloge mo setulong sa gago ka nako ya kaloso.

Molemong wa ho hlophiseha, re kopa hore o se ke wa tloha setulong sa hao nakong ya mokete

~

Only the official photographer is allowed to take photographs in the hall.

Slegs die amptelike fotograaf mag foto's in die saal neem.

Ke motsayadinepe wa semmuso fela yo o letlelelwang go tsaya dinepe mo holong.

Radifoto wa semmuso ke yena feela ya dumeletsweng ho nka difoto ka holong.

An asterisk (\*) next to a name indicates that the diploma / degree has been obtained with distinction

'n Asterisk (\*) langs 'n naam dui aan dat die diploma / graad met onderskeiding verwerf is.

Naletsana (\*) mo thoko ga leina e raya gore dipoloma / dikerii e amogetswe ka dinaledi.

Naledi (\*) haufi le lebitso e bolela hore diploma / degree e fumanwe ka dinaledi

**PROGRAM • LENANE • LENANEO**  
**3 OCTOBER/ OKTOBER / DIPHALANE / MPHALANE 2024**  
**10:00**

Academic procession / Akademiese prosesie /  
Mmopelelo wa Baakatemi / Mokoloko wa bahlomphehi ba thuto

University anthem / Universiteitslied /  
Pina ya Yunibesithi / Pina ya Yunivesithi

Constituting of the congregation / Samestelling van die kongregasie /  
Tlhomamiso ya Phuthego / Phutheho e ema dibakeng tsa yona

Opening / Pulo

Word of welcome / Verwelkoming /  
Kamogelo / Mantswe a kamohelo

Conferral of Honorary Doctorate / Toekenning van Eredoktorsgraad /  
Neelo ya Dikerii ya Tlotlo ya Bongaka / Phano ya Lengolo la Bongaka la Tlotlo

Conferral of diplomas and degrees / Toekenning van diplomas en grade /  
Neelo ya didipoloma le didikerii / Kabo ya diploma le degree

Closure / Afsluiting / Tswalelo / Ho kwala

The National Anthem / Die Nasionale Lied /  
Pina ya Bosetšhaba / Pina ya Setjhaba

Dissolution of the congregation / Ontbinding van die kongregasie /  
Kgololo ya phuthego / Phutheho ya qhalana

Academic procession leaves the hall / Akademiese prosesie verlaat die saal /  
Mmopelelo wa baakatemi o tswa mo holong / Bahlomphehi ba thuto ba tswa ka holong



## **Philosophiae Doctor (Honoris Causa)**

### **Monametsi Peter Chiepe**

Monametsi Peter Chiepe was born in Botswana. He completed his Cambridge O' Level at Gaborone Secondary School and went on to enrol in the Pre-Entry Science Course Program at the University of Botswana. He attended the Hailey School of Mines in Canada and completed his Geological Engineering Technology at the Cambrian College of Applied Arts and Technology. He obtained his BSc Geology from the University of New Brunswick, and related courses in Calculus at the University of British Columbia, and Thermodynamics at McGill University, all of which are in Canada.

He has dedicated his time to professional excellence and self-actualization as an Earth Scientist and Social Entrepreneur who leverages advanced technologies, best practices and business excellence models for finding transformative solutions in the quest to make African professionals and economies globally competitive. He is also known to adhere to a high standard of ethics to reconfigure the structure and culture of the private sector currently dominating the business landscape on the African continent. As a first-generation graduate of the poverty line and beneficiary of a university education in an emerging market environment, Mr Chiepe recognises and operationalises the imperative to uplift the less privileged through inclusive development programs particularly in the livestock value chains where the socio-cultural and socio-economic settings can be optimally synergised.

Mr Chiepe is an avid seed stock/ stud breeder who has benchmarked with leading global entities in the USA, South Africa, Australia, Brazil and Ecuador in the breeding and development of the American Brahman breed from the early 1990s. He runs extensive ranching operations and an embryo transfer centre for export of embryos, semen, and live seed stock cattle. The Centre was set up to provide the empirical foundation for the advancement of the proof of concept for the transformational models geared for the African continent. The related programs are anchored to the production of adapted and optimally performing cattle for the improvement of Africa's multitudes of cattle to position them for export markets and global competitiveness. He actively participates in the development of the Brahman breed through various local, regional, and international breeding platforms. He integrates selected indigenous African breeds into the roll out programs through appropriate performance testing and genetic selection to make them commercially competitive and by leveraging their strong adaptive traits to the African environmental conditions. This assists in preserving the valuable genetics ingrained in the breeds over centuries and in pursuit of the production of cost effective and healthy animal protein and related regenerative agricultural practices.

Mr Chiepe is the Founder, CEO and Breeder Principal of Champrimo Group of companies, a vertically integrated livestock value chain agribusiness with core focus in the beef and dairy industries. The company, originating from Botswana, has developed from years of studying the challenges of Africa as an emerging market and sought compliant solutions founded on appropriate technologies and best practices through in-house innovative production systems and viability models that have risk mitigated investment friendly frameworks.

The scalability and cost-effective business model provides disruptive commercial solutions to farmers across all levels inclusive of small holders and large-scale farmers. The core aim is to position Africa as a competitive continent in the livestock sectors and to develop highly professional farmers of the future amongst the youth- both men and women. It is geared to provide best in-class products to serve the African continent and global niche markets.

In his other interest in geology, he founded Geoflux, a geosciences and engineering consulting firm he conceptualized while at university, established and managed from 1989 to September 2004. It became a key role player in Botswana and developed as part of a group of companies including X-Pert Group Botswana (Project Management consultancy) and Thakadu Drilling (Borehole drilling contractor). Geoflux was a trailblazer in spearheading the acceptance of Black professionals in the engineering and scientific fields in the national development landscape of Botswana. In 1996, the company ventured into the South African market by setting up a four-way owned consulting entity to collaborate with and capacitate other Black professionals in the South African industry, which at this point had very few professionals already in the work environment. The entity, Southern Cross, successfully led several projects before Geoflux ceded the entire company to the partners and focused on growing its footprint and growth in the private sector.

The North-West University is greatly honoured to confer the degree Philosophiae Doctor (Honoris causa) in Agricultural Sciences on Monametsi Peter Chiepe in recognising his attributes:

- His achievement in the establishment of a successful livestock value-chain company reaching into Africa and across the world, supported by compliant solutions founded in appropriate technologies and best practices through inhouse innovative production systems and viability models implemented by means of investment-friendly frameworks;
- The tangible contribution in the uplifting of small-scale famers across Africa;
- The arduous path he walked to found and develop a transformative agribusiness model.

**ECONOMIC AND MANAGEMENT SCIENCES /  
EKONOMIESE EN BESTUURSWETENSKAPPE /  
DISAENSE TSA SEIKONOMI LE BOTSAMAISI /  
DISAENSE TSA MORUO LE BOTSAMAISI**

**BACHELOR OF ADMINISTRATION WITH ORGANISATIONAL PSYCHOLOGY**

MOGOJWA, TSHENOLO EVIDENCE

MOLEME, TSHOLOFETSO

**BACHELOR OF ARTS WITH TOURISM MANAGEMENT**

MASHOME, ORATILE  
MOTSUMI, KEAOGALALETSA

MOKGWEBO, THAPELO  
RALEPELLE, THAPELO

**BACHELOR OF COMMERCE IN BUSINESS OPERATIONS WITH LOGISTICS  
MANAGEMENT**

JEJE, GAOAGWE SIMON  
MAKWELA, MAPATENG KELETSO  
SEOKAMO, THOLANG SILENCE

MAHLANGU, MANDLA  
NEFOLOVHODWE, ALICE  
TSOKU, REUBEN BOIKANYO

**BACHELOR OF COMMERCE IN BUSINESS OPERATIONS WITH TRANSPORT  
ECONOMICS**

MONGALE, REMOFILOE  
RAKOBELA, KAMOGELO

MOOKETSI, BONOLO PRECIOUS

**BACHELOR OF COMMERCE IN INFORMATION SYSTEMS**

MODIBA, LETLOTLO DANIEL

NGWENYA, NONHLANHLA

**BACHELOR OF COMMERCE IN ECONOMIC SCIENCES WITH ECONOMETRICS**

MOLEME, KEABETSWE

**BACHELOR OF COMMERCE IN MANAGEMENT SCIENCES WITH MARKETING  
MANAGEMENT**

KGANTSI, KOKETSO LINDIWE  
SEKURU, THOMSON OUPA

LEGODI, LINA  
SITOE, MOTHUSI JOSEPH

**BACHELOR OF COMMERCE IN MANAGEMENT SCIENCES WITH  
BUSINESS MANAGEMENT**

MOKGWAMME, ONKGOMODITSE

PILANE, OMPHEMETSE FAITH

**BACHELOR OF COMMERCE IN FINANCIAL ACCOUNTANCY**

JIKELA, SALAMINA KENALEMANG

**POSTGRADUATE DIPLOMA IN MANAGEMENT**

MASIKE, MMASERAME BERTHA

**BACHELOR OF COMMERCE HONOURS IN BUSINESS STATISTICS**

MTHIMUNYE, NONHLANHLA JOCOLINE JOCOLINE

**BACHELOR OF COMMERCE HONOURS IN INFORMATION SYSTEMS**

BILA, SOUSA





## **EDUCATION / OPVOEDKUNDE / THUTO**

### **BACHELOR OF EDUCATION IN FOUNDATION PHASE TEACHING**

MAREBODI, ONKARABILE  
MOSHOSHWE, LESEGO LIZZY

MATLABE, ORORISENG OTSILE  
SEJAKE, SEMAKALENG IVONNIA

### **BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH LIFE SCIENCE FOR EDUCATION**

HUTANG, GOTHUSAMANG TERRENCE

MATJELE, AOBAKWE ONALERONA STEVEN

### **BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH GEOGRAPHY FOR EDUCATION**

DUIKER, LETLHOGONOLO  
MSHWE-SHWE, SINOVUYO

DUIKER, ONTIRETSE

### **BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH HISTORY FOR EDUCATION**

LECHICO, MDUDUZI SIYABONGA  
MAKGWE, MXOLISI TOMMY

MACWECWE, THATO CLINTON

### **BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH SETSWANA FOR EDUCATION**

BALIBI, THATO SHARON  
MOHIBIDU, LESEGO GRANNY

GAETLHASE, KAGISO DONALD

### **BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH ENGLISH FOR EDUCATION**

CHAKAPEDI, SEGOMOTSO  
NGUBENI, MOKETE

MBEKWA, LUXOLO  
SAMBO, MARRY SWAZI

**BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH BUSINESS STUDIES FOR EDUCATION**

KIPIDO, SHONIQUE

**BACHELOR OF EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING WITH ECONOMICS FOR EDUCATION**

BRINK, NADINE LEEANN HOPE

HLONGWANI, RHULANI JAYJAY

**POSTGRADUATE CERTIFICATE IN EDUCATION IN SENIOR PHASE AND FURTHER EDUCATION AND TRAINING PHASE TEACHING**

MOTHAMI, GOITSEMODIMO KHOTHATSO

PHOLO, OMPHILE LEBOGANG



**HEALTH SCIENCES / GESONDHEIDSWETENSKAPPE /  
DISAENSE TSA PHOLO / DISAENSE TSA BOPHELO**

**DIPLOMA IN COACHING SCIENCE**

CELE, BONGEKA SINDISWA  
MOCHWAEDI, GAKENOSI  
NDEBELE, ZANDILE

MAYINGA, SIFISO HARRY  
MSWELI, NOBUHLE

**BACHELOR OF NURSING**

JACOBS, SAEEDA  
SEBAENG, MMAMOTSE

MOLEFE, LEBOHANG KEVIN

**BACHELOR OF SOCIAL WORK**

MODISE, PATIENCE BOINGOTLO

TEBANE, KHUMOETSILE NOMONDE FORTUNATE

**HUMANITIES / GEESTESWETENSKAPPE /  
DISAENSE TSA MEKGWA YA BATHO / TSA BOTHO**

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PILANE, MOLEFE RORISANG

**BACHELOR OF ADMINISTRATION IN DEVELOPMENT AND MANAGEMENT WITH  
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MWELENI, SAMKELISIWE

MBOBO, BOITUMELO NKAGISANG

**BACHELOR OF SOCIAL SCIENCES WITH POLITICAL SCIENCE AND  
INTERNATIONAL RELATIONS**

MABUSA, KEOLOPILE

**BACHELOR OF SOCIAL SCIENCES WITH SOCIOLOGY**

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TSHELANE, KGALALELO ELAINE

MONAISA, PABALLO KEAMOGETSWE

**BACHELOR OF SOCIAL SCIENCES WITH PSYCHOLOGY AND THE  
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MAKHOPA, KUTLWANO

**BACHELOR OF SOCIAL SCIENCES WITH ECONOMICS**

NTSHOBANE, THOBA

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CEBISA, BUHLE  
KGATSHE, TSHEGOFATSO BRIDGET  
MATSHEKA, ORATILE LINCOLN  
MENDWANA, ZIMASA  
MVANE, KHANYA  
RAMETHAPE, NEO  
TLADI, TSHEPO ABRAM

BUTHELEZI, SAMUKELISIWE  
KEITSING, KARABO BENJAMIN  
KHATHOLA, LEFA MACDONALD  
MATSOBE, KUTLWANO VICTORIA  
MOSEKI, KARABO  
NGOLOMANE, LINDOKUHLE  
RAMOENYANA, KEALEBOGA ADALIA



## **LAW / REGTE / MOLAO**

### **BACHELOR OF LAWS**

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LOBESE, GOITSEMANG JAN  
MOATSHE, REFILWE TEBOGO  
NCANANA, NELISIWE YANDISA  
NKOSI, ZINHLE  
SABASABA, PHIWE  
VELE, TSHAMANO

LEPHOTHO, RETHABILE  
MAKGALE, MAKGALE ORERATILE TIRO  
MOKHADI, THABANG  
NKABINDE, ONALENNA  
RAKATE, MODISAOTSILE  
TLADI, BONOLO PULANE

### **MASTER OF LAWS WITH MERCANTILE LAW**

SEGOABE, THAPELO JOHN

The proposed legal framework of cryptocurrencies  
in South Africa

Supervisor:  
DR A KLAASEN



**NATURAL AND AGRICULTURAL SCIENCES /  
NATUUR- EN LANDBOUWETENSKAPPE /  
DISAENSE TSA TLHAGO LE TEMOTHUO /  
DISAENSE TSA TLHAHO LE TEMO**

**DIPLOMA IN ANIMAL SCIENCE**

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MASIPA, THABANG

**DIPLOMA IN PLANT SCIENCE WITH CROP PRODUCTION**

TAU, THATO RODNEY

**BACHELOR OF INDIGENOUS KNOWLEDGE SYSTEMS**

MOSIMANEGAPE, PABALELO

**BACHELOR OF SCIENCE WITH COMPUTER SCIENCE AND MATHEMATICS**

MAFUMO, CAROLINE MATSHEDISO

**BACHELOR OF SCIENCE WITH APPLIED MATHEMATICS AND PHYSICS**

TSHABALALA, UNATHI

**BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCES WITH GEOGRAPHY  
AND COMPUTER SCIENCE**

MLAMBO, KHANYO  
ZWANE, MBALI PAULINA

MUZEZE, HLULANI WHITNEY

## BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES WITH MICROBIOLOGY AND BIOCHEMISTRY

MALATJI, KAMOGELO AUDRIECH  
RAMOTSONGWA, KGOMOTSO KABELO

MASEBE, ORGRASIA KODISANG  
TSIMO, KARABO

## BACHELOR OF SCIENCE IN AGRICULTURE WITH ANIMAL SCIENCE

RABASOTHO, THAMSANQA CYRIEL

## BACHELOR OF SCIENCE IN AGRICULTURE WITH ANIMAL HEALTH

RANKORO, KANANELO

SITHOLE, PEGGY MMABATHO

## MASTER OF INDIGENOUS KNOWLEDGE SYSTEMS

MAY, MIRACLE KEKELETSO  
KELEBOGILE

The importance of collaborative curation of  
indigenous artefacts in Ditsong National Museum of  
cultural history

Supervisor:  
DR MT KOITSIWE  
Co-supervisor:  
DR Z ZULU  
Co-supervisor:  
MR MZ DIRATSAGAE

## MASTER OF SCIENCE IN ANIMAL SCIENCE

KGASWANE, MOSALAKWE DAN

Growth performance, health and meat quality  
characteristics of broilers fed diets containing  
Kalahari Melon (*Citrullus lanatus*) meal

Supervisor:  
PROF U MARUME

KGASWANE, SHERDINA  
KHOMOTSO

Inclusion of fed Kalahari melon meal in lamb diets:  
Effects on growth and meat quality

Supervisor:  
PROF U MARUME

## MASTER OF SCIENCE IN CHEMISTRY

\* BALOYI, TUMELO HOPE

Anticorrosion studies of benzaldehyde derivatives  
on iron in HCl using experimental and theoretical  
analyses

Supervisor:  
DR ME MASHUGA

## MASTER OF SCIENCE IN BIOCHEMISTRY

\* MOETLEDIWA, MARAKIYA  
THIRIWANGANI

Evaluating the efficacy of curcumin derivatives on  
adipocyte dysfunction and adipocyte differentiation

Supervisor:  
PROF SE MAZIBUKO-MBEJE  
Co-supervisor:  
PROF S TITINCHI  
Co-supervisor:  
DR BU JACK

## MASTER OF SCIENCE IN PHYSICS

MATOBE, MAGDELINE

Asteroseismic and astrometric characterization of  
members in the NGC 6866 open cluster

Supervisor:  
DR B LETARTE  
Co-supervisor:  
DR PA OYIRWOTH

## MASTER OF SCIENCE IN APPLIED RADIATION SCIENCE

MOTWE, TSHIAMO THUTO

Characterization of honey based on its purity by  
using ICP-MS and XRD

Supervisor:  
MISS TD MOKGELE  
Co-supervisor:  
MR RB NSHIMIRIMANA

## MASTER OF SCIENCE IN AGRICULTURAL ECONOMICS

GCABA, KWAKHANYA

Adoption of genetically modified seed and its  
impact on technical efficiency of family-owned  
maize farms in Eastern Cape

Supervisor:  
PROF M CHRISTIAN  
Co-supervisor:  
MR U LUVHENGO



## THEOLOGY / TEOLOGIE / THUTOBOMODIMO / BODUMEDI

## BACHELOR OF ARTS IN PASTORAL PSYCHOLOGY

SEFUME, BONOLO

ZULU, SBONISO

# DOCTORATES / DOKTORSGRADE / DIDIKERII TSA BONGAKA / DIDOKTEREITI

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# 1 Economic and Management Sciences / Ekonomiese en Bestuurswetenskappe / Disaense tsa Seikonomi le Botsamaisi / Disaense tsa Moruo le Botsamaisi

Doctor of Philosophy

**AGU, Nelson Tochukwu**

Computer and Information Sciences with Information Systems

Tochukwu Nelson Agu was born in Nigeria to the late Chief Nelson Anyasor Agu and Stella Agu. He graduated from Federal Government College, Okigwe, Imo State, Nigeria, in 2004. He earned a National Diploma in Computer Engineering in 2008 and a Higher National Diploma in Computer Engineering in 2011, both from Federal Polytechnic Oko, Anambra State, Nigeria. In 2014, he completed his honours degree in Information Systems, followed by a master's degree in Computer Science and Information Systems in 2016, both from North-West University (NWU), Mafikeng Campus. Currently, he works as a multimedia and information technology support technician at Queen's University, Canada.

In his thesis, **Modelling Employability and Entrepreneurial Intention for ICT Skills Shortage: A North-West University Case Study**, he investigated the critical issue of skills shortages and rising unemployment among South African ICT graduates. Using quantitative research methodology, his study assessed students' perceptions of their competencies and identified key factors, such as self-efficacy and scarce IT skills, which influence employability. Subsequently, he developed a comprehensive model by drawing on several theories, including human capital and social cognitive theory, to enhance the employability and entrepreneurial intentions of ICT students. By aligning university curricula with industry needs and promoting entrepreneurship, his findings offer practical solutions to improve graduate outcomes and address labour market demands in the ICT sector.

Promoter: Prof K Gorejena

Co-promoter: Prof JE Chukwuere



Doctor of Philosophy

**MAHURA, Tshepiso**

Economic and Management Sciences with Business Statistics

Tshepiso Mahura, born on 5 November 1992 in Vryburg to Mapule Patricia Mahura, completed his matriculation with exemption from Pule Leeuw Comprehensive Secondary School in 2010. In 2013, he worked as a mathematics tutor at Master Maths. He began his BCom degree in Statistics at the North-West University (NWU) in 2014 and went on to earn his honours degree in Operations Research in 2017, followed by an MCom degree in Statistics in 2019, all from the Mafikeng Campus of the NWU. Since February 2019, he has been employed as a permanent lecturer in the Department of Mathematics and Statistics at the North-West University.

In his thesis, **The performance of Copula and Hybrid ARMA-GARCH model on BRICS stock returns**, Tshepiso examined the volatility and interdependencies among BRICS markets using hybrid ARMA-GARCH and copula models. The study employed hybrid ARMA (p,q)-GARCH (1,1), ARMA (p,q)-EGARCH (1,1), and ARMA (p,q)-TGARCH (1,1) models, as well as various copulas including student-t, Frank, Clayton, and Gumbel. All the hybrid models were estimated under SSTD and GED. He found that the hybrid ARMA (p,q)-EGARCH (1,1) model managed to capture both the negative and positive leverage effects on all the countries. Hybrid models eliminated ARCH effects, and the student-t copula was the best-fit for dependence structures. These findings offer insights to improve portfolio diversification, risk management, and econometric research by integrating leverage effects with ARMA-GARCH and copula models.

Promoter: Prof JT Tsoku

Doctor of Philosophy

**SAMBO, Vuyolwethu**

Public Administration

Vuyolwethu Sambo, the son of Linah Portia Sambo, was born on 17 May 1988 in Hazyview. He matriculated from the SAFA Transnet School of Excellence in 2006 where his football skills were developed. He then enrolled for his Bachelor of Administration degree at the North-West University (NWU) in 2007. Vuyo was part of the Soccer Institute programme, which gave him an opportunity to study and play football for the NWU. The programme assisted with his studies until he obtained an honours degree. In 2012, Vuyo was employed by the NWU as an administrative officer in the Admissions Division of Student Academic Life Cycle Administration (SALA). While working for the NWU, he further enrolled for a Master's in Public Administration, which he obtained in 2015. Then, in 2016, he was promoted to manager of the Soccer Institute – a position he currently still occupies.

In his thesis, **An assessment of the implementation of school sports policy in the Ngaka Modiri Molema District Municipality**, Vuyo adopted a qualitative approach using ATLAS.ti 23. Two datasets were collected from interviews with educators from the five local municipalities in the Ngaka Modiri Molema District as well as policymakers from the North- West Provincial Government's Departments of Education and Arts, Culture, Sports and Recreation. Themes were identified that were used to cluster the results. Vuyo found a lack of understanding and insufficient investigation of the essential variables needed to implement the sports strategy in the Ngaka Modiri Molema District schools and the roles of key role-players. He recommended the best practice of school sports policy, which includes, among others, the effective training of teachers on the policy.

Promoter: Prof LB Juta

Co-promoter: Prof SM Madue



## 2 Law / Regte / Molao

Doctor of Laws

**CHANANA, Privilege**

Public Law and Legal Philosophy

Privilege Chanana was born on 24 May 1989 in Masvingo, Zimbabwe, to Kefas and Yeukai Chanana. She finished her Advanced levels at All Souls High School in 2007. Her dream was to study law, which was becoming far-fetched when she had to enrol at the University of Zimbabwe in 2008. However, this was short-lived as she managed to enrol for her LLB at Walter Sisulu University in Mthatha in 2009. After obtaining her LLB in 2012, she went on to do Articles in Pretoria between 2013 and 2016. After that, she enrolled for her Masters in International Law at the University of Pretoria, where she also worked as an Academic Associate between 2016 and 2017. She also participated in the NEPAD Young Professional Program Internship during this period. Since 2018, she has worked as Plexus Wealth's financial advisor/compliance officer. She has also been a legal research consultant with various companies, including Fresh Fetch and law firms Zizipa Attorneys and Mamwadhi Attorneys, to mention a few.

In her thesis, **Public Health, women's health and pandemics: assessing the South African regulatory framework**, Privilege examines South Africa's response to the COVID-19 pandemic. She argues that although the response effectively flattened the curve, it failed to address women's specific vulnerabilities adequately. By applying the concept of public health resilience and evaluating women's access to healthcare across availability, accessibility, acceptability, and quality, the study highlights that the state's pandemic management overlooked the broader impact on vulnerable groups, particularly women. These oversights affected women's health rights and overall well-being, framed by the sufficiency principle, which advocates for a functional and fulfilling life. Privilege offers several recommendations based on these findings.

Promoter: Prof CB Soyapi

### 3 Natural and Agricultural Sciences / Natuur- en Landbouwetenskappe / Disaense tsa Tlhago le Temothu / Disaense tsa Tlhaho le Temo

Doctor of Philosophy

**JOBE, Martha Cebile**

Agriculture with Animal Science

Martha Cebile Jobe is the youngest daughter among 4 siblings of Mrs. S.L Jobe and the late Mr. Jobe and was born in Mtubatuba, KwaZulu-Natal province of South Africa. She completed her primary and secondary education in Mtubatuba and then pursued higher education at the University of Zululand, where she obtained both her BSc Agric and MSc Agric degrees specializing in Animal Science. She previously worked as a Research Project Officer at the University of KwaZulu-Natal, Pietermaritzburg Campus, before pursuing her doctoral studies at the North-West University (NWU). Cebile has published 2 articles from her doctoral thesis in DHET-accredited peer-reviewed journals. She has also presented her research work in national (ASM-MYTOX, South Africa) and international (World Mycotoxin Forum, Italy) conferences. She is currently working as a Postdoctoral Fellow in the Department of Animal Health, NWU.

er thesis, **Urginea epigea -fabricated nano-Ag/ZnO effects on aflatoxigenic fungi production, aflatoxin biosynthesis and broiler in ovo co-aflatoxicosis: molecular approach**, involved biosynthesis of Ag/ZnO nanocomposites using *Urginea epigea* bulb extract. *In vitro*, the nanoparticles (NPs) showed antibacterial and antifungal properties. Also, *U. epigea* extract was more effective than Ag/ZnO NPs in downregulating genes involved in aflatoxin biosynthesis. Further, *in ovo* administration of single and combined doses of AFB<sub>1</sub> and AFB<sub>2</sub> induced toxicity to broiler chickens with detrimental effects on growth performance and egg hatchability. The toxicity was mediated through systemic oxidative stress and downregulation of energy metabolic and signalling genes. Both *U. epigea* extract and Ag/ZnO NPs abrogated the toxicity of the aflatoxins.

Promoter: Dr DMN Mthiyane

Co-promoter: Prof SE Mazibuko-Mbeje

Co-promoter: Prof M Mwanza

Co-promoter: Prof DC Onwudiwe



Doctor of Philosophy

**MTHANA, Makiwa Simeon**

Agriculture with Animal Science

Makiwa Simeon Mthana was born in Evaton, Sebokeng, Gauteng Province of South Africa on 9 January 1992. He received his secondary education at Qedilizwe Secondary School, where he matriculated in 2011. In 2012, he enrolled for his BSc Agric degree at the University of Fort Hare in the Eastern Cape Province and obtained the degree in 2017 and subsequently the MSc Agric degree in 2020 from the same institution. He then moved to the North-West University (NWU), Mahikeng Campus, in 2021 to commence his PhD studies in Animal Science, specialising in Poultry nutrition. During his PhD studies, he received several accolades including the 4th Best Student Oral Presenter at the NWU Food Security and Safety Focus Area Annual One-Day Seminars in 2023 and Overall (1st Price) Winner of the Animal Feed Manufacturers Association (AFMA) Student Nutrition Poster Award Competition in 2024. He also presented an abstract of part of his doctoral research work at the 54th Annual SASAS Congress in 2024. Makiwa is currently employed by the University of Fort Hare as a Lecturer in Ruminant Nutrition since September 2024. He also serves as a Sub-Editor for the South African Journal of Animal Science (SAJAS).

In his thesis, **Phyto-nanotechnology in oyster mushroom spent substrate production for marula seed cake and mucuna seed meal-supplemented broiler diets**, Makiwa investigated the ameliorative effects of dietary incorporation of nano-biotechnologically produced mushroom spent substrate against anti-nutritional factors in broiler chickens fed diets wherein combined marula seed cake and mucuna seed meal were used as replacements for soyabean meal. Major findings revealed that the combined marula seed cake and mucuna seed meal in complete replacement of soyabean meal induced detrimental effects on broiler chicken performance, health, meat quality and liver-gut-serophysio-biochemistry that were reversed by the inclusion of the oyster mushroom spent substrate at the level of 1.25%. From his doctoral research work, a total of 4 research articles were published in renowned DHET-accredited peer-reviewed journals.

Promoter: Dr DMN Mthiyane

Co-promoter: Prof M Mwanza

Doctor of Philosophy

**MWINGA, James Lwambi**

Social Sciences with Indigenous Knowledge Systems

James Lwambi Mwinga, the son of William Stevenson and Alice Nekesa Mwinga, was born on in Mombasa, Kenya. He finished his Kenya Certificate of Secondary Education from Bungoma High School (Kenya) in 2006 and obtained his honours in Bachelor of Technology in Industrial Microbiology and Biotechnology at the Jomo Kenyatta University of Agriculture and Biotechnology (Kenya) in 2012. He obtained his master's degree in Indigenous Knowledge Systems, with distinction in 2020 at the North-West University, Mafikeng Campus. His passion for research and development has led him to work as a research assistant at Kenya Marine Fisheries Research Institute (Kenya) in 2011, and 2013 to 2015, and as a laboratory analyst with Kenya Bureau of Standards in 2012.

In his thesis, **Efficacy of plants used for managing diseases in crops by subsistence farmers in OR Tambo Municipality, South Africa**, James conducted an extensive ethnobotanical survey that generated 17 plants used for crop protection in Eastern Cape Province. His study explored the application of plants in the management of common phytopathogens affecting cabbage and spinach. The plant extracts (*Allium cepa*, *Aloe ferox*, *Capsicum annum*, *Tagetes minuta*, and *Tulbaghia violacea*) had considerable quantity of total phenolic and flavonoid contents. Phytochemical analysis revealed a rich pool (106) of bioactive compounds. Based on the biological assays, *T. violacea* and *T. minuta* were ranked as the most potent plants. His findings indicated that botanical extracts hold great potential as an alternative source of bio-fungicides for managing plant diseases.

Promoter: Prof OA Aremu

Co-promoter: Prof W Otan G-Mbeng

Assistant Promoter: Dr P Kubheka



Doctor of Philosophy

**TLHOAELE, Luvhimba**

Science with Transdisciplinary Environmental Sciences and Management

Luvhimba Tlhoaele, the second daughter of Madia and Avhurengwi Ramulongo, was born on 9 February 1990, in the mountain ranges and fertile valleys of the Limpopo Highlands, Shayadima. From an early age, through the guidance of her elder sister Masindi Ramulongo she developed a passion for science, fuelled by her natural inquisitiveness, which inspired her to pursue a career in academia and research. Luvhimba completed her undergraduate studies and BSc Honours in Environmental Science at the University of Limpopo. Building on her foundational knowledge, she obtained her Master's degree at the University of Venda. Her post-graduate studies focused on modelling water distribution systems, aimed to bridge the gap between water consumption and demand, an area of research with significant implications for sustainable resource management in rural vulnerable communities. The research work was presented at an international conference where it received recognition and was subsequently published in *Procedia Environmental science*.

In her thesis, **An integrated Eco-Sanitation framework for water consumption reduction and energy generation Capricorn District, Limpopo Province**, Luvhimba used self-administered surveys, observations and an experiment to develop an integrated ecological sanitation framework aimed at reducing water consumption and generating energy to address SDGs 6 and 7. She confirmed that proper implementation of EVIPs could reduce water consumption by 73% and the Biochemical Methane Potential test could generate 66,6m<sup>3</sup> of biogas. The study findings contribute to WtE nexus and ecological sanitation literature focusing on resource recovery from untreated human faeces while providing sustainable energy to school settings and water conservation. The research work has submitted 3 papers for publication and is collaborating with CSIR for pilot projects.

Promoter: Prof LG Palamuleni