

VISION 130

Renew and Reimagine  
towards 2034



EXCELLENCE

# GRADUATION CEREMONY



THURSDAY 7 DECEMBER 2023 | 09:00

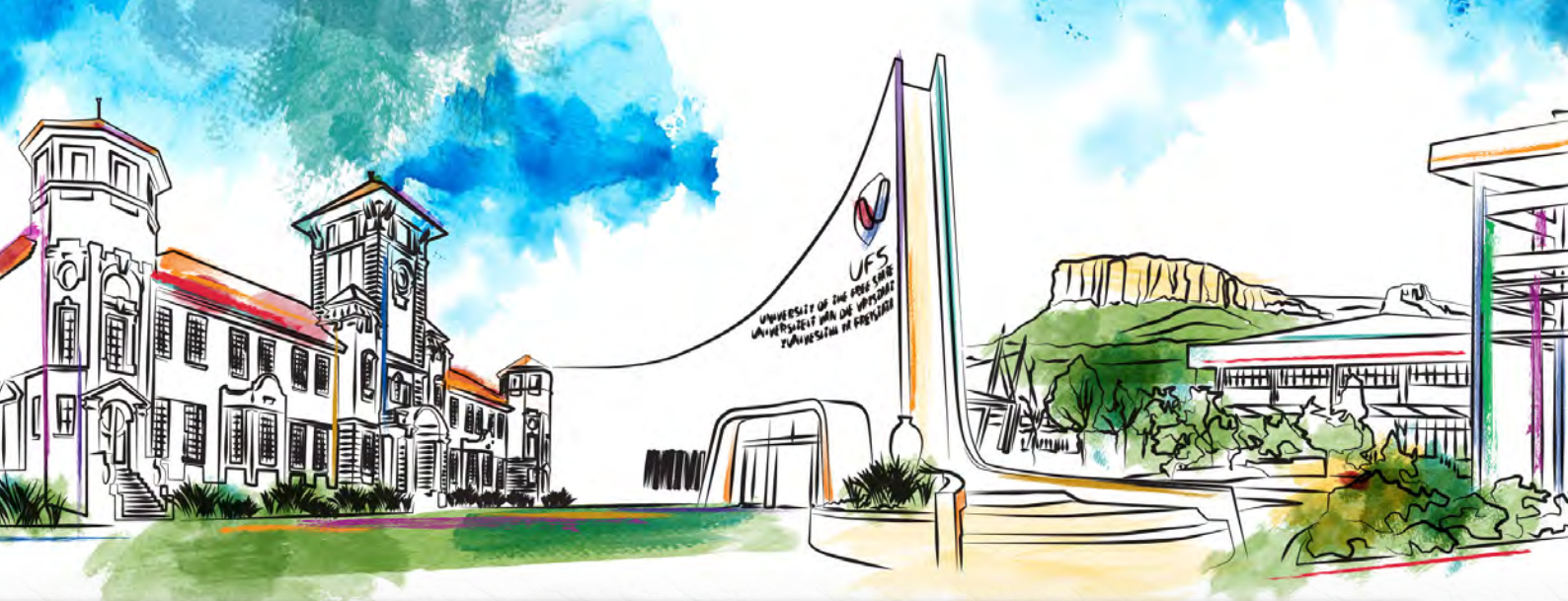
Faculties of The Humanities, Natural and Agricultural Sciences,  
and Theology and Religion

Higher certificates, bachelor's degrees, honours degrees,  
postgraduate diplomas, master's degrees, and doctoral degrees



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





# PROGRAMME

**7 DECEMBER 2023**  
**09:00**

**BLOEMFONTEIN**  
**CAMPUS**

**CONSTITUTION OF THE CONGREGATION**

**OFFICIAL WELCOME**

**MUSICAL ITEM**

**PRESENTATION OF CANDIDATES**

**CONGRATULATORY MESSAGE**

**NATIONAL ANTHEM OF SOUTH AFRICA**

**DISSOLUTION OF THE CONGREGATION**

## **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.



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>.

# Nkosi sikelel' iAfrika

## NATIONAL ANTHEM OF SOUTH AFRICA

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.





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

BLOEMFONTEIN, QWAQWA AND SOUTH CAMPUS

## ABOUT THE UFS

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 40 000 students in its seven faculties (Economic and Management Sciences, Education, Health Sciences, The Humanities, Law, Natural and Agricultural Sciences, Theology and Religion), with an increasing number of international students and associates, and an ever-widening scope of active involvement in and contribution to its surrounding communities.

For the past 119 years, the UFS has been delivering quality graduates who have made their mark in various sectors. What sets the institution apart is its holistic student support initiatives, enabling it to achieve some of the highest success rates in the country. Delivering students who are in high demand in the global job market remains a top priority. An established network of industry partners and close collaboration with the public and private sectors, as well as a continuous process of transformation and curriculum renewal,

dovetail to produce highly employable graduates.

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 UFS responds to societal needs by using its scholarly and professional expertise with an intentional public purpose and benefit.

The UFS is an institution that goes all out to provide its students and staff with an outstanding university experience. Everything the institution does is rooted in its values of excellence, innovation and impact, accountability, care, social justice, and sustainability.

The UFS aspires to be a research-led, student-centred, and regionally engaged university that contributes to development and social justice through the production of globally competitive graduates and knowledge. Our *Vision 130* is an elaboration of our strategic intent to reposition the university for 2034, when we will commemorate our 130th anniversary.



# GRADUATION CEREMONY 2023

## Honorary Awards | Honorary Doctorates

1950	GLP Moerdyk – DLitt (h.c.)	1987	JA Stegmann – DCom (h.c.)		MK Seely – DSc (h.c.)
1951	NC Havenga – LLD (h.c.)		WA Joubert – LLD (h.c.)		C Seerveld – DPhil (h.c.)
1952	Thos Blok – DEd (h.c.)		B Kok – DPhil (h.c.)		F van Z Slabbert – DPhil (h.c.)
	SHS Rubidge – DSc (h.c.)	1988	WP Venter – DCom (h.c.)		JC Steyn – DLitt (h.c.)
1955	CR Swart – LLD (h.c.)		JJN Cloete – DAdmin (h.c.)		PA Verhoef – DTh (h.c.)
	CA v Niekerk – LLD (h.c.)		FC Fensham – DLitt (h.c.)		L van den Heever – LLD (h.c.)
1958	CPB Brink – LLD (h.c.)		JW vd Riet – DPhil (h.c.)	2005	HA Wessels – LLD (h.c.)
	CF Visser – DEd (h.c.)	1989	BJ Meyer – DSc (h.c.)		A du P Heyns – DMed (h.c.)
1959	DB Bosman – DLitt (h.c.)		N van Uden – PhD (h.c.)		JJF Durand – DPhil (h.c.)
	SP le Roux – DScAgric (h.c.)	1990	MG Corbett – LLD (h.c.)		JA Groenewald – DSc (h.c.)
	DF Malherbe – DLitt (h.c.)		JS Rabie – DLitt (h.c.)		WH Neuser – DTh (h.c.)
	GH v Rooyen – MA (h.c.)	1991	SS Brand – DCom (h.c.)		M Ramos – PhD (h.c.)
1960	SPE Boshoff – DLitt (h.c.)		JWL de Villiers – DSc (h.c.)		SJ Terreblanche – DCom (h.c.)
1961	T Boydell – DPhil (h.c.)		GT Fagan – DArch (h.c.)	2006	T Moss – PhD (h.c.)
1962	ES Botes – DEd (h.c.)		JH Hofmeyer – PhD (h.c.)		PV Cox – PhD (h.c.)
	PE Rousseau – DSc (h.c.)	1992	E v Heerden – DLitt (h.c.)	2007	BJ (Bannie) Britz – DArch (h.c.)
1963	EH Louw – LLD (h.c.)		JP Louw – DLitt (h.c.)		KPD Maphalla – PhD (h.c.)
	EN Roberts – DSc (h.c.)		H Olivier – DSc (h.c.)	2008	D Ferreira – DSc (h.c.)
	JGF (Kaalkop) vd Merwe – DCom (h.c.)	1993	RR Arndt – DSc (h.c.)	2009	JC Loock – PhD (h.c.)
	HF Verwoerd – DLitt et Phil (h.c.)		RD Anderson – DMed (h.c.)		LTC Harms – LLD (h.c.)
1966	PSZ Coetzee – DPhilTh (h.c.)		SJ Naudé – LLD (h.c.)	2010	P Gordhan – PhD (h.c.)
	PJ du Toit – DSc (h.c.)	1994	JJ Human – DPhil (h.c.)		BBS Ngubane – PhD (h.c.)
	MS Louw – DCom (h.c.)		JA Myburgh – DMed (h.c.)		AH Strydom – PhD (h.c.)
1967	SM Naudé – DSc (h.c.)		JP vd Walt – DSc (h.c.)	2011	M Jones – PhD (h.c.)
	LC Steyn – LLD (h.c.)	1995	WA Landman – DEd (h.c.)		D Tutu – DTh (h.c.)
	BJ Vorster – LLD (h.c.)		WL Mouton – DPhil (h.c.)		P Fourie – DLitt (h.c.)
1968	SJ Naudé – DCom (h.c.)	1996	WDO Marasas – DSc (h.c.)		OG Winfrey – DEd (h.c.)
1969	CW (Nellie) Swart – DPhil (h.c.)		NE Wiehahn – LLD (h.c.)		RWM Frater – PhD (h.c.)
	AJJ Wessels – DCom (h.c.)	1997	AP Brink – DLitt (h.c.)		A Sawyer – DEd (h.c.)
1970	GS Nienaber – DLitt (h.c.)		B Hurwitz – DPhil (h.c.)	2012	RJ Goldstone – LLD (h.c.)
	HO Mönnig – DSc (h.c.)	1998	FC Müller – DMed (h.c.)		ER v Heerden – DLitt (h.c.)
1971	N Diederichs – DCom (h.c.)	1999	FM Claerhout – DPhil (h.c.)		M Nussbaum – DLitt (h.c.)
	RS Verster – DPhil (h.c.)		JJF Hefer – LLD (h.c.)		OW Prozesky – MD (h.c.)
1972	LW Hiemstra – DPhil (h.c.)		S Nigam – DSc (h.c.)		FDJ Brand – LLD (h.c.)
	PJ Meyer – DPhil (h.c.)		WL Nkuhlu – DCom (h.c.)	2013	ZKG Mda – DLitt (h.c.)
1975	PJ Nienaber – DLitt (h.c.)		MA Ramphela – DPhil (h.c.)	2014	ML Blum – PhD (h.c.)
	De la H de Villiers – DScAgric (h.c.)		HJO van Heerden – LLD (h.c.)		L Mulvey – DLitt (h.c.)
	GJ Stander – DSc (h.c.)	2000	FJ van der Merwe – PhD (h.c.)	2015	L Brahimi – DPhil (h.c.)
1976	AJA Roux – DSc (h.c.)		MH Daling – DCom (h.c.)		JM Samuel – DEd (h.c.)
1978	SP Botha – DSc (h.c.)		TN Liversedge – PhD (h.c.)		MA Oduyoye – DTh (h.c.)
	EM van Zinderen Bakker – DSc (h.c.)		I Mahomed – LLD (h.c.)	2016	JD Sacks – DEcon (h.c.)
	HB Thom – DEd (h.c.)	2001	BP Gilbertson – DCom (h.c.)		RJ Khoza – DEcon (h.c.)
1979	FCL Bosman – DPhil (h.c.)		NR Mandela – LLD (h.c.)		TA Manuel – DEcon (h.c.)
	G Cronjé – DSocSc (h.c.)		EC Taglauer – DSc (h.c.)		M du Preez – PhD (h.c.)
	CJF Human – DCom (h.c.)	2002	BH Meyer – PhD (h.c.)		J Samoff – DPhil (h.c.)
1980	G Boonzaier – DPhil (h.c.)		BAK Rider – LLD (h.c.)		F Haffajee – PhD (h.c.)
1981	PW Botha – DPhil (h.c.)		CF Slabber – PhD (h.c.)	2017	PH Holloway – DSc (h.c.)
	B Human – DCom (h.c.)		JM Stetar – DEd (h.c.)		M Botha – LLD (h.c.)
	SG Shuttleworth – DSc (h.c.)	2003	EWA de Corte – DEd (h.c.)	2019	BL Fanaroff – DSc (h.c.)
1982	BLS Franklin – DPhil (h.c.)		HA Serebro – DPhil (h.c.)		J Mofokeng wa Makhethe – DLitt (h.c.)
	GvN Viljoen – DEd (h.c.)		AG Sykes – DSc (h.c.)	2021	MB Molemela – LLD (h.c.)
1983	L Luyt – DCom (h.c.)	2004	S Badat – DPhil (h.c.)		ZM Yacoob – LLD (h.c.)
	SF Zaaïman – DPhil (h.c.)		R Bringle – DPhil (h.c.)		SM Pityana – DPhil (h.c.)
1984	HS Steyn – DSc (h.c.)		J de Wet – DMus (h.c.)		RJ van Niekerk – DLitt (h.c.)
	FR Tomlinson – DScAgric (h.c.)		CF Fauconnier – DSc (h.c.)	2022	WK Byanyima – PhD (h.c.)
	JH vd Berg – DMed (h.c.)		GJ Gerwel – DPhil (h.c.)		DM Davis – LLD (h.c.)
1985	L Alberts – DSc (h.c.)		WD Jonker – DTh (h.c.)		DE Moseneke – LLD (h.c.)
	GG Cillié – DPhil (h.c.)		A Krog – DLitt (h.c.)		AL Sachs – LLD (h.c.)
	SPD le Roux – DLitt (h.c.)		K Mokhele – DPhil (h.c.)		MJ Wingfield – DSc (h.c.)
	A Polson – DPhilMed (h.c.)		CJC Nel (Posthumous) – PhD (h.c.)	2023	M Musk – DDiet (h.c.)
	J du P Scholtz – DPhil (h.c.)		L Quayle – DMus (h.c.)		A Ekwamu – DSc (h.c.)
1986	S Grové – DMus (h.c.)		T (Karel) Schoeman – DLitt (h.c.)		D Pepler – DSc (h.c.)
	FP Retief – DMed (h.c.)		YK Seedat – DMed (h.c.)		PCJ Vale – PhD (h.c.)

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

1994	Prof FO Müller (Shield of Honour)	2008	Prof SA Petersen (Shield of Honour)
	RE Schoombie (Shield of Honour)	2009	Ludo Helsen (Shield of Honour)
1995	Prof FO Müller (Chancellor's Medal)	2010	Prof JU Grobbelaar (Council Medal)
	RE Schoombie (Chancellor's Medal)	2011	Mrs AM Dippenaar (Chancellor's Medal)
1996	Prof S Mittman (Shield of Honour)	2014	Dr H Verster (Chancellor's Medal)
1997	Prof M Jansens (Shield of Honour)	2014	Mr JL Pretorius (Chancellor's Medal)
1998	Prof CJC Nel (Chancellor's Medal)	2016	Mr AD Osler (Chancellor's Medal)
	Prof C Swanepoel (Chancellor's Medal)		Ms M van der Merwe (Chancellor's Medal)
1999	WJ (Hansie) Cronje (Shield of Honour)	2017	Ms JS Isaacs (Chancellor's Medal)
	Prof David Justice (Shield of Honour)	2019	Mr JF de Villiers (Chancellor's Medal)
2000	Prof P Rosseel (Shield of Honour)		Ms EM Oosthuizen (Council Medal)
	Prof MJ Viljoen (Chancellor's Medal)	2022	Dr N Pearce (Chancellor's Medal)
2001	Prof PC Potgieter (Chancellor's Medal)		Mr N Janse van Rensburg (Council Medal)
2002	T Moss (Shield of Honour)	2023	Prof MG Lötter (Chancellor's Medal)
	Prof CD Roode (Chancellor's Medal)		Prof SC Brown (Council Medal)
2003	Prof HC Janse van Rensburg (Council Medal)		



# MESSAGE FROM VICE-CHANCELLOR AND PRINCIPAL | PROF FW PETERSEN

**W**elcome to the graduation ceremony of the University of the Free State (UFS).

Today is a special day indeed. Few events and occasions hold as much significance as your graduation. This day is just as important for those who have supported you along the way. Many of you had to overcome a lot during your journey to get here today. Many of you are the first in your families to reach this milestone. You have earned this moment and you should be extremely proud. 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.

Graduands, you have had the honour of studying at an institution that commands a track record that is on par with well-regarded national peers, as reflected in the 2024 Times Higher Education World University and Impact Rankings. Sufficient evidence indicates that higher education has the potential to function as an agent of change and a means of serving the greater good. Although the mission of our university has always been to equip you with knowledge and skills needed to make a difference in your field of study, we are also mindful that values are as important for you to make a difference in your communities.

The UFS places great emphasis on ensuring that students and staff have an outstanding university experience. In our pursuit of excellence, we are proud that our environment is conducive for intellect and knowledge to flourish. As such, our values of excellence, innovation and impact, accountability, care, social justice, and sustainability are embedded in all activities across the institution.

Graduands, irrespective of what you undertake in the future, remember to pursue your passion, and continuously have the desire to make a difference in the lives of others. Surround yourself with real people in real communities, while inculcating kindness, empathy, passion, and awareness of the real issues. If you want to tackle the unfinished goals of this country and create a better world – build bridges, remain morally astute, and grow your coalitions. Life can be challenging if you are on your own – however, great results can be achieved if you work as a collective.

It is up to you to align yourself with those who have a common cause, heal the divisions that keep us separated, and carry along those who have been left out and are struggling.

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

Best wishes

**PROF FW PETERSEN**

VICE-CHANCELLOR AND PRINCIPAL | UNIVERSITY OF THE FREE STATE

**W**elkom by die Universiteit van die Vrystaat (UV) se gradeplegtigheid.

Vandag is voorwaar 'n spesiale dag. Min gebeurtenisse en geleenthede het soveel betekenis as 'n mens se gradeplegtigheid. Hierdie dag is net so belangrik vir diegene wat julle langs die pad ondersteun het. Baie van julle moes talle uitdagings te bowe kom tydens julle reis om vandag hier te wees. Baie van julle is die eerste in julle gesinne om hierdie mylpaal te bereik. Julle het hierdie oomblik verdien en julle kan baie trots wees daarop.

Erken en herken altyd die belangrikheid van jou prestasie waar jy van 'n student van die Universiteit van die Vrystaat (UV) beweeg na 'n UV-gegraduateerde.

Gedegreeerdes, julle het die eer gehad om aan 'n instelling te studeer wat 'n prestasierekord het wat gelykstaande is aan welbekende nasionale eweknieë, soos weerspieël in die 2024 Times Higher Education World University en Impact-ranglys. Talle bewyse dui daarop dat hoër onderwys die potensiaal het om te dien. Alhoewel die missie van ons universiteit nog altyd was om julle toe te rus met kennis en vaardighede wat nodig is om 'n verskil in julle studieveld te maak, is ons ook bedag daarop dat waardes vir julle net so belangrik is om 'n verskil in julle gemeenskappe te maak.

Die UV plaas groot klem daarop om te verseker dat studente en personeel 'n voortrefflike universiteitservaring het. In ons strewe na uitnemendheid is ons trots dat ons omgewing bevorderlik is vir intellek en kennis om te floreer. As sodanig is ons waardes van uitnemendheid, innovasie en impak, aanspreeklikheid, omgee, sosiale geregtigheid en volhoubaarheid ingebed in alle aktiwiteite oor die instelling heen.

Gedegreeerdes, ongeag wat julle in die toekoms aanpak, onthou om julle passie na te streef en behou die begeerte om voortdurend 'n verskil in ander se lewens te maak. Omring juis met regte mense in regte gemeenskappe, terwyl julle welwillendheid, empatie, passie en bewustheid van werklike kwessies inskerp. As julle die onvoltooides doelwitte van hierdie land wil aanpak en 'n beter wêreld wil skep – bou brúe, bly moreel skerpsinnig, en laat julle koaliesies groei. Die lewe kan



uitdagend wees as 'n mens op jou eie is – goeie resultate kan egter behaal word as julle as 'n groep saamwerk.

Dit is julle verantwoordelikheid om juisself in ooreenstemming te bring met diegene wat 'n gemeenskaplike saak het, die verdeeldheid te genees wat ons verdeeld hou, en om diegene wat uitgelaat is en sukkel, met julle saam te neem.

Baie geluk aan al ons graduandi. Mag julle voortgesette sukses in al julle ondernemings behaal!

Beste wense

**PROF FW PETERSEN**

VIKANSIELIER EN PRINSIPAAL | UNIVERSITEIT VAN DIE VRYSTAAT

**R**e a le amohela moketeng wa kabo ya dikgau wa University of the Free State (UFS).

Letsatsi lena ke le kgethehileng ka nnete. Ke diketsahalo tse mmalwa haholo tse bohlokwa jwalo ka ho abelwa kgau ya yunivesithi. Letsatsi lena le bohlokwa hape le ho batho ba ileng ba le tshetsa leetong la lona. Ba bangata ba lona le ile la hlola maima a mangata leetong la lona ho fihla mona kajeno. Ba bangata ba lona ke lona ba pele malapeng a lona ho fihlella sehlohlolo sena sa katleho. Le fihlile motsotsong ona mme re motlotlo ka lona haholo.

Ka dinako tsohle amohelang le ho lemoha bohlokwa ba dintha tseo le di fihleletseng ha jwale le tlaha boemong ba ho ba moithuti mona University of the Free State (UFS) ho fetela boemong ba ho ba graduate ya UFS.

Baithuti ba seng ba tla abelwa dikgau tsa yunivesithi, le bile le tlotla ya ho ithuta setheong sa thuto se nang le nalane e ntle e kgemang le bomphato ba yona ba hlomphehang naheng, jwalo ka ha ho boletswe ho 2024 Times Higher Education World University and Impact Rankings. Ho na le bopaki bo hlwanang hodimo bo bontshang hore thuto e phahameng e na le monyetla wa ho sebetsa jwalo ka kofuto e hlalisang phetoho le mokgwa o hlalisang melemo e meholo ka ho fetisisa. Le hoja Mishini- thomo ya yunivesithi ya rona ka dinako tsohle e bile ho le hlomella ka tsebo le bokgoni bo hlokalahalang ho etsa phetoho dithutong, re boela re lemoha hore dintho tsa boleng di bohlokwa ho etsa phapang metseng ya lona.

UFS e kgothaletsa haholo ho etsa bonnete ba hore baithuti le moifo ba na le boiphihlelo bo hlahelletseng ka mahetla ba yunivesithi. Maikemisetsong a rona a ho hahamalla diphihlelo tse ipabolang, re motlotlo hore tikoloho ya rona ke e loketseng bakeng sa ho fana ka bohale le tsebo ho atleha. Ka labaka lena, makgabane a rona bakeng sa diphihlelo tse ipabolang, mehopollo e metjha le tshusumetso e ntle, boikarabelo, tlhokomelo, le toka e se nang leeme setjhabeng, le ho tswella ke dintho tse bopelletseng mesebetsing yohle ya setheo sena sa thuto.

Baithuti ba seng ba tla abelwa dikgau tsa yunivesithi, ho sa natswe hore na le tla etsa eng nakong e tlang, hopolang ho phehella ditabatabelo tsa lona ka tjeheseho, mme le tswelle pele ho ba le takatso ya ho etsa phapang bophelong ba batho ba bang. Etsang hore le dikadiketswe ke batho ba sebele metseng ya sebele, ha le ntse le ruta le ho jala mosa, kutlwelobohloko, tjantjello, le temoho ya ditaba tsa sebele. Haeba le batla ho sebetsana le dipakane tse sa qetwang le ho theha lefatse le betere – hahang marogo, dulang le le bohale, le ho theha maqhama a lona a ditshebedisano. Bophelo e ka ba bo phephetsang haeba o sebetsa o le mong – le ha ho le jwalo, diphetho tse babatseheng di ka fihlellwa ka tsehebedisano le ho ba ngatana-nngwe.

Dintho di mahetleng a lona ho iphaphatha le batho ba nang le dipheo tse tshwanang, ho kwala dikgeo tse re arohanyang, le ho jara batho ba ileng ba siuwa morao le ba nang le mathata a ba sitisang.

Re thoholetsa baithuti kaofela ba rona ba seng ba tla abelwa dikgau tsa bona tsa yunivesithi. E se ka le ka ba le katleho e tswelang pele mekuting ya rona kaofela!

Ditakaleto tse ntle

**MOPROFESARA FW PETERSEN**

MOLAETSA: MOTLATSA MOKANSELIRI LE HLOOHO YA UNIVESITHI



# VISION130

*Renew and Reimagine  
towards 2034*

**T**he University of the Free State (UFS) aims to continue growing and extending its influence and impact locally, regionally, and globally. Vision 130 is an elaboration of our strategic intent to reposition the institution for 2034, when the university will commemorate its 130th anniversary. It reflects our ambition to be a university with a consistent outward focus, and to be profound in what we deliver – building on past achievements, while constantly transforming ourselves in order to stay relevant within the dynamic and ever-changing international higher education sphere.

## VISION

The UFS aspires to be a research-led, student-centred, and regionally engaged university that contributes to development and social justice through the production of globally competitive graduates and knowledge.

## MISSION

The university's ultimate goal is to impart and generate new knowledge that impactfully supports societal development.

## VALUES

The UFS subscribes to a set of values, explicated below, which shape and inform our culture and provide a framework for our actions and decisions.

Our values are realised through the conduct of the wider university community:

*excellence, innovation and impact, accountability, care, social justice, and sustainability.*



**EXCELLENCE**



**INNOVATION  
AND IMPACT**



**ACCOUNTABILITY**



**CARE**



**SOCIAL JUSTICE**



**SUSTAINABILITY**



# OFFICE-BEARERS



**CHANCELLOR**  
Prof BF Mohale  
Professor of Practice (JBS)



**VICE-CHANCELLOR AND PRINCIPAL:**  
Prof FW Petersen  
PhD (SU)



**CHAIR OF COUNCIL:**  
Mr D Noko  
HND Mechanical  
Engineering (UJ)



**DEPUTY VICE-CHANCELLOR: RESEARCH AND INTERNATIONALISATION**  
Prof V Reddy  
PhD (UKZN)



**DEPUTY VICE-CHANCELLOR: OPERATIONS**  
Prof P Naidoo  
PhD (VISTA)



**DEPUTY VICE-CHANCELLOR: INSTITUTIONAL CHANGE, STRATEGIC PARTNERSHIPS AND SOCIETAL IMPACT:**  
Dr M Qhobela  
PhD (KSU)



**DEPUTY VICE-CHANCELLOR: ACADEMIC**  
Dr EL van Staden  
DPhil (UJ)



**EXECUTIVE DIRECTOR: STUDENT AFFAIRS**  
Mr T Hlasho  
MPhil (NMU)



**REGISTRAR:**  
Mr NN Ntsababa  
MPA (NMU)



**CAMPUS PRINCIPAL: QWAQWA CAMPUS**  
Dr M Mandew  
PhD (UN)



**PRESIDENT OF CONVOCATION:**  
Dr PD du Toit  
PhD (UFS)



**PRESIDENT GENERAL: INSTITUTIONAL STUDENT REPRESENTATIVE COUNCIL:**  
Sifundo Thami Masuku



# DEANS



**DEAN:  
ECONOMIC AND  
MANAGEMENT SCIENCES**

Prof P Burger  
PhD in Economics (UFS)



**DEAN:  
EDUCATION**

Prof LC Jita  
PhD (MSU)



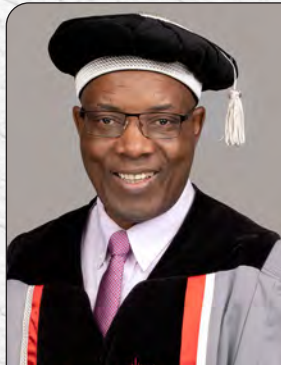
**DEAN:  
HEALTH SCIENCES**

Prof GJ van Zyl  
PhD (UFS)



**DEAN:  
THE HUMANITIES**

Prof MA Masoga  
PhD in Philosophy (UFS)



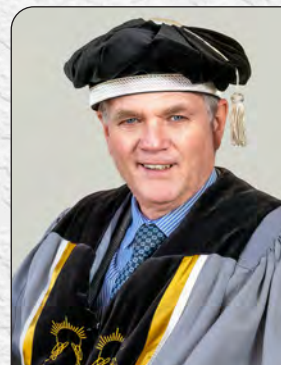
**DEAN:  
LAW**

Prof SD Kamga  
LLD (UP)



**DEAN:  
NATURAL AND  
AGRICULTURAL SCIENCES**

Prof PD Vermeulen  
PhD (UFS)



**ACTING DEAN:  
THEOLOGY AND RELIGION**

Prof F Tolmie  
PhD, DTh (UFS)



## GUEST SPEAKER

MRS TIRELO SIBISI



**T**irelo Sibisi is currently the Managing Director of Dinare HR Consulting and serves as the Deputy Chairperson of the Council of the University of the Free State (UFS). She is a Master of Business Administration graduate from Henley Business School and completed further studies at the University of Michigan and North-West University.

She is a seasoned business leader with more than 25 years of experience in the field of human resources and development. As the former Group Human Resources Executive for AngloGold Ashanti, she was responsible for the human capital portfolio globally across its operations in South Africa, Ghana, Tanzania, USA, Australia, and South America. Among others, this entailed attracting, retaining, and developing a highly engaged, diverse, and productive workforce.

Sibisi has built strategic knowledge and expertise across multiple industries, including information technology, construction, and health care. Among others, she worked at Netcare, was the group executive for human resources and corporate social investment at PPC Ltd, spent seven years at Telkom, and ten years at IBM SA and Europe. Her extensive experience covers various strategic roles, including human resource strategy development, performance management, succession planning, executive compensation, organisational design, diversity and inclusion, and culture transformation.

In addition, she served as an independent non-executive director for the Institute of People Management (IPM) and AngloGold Ashanti Ghana. In 2018, she was named the Human Resources Director of Year by the IPM. She is a well-rounded human resources generalist with strengths in several fields.





## DEAN |

**PROF MA MASOGA**

## CERTIFICATES

### HIGHER CERTIFICATE IN HUMANITIES COMMUNICATION STUDIES AND PSYCHOLOGY

LUHLONGWANE, Meisie Esther  
 MABHENGU, Nosipho  
 MAHLAMBA, Lefa Samuel  
 MAHLANGU, Nompoti  
 MAHUNYE, Dimakatso Mampatswa  
 MAZIBUKO, Nelisiwe Connie  
 MAZIBUKO, Noluthando Patience  
 MBATHA, Nokwanda Sinqobile  
 MOEKETSANE, Mampaleng  
 MOFOKENG, Relebohile Amanda  
 MOGOFI, Boitumelo Confidence  
 MOKWENA, Mpho Princess  
 MOLAOA, Motshedisi Merriam  
 MOLOI, Nthibijane Prudence  
 MOPHUTHI, Zanele  
 MOSIA, Engelinah Ntshaba  
 MOTAUNG, Mamello Felicity  
 MOTAUNG, Mpho Violet  
 MOTAUNG, Palesa  
 MTOTOBA, Nosipho Peceverense  
 NHLAPO, Steven Siyabonga

RASHEANE, Masetjhaba Agnes  
 SELLO, Motshidisi Adelina

### HUMANITIES COMMUNICATION STUDIES AND SOCIOLOGY

DHLAMINI, Sebongile Julia  
 MAHAHENG, Kedibone Portia  
 MAJOLA, Mandisa Faith  
 MATEBA, Thlolohelo Goodness  
 MBHELE, Sibongile Rosy  
 MOFOKENG, Motshidisi Florence  
 MOHALE, Mokgantsho  
 MOHALE, Pulane  
 MOJAJI, Mpho Elizabeth  
 MOJAKI, Lebohlang Getrude  
 MOKOENA, Kgauhelo  
 MOKOENA, Mapaseka Elizabeth  
 MOLISE, Mamoroa Lorraine  
 MOLOI, Barbara Dimpho  
 MOTSEI, Meikie  
 MOTSOENENG, Kefiloe Paballo  
 QEBULA, Yolokazi  
 RAMPOPORO, Mpho  
 THEKISO, Mapuleng  
 ZULU, Nqalamabutho

### HIGHER CERTIFICATE IN HUMANITIES POLITICAL SCIENCE AND PSYCHOLOGY

DYANTYI, Pumza

GULE, Thandeka  
 KHOMO, Tshepiso

### HIGHER CERTIFICATE IN HUMANITIES POLITICAL SCIENCE AND SOCIOLOGY

MAHELEMBE, Siphellele  
 NDLANGALAVU, Yonela

### HIGHER CERTIFICATE IN

## BACHELOR'S DEGREES

### BACHELOR OF ARTS

HLONGWANE, Sibusiso Mzwandile  
 KHUMALO, Nosihle Lungile  
 MALAZA, Mathabo Felicity  
 MASHININI, Pearle Noluthando  
 MOFOKENG, Dieketseng Tryphinah  
 MOKOENA, Glenda Nolwazi  
 MOKOENA, Kearabetswe Bridgette  
 MOKONE, Hlaodi Patrick  
 MOTSHOENENG, Boipelo Portia  
 NDLOVU, Immaculate Zama  
 RADEBE, Lungelo  
 RAMOTSHO, Refuwe  
 THWALA, Vukile Sibongakonke  
 XABA, Nonkululeko Patience





## **BACHELOR OF ARTS IN GOVERNANCE AND POLITICAL TRANSFORMATION**

ANWAREY, Ekram  
KHOLWANE, Ntombizanele  
LEDIBANE, Katleho  
LEKWATE, Boitshoko  
MANZI, Zakhele  
MATLHOKO, Ofentse  
NDLOVU, Sibongiseni  
SENWEDI, Vinolia Lesego  
SIBEKO, Thokozani  
SIMANE, Masande  
THITHI, Selwane Martha  
VAN STAWEL, Itumeleng Amos

## **BACHELOR OF ARTS IN INTEGRATED ORGANISATIONAL COMMUNICATION**

BALOYI, Zabeth  
BOLANI, Landile  
BOMSI, Vuyani  
DEEUW, Kopano Anthony  
MDHLOVU, Gift  
MOHOLO, Bonolo  
MOKUNYANE, Lebohang Joseph  
MOLELEMANE, Kgalalelo Lerato  
MOTAUNG, Mathapelo Eunice  
MTHEMBU, Thabiso Mbuso  
NGUBANE, Fezeka Yanelisa  
NHLAPO, Ann Palesa

OLIPHANT, Nthabiseng  
PLAATJIE, Shaun Tj  
POTIANE, Limphe  
TITUS, Uel  
WAMBI, Nolonwabo Simthandile

## **BACHELOR OF ARTS IN JOURNALISM**

MADIMA, Ritshidze  
NETSHIPISE, Unarine  
TAU, Nwabisa

## **BACHELOR OF ARTS IN LANGUAGE PRACTICE**

MONYAKU, Hope Valentiah Karabo  
NUKERI, Nhlayiso

## **BACHELOR OF ARTS MAJORING IN COMMUNICATION SCIENCE AND PSYCHOLOGY**

LEBURU, Mmedi Itebogeng  
MAILE, Dorothy Dieketseng  
RAMAILA, Lehlohonolo  
ZONDO, Dineo Muhle

## **BACHELOR OF ARTS MAJORING IN GEOGRAPHY AND TOURISM AND ENGLISH**

NGUBANE, Lungelo Luyanda

## **BACHELOR OF ARTS MAJORING IN PSYCHOLOGY AND ENGLISH**

MATEBESI, Tshegofatso  
MTOLO, Siphosethu Trinity  
SELALA, Ndzalama Michelle

## **BACHELOR OF ARTS MAJORING IN PSYCHOLOGY AND ISIZULU**

MNTAMBO, Simon Mzamo

## **BACHELOR OF ARTS MAJORING IN PSYCHOLOGY AND SESOTHO**

MABULA, Pulane  
SENAKGOMO, Nthabiseng

## **BACHELOR OF SOCIAL SCIENCE**

CINGO, Nonceba  
CONNELLAN, Dennis  
FABA, Tholwana  
KGOMOYADIRA, Rebaone Realeboga  
LECHE, Mohau  
LEKHULENG, Lethabo Dakalo  
LESETLA, Tholoana  
LETOANE, Faith Lerato  
MAHLANGU, Sizwe





MAJENG, Sichelokuhle  
 MAJOLA, Malibongwe Nosipho  
 MALINGA, Sibongile Esther  
 MANKHE, Lerato Moipone Christal  
 MATHA, Bongwiwe Clementina  
 MFIDI, Qhawekazi Ayanda  
 MGAGA, Mamello Charity  
 MOHAMED, Aqeelah Ayesha  
 MOHLOCHANE, Thato Pretty  
 MOKHEMA, Gugu Dimpho  
 MOKOENA, Tlotliso  
 MOLALE, Nonjabuliso  
 MOLEHE, Petrus Tsholofelo  
 MOSAI, Lebohang  
 MPUNGOSE, Sinegugu Zamakhuba  
 MWELASE, S'Phehile  
 MYEMANE, Sanelisiwe  
 NDLELA, Sandile Ayanda  
 NGCANGISO, Karabelo  
 PHADI, Thabang Alfios  
 QHALA, Punkie Florence  
 SESING, Relebogile Innocentia  
 SHABALALA, Nosipho Tshepiso Lisa  
 SHABANGU, Nelisiwe  
 SHABANGU, Thabiso Perfect  
 SIBANDA, Themba Valentine  
 TLOU, Omphile Promise  
 TSHITE, Matlhogonolo Virginia  
 TSHUPANE, Phumela Prunella  
 VAN ROOYEN, Carlene

ZONDO, Khanya  
 ZONDO, Nolwazi

**BACHELOR OF SOCIAL SCIENCE MAJORING IN ANTHROPOLOGY AND PSYCHOLOGY**

KHANYE, Khotso Khothatso Machaba  
 MOTLOLI, Kopano  
 MTSHALI, Sethabile Sharon

**BACHELOR OF SOCIAL SCIENCE MAJORING IN BUSINESS MANAGEMENT AND PSYCHOLOGY**

AMSTERDAM, Jody Jonathan  
 BUTHELEZI, Saziso  
 MAKHELE, Katleho  
 NYATHI, Ndumiso  
 VAN HEERDEN, Janice Melissa

**BACHELOR OF SOCIAL SCIENCE MAJORING IN CRIMINOLOGY AND PSYCHOLOGY**

ADAMS, Chardré Caitlin  
 DINI, Sixolisiwe  
 KLAAS, Siphon  
 NKOMO, Sphamandla  
 NTHUTANG, Itumeleng  
 NXUMALO, Nomfundo

RATHOPO, Amogelang Alicia  
 SAUERMAN, Louw-Marie  
 SEBOPA, Paseka Sylvia  
 SWAPI, Puleng

**BACHELOR OF SOCIAL SCIENCE MAJORING IN INDUSTRIAL PSYCHOLOGY AND PSYCHOLOGY**

DILODILO, Outwile Rachel  
 GUMEDE, Sethabile Nomthadazo  
 JANSEN VAN VUUREN, Danae  
 KHOAHLAPE, Moliehi Ameliah  
 LOUW, Louisa Segopotso  
 MIYANDA, Vikelwe  
 NKATULA, Esihle Shadrack  
 TSOTETSI, Christina Malapane

**BACHELOR OF SOCIAL SCIENCE MAJORING IN INDUSTRIAL PSYCHOLOGY AND SOCIOLOGY**

KRAPOHL, Riane  
 MPHULANYANE, Ntoi Dorothy

**BACHELOR OF SOCIAL SCIENCE MAJORING IN POLITICAL SCIENCE AND CRIMINOLOGY**

MAQALIKA, Refilwe Charlotte  
 NHLUMAYO, Sphindokuhle Karen  
 NYAKA, Lindelwa Martin





## **BACHELOR OF SOCIAL SCIENCE MAJORING IN PSYCHOLOGY AND SOCIOLOGY**

LEBONA, Nkosana Maria

LEKAOTA, Monica

MOSTERT, Gabri le

NCHABELENG, Zanele Matsimele

SKHOSANA, Gugulethu Mamohau

## **BACHELOR OF SOCIAL SCIENCE MAJORING IN SOCIOLOGY AND CRIMINOLOGY**

GCALI, Xola

MASHELE, Emily Siphwe

NGAMBU, Thokozani

RODERICK, Ashwin Jayson

THOMAS, Andile Cristopher

## **BACHELOR OF SOCIAL SCIENCES IN HUMAN AND SOCIETAL DYNAMICS**

DEMPSEY, Calla Michelle

## **HONOURS DEGREES**

### **BACHELOR OF ARTS HONOURS IN MUSIC**

MHALO, Lesley-Ann Sophy Vinemary

### **BACHELOR OF ARTS HONOURS WITH SPECIALISATION IN ENGLISH**

KHUMALO, Maqhinga Nelson

### **BACHELOR OF PSYCHOLOGY HONOURS**

DIAMOND, Lillian Lindiwe

MGIBA, Mandisi Tricia

## **MASTER'S DEGREES**

### **MASTER OF ARTS IN DRAMA AND THEATRE ARTS**

NORTIER, Christelle

**Dissertation Title:** IDENTIFYING AND CLASSIFYING DIFFERENT APPROACHES TO ACTING IN SELECTED DEVISED THEATRE PRODUCTIONS

**Supervisor:** Prof A van Jaarsveld

**Co-Supervisor:** Mr D Cloete

### **MASTER OF ARTS IN GOVERNANCE AND POLITICAL TRANSFORMATION**

BITTERBOS, Lorraine Janice

CWAILE, Mmoloki Saviour

KOALI, Seemola Sylvia

MANOTO, Lehlohonolo Webster\*

MOPHETHE, Kelebile Hallery

MOTSIE, Nneo Tsamontle

NKOPANE, Mapheello Juliet

NYATHI, Mandla Comfort

SEPTEMBER, Teboho Jeffry

SINGO, Muthundinne Curtis

### **MASTER OF ARTS WITH SPECIALISATION IN AFRICAN LANGUAGES**

MATSAU, Mampoba Pascalina

**Dissertation Title:** A CRITICAL ANALYSIS OF POLYGAMY IN B.M. KHAKETLA'S SESOTHO DRAMA TEXTS, THOLOANA TSA SETHEPU AND BULANE

**Supervisor:** Dr BD Letlala

**Co-Supervisor:** Dr EN Maletle

### **MASTER OF ARTS WITH SPECIALISATION IN CRIMINOLOGY**

BOLEU, Kelebogile Portia

**Dissertation Title:** EXPECTATIONS OF PRESIDING OFFICERS IN THE SOUTH AFRICAN CRIMINAL JUSTICE SYSTEM OF THE CRIMINOLOGIST AS AN EXPERT WITNESS

**Supervisor:** Prof R Peacock





## MASTER OF ARTS WITH SPECIALISATION IN ENGLISH

**BOSHOFF, Elani\***

**Dissertation Title:** EXPLORING READING ATTITUDES AND HABITS OF PRESERVICE TEACHERS RESPONSIBLE FOR EARLY LITERACY DEVELOPMENT

**Supervisor:** Dr CL du Plessis

**Co-Supervisor:** Dr LM Drennan

## MASTER OF ARTS WITH SPECIALISATION IN GENDER STUDIES

**MAKAMURE, Gibson\***

## MASTER OF ARTS WITH SPECIALISATION IN HISTORY

**VENTER, Louis Edian**

**Dissertation Title:** TOMMY ATKINS IN SOUTH AFRICA: FIRST-HAND ACCOUNTS OF THE EXPERIENCES OF BRITISH SOLDIERS DURING THE ANGLO-BOER WAR, 1899-1902

**Supervisor:** Dr MM Oelofse

**Co-Supervisor:** Mr JJR van Zyl

## MASTER OF ARTS WITH SPECIALISATION IN HUMAN GEOGRAPHY

**SHEZI, Ntombizodumo**

**Dissertation Title:** THE CLIMATE CHANGE-URBAN PLANNING NEXUS IN A MOUNTAIN ENVIRONMENT: THE CASE OF THE EASTERN FREE STATE REGION OF SOUTH AFRICA

**Supervisor:** Prof G Mukwada

**Co-Supervisor:** Dr EG Adagbasa

## MASTER OF ARTS WITH SPECIALISATION IN POLITICAL SCIENCE

**BEKKER, Simone**

**Dissertation Title:** AN INTERSECTIONAL ANALYSIS OF THE SYSTEMIC DISCRIMINATION CONFRONTING LGBTQ+ INDIVIDUALS IN THE MIDDLE EAST: THE CASES OF IRAN, TURKEY, AND EGYPT

**Supervisor:** Prof H Solomon

**DE KLUIVER, Jana Cicile**

**Dissertation Title:** ENTERING THE DRAGON'S DEN: CONTEMPORARY RISKS AND OPPORTUNITIES OF CHINA'S BELT AND ROAD INITIATIVE FOR AFRICA

**Supervisor:** Prof TG Neethling

## MASTER OF PSYCHOLOGY

**DE OLIVEIRA, Judite Danielle**

**Dissertation Title:** PREDICTORS OF PSYCHOPATHY AMONGST FEMALE INCARCERATED OFFENDERS

**Supervisor:** Dr J Jordaan

**Co-Supervisor:** Dr M Cronje

**SCHOEMAN, Marco\***

**Dissertation Title:** HEALTH LOCUS OF CONTROL, SELF-REGULATION AND FUTURE TIME PERSPECTIVE AS PREDICTORS OF RECOVERY FROM SUBSTANCE ABUSE

**Supervisor:** Mr HW Taylor

## MASTER OF SOCIAL SCIENCE IN CLINICAL PSYCHOLOGY

**MATWA, Nozibuze Yvonne**

**RAMAHATA, Mpho Alice\***

**SIBETHA, Zintle**

## MASTER OF SOCIAL SCIENCE WITH SPECIALISATION IN SOCIOLOGY

**KHIBA, Teboho Aubrey**





**Dissertation Title:** VIOLENT STUDENT PROTESTS IN HIGHER EDUCATION INSTITUTIONS: EXPLORING THE FORMATIONS OF VIOLENCE AND THE SOCIO-ECONOMIC COSTS OF VIOLENT PROTESTS

**Supervisor:** Dr D Nzima

## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY

**SETILO, Tshegofatso**

Tshegofatso Setilo was born on the 18<sup>th</sup> of May in Thaba Nchu. She matriculated at Moroka High School in 2003. She obtained a BSocSc degree in 2009, BSocSc honours in Sociology in 2012 at the UFS and a Master's degree in Transatlantic studies in 2013 at the University of Jagiellonian in Poland. She started her career in 2009 at the UFS as an Administration officer at the Division of Student Development and Success. She rose to become the Head of Access Programmes at the South Campus. She is currently the Head of Access at the University of Johannesburg.

With her thesis, titled: **CAPABILITIES, RESILIENCE AND SUCCESS OF UFS ACCESS STUDENTS: CONFRONTING DEFICIT DISCOURSES**, the candidate makes a contribution to the knowledge base of access and success in South African higher education. The candidate draws on the Capabilities Approach and resilience theory to make the case for an asset-based approach to university access. Such an asset-based approach regards so-called disadvantaged students in light of the capabilities and resilience they bring with them when accessing higher education, thereby imploring institutions to build on students' strengths rather than implementing a deficit approach to students. The findings of this study contribute to how institutions should think about widening access, while supporting student success.

**Supervisor:** Dr S Loots

### DOCTOR OF PHILOSOPHY IN MUSIC

**DIAMOND, Samson**

Samson Diamond hails from Soweto. After graduating with a distinction in music from the National School of the Arts, he was accepted at the Royal Northern College of Music in Manchester, England, where he earned the degrees of Bachelor of Music Honours First Class (2006) and Master of Music Performance (2007), both with distinction. Diamond enjoys an illustrious international career, having performed in more than 30 countries. He was the artistic leader and first violinist of the Odeion String Quartet at the University of the Free State from 2013 until the completion of his PhD in Music Education in 2023.





With his thesis, titled: **TRANSFORMATIVE TEACHER TRAINING STRATEGIES OF STRINGED INSTRUMENTS IN SOUTH AFRICAN COMMUNITY MUSIC PROGRAMMES**, the candidate examined the current state of string teacher training in South African Community Music programmes. Diamond's aim was specifically to investigate their strengths, weaknesses, and successes, in some of those programmes where former students are now employed as teachers. By conducting interviews with 13 participants from three Community Music programmes, Diamond shared the insights and lived experiences of programme directors and string teachers, which illuminated the central tenets of transformative strategies for string teacher training and practice. Diamond is adamant that Community Music programmes have the potential to promote positive social outcomes, such as personal development through music education that fosters high aspirations and achievement, community development through cultural and economic empowerment, social cohesion and improved personal and social wellbeing.

**Supervisor:** Dr AMF de Villiers

**Co-Supervisor:** Prof JM Dakon

### **ENGELBRECHT, Albertus Petrus**

Albertus Engelbrecht was appointed in opera houses of Nuremberg and Passau from 1999 till 2016 where he sang various leading tenor roles. As concert singer, Engelbrecht performed regularly in Berlin, Frankfurt, Mainz, Vienna and Naples. Albertus obtained his MMus degree (cum laude) at the University of the Free State in 2015 and since 2016, he is appointed as coordinator of vocal studies at the Odeion School of Music. In 2022 and 2023, Engelbrecht presented papers at the 4th Transnational Opera Studies Conference (University of Bayreuth) and the annual congress of the South African Society for Research in Music.

With his thesis, titled: **THE JOURNEY OF A VERSATILE SINGER: AN AUTOETHNOGRAPHIC STUDY OF PREPARING AND PERFORMING FIVE DIFFERENT VOCAL STYLES AND GENRES**, Engelbrecht investigated his own artistic practice in order to describe his development of the vocal–technical versatility required to perform various Western art music styles and genres appropriately while maintaining vocal health. His enquiry revealed that he was able to develop such vocal–technical versatility by focusing consciously on the appropriate configuration of heavy and light registration. The use of *voix mixte* played a significant role in the colouration of the voice, which necessitated using light registration (regardless of whether the relevant performance situation gravitates more towards mainstream or historically informed performance). His findings constitute a valuable resource for singers and pedagogues.

**Supervisor:** Dr MJ Wium

### **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN AFRICA STUDIES**

#### **GUMBO, Bekezela**

Bekezela Gumbo was born on 22 December 1990 in Tsholotsho, Matabeleland North Province, Zimbabwe. He matriculated at Luveve High School in 2010 and attained a BSc (Honours) degree in Political Science from the University of Zimbabwe in 2014 and a Master of Science Degree in International Relations (with merit) from the University of Zimbabwe in 2016. He started his career as university lecturer and political activist in Harare in 2015 when he was appointed as lecturer of comparative African politics at the University of Zimbabwe, and Africa University from 2022-2023. In 2017, he was appointed as Senior Researcher at the Zimbabwe Democracy Institute (ZDI) where, at present, he is Principal Researcher and Head of Programmes.

With his thesis, titled: **POWER-SHARING AND POLITICAL STABILITY: CREATING INCLUSIVE GOVERNANCE FOR DEVELOPMENT IN SUB-SAHARAN AFRICA**, the candidate makes a contribution to scholarship on governments of national





unity (GNUs) in Liberia (2003), Kenya (2008) and Zimbabwe (2009) and their role as institutional engineering mechanism for political stability, inclusion, and socio-economic and human development in sub-Saharan Africa by applying consociational theory and the liberal institutional reform approach to peacebuilding. The study finds that the cessation of hostilities after GNUs can only mean sustainable political stability when accompanied by the institutionalisation of a strong rule of law, respect for human rights and addressing the socio-economic triggers of political instability. The argument that the inclusion of more conceptual tenets of consociational power-sharing in GNUs increases political stability and socio-economic and human development in post-conflict eras is significant for institutional designers in divided societies and regional and international peace and development players.

**Supervisor:** Dr J Steyn-Kotzé

**Co-Supervisor:** Dr S Cawood

### **MAGAU, Natalia Helena**

Natália Magau was born in Niassa on 16/12/1975. She received her secondary education in Maputo, where she matriculated at the Josina Machel Secondary School in 1991. She obtained a Licentiate degree in Education at the Pedagogical University, Maputo, Mozambique in 2004, her Masters Degree in Curriculum Development at the University Eduardo Mondlane, Maputo, in 2009, and her PhD in Africa Studies in 2023 at the University of the Free State, South Africa. She started her career as a teacher in Maputo in 2005. In 2007 she began her career in higher education, and at present she is a Lecturer at the University Eduardo Mondlane in Maputo, Mozambique.

With her thesis, titled: **THE IMPACT OF THE GENDER POLICIES IN A HIGHER EDUCATION INSTITUTION IN MOZAMBIQUE: A CASE STUDY OF THE UNIVERSITY OF EDUARDO MONDLANE**, the candidate contributes to scholarship in higher education and gender by analyzing the impact of the implementation of the Gender Policy at the University Eduardo Mondlane in Mozambique. The implementation of this policy is key to improving the socio-economic situation of the country. As a multi-method qualitative study, this study involved gathering original empirical data through questionnaires, focus group discussions, and individual interviews with purposively selected University Council members, Gender Unit employees, gender focal points, and selected academic community members. Natalia Magau's findings show that the Gender Policy was unsystematically implemented at UEM for a variety of reasons. Importantly, key personnel such as gender focal points were given neither the resources nor appropriate accountability to implement the policy, and whilst support for the gender policy exists at the highest level, this has not (yet) trickled down into appropriate sustained actions at the ground levels.

**Supervisor:** Prof G Griffin

**Supervisor:** Dr NC Lake

**Co-Supervisor:** Dr S Cawood

**Co-Supervisor:** Dr M Paulo

### **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN AFRICAN LANGUAGES**

#### **NDEBELE, Sipiwe Alfred**

Sipiwe Alfred Ndebele was born on 15 October 1962 in Roosboom, Ladysmith. He matriculated at Endakane High School in 1983. He later obtained a Secondary Teacher's Diploma at Bethel College in 1991, affiliated with the University of Transkei. He graduated with a BA degree from the University of South Africa in 1996, a BA Honours degree from the University of Port



Elizabeth in 1999, and obtained a Master's of Education at the University of Stellenbosch in 2007. His career as a teacher began in 1995. At present, he is a lecturer of IsiZulu in the Department of African Languages at the University of the Free State.

With his thesis, titled: **PORTRAYAL OF WITCHCRAFT IN ISIZULU NOVELS**, the candidate contributes to the scholarship of African Literary Studies, focusing on IsiZulu literary works written during the colonial and post-colonial periods. Using the thematic analysis approach, the candidate chronicles witchcraft techniques and practices reflected particularly in isiZulu novels. With this contribution, the study presents an observation that witchcraft is represented in these novels mainly by sorcery and occult practices, that it is embedded in cultural belief systems and psychological state of mind, and that it forms part of what Niehaus (2001) considers to be an elaboration of social dramas that mirrors how beliefs on a societal, communal, and personal level are naturally organised.

**Supervisor:** Dr EN Maletle

**Co-Supervisor:** Prof NS Zulu

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN DRAMA AND THEATRE ARTS

**HEYDENRYCH, Mattheus**

Mattheus Heydenrych was born on 21 March 1978 in Bethlehem, South Africa. He matriculated at Diamantveld High School, Kimberley in 1996. His career as an educator began in 1998 as a music teacher at The Kimberley Academy of Music and later taught at Kimberley Boys' High. He graduated with a BA Drama and Theatre Arts degree at the UFS in 2005. In 2013, he obtained an MA degree in Theatre Directing at East 15 Acting School, University of Essex, London, UK. At present, he is a lecturer and the Programme Director at the Department of Drama and Theatre Arts at the UFS.

With his thesis, titled: **REIMAGINING DESIRE AND IDENTITY IN THE TITLE CHARACTERS OF HAMLET AND RICHARD III IN A SOUTH AFRICAN CONTEXT**, the candidate contributes to scholarship on Queer Theory with new perspectives on homosocial bonding and gay sensibility. Queer Theory has broadened the literary field's focus beyond conventional binary conceptions of gender and sexuality. Using Queer Theory, one can study how gender and sexuality are disrupted and challenged in texts and how these categories are constructed and performed through language and narrative. The researcher successfully deconstructs particular cultural representations and binary categories through a theatrical new interpretation. The study presents the argument that the transposition of a Shakespeare play into a queer adaptation by identifying 'unspoken or unconscious lesbian, gay, or queer presence', referred to as 'queer cues', could manifest in a dynamic reimagination of the identity and desire of some of Shakespeare's title characters within a contemporary context.

**Supervisor:** Prof A van Jaarsveld

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ENGLISH

**JOUBERT, Michelle Anne**

Michelle Joubert is the head of Academic Language and Literacy Development at the Centre for Teaching and Learning at the University of the Free State. She received her Bachelor of Arts with Specialisation in English (cum laude) from the University of Pretoria in 2007. She completed her Honours and Master's degrees in English, all cum laude, at the University of Pretoria. In 2011, she was selected as a Fulbright Scholar and obtained her Master's degree in Teaching English to Speakers of Other Languages at American University, Washington DC. She has worked in the field of academic literacy development in the UK, USA, and South Africa.



With her thesis, titled: **LIMINAL SPACES, LIMINAL IDENTITIES: RE-EVALUATING THE ROLE OF ACADEMIC LITERACIES PRACTITIONERS IN THE SOUTH AFRICAN UNIVERSITY**, the candidate attempts to address the question, ‘In what ways do academic literacies practitioners in the South African higher education sector construct (and reconstruct) their professional identity in light of the structural and cultural forces that surround them?’ The value of such research lies in its uniquely South African view of professional identity construction in the field of Academic Literacy Development. This is important as it affects the way academic literacy development is practiced in South African universities and, in turn, how the identity of its practitioners is perceived. By exploring these identity relations in a qualitative study, this research challenges the dominance of certain ‘commonsense’ discourses about the field in South Africa to more accurately reflect the activities of practitioners and the research-informed and academic nature of the field.

**Supervisor:** Dr S Clarence

**Co-Supervisor:** Dr SI Brokensha

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN POLITICAL SCIENCE

**CAROMBA**, Laurence Joseph

Laurence Caromba received a bachelor’s degree in Political Science from the University of Pretoria in 2006, and Honours degree in International Relations in 2007. He completed a Master’s degree in political science in 2012, also at the University of Pretoria, which focused on Political Theory. In 2014, he was appointed a lecturer at Monash South Africa, where he taught Political Studies and International Studies until 2020. The following year, he became a researcher at the Mapungubwe Institute in Johannesburg, in its Faculty of Humanity.

With his thesis, titled: **ELECTRONIC HACKING AND SUBVERSION AS TOOLS OF FOREIGN POLICY: A NEOCLASSICAL REALIST ANALYSIS OF CYBER POWER**, the candidate develops a new theory to explain the choices that countries make when deciding how to use cyber operations to advance their foreign policy goals. Drawing from the realist paradigm of International Relations, the study develops an integrated understanding of “cyber power” as a method for eroding trust. The research then develops a typology of four cyber strategies, and argues that a state’s choice of cyber strategy is likely to be influenced by its security requirements and its views on international institutions. This argument is then tested with three empirical case studies that examine the cyber strategies of Brazil, the United States of America, and Russia. The research suggests that a multipolar international system is likely to see increasing use of cyber operations by states.

**Supervisor:** Prof H Solomon

**Co-Supervisor:** Prof TG Neethling

## DOCTOR OF PSYCHOLOGY WITH SPECIALISATION IN CHILD PSYCHOLOGY

**SCHOUWINK**, Frederik

Frederik Schouwink was born in Johannesburg on 6 January 1978. He received his secondary education in Alberton, matriculating at Hoërskool Dinamika in 1995. He obtained his Higher Education Diploma at the former Rand Afrikaans University in 2003. In 2006, he obtained his BEd Honours degree in Career and Life Orientation from the University of Johannesburg, followed by his BEd Honours in Educational Psychology at the same university in 2008. He proceeded to complete his MEd degree in Educational Psychology with distinction in 2011, earning him a top 10 achievers award from the





Faculty of Education at UJ. Presently, he serves as the HOD of the Psychology team at SAHETI School, while also lecturing at the South African College of Applied Psychology.

With his thesis, titled: **NARRATIVE IDENTITIES OF LATE ADOLESCENT MALES WHO EXPERIENCED THE LOSS OF A PARENT**, the candidate makes a unique contribution to the field of Child Psychology by focusing on how late adolescent males construct their story of parental loss. Using a narrative inquiry approach, the candidate found that parental loss can elicit significant personal changes, secondary losses, and challenges for individuals undergoing grief, with the grieving process differing based on the developmental stage of the individual and gender-specific societal shifts. The importance of meaning-making processes and the role of significant others in the grief process was emphasised. The narratives conveyed the central themes of agency and goal-directedness while also stressing the value of recounting the story of loss. The study's findings can inform interventions to support parentally bereaved late adolescent males in South Africa and will be advantageous when applied in other similar contexts.

**Supervisor:** Prof L Naudé





## DEAN |

**PROF PD VERMEULEN**

### **BACHELOR OF AGRICULTURE**

MAHLOBO, Ntsoaki

MHLONGO, Ntobeko Thobelani

MLAMBO, Njabulo Herold

MOROE, Lebogang Kgomotso

### **BACHELOR OF AGRICULTURE MAJORING IN AGRICULTURAL ECONOMICS**

NEL, Louis Daniel

### **BACHELOR OF AGRICULTURE MAJORING IN AGRICULTURAL EXTENSION**

MZINYANE, Sibongakonke

### **BACHELOR OF AGRICULTURE MAJORING IN AGRICULTURAL MANAGEMENT**

BUYANA, Onke

DLUNGWANA, Chumani

GABADA, Mninawa

HENNIG, Herman Marthinus

JALI, Zusakhe

MATWA, Siziphiwe

MBELEKANE, Nangamso

MJACU, Asemahle

MOKOMA, Thabo Pheello Pricious

MOTSOKOBI, Mamello

NDLOVU, Sibusisiwe Nomonde

NYANGANA, Xoliswa

O'EHLEY, Stefan Frank

SEHLOHO, Cindi Ordeansiah

### **BACHELOR OF AGRICULTURE MAJORING IN MIXED FARMING MANAGEMENT**

BONNIN, Brian Lucien

VREY, Markus

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

DRUDE, Shadi Tammy

DYANTYI, Kanyisa

POSWA, Nkcubeko

SETJIE, Kagiso Oscar

SIBUYE, Glance

### **BACHELOR OF SCIENCE IN AGRICULTURE**

NOPHALE, Sindiswa Lulama  
Mpho

### **BACHELOR OF SCIENCE IN AGRICULTURE MAJORING IN PLANT PATHOLOGY**

KRUGER, Wilmarié

### **BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MAJORING IN COMPUTER SCIENCE AND BUSINESS MANAGEMENT**

NYAMATE, Matello

RANTLHAGO, Solomon Machaba

SAMBO, Lesedi Faith

THENGWA, Lilitha

### **BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MAJORING IN COMPUTER SCIENCE AND CHEMISTRY**

MATHAPO, Katleho

### **BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MAJORING IN COMPUTER SCIENCE AND MANAGEMENT**

MOLEFE, Ntsekiseng Lindokuhle

### **BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MAJORING IN COMPUTER SCIENCE AND PHYSICS**

MIYA, Khulekani Thembelani

### **BACHELOR OF SCIENCE IN QUANTITY SURVEYING**

MOCHOARI, Refilwe Boitumelo



## **BACHELOR OF SCIENCE MAJORING IN BEHAVIOURAL GENETICS**

MAHOMED, Lutfiyya

## **BACHELOR OF SCIENCE MAJORING IN BIOCHEMISTRY AND FOOD SCIENCE**

GQIBA, Siphwe Abednigo

## **BACHELOR OF SCIENCE MAJORING IN BIOCHEMISTRY AND MICROBIOLOGY**

MABASO, Nothile Thembeka  
MATHIBE, Rethabile Mpotseng

## **BACHELOR OF SCIENCE MAJORING IN BIOLOGICAL SCIENCES**

XABA, S'Duduzo

## **BACHELOR OF SCIENCE MAJORING IN CHEMISTRY AND BIOCHEMISTRY**

MALAZA, Thandeka Ladygrace  
MANDUBU, Phikolomzi  
MJIKA, Asiphe

## **BACHELOR OF SCIENCE MAJORING IN CLIMATE SCIENCES**

TSHABALALA, Simphiwe Given

## **BACHELOR OF SCIENCE MAJORING IN ECONOMETRICS**

TSIESE, Lebogang Godfrey

## **BACHELOR OF SCIENCE MAJORING IN GENETICS AND PHYSIOLOGY**

GOLA, Bulelwa  
JAMESON, Phaphama Mihle  
MAFUMANA, Yolanda Zukhanye  
TSHELE, Malefu Venolia

## **BACHELOR OF SCIENCE MAJORING IN GENETICS AND ZOOLOGY**

BOGATSU, Baamogetswe

## **BACHELOR OF SCIENCE MAJORING IN GEOGRAPHY**

MTHEMBU, Nonkululeko  
Nothando

## **BACHELOR OF SCIENCE MAJORING IN GEOGRAPHY AND ENVIRONMENTAL GEOGRAPHY**

JIYANE, Thobelani  
MOLLO, Moleboheng

## **BACHELOR OF SCIENCE**

## **MAJORING IN GEOGRAPHY AND ENVIRONMENTAL SCIENCE**

VAN NIEKERK, Melissa

## **BACHELOR OF SCIENCE MAJORING IN GEOGRAPHY AND LIFE SCIENCES**

MOKOENA, Thapelo Vincent  
ZWANE, Thembalihle Ntuthuko

## **BACHELOR OF SCIENCE MAJORING IN GEOGRAPHY**

LECHENG, Libenyana Ishmael  
MOLOI, Katileho

## **BACHELOR OF SCIENCE MAJORING IN MATHEMATICS AND FINANCES**

MASOEU, Reitumetse Ulania

## **BACHELOR OF SCIENCE MAJORING IN PHYSICS AND ASTROPHYSICS**

RADEBE, Motlalepule Valentine

## **BACHELOR OF SCIENCE WITH SPECIALISATION IN GEOLOGY**

MKHATSHANE, Phindile





## POSTGRADUATE DIPLOMAS

### POSTGRADUATE DIPLOMA IN DISASTER MANAGEMENT

NXALA, Ntombizanele

TENZA, Princess Nontuthuzelo

## HONOURS DEGREES

### BACHELOR OF AGRICULTURE HONOURS MAJORING IN AGRICULTURAL MANAGEMENT

KHUMALO, Lindokuhle

MOKHOBO, Oleseng Alice

MOLEHE, Tsholofelo Boipelo

XULU, Nompumelelo Nkosikhona

### BACHELOR OF SCIENCE HONOURS IN QUANTITY SURVEYING

MATOBA, Mokete Christopher

### BACHELOR OF SCIENCE HONOURS MAJORING IN BOTANY

GUMANI, Tshililo Frans

### BACHELOR OF SCIENCE HONOURS MAJORING IN GEOGRAPHY

HLONGWANE, Jeniffer Shalati

### BACHELOR OF SCIENCE HONOURS MAJORING IN GEOHYDROLOGY

MUDZUNGA, Ndiada Faith

### BACHELOR OF SCIENCE HONOURS MAJORING IN MATHEMATICAL STATISTICS

RASUNYANE, Bereng Albert

### BACHELOR OF SCIENCE HONOURS MAJORING IN ZOOLOGY

STEMLA, Siphosethu

## MASTER'S DEGREES

### MASTER OF AGRICULTURE MAJORING IN IRRIGATION MANAGEMENT

GROENEWALD, Jakobus

**Dissertation Title:** APPLIED WATER PRODUCTIVITY OF LUCERNE GROWN UNDER CENTRE PIVOT IRRIGATION

**Supervisor:** Dr JH Barnard

**Co-Supervisor:** Prof B Grové

### MASTER OF AGRICULTURE WITH SPECIALISATION IN FOOD AND NUTRITION SECURITY

OOSTHUIZEN, Elizabeth Maria\*

**Dissertation Title:** THE SUSTAINABILITY OF STUDENTS' FOOD CONSUMPTION PATTERNS: A CASE STUDY AT THE UNIVERSITY OF THE FREE STATE

**Supervisor:** Prof JA Van Niekerk

**Co-Supervisor:** Dr I Van der Merwe

### MASTER OF SCIENCE

MAFUZA, Mzoxolo

**Dissertation Title:** INVESTIGATION OF HYDROGEOCHEMICAL PROCESSES WITHIN THE VICINITY OF REHABILITATED COAL MINE PITS

**Supervisor:** Prof M Gomo

MOTSAMAI, Jane Teboho

**Dissertation Title:** GENETIC ASSOCIATION BETWEEN SELECTED SINGLE NUCLEOTIDE POLYMORPHISMS AND BIPOLAR DISORDER IN PATIENTS FROM CENTRAL SOUTH AFRICA

**Supervisor:** Mrs S Schneider

**Co-Supervisor:** Dr GM Marx



**NGILANDE**, Terrence Phelelani

**Dissertation Title:**  
INVESTIGATION INTO THE  
GROUNDWATER OVER-  
ABSTRACTION DUE TO  
IRRIGATION IN HOOPSTAD  
AREA

**Supervisor:** Dr E Lukas

**MASTER OF SCIENCE IN  
AGRICULTURE MAJORING IN  
AGRONOMY**

**DYABUZA**, Somila

**Dissertation Title:**  
QUANTIFYING  
EVAPOTRANSPIRATION AND  
ABOVE-GROUND BIOMASS  
OF GRAIN SORGHUM IN  
RESPONSE TO SOIL WATER  
DEPLETION

**Supervisor:** Dr JH Barnard

**Co-Supervisor:** Prof GM Ceronio

**SILWANA**, Chumisa Sinesipho

**Dissertation Title:**  
ENHANCEMENT OF SALT  
STRESS TOLERANCE IN  
IRRIGATED WHEAT USING  
SILICON

**Supervisor:** Dr E van Der Watt

**Co-Supervisor:** Dr JH Barnard

**MASTER OF SCIENCE IN  
AGRICULTURE MAJORING IN  
ANIMAL SCIENCE**

**KINGHORN**, Matthew George\*

**Dissertation Title:** GENETIC  
EVALUATION OF JERSEY  
CATTLE

**Supervisor:** Prof FWC Nesor

**Co-Supervisor:** Prof ED Cason

**MAVHUNGU**, Ofhani Michael\*

**Dissertation Title:** EVALUATING  
THE EFFICACY OF A  
NUTRITIONAL FAT EMULSIFIER  
ON DIET DIGESTIBILITY AND  
PRODUCTION PERFORMANCE  
OF BROILERS

**Supervisor:** Mrs GC Josling

**Co-Supervisor:** Dr F de Witt

**POTGIETER**, Beate

**Dissertation Title:** EFFECT  
OF  $\omega$ -3 LIPID SOURCES ON  
LAYER PERFORMANCE AND  
EGG QUALITY DURING PEAK  
PRODUCTION

**Supervisor:** Dr F de Witt

**Co-Supervisor:** Mrs GC Josling

**MASTER OF SCIENCE IN  
AGRICULTURE MAJORING IN  
FOOD SCIENCE**

**MUDAU**, Dembe Dynne

**Dissertation Title:** FUNCTIONAL  
PROPERTIES OF CACTUS PEAR  
MUCILAGE: GEL FORMATION,  
EDIBLE COATINGS, FILMS AND  
SPHERIFICATION

**Supervisor:** Prof M De Wit

**Co-Supervisor:** Dr A Du Toit

**MASTER OF SCIENCE IN  
AGRICULTURE MAJORING IN  
SOIL SCIENCE**

**WOOD**, Lorato Cassey

**Dissertation Title:** EVALUATING  
PEDOTRANSFER FUNCTIONS  
AND MODELLING WATER FLOW  
IN IRRIGATED SOILS WITH  
SHALLOW GROUNDWATER

**Supervisor:** Dr JH Barnard

**MASTER OF SCIENCE IN  
NANOSCIENCE**

**BARNARD**, Kara

**KHUMALO**, Londiwe Sandile

**NXUMALO**, Sifiso Thulani Moris\*





## MASTER OF SCIENCE MAJORING IN AGRICULTURAL ECONOMICS

**BRAGO, Paulina\***

**Dissertation Title:** THE ROLE OF WOMEN EMPOWERMENT ON THE ADOPTION OF CLIMATE CHANGE ADAPTATION STRATEGIES IN NORTHERN GHANA

**Supervisor:** Prof AA Ogundeji

**Co-Supervisor:** Dr G Danso-Abbeam

**ERASMUS, Johanna Catharina\***

**Dissertation Title:** BIO-ECONOMIC ANALYSIS OF THE CONTRIBUTION OF SHALLOW WATER TABLES TO IRRIGATED MAIZE PRODUCTION

**Supervisor:** Prof B Grové

**Co-Supervisor:** Prof N Matthews

**HADEBE, Masiziba Ruth Mbedzi**

**Dissertation Title:** THE ECONOMIC VALUE OF SOIL-WATER INFORMATION IN IRRIGATED MAIZE PRODUCTION WITH SHALLOW GROUNDWATER TABLES

**Supervisor:** Prof B Grové

**Co-Supervisor:** Prof N Matthews

**OGUNLEYE, Oluwasola Temitope\***

**Dissertation Title:** THE IMPACT OF HOMESTEAD GARDENS ON FOOD SECURITY IN RURAL LESOTHO

**Supervisor:** Prof AA Ogundeji

**Co-Supervisor:** Dr G Danso-Abbeam

**SELELO, Obakeng Tevin**

**Dissertation Title:** IMPACT OF AGROECOLOGICAL PRACTICES' ADOPTION ON FARM PERFORMANCE AMONG SMALLHOLDER VEGETABLE FARMERS IN BOTSWANA

**Supervisor:** Prof AA Ogundeji

**Co-Supervisor:** Dr G Danso-Abbeam

**THOSAGO, Pleasure Maryall Mamphoka**

**Dissertation Title:** THE DETERMINANTS AND IMPACTS OF URBAN AGRICULTURE ON URBAN HOUSEHOLD'S FOOD AND NUTRITION SECURITY

**Supervisor:** Prof YT Bahta

**Co-Supervisor:** Dr E Owusu-Sekyere

**TORSU, Dora Akpene\***

**Dissertation Title:** THE IMPACT OF GREENHOUSE FARMING AS CLIMATE-SMART AGRICULTURAL TECHNOLOGY ON FARMERS' WELFARE IN SOUTHERN GHANA

**Supervisor:** Prof AA Ogundeji

**Co-Supervisor:** Dr G Danso-Abbeam

**ZANTSI, Yongama**

**Dissertation Title:** COST-BENEFIT ANALYSIS AND PROFITABILITY OF MIXED FARMING ENTERPRISES: THE CASE OF NYANDENI LOCAL MUNICIPALITY, O.R TAMBO DISTRICT, EASTERN CAPE PROVINCE, SOUTH AFRICA

**Supervisor:** Ms Z Coka

**Co-Supervisor:** Mr PZ Mokhatla

## MASTER OF SCIENCE MAJORING IN BOTANY

**BOLOGO, Nthambeleni**

**Dissertation Title:** IMPACT OF THE INVASIVE ALIEN PLANT SPECIES CLEARING PROGRAMME ON SOCIO-ECONOMIC BENEFITS AND PLANT BIODIVERSITY



ALONG THE NORTHERN  
DRAKENSBERG, MPUMALANGA  
PROVINCE, SOUTH AFRICA

**Supervisor:** Dr GD Martin

**Co-Supervisor:** Prof S  
Steenhuisen

**BOTHA**, Christiaan Johannes\*

**Dissertation Title:**  
BIOCHEMICAL AND  
MOLECULAR ANALYSIS OF THE  
ADULT PLANT RESISTANCE  
RESPONSE IN WHEAT TO STEM  
RUST DISEASE

**Supervisor:** Prof B Visser

**Co-Supervisor:** Mr HD Castelyn

**LETAOANA**, Tshepiso Makalane\*

**Dissertation Title:** CHEMICAL  
COMPOSITION AND  
ANTIFUNGAL ACTIVITY OF  
*CYDONIA OBLONGA* EXTRACTS

**Supervisor:** Prof AOT Ashafa

**NIENABER**, Kristen

**Dissertation Title:**  
DETERMINING WETLAND  
HEALTH USING PLANT AND  
SOIL INDICATORS IN GOLDEN  
GATE HIGHLANDS NATIONAL  
PARK, FREE STATE PROVINCE

**Supervisor:** Dr AC Van Aardt

**Co-Supervisor:** Prof JJ Van Tol

**TSOTETSI**, Makemelo Emily\*

**Dissertation Title:** FUNCTIONAL  
ANALYSIS OF *AVRSR35* AND  
*AVRSR50* AVIRULENCE GENES  
IN SOUTH AFRICAN *PUCCINIA*  
*GRAMINIS* F. SP. *TRITICI*  
ISOLATES

**Supervisor:** Prof B Visser

**Co-Supervisor:** Prof WHP  
Boshoff

**MASTER OF SCIENCE  
MAJORING IN CHEMISTRY**

**CHUKWUMA**, Maria Sopuruchi

**Dissertation Title:** AN  
INVESTIGATION OF THE  
GABAERGIC AND ANTI-  
DIABETIC ACTIVITIES OF  
FRACTIONS AND ISOLATED  
COMPOUNDS FROM  
*HYPERICUM REVOLUTUM*

**Supervisor:** Dr SL Bonnet

**Co-Supervisor:** Dr A Wilhelm

**DE JAGER**, Kayla

**Dissertation Title:**  
TETRAOXYGENATED  
ACETOPHENONES IN

HOMOISOFLAVONOID  
SYNTHESIS

**Supervisor:** Dr C Marais

**Co-Supervisor:** Dr BCB  
Bezuidenhout

**MAIER**, David Irving Hermann

**Dissertation Title:** NEW  
CATALYTIC METHODOLOGIES  
TOWARDS THE SYNTHESIS OF  
OXYGENATED DIBENZO[b,f]  
AZEPINES

**Supervisor:** Dr C Marais

**Co-Supervisor:** Dr BCB  
Bezuidenhout

**SEBOTSA**, Mojabeng Maria\*

**Dissertation Title:** CHEMICAL  
ANALYSIS AND EVALUATION OF  
A HOMEMADE PEST CONTROL  
MIXTURE USED BY LOCAL  
FARMER FROM MALOTI-A-  
PHOFUNG MUNICIPALITY OF  
THE AFROMONTANE REGION IN  
THE FREE STATE

**Supervisor:** Dr NF Molefe

**SMITH**, Willemien\*

**Dissertation Title:**  
COMPARATIVE INVESTIGATION  
OF BIOLOGICAL ACTIVE





COMPOUNDS OF VALERIANA  
OFFICINALIS HARVESTED  
IN SOUTH AFRICA AND  
OPTIMIZATION OF HARVESTING  
SEASONS

**Supervisor:** Dr A Wilhelm

**Co-Supervisor:** Dr SL Bonnet

**MASTER OF SCIENCE  
MAJORING IN COMPUTER  
SCIENCE AND INFORMATICS**

**MHLONGO, Thobani**

**Dissertation Title:**  
DETERMINING THE USABILITY,  
USER EXPERIENCE AND  
CONTINUANCE USE OF  
A MOBILE APPLICATION  
AND ONLINE PORTAL: A  
COMPARATIVE CASE STUDY

**Supervisor:** Prof L De Wet

**Co-Supervisor:** Dr S Verkijika

**MASTER OF SCIENCE  
MAJORING IN CONSTRUCTION  
MANAGEMENT**

**LABUSCHAGNE, Liané\***

**Dissertation Title:** READINESS  
OF CONTRACTING  
ORGANISATIONS FOR THE  
IMPLEMENTATION OF BUILDING  
INFORMATION MODELLING  
TECHNOLOGY IN THE SOUTH

AFRICAN CONSTRUCTION  
INDUSTRY

**Supervisor:** Prof K Kajimo-  
Shakantu

**Co-Supervisor:** Dr A Oyawole

**MASTER OF SCIENCE  
MAJORING IN CONSUMER  
SCIENCE**

**COLBERT, Taylon Anthony\***

**Dissertation Title:**  
ACCEPTANCE, ATTITUDES  
AND NUTRITIONAL CONTENT  
OF NOVEL NIXTAMALIZED  
MAIZE PRODUCTS DEVELOPED  
FOR THE SOUTH AFRICAN  
CONSUMER

**Supervisor:** Dr A Du Toit

**Co-Supervisor:** Prof JW  
Swanepoel

**Co-Supervisor:** Dr C Bothma

**DE JAGER, Aninka\***

**Dissertation Title:** CHANGES  
IN THE FOOD SECURITY  
STATUS DURING THE COVID-19  
PANDEMIC AMONG THE  
ELDERLY WITHIN THE BETHAL  
DISTRICT, MPUMALANGA,  
SOUTH AFRICA.

**Supervisor:** Dr N Cronje

**Co-Supervisor:** Prof WH  
Oldewage-Theron

**MOLAPO, Maletsie Meriam**

**Dissertation Title:** EXPLORING  
FOOD INSECURITY, FOOD  
WASTE AND DIETARY  
DIVERSITY AMONG RURAL  
AND URBAN HOUSEHOLDS IN  
LESOTHO.

**Supervisor:** Dr N Cronje

**Co-Supervisor:** Prof M De Wit

**Co-Supervisor:** Dr J Vermaas

**MASTER OF SCIENCE  
MAJORING IN ENTOMOLOGY**

**EDWARDS, Gary Lennox**

**Dissertation Title:** ECOLOGICAL  
ASPECTS OF SOIL-DWELLING  
ARTHROPODS IN PECAN  
ORCHARDS

**Supervisor:** Dr VR Swart

**Co-Supervisor:** Dr GJ Marais

**MASTER OF SCIENCE  
MAJORING IN ENVIRONMENTAL  
MANAGEMENT**

**MULOVHEDZI, Khuthadzo  
Marlene**

**MASTER OF SCIENCE  
MAJORING IN GENETICS**

**DE JAGER, Jacob Louwrens  
Carolus Erasmus**



**Dissertation Title:** THE SUITABILITY OF *DANIO RERIO* AS A MODEL FOR PHARMACOGENETIC RESEARCH

**Supervisor:** Mrs S Schneider

**Co-Supervisor:** Prof JP Grobler

**HERSELMAN, Maryke\***

**Dissertation Title:** IDENTIFICATION OF MUSHROOM SPECIES FROM PINE PLANTATIONS IN THE TSITSIKAMMA REGION, SOUTH AFRICA

**Supervisor:** Dr M Gryzenhout

**Co-Supervisor:** Dr S Ghosh

**KLOPPERS, George Antonie Ehlers**

**Dissertation Title:** SKIN MICROBIOMES OF BATRACHOCHYTRIUM DENDROBATIDIS CHALLENGED PHOFUNG RIVER FROGS (*AMIETIA HYMENOPUS*) IN THE DRAKENSBERG MOUNTAIN RANGE

**Supervisor:** Dr M Gryzenhout

**Co-Supervisor:** Prof ED Cason

**MALOKA, Onalerona Orefilemphi**

**Dissertation Title:** DESCRIPTION OF NOVEL SPECIES OF POSSIBLY

PSYCHEDELIC MUSHROOMS FROM SOUTHERN AFRICA

**Supervisor:** Dr M Gryzenhout

**Co-Supervisor:** Dr S Ghosh

**NAIDOO, Palesa**

**Dissertation Title:** TRANSCRIPTOME SEQUENCING AND DIGITAL EXPRESSION ANALYSES OF FLOWER MORPHOGENESIS GENES IN *CLIVIA MINIATA*

**Supervisor:** Dr MF Maleka

**MASTER OF SCIENCE MAJORING IN GEOGRAPHY**

**TAVENER, Jessica Mareé**

**Dissertation Title:** SPATIAL CORRELATION BETWEEN WETLANDS AND GULLY EROSION IN THE NTABELANGA DAM CATCHMENT, EASTERN CAPE PROVINCE

**Supervisor:** Dr JJ Le Roux

**Co-Supervisor:** Dr EM Rudolph

**Co-Supervisor:** Dr B van der Waal

**MASTER OF SCIENCE MAJORING IN GEOHYDROLOGY**

**MUNYAI, Mutshidzi**

**Dissertation Title:** DEVELOPING A PLAN TO MANAGE POST-CLOSURE ACID MINE DRAINAGE AT A SMALL-SCALE OPENCAST COAL MINE IN AN URBAN SETTING: CASE STUDY OF THE NVE MINE NEAR EMALAHLENI

**Supervisor:** Prof FD Fourie

**Co-Supervisor:** Dr N Singo

**MASTER OF SCIENCE MAJORING IN GEOINFORMATICS**

**LEFULEBE, Bosiu Edward**

**Dissertation Title:** FINE-SCALE CLASSIFICATION OF URBAN LAND-USE AND LAND COVER WITH PLANETSCOPE IMAGERY AND MACHINE LEARNING STRATEGIES IN THE CITY OF CAPE TOWN, SOUTH AFRICA

**Supervisor:** Dr AJ Van Der Walt

**Co-Supervisor:** Dr S Xulu

**MASTER OF SCIENCE MAJORING IN GEOLOGY**

**NYAKANE, Tshepo Felix**

**Dissertation Title:** A SR-ISOTOPIC INVESTIGATION OF BIFURCATING CHROMITITE LAYERS OF THE UG1 AT THE





IMPALA PLATINUM MINE,  
RUSTENBURG

**Supervisor:** Mrs J Magson

**Co-Supervisor:** Prof F Roelofse

**MASTER OF SCIENCE  
MAJORING IN INTEGRATED  
WATER MANAGEMENT**

**MNYANGO**, Samkele Sipehele

**Dissertation Title:** WATER  
QUALITY ASSESSMENT  
FOR SUSTAINABLE WATER  
RESOURCE MANAGEMENT:  
A CASE STUDY OF THE  
ROODEPLAAT DAM, SOUTH  
AFRICA

**Supervisor:** Prof PJ Oberholster

**Co-Supervisor:** Dr M Thwala

**MASTER OF SCIENCE  
MAJORING IN MATHEMATICS**

**VENTER**, Johannes Gerhardus\*

**Dissertation Title:** METHODS  
FOR DISTINGUISHING  
VERTICES IN GRAPHS: A STUDY  
ON THE METRIC CHROMATIC  
NUMBER AND RELATED  
INVARIANTS

**Supervisor:** Dr ECM Maritz

**Co-Supervisor:** Prof T Vetric

**MASTER OF SCIENCE  
MAJORING IN MICROBIOLOGY**

**STEYN**, Hendrik Jacobus  
Frederik\*

**Dissertation Title:**  
THE EVALUATION OF  
SUPRAMOLECULAR SELF-  
ASSOCIATING AMPHIPHILES  
AS NOVEL ANTI-BIOFILM  
COMPOUNDS

**Supervisor:** Prof CH Pohl-  
Albertyn

**Co-Supervisor:** Prof JR Hiscock

**VAN ZYL**, Mart-Louise

**Dissertation Title:** EVALUATION  
OF THE EFFICIENCY OF PRE-  
PLACEMENT DISINFECTION  
BY MONITORING LEVELS OF  
INFECTIOUS BURSAL DISEASE  
VIRUS BY MEANS OF RT-qPCR

**Supervisor:** Prof RR Bragg

**Co-Supervisor:** Ms SJ McCarlie

**MASTER OF SCIENCE  
MAJORING IN PHYSICS**

**NTSHALINTSHALI**, Delicacy

**Dissertation Title:** NOVEL  
SYNTHESIS OF CDSE THIN  
FILMS DOPED WITH VARIOUS

TRANSITION METAL IONS  
(Zn<sup>2+</sup>, Cu<sup>2+</sup>, Mn<sup>2+</sup> and Cr<sup>3+</sup>)  
FOR APPLICATION IN LIGHT-  
EMITTING DIODES

**Supervisor:** Prof SV Motloug

**Co-Supervisor:** Prof HC Swart

**MASTER OF SCIENCE  
MAJORING IN PLANT  
BREEDING**

**KHIBA**, Karabo Filicity\*

**Dissertation Title:** IMPROVING  
WHEAT LINES WITH COMBINED  
RUST AND FUSARIUM HEAD  
BLIGHT RESISTANCE

**Supervisor:** Dr A Marè

**Co-Supervisor:** Prof L Herselman

**MASTER OF SCIENCE  
MAJORING IN SOIL SCIENCES**

**VAN DEN BERG**, Daniël  
Johannes Hendrik

**Dissertation Title:** EVALUATING  
MAIZE (ZEA MAYS L.) YIELD  
RESPONSE TO SOIL TYPE AND  
SLOPE

**Supervisor:** Prof CW Van  
Huysteen

**Co-Supervisor:** Prof GM Ceronio



## MASTER OF SCIENCE MAJORING IN ZOOLOGY

**DARKER**, Kristen Nadine

**Dissertation Title:** ENZOOTIC GEOPHAGY BY ELEPHANTS (*LOXODONTA AFRICANA*) IN RELATION TO GEOCHEMICAL COMPOSITION OF MINERAL LICKS IN ADDO ELEPHANT NATIONAL PARK, SOUTH AFRICA

**Supervisor:** Dr HJB Butler

**DLAMINI**, Sphindile Thabile

**Dissertation Title:** ASSESSING WATER GOVERNANCE AND INVOLVED STAKEHOLDERS TO IMPROVE THE WATER QUALITY OF THE UPPER TUGELA RIVER, SOUTH AFRICA

**Supervisor:** Prof A Le Roux

**Co-Supervisor:** Dr MM Hansen

**KUBHEKA**, Nduduzo Nzuzo

**Dissertation Title:** USING *FOLSOMIA CANDIDA* (COLLEMBOLA) FOR THE ECOTOXICOLOGICAL ASSESSMENT OF SEDIMENT SAMPLES OF WATER STREAMS FROM THE QWAQWA REGION

**Supervisor:** Dr P Voua Otomo

**NEMAUNGWE**, Tinotenda Mercy\*

**Dissertation Title:** DISTRIBUTION AND ACARICIDE RESISTANCE STATUS OF THE THEILERIOSIS VECTOR, *RHIPICEPHALUS APPENDICULATUS* NEUMANN (IXODIDAE) IN RESPONSE TO CHANGING CLIMATE IN ZIMBABWE

**Supervisor:** Dr EM S P van Dalen

**Co-Supervisor:** Dr F Chidawanyika

**SITHOLE**, Siphio

**Dissertation Title:** ASSESSMENT OF THE JOINT EFFECTS OF CARBARYL, DIETARY RESTRICTION (DR) AND DIETARY DEPRIVATION (DD) ON THE OLIGOCHAETA SPECIES *EISENIA FETIDA*

**Supervisor:** Dr P Voua Otomo

**SUTHERLAND**, Klinette

**Dissertation Title:** RESPONSES OF FREE-RANGING SOUTH AFRICAN UNGULATES TO FOUR COMMERCIAL FEED FLAVOURANTS

**Supervisor:** Dr HJB Butler

## MASTER OF SUSTAINABLE AGRICULTURE

**MALULEKE**, Nkhensani\*

**MTYELWA**, Chuma\*





## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY

**FOURIE, Petrus Johannes**

Johan Fourie obtained a Bachelor's, honours, and master's degrees, majoring in geology, at the University of the Free State. He has emigrated to Australia and is currently employed as a specialist geochemist in the mining industry.

With his thesis, titled: **GEOCHEMICAL EVOLUTION IN DEFUNCT GOLD MINE TAILINGS AND MODELLING OF SEEPAGE WATER QUALITY: AN INVESTIGATION OF A TYPICAL TAILINGS STORAGE FACILITY IN THE EAST RAND, JOHANNESBURG, SOUTH AFRICA**, the candidate contributes to the understanding of the geochemistry of acid mine drainage and pollution sources and controls on mobility. With this contribution, he attempts to increase the accuracy of modelling the geochemical processes in these tailings for environmental impact assessments and to inform relevant mitigation measures.

**Supervisor:** Dr R Hansen

**NETSHITUNGULWANA, Khashane Tshishonga Robert**

Robert Netshitungulwana was born in Venda, former homeland on the 19th of February 1979. He matriculated at Diman i Agricultural High School in 1996. He graduated with a Bachelor of Earth Science (B.Esc.) degree at University of Venda (UNIVEN) in 2003. He obtained a M.Sc. degree on chemical fingerprinting of South African and Zimbabwean gold deposits from University of the Free State (UFS) in 2011. Robert has worked at the Council for Geoscience at Pretoria for the past 17 years and is currently a Chief Scientist in the Department of Minerals and Energy. His expertise comprises economic and exploration geology, the origin of gold mineralization, water resources and geochemical modelling. His research speciality lies in the field of geochemistry and hydrogeology, about which he published frequently on acid mine drainage (AMO) of mine residue deposits as reflected by water and stream sediment geochemistry.

With his thesis, titled: **GEOCHEMICAL AND MINERALOGICAL CHARACTERIZATION OF THE LITHOLOGICAL UNITS OF THE GEODEHOOP COLLIERY IN THE WITBANK COALFIELD TO FATHOM THE SOURCE AND THE RECEPTOR OF METALS IN THE RIET-OLIFANTS CATCHMENT, SOUTH AFRICA**, the study aims to understand the elemental department's characteristics from the source, pathway and receptor realm in the Riet-Olifants catchment (ROC) drainage system. The key to this study is to identify the mobile elements in minerals occurring in different sedimentary units of the source rock geological units, with the assessment of its contribution to the receiving environment of the drainage area. Acid-base accounting and leach tests indicated that the reaction processes involved in the transportation of elements include sulphide oxidation, acid neutralization and alkalinity, ion exchange or adsorption, precipitation metal hydroxides and salts, and hydrolysis. Modelling of metal influxes and effluxes and calculated metal loads revealed that the metal contributions to the receptor realm are largely from the coal seams and above or below lithological units. Finally, stream sediment chemistry identified anomalies of both anthropogenic and geogenic origin.

**Supervisor:** Prof CD Gauert

**Co-Supervisor:** Prof BB Yibas

**Co-Supervisor:** Prof D Vermeulen



## DOCTOR OF PHILOSOPHY IN ARCHITECTURE WITH SPECIALISATION IN DESIGN

**HERBST, Marié**

Marie Herbst was born in Cape Town on 6 May 1975. She matriculated at Strand High School in the Western Cape in 1993. She obtained a Bachelor of Architecture Studiorium in 1997 at the University of the Free State, followed by a Bachelor of Architecture in 1999 at the University of Cape Town. She returned to the University of the Free State to complete her master's degree in architecture with specialisation in design in 2019. She has practiced as a registered architect in both the United Kingdom and South Africa, which included her role as chief architect for the Western Cape Government. She is currently employed as an architect working on large-scale projects located in the Western Cape.

With her thesis, titled: **THE (S)PACE OF IMAGES: ESTABLISHING A PRACTICE OF THE CONSCIOUS ABSTARCTION OF MOTION**, the candidate investigates the use of abstract image-making to mediate the design of space, and the processes of abstraction in design. The unifying theme is establishing a practice of conscious abstraction; more specifically, the abstraction of motion. The aim is to identify a way to relate abstract image-making to architectural design, bring about shifts in the design process, and discover novel techniques that reveal how abstraction influences that process.

**Supervisor:** Prof JA Noble

## DOCTOR OF PHILOSOPHY MAJORING IN AGRICULTURAL ECONOMICS

**MYEKI, Lindikaya Wiseman**

Lindikaya W Myeki was born in Sulenkama, Eastern Cape, South Africa on August 16, 1986. He finished primary school at Pandomise Ridge, Mount Frere, Eastern Cape. He matriculated at Cancele Senior Secondary School in 2004. His tertiary education includes B Agric Economics degree and B Agric Economics honours both from University of Fort Hare. BCom Development Theory & Policy (Honours) from the University of the Witwatersrand and Master's degree from the University of New England in Australia. He has over a decade of expertise as an agricultural economist and is presently the managing director of Luncwane Farm Fresh (Pty) Ltd.

With his thesis, titled: **ECONOMETRIC ESTIMATION OF AGRICULTURAL PRODUCTIVITY AND EFFICIENCY IN AFRICA: AN EARLY TWENTY-FIRST CENTURY ANALYSIS**, the candidate contributes to the understanding of agricultural productivity and efficiency in Africa. The candidate used extensions of the Total Factor Productivity (TFP) estimation approach to investigate the TFP of 49 African countries. His study explored the sustainability of agricultural productivity growth, and whether the sector experienced short-term or long-term technical inefficiencies. The findings revealed that for the period 2000-2016, productivity growth in Africa was driven by technical change and that technical inefficiency was persistent in the long-term. Moreover, productivity growth in Africa did not often meet the Sustainable Development Goals. The candidate recommends that policy design should focus on a long-term plan for structural transformation, followed by managerial strategies to address the short-term goals of the sector.

**Supervisor:** Prof YT Bahta

**Co-Supervisor:** Prof N Matthews





## DOCTOR OF PHILOSOPHY MAJORING IN AGRONOMY

**NEMADODZI**, Edzisani Albert

Edzisani Nemadodzi was born on 23 July 1975 in the Makhado Area of Limpopo province, South Africa. He matriculated at Johannes Mulambilu Secondary School in 1993 and later attained a Bachelor of Agriculture Degree at the University of Limpopo 1996. He obtained a Master in Sustainable Agriculture at The University of the Free State in 2012. He started his career as Research Technician in 2005 and later a Senior Research Technician in Agronomy department at the Agricultural Research Council – Grain Crops, where he is currently employed.

With his thesis, titled: **SOIL ENZYMES, ROOT PATHOGENS AND YIELDS UNDER MAIZE- LEGUME ROTATIONS IN A SEMI-ARID AREA**, the candidate contributes to knowledge on sustainable crop production. The study reports on the effects of maize-legume rotation systems and fertiliser applications on soil enzyme activities and glomalin levels, maize root fungal pathogens as well as maize productivity and yield. The research findings demonstrated the potential positive impact of incorporating cowpea and soybean in cereal-based rotations promoting soil enzyme activities and glomalin levels. Maize rotated with cowpea generally gave higher enzyme activities than rotation with soybean, while continuous maize had the lowest enzyme activities. The research also provided evidence that the inclusion of legumes such as cowpea and soybean into maize-based systems can suppress key soil-borne pathogens of maize while increasing maize yield.

**Supervisor:** Prof AC. Franke

**Co-Supervisor:** Dr N Mashingaidze

**Co-Supervisor:** Dr E Kotzé

**Co-Supervisor:** Dr Z Mavunganidze

## DOCTOR OF PHILOSOPHY MAJORING IN ANIMAL SCIENCE

**KRUGER**, Leon Paul

Leon Kruger was born in Kimberley on 21st June 1963. He matriculated at the Academia Secondary School in Windhoek in 1983. He obtained a National Diploma Veterinary Technology in 1988, a Baccalaureus Technology (Veterinary Technology) with distinction in 1999, both at the Pretoria Technikon and a Master's Degree in Agriculture (Animal Production) in 2015 at the University of Pretoria. He started his career at the Onderstepoort Veterinary Institute as a Research Technician in Pretoria in 1988. In 1990 he was appointed at the Agricultural Research Council and in 2018 as lecturer at the University of Free State in his current position.

With his thesis, titled: **THE EFFECT OF TEMPERAMENT AND STRESS ON PRODUCTION AND IMMUNE RESPONSE IN SHEEP**, the candidate contributes significantly to our understanding of how stress and temperament influence the wellbeing of sheep. Stress hormones may have detrimental effects on both production and immunity in sheep. To investigate this phenomenon, individual sheep were ranked according to temperament, using different methods, one of which was novel. This provided the opportunity to investigate how temperament influences the release of the gluco-corticoid stress hormone, cortisol. The conclusive results showed no correlation between individually ranked animals for temperament and cortisol release. The results furthermore demonstrated that cortisol release is responsible for a compromised immune response.

**Supervisor:** Prof FWC Neser

**Co-Supervisor:** Prof MM Scholtz



## DOCTOR OF PHILOSOPHY MAJORING IN APPLIED MATHEMATICS

**MAGAU**, Hangwelani

Magau Hangwelani, born on July 25th, 1992, in Meadowlands, Soweto, started education in Venda at Tshiheni and later moved to Livhuwani Primary School in Soweto. He matriculated from Lwamondo High School in 2010. Hangwelani earned a BCom in Financial Mathematics, a BSc Honours, and an MSc in Applied Mathematics from the University of the Free State. He worked as an academic facilitator at the University of The Free State, Qwaqwa campus until 2017. Currently, he is a Lecturer at the Central University of Technology.

With his thesis, titled: **GLOBAL RATE OF CHANGE WITH LOCAL AND NON-LOCAL OPERATORS: A NEW APPROACH TO PREDICT COMPLEX SYSTEMS**, the candidate makes a valuable contribution in the field of Applied Mathematics, focusing on using both local and non-local operators. The findings demonstrate that the incorporation of global derivative in mathematical modelling offers valuable insights into the complex dynamic processes. These equations are often non-linear and difficult to solve analytically. The candidate proposed new numerical techniques to solve a broad scope of problems in fields such as, but not limited to Epidemiology, Physics and Biology based on classical and fractional differential equations with global derivatives. A mathematical model for the spread of illicit drug abuse was studied and the proposed schemes applied to find numerical approximation and simulations for future predictions. Furthermore, the study showed that incorporating fractional calculus, which considers memory effects and nonlocal interactions, led to a more accurate representation of long-term behaviour.

**Supervisor:** Prof A Atangana

## DOCTOR OF PHILOSOPHY MAJORING IN BIOCHEMISTRY

**ASCHENBRENNER**, Jasmin Cara

Jasmin Aschenbrenner obtained her Bachelor of Science and Master of Science degrees in Biology from the Technical University of Munich in Germany with research stays in South Africa and Australia. For her PhD in Biochemistry, she performed research in the Biocatalysis and Structural Biology group at the University of the Free State. Currently, she is working as a Post-Doctoral Research Associate in XChem at Diamond Light Source in the UK.

With her thesis, titled: **ADDRESSING THE LIMITATIONS OF SELF-SUFFICIENT CYTOCHROME P450 MONOOXYGENASES**, the candidate investigates different strategies to increase the stability, change the regioselectivity and reduce the lack of structural data and cofactor dependence of self-sufficient CYP450s from the CYP102 and CYP505 families. Using a variety of methods, the candidate characterised and engineered multiple bacterial and eukaryotic CYP450s in her search for enzymes with improved characteristics for biocatalytic applications. She, furthermore, solved the first structure of a fungal CYP505, making a significant contribution towards the availability of structural data of these class VI II CYP450s.

**Supervisor:** Prof DJ Opperman

**Co-Supervisor:** Prof MS Smit

## DOCTOR OF PHILOSOPHY MAJORING IN BOTANY

**ADAMS**, Zanele

Zanele Adams was born on 21 October 1985 in Mthatha, Eastern Cape Province, South Africa. She received her secondary education in Mthatha where she matriculated at Excelsior High School in 2004. She obtained a BSc in Botany and Microbiology





in 2010, BSc Hons in Botany 2012 and MSc in Botany in 2014 at the University of Fort Hare. Her career and skills developed whilst working as a laboratory demonstrator conducting undergraduate Botany practical sessions at the University of Fort Hare and as Teaching Assistant at the University of Free State's Centre for Teaching and Learning.

With her thesis, titled: **PHARMACOLOGICAL SCREENING AND ISOLATION OF BIOACTIVE COMPOUNDS FROM PLANTS USED AGAINST ELEPHANTIASIS IN THE EASTERN CAPE, SOUTH AFRICA** the candidate contributed to an increase in indigenous knowledge of medicinal plants that can be used in the treatment and management of elephantiasis. Using an ethnobotanical survey approach, a total of 37 informants, comprising 30 traditional healers, four herbalists and three young people, were interviewed. Twenty-six (70%) of the informants were females and eleven (30%) males with ages ranging between 18 and 75 years. All informants used medicinal plants to treat and manage elephantiasis, which they commonly refer to as Umeqo or Unyawo lwendlovu. In this study, 29 medicinal plants belonging to 25 Angiosperm families were reported for use in the treatment and management of the common symptoms of elephantiasis, in the three municipal areas of OR Tambo District Municipality, Eastern Cape, South Africa.

**Supervisor:** Dr PJ Mojau

**Co-Supervisor:** Prof L Buwa-Komoreng

**Co-Supervisor:** Prof MMO Thekiso

## DOCTOR OF PHILOSOPHY MAJORING IN CHEMISTRY

**ENSLIN, Lucy Ellen**

Lucy Ellen Enslin was born in Kroonstad on 8 March 1995. She received her secondary education in Kroonstad, where she matriculated at Kroonstad High School in 2013. She obtained a Bachelor of Science degree majoring in Forensic Science in 2016, a Bachelor of Science Honours degree in 2017, a Master of Science degree majoring in Chemistry in 2019 and a Doctor of Philosophy degree majoring in Chemistry in 2023, all at the University of the Free State. She started her career as an assistant bio-analyst at FARMOVS in Bloemfontein in 2022 and has since emigrated to Canada with her husband.

With her thesis, titled: **SYNTHESIS, CHARACTERISATION AND CYTOTOXICITY OF RHENIUM(I) COMPLEXES BEARING N,N' BIDENTATE LIGAND SCAFFOLDS**, the candidate makes a contribution to the research into potential anti-cancer compounds. Different N,N' bidentate ligands were synthesised and coordinated to the rhenium(I) metal core. In vitro cell testing on a range of cancer cells indicated that these compounds were excellent candidates for anti-cancer treatment, especially since some of these compounds showed no cytotoxicity towards healthy cells. The results from this research study are already published in a high-impact journal with international collaborators and proves the quality and value of this research in the battle against cancer.

**Supervisor:** Dr M Schutte-Smith

**Co-Supervisor:** Prof HG Visser

**FABER, Jani**

Jani Faber was born in Kimberley on 10 April 1995. She grew up on a farm close to Ulco and matriculated from the Ulco Academy in 2013. She obtained the degree B.Sc. Forensic Science with distinction in 2016, B.Sc. Hons Chemistry with distinction in 2017, the degree M.Sc. Chemistry with distinction in 2019 and her PhD in Chemistry in 2023 at the University of the Free State. She started her career as a scientist in Sasolburg in 2023, after which she was appointed to the Research and Technology Department, where she is presently a researcher at Sasol.



With her thesis, titled: **ANTICANCER AND ANTIDIABETIC ACTIVITY OF GLUCOSYLATED BENZOPHENONE AND XANTHONE SCAFFOLDS**, the candidate makes a significant contribution to the field of Organic Chemistry. With this contribution, she endeavours to synthesize benzophenone and, subsequently, xanthone C-glycosides, which have the potential to exhibit antioxidant, antidiabetic, and anticancer biological activities. This investigative work serves as an indication of the significance of such interventions in the ongoing quest to find solutions for diseases like cancer and diabetes. It underscores the vital role that innovative chemical research plays in advancing our understanding and treatment of these health challenges.

**Supervisor:** Dr A Wilhelm

**Co-Supervisor:** Dr SL Bonnet

## DOCTOR OF PHILOSOPHY MAJORING IN COMPUTER SCIENCE AND INFORMATICS

**BEZUIDENHOUT, Riaan**

The candidate matriculated from Sand du Plessis High School in 1988 and completed a B. Com degree in 1993. His postgraduate studies started with a B. Com Hons degree in Statistics (1996), a B. Com Hons degree in Business Management (1998) and an MBA (2003). He pursued his interest in Computer Science with a B.Sc Hons in Computer Science (2018) and an MSc in Computer Science Computer Science (2020).

With his thesis, titled: **VERIFIABLE PROOF OF RANDOMNESS: EFFICIENT CONSENSUS FOR PERMISSIONLESS BLOCKCHAIN SYSTEMS**, the candidate contributes to the field of permissionless blockchain systems. These systems consist of a combination of technologies that underlie modern cryptocurrencies. They function at the intersection of distributed computing, algorithm theory and cryptography. The mechanisms available to establish consensus in decentralised transactional systems are a critical problem in the blockchain field. In his research, the candidate focuses on consensus in permissionless blockchain systems and consensus mechanisms that can function in trustless environments. He makes a three-fold contribution to the field. First, by establishing a theoretical definition of decentralised blockchain systems. Second, by demonstrating how permissionless blockchain systems can function as computationally efficient, publicly verifiable, tamper-resistant pseudo-random number generators. Lastly, using these pseudo-random number capabilities of blockchain systems, he proposes a new consensus algorithm, Proof-of-Publicly Verifiable Randomness, that remains computationally efficient when employed on large-scale blockchain networks.

**Supervisor:** Dr W Nel

**Co-Supervisor:** Dr JM Maritz

**BOTHA, Benjamin Stephanus**

Bennie Botha, born on 4 September 1990 in Universitas, Bloemfontein, South Africa; matriculated at Fichardt Park High School in 2008, after which he worked as an IT technician. In 2010 he started studying B. Com Investment Management, after which he switched to B.Sc. IT in 2013. He completed his B.Sc.IT, B.Sc. IT (Hons) and M.Sc. CS at the UFS. In 2010 he also started working as a technician for the School of Nursing at the UFS, where he later became the Portfolio Head of JCT and Simulation, before accepting an academic position at Computer Science and Informatics in 2023.

With his thesis, titled: **A FRAMEWORK TO PREVENT OR MINIMISE CYBERSICKNESS DURING IMMERSIVE VIRTUAL CLINICAL SIMULATION**, the candidate contributes both theoretically and practically by creating a framework for use in immersive Virtual Clinical Simulations by Virtual Reality (VR) users, software developers and researchers, to assist in avoiding



or limiting the onset of Cybersickness (CS). Applying a mixed methods approach, the Best Fit Framework was used to create the CyPVICS Framework, consisting of causes, linked methods, and their associated techniques for reducing or minimising CS. During evaluation, sensory conflict/mismatch (as part of the framework) was tested for usability and user experience with two navigation techniques (VR touch controllers and an omnidirectional treadmill (ODT)), involving a nursing training case study. The results showed that the ODT has potential to become a valid model of interaction in immersive Virtual Clinical Simulation to reduce/minimise CS, thus initialising the validation of the content of the framework.

**Supervisor:** Prof L de Wet

**Co-Supervisor:** Prof Y Botma

## DOCTOR OF PHILOSOPHY MAJORING IN CONSTRUCTION MANAGEMENT

**RALIILE, Mohlomi Terah**

Mohlomi Terah Raliile was born in Maputsoe, Lesotho on 01-July-1989. He completed COSC at Sacred Heart High School in St Monica's, in 2006 an IB in 2009 from Machabeng College in Maseru. Mohlomi obtained a National Diploma (NDip) D in Building 2015, a BTech in Construction Management (cum-laude) at CPUT in 2016 and MSc in Construction Management in 2019 at UKZN. He started his career as a Quantity Surveyor at JC2 in Cape Town (2017 –2020) and Trenchless Technologies in Johannesburg, 2018. In 2021/2, he was a part-time lecturer at UFS. He is a Managing Director at Spartacus in Lesotho

With his thesis titled: **OCCUPATIONAL STRESS MANAGEMENT MODEL FOR THE CONSTRUCTION WORKFORCE IN SOUTH AFRICA**, the candidate contributes to scholarship on Health and Safety management by developing a model to measure the occupational stress experienced by construction workers in South Africa. Raliile researched the problem that occupational stress and mental health problems lead to increased levels of accidents on construction sites and reduce productivity. Using a cross-sectional study based on an epistemological positivist philosophy and ontological objectivism, a deductive research approach, a survey research strategy, and a questionnaire data collection technique and procedure using the non-probability sampling technique of convenient sampling, Raliile developed and validated a model adapted from the WHO-5 Wellness Measure. The research findings reveal that the most significant stressors are linked with task demands. The stress management model for the construction workforce comprises all the important antecedents to stress in construction and effective stress management strategies.

**Supervisor:** Prof TC Haupt

**Co-Supervisor:** Prof K Kajimo-Shakantu

## DOCTOR OF PHILOSOPHY MAJORING IN CONSUMER SCIENCE

**NKOKO, Nthabeleng**

Nthabeleng Nkoko was born in Maseru, Lesotho on 13th June 1991. She matriculated from Adventville High School in 2010. She further obtained a Bachelor of Science in Consumer Science at the National University of Lesotho in 2014. She graduated with a Master of Science in Consumer Science at the University of the Free State in 2020. Her career began in 2015 when she was appointed as Laboratory Technician at the National University of Lesotho, she currently pursues the same role with an added responsibility as a teaching assistant.





With her thesis, titled: **FOOD AND NUTRITION SECURITY AMONG FARMING HOUSEHOLDS IN LESOTHO: THE ROLE OF COMMERCIAL AGRICULTURE**, the candidate makes a contribution to scholarship on the linkages between agricultural development and food and nutrition security. With this contribution, she addresses the limited empirical evidence through the assessment of food and nutrition security status among farming households. In addition, she evaluates the role of commercial agriculture as a developmental approach to the advancement of household food and nutrition security in Lesotho. The results indicated that farming households were vulnerable to food insecurity and malnutrition. However, the study presents a submission that involvement in commercial agriculture has a positive contribution to household food and nutrition security.

**Supervisor:** Dr C Cronje

**Co-Supervisor:** Prof JW Swanepoel

## DOCTOR OF PHILOSOPHY MAJORING IN DISASTER MANAGEMENT

**MUHAME**, Collins

Collins Muhame, born in Mbarara District, Uganda on August 04, 1978. He finished primary school at Boma in Mbarara. He matriculated at Mbarara high school in 1996. His tertiary education includes BA corporate communication degree and B(Honors) communication science, a Certificate in Labour Law, Postgraduate degree in disaster management and a Master's degree in Disaster Management all from the University of the Free State. He has worked as a volunteer with the Uganda Red Cross and a field officer with Statistics during the 2022 census. He has worked on short assignments as a research assistant at DiMTEC during his studies with the Centre.

With his thesis, titled: **BUILDING URBAN RESILIENCE AND SUSTAINABLE HUMAN SETTLEMENT IN THE FREE STATE PROVINCE OF SOUTH AFRICA**, the candidate contributes to mainstreaming disaster risk reduction management into the housing sector. An urban resilience framework was developed, which incorporated basic service delivery as a chronic disaster risk stressor to predict urban social resilience outcomes. The urban resilience framework serves as a base and guideline for municipalities to develop urban resilience plans for sustainable human settlement and in-situ informal settlement upgrading.

**Supervisor:** Dr A Ncube

**Co-Supervisor:** Prof YT Bahta

## DOCTOR OF PHILOSOPHY MAJORING IN ENTOMOLOGY

**MBANDE**, Abongile

Abongile Mbande was born in rural Mthatha of the Eastern Cape. She completed her junior education at Gqunge Junior Secondary School in Mthatha and her matric at King's College, Mthatha and later Dansa college, Pretoria. She obtained her B. Sc. in Entomology at the University of Fort Hare and then M. Sc. (cum laude) from the University of KwaZulu Natal. During her PhD she was the recipient of NRF bursary and later a highly competitive SACTA-Maize Trust Bursary.

With her thesis, titled: **EVOLUTIONARY, PHYSIOLOGICAL AND PHENOLOGICAL RESPONSES OF *SPODOPTERA FRUGIPERDA* TO CLIMATE CHANGE**, the candidate contributes to both theoretical and applied biology of the devastating invasive maize pest called fall armyworm. Her work defined the thermal limits of fall armyworm pest at both spatial and temporal scales. The data also enables us to identify and map high risk areas using both traditional mechanistic climate



models, and contemporary artificial intelligence and machine learning. The candidate's research therefore not only advance knowledge insect biology and ecology but improves our early warning systems for crop protection and food security for the strategic maize crop. The candidate's work culminated in 5 scientific publications in highly reputable journals of the of field entomology, physiology, and crop protection.

**Supervisor:** Dr F Chidawanyika

**Co-Supervisor:** Dr R Mutamiswa

## DOCTOR OF PHILOSOPHY MAJORING IN FOOD SCIENCE

### FREITAG, Alicia

Alicia Freitag was born in Bloemfontein on 26 June 1995. She received her secondary education in Bloemfontein, where she matriculated from Jim Fouche High School in 2013. She obtained her B.Sc. Home Economics Degree in 2018, M.Sc. Agric Degree in Food Science with distinction in 2020, and PhD in Food Science in 2023, at the University of the Free State.

With her thesis, titled: **THE EFFECT OF MICROBIAL AND PLANT EXTRACT PRESERVATIVES ON THE CHEMICAL, MICROBIAL AND SENSORY QUALITY OF A TRADITIONAL FRESH SOUTH AFRICAN SAUSAGE**, she makes significant contributions towards an international trend of replacing chemical preservatives with natural preservatives. Boerewors is a well-known South African sausage preserved with sulphur dioxide, which may have negative health effects. Commercial plant extracts containing, e.g., rosemary extract, and commercial protective cultures, were evaluated in this study. Community level physiological profiling, microbial, lipid stability, water activity, pH, *E. coli* and *S. aureus* survival and growth and sensory analysis methods were used to determine the suitability of the natural preservatives to replace the SO<sub>2</sub>. The results indicated that especially the plant extract preservatives, maintained the chemical, microbial, sensory qualities and product safety as efficient as SO<sub>2</sub>. A preliminary cost-evaluation indicated that the use of these natural preservatives will be cost-effective to the South African food industry.

**Supervisor:** Prof CJ Huqo

**Co-Supervisor:** Prof A Huqo

**Co-Supervisor:** Dr M Cluff

**Co-Supervisor:** Dr S van der Merwe

### GAVU, Masabata Lydia

Lydia Gavu was born in Odendaalsrus on 29 April 1994. She received her secondary education in Odendaalsrus, where she matriculated from Rearabetswe Senior Secondary School in 2012. She obtained her B.Sc. degree in Microbiology and Food Science in 2016, B.Sc. Hons in Food Science with a distinction in 2017, M.Sc. in Food Science in 2019, and her Ph.D. in Food Science in 2023, all from the University of the Free State. She started her career as a Clinical Data Coordinator in Bloemfontein in 2023.

With her thesis, titled: **TAXONOMY, SPOILAGE, AND VIRULENCE CHARACTERISTICS OF *Kaistella* SPECIES ISOLATED FROM FISH**, she makes significant contributions towards knowledge on bacteria involved in spoilage of fish. Cape Hake is a popular fish consumed in South Africa. It, however, spoils fast. The isolation of bacteria involved with its spoiling process, and development of methods to control them, are, therefore, important. By using taxonomic methods, three novel *Kaistella* species,



isolated from Cape Hake, were described. The spoilage and virulence characteristics by biofilm and enzyme production were the first study internationally that indicated that the three novel species exhibited spoilage characteristics. One species even displayed potential pathogenicity. All the species were resistant to most antibiotics and therefore, the study also investigated natural ways for the control of these species. This was the first time that bacteriophages against *Kaistella* species were characterised, which may lead to fish spoilage control.

**Supervisor:** Prof CJ Hugo

**Co-Supervisor:** Dr A Hitzeroth

## **OLCKERS, Schae-Lee**

Schae-Lee Olckers was born in Durban, KwaZulu Natal on 12 October 1994. She matriculated at Greytown High School in 2012. She obtained the following degrees: BSc. Agri majoring in Food Science and Microbiology in 2016, MSc. in Food Science, with distinction, in 2018, at the University of the Free State. She started her career as a tutor in science and math for primary school kids, as well as a research assistant in the Food Science Department from 2015 to 2021. At present, she is employed as a Food Scientist at StartWell Foods in Springs, Gauteng.

With her thesis, titled: **THE INFLUENCE OF ABIOTIC STRESS ON GLUTEN IN WHEAT AND ITS EFFECT ON BREAD BAKING QUALITY**, the candidate contributes to understanding the influence of heat and drought stress effects on specific gluten protein fractions in the wheat grain and how these expressions reflect in baking quality characteristics of different bread wheat cultivars with different genetic backgrounds. By using size exclusion and reversed phase - high-performance liquid chromatography and proteomics techniques the results obtained serve as a vital indication of how gluten proteins react to different levels of abiotic stress. Therefore, these findings make a huge contribution to the knowledge of the effects of heat and drought stress on the biochemistry and composition of glutenin protein and its subsequent effects on bread baking quality and can be implemented to improve drought and heat stress tolerance in breeding programmes to ensure stable baking quality.

**Supervisor:** Dr A van Biljon

**Co-Supervisor:** Prof MT Labuschagne

**Co-Supervisor:** Prof G Osthoff

**Co-Supervisor:** Dr C Guzman

## **DOCTOR OF PHILOSOPHY MAJORING IN GENETICS**

### **DISEKO, Lerato Gloria**

Lerato Gloria Diseko, born on November 25, 1993, in Lesotho, achieved academic milestones including a B.Sc in Human Molecular Biology (2014), B.Med.Sc (Honours) in Human Molecular Biology (2015), M.Sc in Genetics (2018), and a PhD in Genetics (2023) at the University of the Free State. Lerato has been actively involved in professional activities by serving as a student representative in the South African Genetics Society from 2018 to the present. Lerato also interned as a Medical Scientist in Human Genetics at NHLS from 2021 to 2023 and pursued Bioinformatics, GLP and GCP short courses during her studies.

With her thesis, titled: **THE RELATIONSHIP BETWEEN HOST GENETIC MAKE-UP AND HUMAN IMMUNODEFICIENCY VIRUS IN A SOUTH AFRICAN POPULATION**, significantly advances our understanding of blood group frequencies within





the South African population and their connection to HIV. This research endeavour sought to unveil the intricate link between host blood groups and HIV infection. Additionally, the study delved into the prevalence of the CCR5 delta 32 mutation within the South African population, a genetic variant associated with HIV resistance in European populations. Furthermore, the candidate conducted comprehensive screenings for mutations within the A4GAL T gene of the P1 PK blood system, utilizing Sanger sequencing to identify potential mutations linked to HIV susceptibility in the study population. This doctoral thesis represents a substantial contribution to the field by offering a comprehensive insight into the blood group frequencies of ABO, Rhesus, Kidd, Duffy, and the P1 PK system and their interplay with HIV infection among the South African populace.

**Supervisor:** Dr GM Marx

**Co-Supervisor:** Prof D Goedhals

**Co-Supervisor:** Prof W Janse van Rensburg

## DOCTOR OF PHILOSOPHY MAJORING IN GEOCHEMISTRY

**WELMAN PURCHASE**, Megan Dayl

Megan Welman-Purchase obtained a Bachelor's, honours and master's degrees, majoring in geology, at the University of the Free State. Following her studies, she started working for the Department of Geology at the University of the Free State as a laboratory technician, where and in which position she is still currently employed.

With her thesis, titled: **AN INVESTIGATION OF THE IRON-CYANIDE MINERALIZATION IN GOLD MINE DUMPS**, the candidate contributes to the understanding of the geochemistry of highly toxic cyanide compounds in South African gold mine tailings. With this contribution, she attempts to use the lessons learnt from this research to aid in designing relevant and efficient mitigation and remediation methods for cyanide at these gold mine sites. This work has also contributed to understanding the thermodynamic behaviour of various cyanide compounds in these environments, knowledge of which has been scant up to now.

**Supervisor:** Dr R Hansen

## DOCTOR OF PHILOSOPHY MAJORING IN GEOGRAPHY

**MARARAKANYE**, Ndifelani

Ndifelani Mararakanye was born on 10 October 1978 in Tshaulu, Limpopo Province. He matriculated at Milton Mpfumedzeni Secondary School in 1996. He obtained the degree Bachelor of Environmental Sciences in 2002 and Bachelor of Environmental Sciences Honours in 2011 at the University of Venda. In 2015, he obtained a degree Master of Science in Geography at the University of Pretoria. His career began as Environmental Officer at the Department of Environmental Affairs and Development Planning in 2005. In 2006, he joined the Department of Agriculture, Rural Development, Land and Environmental Affairs, where he is currently a Scientific Manager.

With his thesis, titled: **QUANTIFYING EUTROPHICATION FROM AGRICULTURAL SOURCES UNDER CHANGING LAND USE AND CLIMATE IN A SEMI-ARID AND DATA POOR CATCHMENT**, the candidate contributes to the understanding of



eutrophication in a large, data-poor, semi-arid region of South Africa using hydrological modelling. The use of satellite-based weather as an alternative to weather station data in the Soil and Water Assessment Tool is a significant contribution in the field of study. The findings serve as an indication that satellite-based weather can be an important alternative dataset for hydrological modelling in data poor catchments. The research also provides valuable insights regarding the interplay between land use changes, climate change and water quality, particularly in the context of eutrophication. An increase in irrigated cropping systems and climate change are expected to result in an increase in nutrient pollution.

**Supervisor:** Dr JJ Le Roux

**Co-Supervisor:** Prof AC Franke

**STANDER, Marike Hester**

Marike Stander was born in Brits on 5 June 1984. She completed her matriculation at Hendrik Potgieter Agricultural School in Reddersburg in 2002. She achieved her educational milestones by obtaining a BSc in Geology in 2005, followed by a BSc Honours in Geology in 2006. In 2015, she successfully obtained a Master's degree in Environmental Management, and her performance merited her the Maitland Seaman Award for Best Master's Student. Her professional journey began as an exploration geologist in Groblersdal in 2007, with a transition to the role of an environmental assessment practitioner in 2013. In 2020, Marike assumed the position of lecturer in the Department of Geography at the University of the Free State.

With her thesis, titled: **SEDIMENT SOURCE PROVENANCE BY MEANS OF COMPOSITE FINGERPRINTING TECHNOLOGY: TOWARDS IDENTIFYING TRACERS ASSOCIATED WITH ERODIBLE SOILS**, the candidate contributes to the valuable, and often overlooked, field of soil erosion. Her research made use of the sediment fingerprinting technique to differentiate between sediment sources and quantify contributions from different soil types, with an emphasis on erodible duplex soils. By analysing the use of different tracers in this technique, including geochemical properties, chemical weathering indices, and spectral reflectance data, the study discriminated between various soil types in a degraded catchment in the eastern Free State. This research underscores the significance of sediment fingerprinting in erosion control and emphasises the need to consider various soil types in mitigation strategies. It contributes to the protection of one of the most valuable natural resources, soil, and emphasises the importance of understanding soil erosion processes for sustainable land management.

**Supervisor:** Dr JJ le Roux

**Supervisor:** Prof MAM Abd Elbasit

**Supervisor:** Prof G Liu

## DOCTOR OF PHILOSOPHY MAJORING IN GEOHYDROLOGY

**MOLEME, Malefa Florence**

Malefa was born on 14 August 1990 in the Free State. She matriculated at Saint Michael's Girls School, obtained a BSc in Earth Science: Geology from the University of Stellenbosch, BSc (Honours) in Geology from the University of the Free State (UFS), and an MSc in Geohydrology with distinction at UFS. Contaminant migration is of great interest to Malefa, and she has made contributions in an internationally accredited journal, Natural Resources Research. Her career as a hydrogeologist began in 2018 and she rose through the ranks to become a senior hydrogeologist at one of the world's leading engineering consulting firms.

With her thesis, titled: **CHARACTERISTICS OF FLUID ELECTRICAL CONDUCTIVITY (FEC) PROFILES ASSOCIATED WITH A CONTAMINANT PLUME IN POROUS AND WEATHERED AQUIFER SYSTEMS**, the candidate has made a noble



contribution to advancing the knowledge and understanding of contaminant migration patterns in various aquifer systems using laboratory-based aquifer models and field tests. As part of its outcome the study has produced conceptual profiles which can be referred to as guidelines, during the interpretation of FEC profiles obtained in similar systems. The fluid electrical conductivity (FEC) profiling method has been commonly applied to aid in the compilation of site-specific conceptual models and understanding of the subsurface environment. Although in recent years research has been conducted to help improve the understanding and interpretation of FEC profiles associated with diverse groundwater conditions within the fractured-rock aquifer system (Moleme, 2017; Moleme and Gomo, 2018), a research gap still existed for such studies in other aquifer types.

**Supervisor:** Prof M Gomo

## DOCTOR OF PHILOSOPHY MAJORING IN PHYSICS

**BASHIAR, Osama Khalifa Mhajoub**

Osama K. M. Bashiar was born on 01 January 1985 in Damazeen, the Blue Nile state, Sudan. He matriculated at Al-Baqaa High School in 2003 and later attained a Bachelor of Science in Physical and Mathematics (Excellent), College Science, Kordofan University in 2009. He graduated with a Qualify degree in Physics from the College of Applied and Industrial Sciences at Juba University in 2011 and a Master of Science at Bahri University in 2014. He started his career as a teacher until in 2013 and he lectured at Blue Nile University.

With his thesis, titled: **A COMPARATIVE STUDY OF CBD AND PLO TO DEVELOP ZNO NANOSTRUCTURES**, two techniques were used to study the synthesis of ZnO nanostructures: pulsed laser deposition and chemical bath deposition. Nanorods and nanowalls were synthesized and characterized via SEM, XRD, XPS, EDS, UV-Vis and PL. Furthermore, electrical characterization was done to determine the photocurrent under different illumination conditions, ranging from infrared to ultraviolet. ZnO nanowalls deposited in argon displayed a high photocurrent compared to ZnO nanowalls deposited in oxygen. Furthermore, both these samples displayed a higher photocurrent than the ZnO nanorods prepared via CBD. This was attributed to defects (particularly oxygen vacancies and zinc interstitials). Finally, a combination of PLO and CBD was used to synthesize ZnO with a patterned structure (with areas with high concentrations of ZnO and areas with low concentrations of ZnO). Near-infrared luminescence was observed in this experiment but was not visible in the previous experiments.

**Supervisor:** Prof RA Harris

**Co-Supervisor:** Prof RE Kroon

## DOCTOR OF PHILOSOPHY MAJORING IN SOIL SCIENCE

**HARRISON, Rowena Louise**

Rowena Harrison was born on the 21st of April 1982 in Johannesburg and completed her secondary schooling in Botswana. She then moved to South Africa for her university studies where she attained her M.Sc degree in Soil Science at the University of KwaZulu-Natal in 2009. Rowena's career started in 2008 as an Environmental Consultant. She decided to go back to studying in 2018 and attained her PhD in Soil Science under joint international collaboration at the University of the Free State and the University of Burgundy in 2023.

With her thesis, titled: **INTERACTIONS BETWEEN DISSOLVED ORGANIC CARBON AND HYDROPEDOLOGY IN AFROMONTANE CATCHMENTS**, the candidate contributes to the knowledge of both the hydrogeological characteristics





of mountain catchments and how these impact the storage and export of dissolved organic carbon in these areas. Rowena utilised 3 research catchments within the uKhahlamba-Drakensberg Mountain range of South Africa to conduct her study to enhance our knowledge of these important headwater catchment areas and how they influence downstream locations. Her thesis identified a variety of factors that influence dissolved organic carbon storage and export on a catchment scale. It highlights the importance of understanding the hydrogeological characteristics of a watershed for both improving our knowledge on the streamflow aspects as well as understanding the dissolved organic carbon dynamics and how these affect the overall carbon budget of a system.

**Supervisor:** Prof JJ van Tol

**Co-Supervisor:** Prof P Amiotte-Suchet

**HAUMANN, Eduard Johannes**

Eduard Johannes Haumann was born on 18 September 1961 in Zimbabwe, Harare. He matriculated at Harrismith Secondary School in 1979. At the University of the Free State he obtained BSc Agric in 1983, BSc Agric Hons in 1984 and MSc Agric in 1988. His career began in 1987 as Agricultural Researcher at the Tobacco and Cotton Research Institute near Rustenburg. In 1991 he was appointed as a Soil Scientist at the Lowveld Tobacco Cooperative in Nelspruit. He started his own business in 1994, providing consultation services to farmers and co-operative clients locally and internationally.

With his thesis, titled: **REFINING OF NITROGEN FERTILIZATION GUIDELINES FOR IRRIGATED COTTON (GOSSYPIMUM HIRSUTUM L.) IN SOUTH AFRICA**, the candidate contributes simple guidelines for the fertilization of irrigated cotton based on the amount of residual nitrogen in soil at planting. He also suggests a first approach to utilise in-season leaf petiole analysis to correct nitrogen fertilization of irrigated cotton during growing in South Africa. This approach contributes to resolving the long-standing international conundrum of how to quantify nitrogen applications using in-season petiole analyses. Furthermore, the guidelines also cater for economically optimal cotton production.

**Supervisor:** Prof CC du Preez

## DOCTOR OF PHILOSOPHY MAJORING IN SOIL SCIENCE INTERDISCIPLINARY

**MALONGWENI, Siviwe Odwa**

Siviwe Odwa Malongweni, born on 19 February 1993 in Lusikisiki. She matriculated at East London Science College in 2010. At the University of Fort Hare, she obtained a BSc. Agric (cum laude) in 2015 and BSc. Agric (cum laude) in 2016. Siviwe earned her Master of Environmental Science and Technology from the University of Shimane, Japan, in 2019. During her time in Japan, she acted as an environmental sustainability researcher from 2017. She enrolled for a PhD at the University of the Free State in 2021 and is currently research coordinator at Climate Neutral Group.

In her thesis, titled: **FIRE-HERBIVORE INTERACTIONS IN SAVANNA ECOSYSTEMS OF KRUGER NATIONAL PARK, SOUTH AFRICA: IMPACT ON SOIL QUALITY**, the candidate explores the pivotal role of fire and herbivory in shaping Kruger National Park's savanna ecosystems. The study reveals their influence on vegetation, nutrient transfer, and habitat conditions. Assessing soil quality through diverse indicators, including a soil quality index (SQI), identified significant variations in soil properties. Fire negatively impacted certain attributes on sandy soils of crest positions, while unburnt plots showed higher cation exchange capacity and available phosphorus on clayey foot-slope soils. Excluding large herbivores resulted in lower SQI emphasising their importance in maintaining a healthy ecosystem. The presence of trees also influenced soil properties



significantly. These findings highlight the intricate dynamics of fire, herbivores, vegetation, and woody species in sustaining savanna soil health and biodiversity, providing essential insights for effective ecosystem management.

**Supervisor:** Prof JJ van Tol

## DOCTOR OF PHILOSOPHY MAJORING IN SUSTAINABLE AGRICULTURE

**GROBLER, Hendrik Frederik**

Hennie Grobler was born on 20 June 1966 in Pretoria, South Africa. He matriculated at Voortrekkerhoogte High School in 1984 with a Book Prize and Trophy as the best student in Engineering Design. He graduated with a B.Eng (Agriculture) degree at the University of Pretoria in 1989 and a Master in Engineering, specializing in Project Management, also with the University of Pretoria in 2006. His career as an agricultural engineer began in 1990 and he rose through the ranks to be appointed as the Chief Engineer with the Free State Provincial Department of Agriculture and Rural Development in 2007.

With his thesis, titled: **DEVELOPMENT OF A TOOLKIT FOR SUSTAINABLE REVITALIZATION OF SMALLHOLDER IRRIGATION SCHEMES: FREE STATE PROVINCE**, the candidate contributes to scholarship on Revitalization of Smallholder Irrigation Schemes (RESIS), focusing on how self-determination principles can assist in the development of sustainable smallholder irrigation schemes. Using a mixed-methods approach, Grob/er sampled 150 smallholder irrigation farmers in the Thaba Nchu Tribal Area to understand and explain the current knowledge base of smallholder irrigators and if a toolkit for sustainable revitalization of smallholder irrigation schemes is needed and if it will be adopted. A very strong correlation between knowledge and productivity was found in all three schemes included in the study. The study presents the argument that the development of a toolkit will add much value to the knowledge base, best management practice and productivity of smallholder irrigation farmers in the Free State Province.

**Supervisor:** Prof JA van Niekerk

**Co-Supervisor:** Dr CJ Botha

**HLATSHWAYO, Alois Sifelani**

Alois Sifelani Hlatshwayo was born on 2nd February 1961 in the Masvingo Province. He completed his Cambridge School Certificate at Lundi High School in 1979. In 1986, he graduated with a Certificate in Agriculture at Esigodini Agriculture College in Matabeleland South Province and completed a Diploma in Management from the Institute of Personnel Management, UK in 1988. Thereafter he obtained a certificate in Professional Hunting and Guiding in 1998 in Bulawayo. In 2008 he obtained a BSc Agriculture Management Degree from the Zimbabwe Open University and a Master's Degree in Sustainable Agriculture, from the University of Free State in 2017. His professional career started as researcher in 1986 when he was employed as a Research Assistant at Matopos Research Institute. He rose through the ranks until he attained his current position as Chief Research Officer at the Directorate Agricultural Research Innovation and Development, Ministry of Lands, Agriculture, Fisheries, Water and Rural Development.

With his thesis, titled: **ENHANCING PRODUCTIVITY AND RESILIENCE OF SEMI-ARID RANGELANDS OF SOUTHWESTERN ZIMBABWE: A CASE OF ADAPTATION IN EXTENSIVE LIVESTOCK PRODUCTION IN A COMMUNAL AREA**, the candidate contributes to livestock production in semi-arid communal areas by focusing on sustainable rangeland utilization through manual and livestock mediated reseeding of degraded rangelands and fodder production adoption to reduce grazing pressure on the rangelands and allow regeneration of herbaceous plants. Hlatshwayo reseeded semi-arid communal rangelands manually and through livestock and encouraged fodder production adoption to increase fodder availability.



Livestock production is important to food security and livelihoods yet degradation on communal rangelands is threatening its sustainability. The generated knowledge will impact positively on rangeland productivity which in the long run will boost animal off-take from the communal rangelands so that incomes from livestock sales can be used to satisfy family needs such as food, medication, school fees and restocking.

**Supervisor:** Dr P Malan

## **MAKAMANE, Anathi Siphesihle**

Anathi Siphesihle Makamane was born on February 16, 1993, in Cacadu, previously known as Lady Frere. She completed her matriculation at St James Senior Secondary School in Cofimvaba in 2010. Anathi earned her Bachelor's degree in Agricultural Economics in 2015, followed by an Honours degree in Agricultural Economics in 2016, and she completed her Master's degree in Sustainable Agriculture in 2019. All her academic achievements were attained at the University of the Free State.

She started her career in international development organisations and presently holds a position as lecturer at the University of the Free State.

With her thesis, titled: **CAPACITY OF EXTENSION AND ADVISORY SERVICES IN SUPPORTING FARMERS TO ADAPT TO CLIMATE CHANGE IN THE EASTERN CAPE, SOUTH AFRICA**, the researcher contributes to the field of agriculture and climate change by focusing on the nexus between the two. Using a mixed-method design, Makamane sampled 301 respondents, assessing the capacity of extension practitioners to support farmers in climate change adaptation. Extension practitioners play a crucial role in disseminating climate-related information, however, there are notable knowledge gaps due to limited sources and training. To bridge these gaps, capacity-building initiatives are recommended. The study highlights the need to enhance practitioners' improved use of written communication and mass media, along with higher educational levels. The study presents the argument that in order to address climate change and agriculture in the area, there is a need for accessible and effective information sources and communication channels.

**Supervisor:** Prof JW Swanepoel

**Co-Supervisor:** Dr O Loki

## **MATHOBO, David Nndineni**

David Nndineni Mathobo was born on 27 April 1959 at Phiphidi Village in Limpopo. He matriculated at Rambuda High School in 1979. He graduated at the following universities: Fort Hare: B. Agric & HED in 1985; UNISA: B.Ed (cum laude) in 1995; Pretoria: - B.Inst Agrar (Hons) in 2000; UFS: Masters of Sustainable Agriculture in 2015. His career started as a lecturer in 1986 at Tshisimani College of Education, then became a Senior Education Specialist, and later Deputy Chief Education Specialist in Limpopo Department of Education.

With his thesis, titled: **SUSTAINABILITY OF VEGETABLE PRODUCTION SYSTEMS BY SMALL SCALE FARMERS OF LIMPOPO PROVINCE IN SOUTH AFRICA**. The study reveals how vegetables are being produced by small scale farmers. The study also looked at how the production could be improved for sustainability. The study provides knowledge to the Limpopo small scale farmers in terms of vegetable production. It is hoped that the study has sensitised the Government in areas that need intervention in terms of farmer support strategies. Above all, the study is of significant importance in understanding the behaviour of small-scale farmers in the production of vegetables, as well as the sustainable production systems arising from the data collected. Other provinces in South Africa may learn from the results of this study. The study is also contributing to the body of knowledge about vegetable production systems.

**Supervisor:** Dr ND Nthakheni

**Co-Supervisor:** Prof ME Zwane





## **MAVHUNGU**, Tsumbedzo Jutas

Tsumbedzo Mavhungu was born on 26 September 1969 at Fefe Village, Mutale, in the Vhembe District in Limpopo. He matriculated at Ratshilumela High School in 1992 where after he obtained a Diploma in Crop science at Madzivhandila College of Agriculture in 1997. He graduated with a B.Tech in Agricultural Management, specializing in Plant production at UNISA in 2007. He further obtained a Master in Sustainable Agriculture in 2016 at the University of the Free State in 2023. His career as an Agricultural extension practitioner began in 2007 with the Limpopo Provincial Department of Agriculture and Rural Development.

With his thesis, titled: **DEVELOPMENT OF A SUSTAINABLE MODEL FOR IRRIGATED SMALLHOLDER AGRICULTURAL ENTERPRISES IN VHEMBE DISTRICT, LIMPOPO PROVINCE OF SOUTH AFRICA**, the candidate contributes to the characterization of ISAEs in selected areas of the Vhembe District. Selected commodities of field crops on ISAEs were evaluated based on the geophysical attributes (e.g., terrain form and soil), climatic parameter, productivity and profitability of each field crop. He developed a sustainable model, using available natural resources productively and profitably with the intention of increasing household food security and farming effectiveness, sampling 294 ISHAE-WY through using a pragmatic approach. The study revealed a great impact of climatic resources on the suitability of the selected field crops on ISHAEs. The ISHAE's reliance on the informal market makes more profit than the formal market and reaffirm that ISHAEs can also be alternative employment to Women and Youth who remain at home while their counterpart is looking for employment in cities.

**Supervisor:** Prof. AE Nesamvuni

**Co-Supervisor:** Dr KA Tshikolomo

**Co-Supervisor:** Prof NS Mpandeli

**Co-Supervisor:** Prof J van Niekerk

## **MAZIYA**, Mbongeni

Mbongeni Maziya was born in Big Bend in eSwatini (formerly known as Swaziland). He matriculated at Ndumo High School in 2007 and later attained a Bachelor of Agricultural Management in 2011, he was awarded his Bachelor of Agricultural Management Honours in 2012 and obtained his Master of Agriculture (Food Security) at the University of KwaZulu-Natal in 2014. His career began in 2014 as a researcher at the Farmer Support Group at the University of KwaZulu-Natal.

With his thesis, titled: **SMALLHOLDER FARMERS' PERCEPTIONS AND ADAPTATION TO CLIMATE CHANGE: A CASE OF UMKHANYAKUDE DISTRICT IN KWAZULU-NATAL PROVINCE OF SOUTH AFRICA**, the candidate contributes to scholarship on climate change and smallholder farming, focusing on how smallholder farmers perceive and adapt to climate change. Using a mixed-method approach, Mbongeni sampled 400 smallholder farmers in the uMkhanyakude district of KwaZulu-Natal to understand climate change adaptation in the area. The results from his thesis revealed that climate change has eroded the livelihood assets that farmers depend upon to make a living and that farmers were making an effort to adapt to climate change. The results present the argument that climate change perceptions play an important role in climate change adaptation.

**Supervisor:** Prof B Nkonki-Mandleni

**Co-Supervisor:** Prof J van Niekerk

## **NTSIAPANE**, Alina Dimakatso

Alina Dimakatso Ntsiapane was born on 4<sup>th</sup> January 1996 in Kroonstad, Free State, South Africa. She matriculated at Bodibeng High School in 2014. She obtained both her undergraduate degree and honours degree in Agricultural Management with distinctions. She then transitioned to do her Masters and PhD in Sustainable Agriculture. In 2022, she presented her PhD



research to the International Livestock Research Institute (ILRI) Capacity Development Challenge and won this prestigious international competition. Alina was also a member of the UFS Student Representative Committee for 2022/2023.

With her thesis, titled: **SMALLHOLDER WOOL PRODUCTION FOR IMPROVED RURAL LIVELIHOODS IN THABA 'NCHU AND BOTSHABELO IN THE FREE STATE PROVINCE OF SOUTH AFRICA**, the candidate contributes to scholarship on smallholder wool production, focusing on efficiency and profitability of smallholder wool farmers. Using a mixed-methods approach, Alina sampled 351 smallholder wool farmers in Thaba 'Nchu and Botshabelo. The study assessed the efficiency of smallholder wool farming and factors influencing profitability of smallholder wool production in the Free State Province of South Africa. Furthermore, a PESTEL analysis of smallholder wool producers was conducted to determine strategies for improved efficiency. The overall aims were to incorporate an assets-based approach to agriculture in order to empower farmers to help themselves, enhance wool productivity and income for smallholder wool farmers through training, and to develop a model that will help smallholder wool producers to be more efficient and improve their livelihoods.

**Supervisor:** Prof JW Swanepoel

**Co-Supervisor:** Prof E Nesamvuni

## VON MALTITZ, Lindie

Lindie von Maltitz was born in Pietermaritzburg. She obtained her BSc (Agric)(Hons) degree in Agricultural Economics at the UFS in 1998 and started working as an agricultural economist at the FS Department of Agriculture. From 1999-2004, she was employed as operational manager at a fresh produce export company, whereafter she started her own agricultural economic consultancy and completed numerous feasibility studies for an extensive client base. In 2019, she completed her MSc. (Agric) in Agricultural Economics at the UFS and joined the Department of Sustainable Food Systems and Development as a lecturer. In 2022 she was appointed as a lecturer at the Department of Agricultural Economics, UFS.

With the thesis, titled: **SKILLS AND COMPETENCIES OF AGRICULTURAL EXTENSION PROFESSIONALS IN SOUTH AFRICA: IMPLICATIONS FOR HIGHER EDUCATION CURRICULA**, a contribution is made towards improving the skills and competencies of agricultural extension professionals in South Africa through customized higher education. Two different research studies were conducted, and the results used to make recommendations for undergraduate agricultural extension curricula in South Africa. The primary objective of the first study was to determine the skills and competencies that agricultural advisory staff require to function efficiently in the modern-day work environment. The second study examined the suitability of available higher education qualifications available in South Africa in comparison to the desired skills and competencies. The research results culminated in formulating a conceptual framework for agricultural extension curricula that can be applied globally.

**Supervisor:** Prof JA van Niekerk

**Co-Supervisor:** Dr K Davis

## DOCTOR OF PHILOSOPHY MAJORING IN URBAN AND REGIONAL PLANNING

### BINGLE, Rouve Velma

Rouve Bingle was born in Cape Town in 1984. She received her secondary education at the DF Malan High school in 2002. She obtained a B. Agric (Cellar management & Viticulture) degree in 2007 from the University of Stellenbosch and worked in the Cape wine industry while studying Mandarin. Later she undertook postgraduate studies in the Free State with an Hons in Spatial Planning and a Master's in Urban and Regional Planning - both with distinction - and the PhD in Urban and Regional Planning in 2023 at the University of the Free State. She is currently a Postdoc Fellow at Stellenbosch University at the Department of Global Health.



With her thesis, titled: **BIOPHILIC CONSIDERATIONS FOR URBAN PLANNERS: EXPLORING THE PERCEPTIONS OF THE VALUE OF TREES WITHIN THE BUILT ENVIRONMENT IN BLOEMFONTEIN, SOUTH AFRICA**, Rouve explores the historical and significance of urban trees in built environment decision-making in Bloemfontein. She found a complex story informed by past decisions, differing cultural opinions, inequality regarding green spaces, and a scarcity of tree planning and maintenance resources. The study provides a greater understanding of urban nature, expands the contemporary conceptualisation of the built environment, and communal and interdisciplinarity responsibilities of all citizens in city making.

**Supervisor:** Prof VJ Nel

**Co-Supervisor:** Prof MM Campbell

## **BUTHELEZI, Natal**

Natal Buthelezi is a 34-year-old man who matriculated from Mpopoma High School in 2008. He pursued his passion for architecture, earning a Bachelor of Architecture Studies Honours degree in 2014 and subsequently earned a Master's degree in Architecture in 2016. His professional trajectory commenced in 2014 and has since taken him across the SADC region, gaining a wealth of knowledge and experience in various built environment settings. Currently, he is serving in the Public sector with the Eastern Cape Department of Public Works and Infrastructure to improve the lives of disadvantaged communities.

With his thesis, titled: **MORPHOLOGICAL CHARACTERISATION OF INFORMAL SETTLEMENTS AND THEIR ADAPTATION TO NATURAL DISASTERS IN THE FACE OF CLIMATE CHANGE: A CASE STUDY OF THE BUFFALO CITY, SOUTH AFRICA**, the candidate contributes to scholarship on urban and regional planning, providing insight into the vulnerability of the poor to climate change hazards. Underpinned by complex adaptive assemblage theoretical lenses, the research uniquely establishes and evaluates the innovative everyday practices adopted by the residents of Duncan Village informal settlement to adapt and mitigate climate change. The findings highlight a number of flaws in the state's response to natural disasters, which exacerbate the dangerous situations faced by the residents. This underscores the urgency of comprehending how urbanization in Africa deviates from conventional planning models and how climate change hazards are to worsen, presenting nested challenges.

**Supervisor:** Dr AR Matamanda

**Co-Supervisor:** Prof VJ Nel

## **GOLIATH, Michellé Lillian- May**

The candidate was born on 4 August 1967 in Kimberley. She received her secondary education at the Girls' High School in Kimberley. She obtained the BA Fine Arts degree in 1996, and the master's degree in Urban and Regional Planning with distinction in 1998 at the University of the Free State. She started her career in 1987 as a candidate town planner in Kimberley at Rademeyer and Van Wyk and progressed to a professional planner at Macroplan and partner of Plan Proactive. She has been a consultant in international development and held various positions throughout her long career in the private sector.

With her thesis, titled: **URBAN PACIFICATION STRATEGIES AND SOLUTIONS TOWARDS A CONTESTED SPACE THEORY OF ARTISANAL MINING**, the candidate contributes to conflict resolution and urban development. The thesis aimed at providing insights and recommendations to address the challenges posed by artisanal mining in contested urban spaces. The empirical and theoretical findings indicate the value of this intervention in finding solutions to the complexities of urban pacification in artisanal mining contexts. By analysing contested spaces and exploring strategies to mitigate conflicts arising from artisanal mining, the thesis offers pathways toward sustainable development, social stability and conflict resolution. The research deepens understanding of the causes and drivers of conflict associated with artisanal mining, fostering a nuanced approach to urban pacification strategies. The thesis contributes to the discourse on urban development, conflict resolution and





governance of artisanal mining, and provides valuable insights for policymakers and urban planners in creating sustainable, peaceful urban environments.

**Supervisor:** Prof MM Campbell

## **LEBOTO, Lucia**

Lucia Leboto-Khetsi born in 1984, Lesotho. She was among the top 10 matriculants at St Stephens Diocesan High School, 2001. Her BA in Urban and Regional Planning from the National University of Lesotho in 2006 was followed by a Spatial Planning Honours (with distinction) in 2014 and a Masters in Urban and Regional Planning in 2015. Lucia was a Project Manager for community development projects in Lesotho. She has since lectured part-time at the Urban and Regional Planning and the Economics and Finance Departments At the UFS. She has already contributed to several publications.

With her thesis, titled: **BIOPHILIC CONSIDERATIONS FOR URBAN PLANNERS: EXPLORING THE PERCEPTIONS OF THE VALUE OF TREES WITHIN THE BUILT ENVIRONMENT IN BLOEMFONTEIN, SOUTH AFRICA**, explores the historical and significance of urban trees in built environment decision-making in Bloemfontein. She found a complex story informed by past decisions, differing cultural opinions, inequality regarding green spaces, and a scarcity of tree planning and maintenance resources. The study provides a greater understanding of urban nature, expands the contemporary conceptualisation of the built environment, and communal and interdisciplinarity responsibilities of all citizens in city making.

**Supervisor:** Dr A Scheba

## **ZIMUNYA, Willoughby**

Willoughby Zimunya was born in Harare, Zimbabwe on 21 February 1970. He matriculated at Hartzel High School in 1990. He graduated with a BSc Honours degree in Rural and Urban Planning in 1995 and a MSc degree in Rural and Urban Planning in 1997 at the University of Zimbabwe. He started his career as a Town Planner in the Government Department of Spatial Planning and Development, Zimbabwe in 1997. In 2004 he was appointed a Senior Town Planner at the City of Mutare, Zimbabwe until 2016. At present, he is a Lecturer at the University of Zimbabwe.

With his thesis, titled: **A CRITICAL ANALYSIS OF PLANNING AND POLICY FRAMEWORKS IN THE MAPPING OF THE URBAN LIVEABILITY OF MUTARE CITY, ZIMBABWE**, the candidate contributes to scholarship on urban and regional planning, focusing on how planning and policy frameworks contribute to urban liveability in Zimbabwean cities. Using a pragmatic philosophy and mixed methods approach Zimunya sampled 397 participants, in Zimbabwe to understand and explain the nexus between planning, policy, and urban liveability. The study found that urban development in Mutare is being guided by a planning and policy regime that is fairly comparable to other planning systems in other countries. However, it emerged from the study that the planning system in Mutare is not operating efficiently due to factors. The study presents the argument that appropriate planning and policy frameworks remain central to the promotion of urban liveability now and in future.

**Supervisor:** Dr AR Matamanda

**Co-Supervisor:** Prof MM Campbell

**Co-Supervisor:** Prof I Chirisa

## **DOCTOR OF PHILOSOPHY MAJORING IN ZOOLOGY**

### **DE JAGER, Gerhard Pieter**

Gerhard de Jager was born in Bloemfontein in 1978, finishing his secondary education at Grey College. He obtained his BSc and BSc Hons degrees at the UFS before continuing his studies at the University of Cape Town in Applied Marine Science,



also obtaining a BA Mus Hons in Music. After further music studies in orchestral conducting at Northwestern University, Chicago and Sibelius Academy, Helsinki, he returned to the UFS to complete his MSc and PhD in Zoology (Parasitology). During his PhD he received the Marie Curie Actions Doctoral Fellowship, spending time at the Max Planck Institute, Tübingen, Germany and the University of Pisa, Italy.

With his thesis, titled: **TAXONOMIC STUDY OF THE FAMILY URCEOLARIIDAE (CILIOPHORA: PERITRICHIA) FROM MARINE INTERTIDAL INVERTEBRATES, WITH EMPHASIS ON THE SOUTHERN COAST OF SOUTH AFRICA**, the candidate makes a valuable contribution in the field of ciliates. The mobiline family Urceolariidae contains two genera, i.e. *Leiotrocha* and *Polycycla*, found in symbiotic associations with several marine invertebrates. The candidate performed a complete taxonomic review, utilising a “Next Generation Taxonomy” approach where morphology, morphometrics, genetic marker phylogeny and whole genome analyses contributed to laying the foundation for a universal taxonomic protocol for urceolariids. This protocol did not only assist to improve our knowledge of peritrich systematics and their place within the Class Oligohymenophorea, but also led to a novel morphometric system to use for urceolariid morphological analysis, and the description of no less than 11 new species of *Leiotrocha* and *Polycycla* collectively. A total of five publications are planned from this thesis.

**Supervisor:** Prof L Basson

**MODISE, Serero Abiot**

Serero Madise is probably the hardest worker and certainly the most passionate about insects and the environment that we have ever produced within our Zoology department at Qwaqwa. He completed his undergraduate, honours and PhD with us, where he excelled with multiple distinctions academically, and won various awards. He was an active member, mentor, and leader in the Qwaqwa campus community. He was the founder of the Bio-society and represented the UFS on various occasions in community projects. His love for his culture and stewardship towards protecting the environment can be seen throughout all that he does.

With his thesis, titled: **ECOLOGICAL ANALYSIS OF AFROMONTANE GRASSLANDS IN THE EASTERN FREE STATE USING THE BIOTOPE QUALITY INDEX**, the candidate makes a contribution to the study of the impact of environmental disturbance in highland montane grasslands in temperate regions. Grasslands are vulnerable to land transformation, overgrazing, habitat fragmentation, soil erosion, fires, and plant invasion, threatening conservation efforts. His study utilises the Biotope Quality Index (BQI) to assess disturbance effects on Afromontane grassland vegetation types, including the Sandy Eastern Free State, Basotho Montane Shrubland, and North Drakensberg Highlands Drakensberg Grasslands within the Golden Gate Highlands National Park. It also introduces the Biotope Conservation Status (BCS) to complement BQI in evaluating conservation areas. The study recommends BQI and BCS as surrogates for biomonitoring, effectively highlighting the impact of environmental disturbances on plant communities and arthropod assemblages in these sensitive ecosystems. This research provides valuable insights for conservation management and environmental monitoring.

**Supervisor:** Dr E Bredenhand

**Co-Supervisor:** Dr M Stander

**Co-Supervisor:** Dr AR Rakotoarivelo

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN CONSERVATION BIOLOGY

**KOMAKECH, Christopher Otim**

Christopher Komakech was born on 23<sup>rd</sup> December 1969 in Gulu Uganda. He completed his Ordinary level at Busoga High School Kamuli in 1988, Advanced level in St. Mary's College Kisubi in 1991. Graduated with a BSc Forestry from Makerere



University, Kampala in 1997 and MSc Plant Genetics from UKZN, in 2009. Worked as a research Assistant with SAPPI in 1998 and joined the ICFR as a research technician. He joined Mondi Tree Breeding Program in 2006 and later, 2007, joined the CSIR as a Tree Breeder. Appointed Director of Genetic Resources in Tanzania from 2014. Consultant for Tree Breeding in Africa since 2019.

With his thesis, titled: **ECONOMICALLY VIABLE EUCALYPTUS SPECIES AND HYBRID CLONES FOR COMMERCIAL AFFORESTATION OF MINED SAND DUNES IN THE RICHARDS BAY AREA OF KWAZULU-NATAL**, the candidate contributes data to support the economically sustainable use of mined sand dunes. This study sought to identify tree species genotypes that are suitable for deployment on the mined sand dunes as alternatives to *Casuarina equisetifolia*. Four trials were established in an alpha lattice design on the mined sand dunes to test 70 genotypes of *Eucalyptus* species and hybrids, and related species, over a 6-year period. The results identified two suitable genotype groups namely *E. grandis* and *E. urophylla* (GxU) as well as *E. grandis* and *E. camaldulensis* (GxU). The knowledge obtained during this study will facilitate the rehabilitation of the mined sand dunes in the Richards Bay area and, in addition, will also help local communities in gaining access to markets and becoming economically viable.

**Supervisor:** Prof A Fossey

**Co-Supervisor:** Prof JP Grobler





ACTING-DEAN |

PROF DF TOLMIE

## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY

**LAM, Judy Elise**

Judy Lam was born on 20 December 1959 in Port Elizabeth. She matriculated at the Johannesburg Chinese Kuo Ting School in 1977. She obtained Diplomas in Theology and Mission from Rosebank Bible College, Johannesburg, in 1978, 1979, and 1985. She graduated with a B.A. degree from UNISA in 1992; a Postgraduate Diploma in Spiritual Direction from Tao Fong Shan Christian Centre, Hong Kong, in 2006, and a M.Th. in Christian Spirituality, cum laude, from UNISA, in 2012. Her current ministry as a Christian professional in Hong Kong began in 1992 with OMF International. She is also a Research Fellow of the University of the Free State, in the Faculty of Theology and Religion.

With her thesis, titled: **UNION AND COMMUNION: THE MYSTICAL SPIRITUALITY OF JAMES HUDSON TAYLOR (1832-1905)**, the candidate sheds new light on his life and work as the founder of the *China Inland Mission (CIM)* in 1865. She brings into focus the mystical insights in Hudson Taylor's own life and in his many writings, in particular '*Union and communion*', his devotional commentary of the Song of Songs, published in 1894. Her research brings to the fore the link between his mystical and missionary spirituality and suggests that Taylor be re-visited as a 'Protestant mystic cum missionary'. With this research, the candidate has contributed to a greater understanding of the life and spirituality of the founder of the *CIM* (now re-named '*OMF International*') and his significant contribution to soul care in contemporary Protestant missionary spirituality.

**Supervisor:** Prof C Kourie

**Co-Supervisor:** Dr W Chow

**MOKONE, Puseletso Clementinah**

Puseletso Clementinah Mokone was born on a farm in Bothaville on 6 March 1956. She received her secondary education at Tweespruit where she matriculated at Mariasdal GHS in 1980. She graduated with a B.A. degree in Sociology and Theology in 1985, followed by a PGCE with distinction at the National University of Lesotho in 1986. She obtained a Master of Philosophy degree at St. Augustine College of South Africa in 2010. During her teaching career, she represented Africa with her religious education learners in Rome at the Evangelisation 2000 conference, presenting the life of Blessed Joseph Gerard OMI, a missionary to Lesotho in 1862.

Her thesis, titled: **RETHINKING THE PRIESTLY FORMATION OF ST JOHN VIANNEY SEMINARY: A CRITICAL PRACTICAL THEOLOGICAL ANALYSIS** was inspired by the lack of participation of the laity in evangelisation and involvement in the transformation of society, even though South Africans are said to be Christians. The same people in society are members of the Church and yet society is infested by corruption, crime, poverty, unemployment, discrimination, and injustices. This research aimed to determine what prevents parish priests from fulfilling their mandate to serve the laity by forming them to be missionary disciples within society in answer to their call to be followers of Christ. For the Church to be true to her nature, this research proposes that the Church should rethink her ministerial priesthood formation and form spiritual servant leadership



that will bring about deep change in faith formation to meet the needs of all her members on all levels to participate in *missio Dei* and *missio Ecclesia* within the South African context.

**Supervisor:** Dr KJ Pali

## **STRAUSS, Lodewyk Johannes**

Lodewyk Johannes Strauss was born in eMalahleni, formerly Witbank, in Mpumalnga on 12 July 1962. He matriculated at the Point High School in Mossel Bay in 1980. He obtained the degrees BA with distinction (1984); BD with distinction (1987); BA Honours in Philosophy (1988); and an MTh in Church History (2002) at the University of Pretoria. He was ordained in 1987 and has served since as a minister of religion in the Netherdutch Reformed Church of Africa. Currently he is pastoring a congregation in Koster, North-West Province.

With his thesis, titled: **DIE HERKOMS EN JEUG VAN HCM FOURIE (1882-1939). 'N KERKHISTORIESE STUDIE**, the candidate contributes to scholarship on Dr HCM Fourie, focusing on the first two decades of this remarkable translator of the Bible into Afrikaans and first-generation, early 20th-century anthropologist. Based on a thorough historical-critical and genealogical study of primary sources, the research describes Fourie as an exponent of children who were educated in the classical tradition at institutions in Pretoria and in Zwolle, the Netherlands. He took part in the South African War (1899-1902). The letters written by his mother during the war cast significant light on the role, experience, and suffering of a woman who had to take care of a farm and children. The study presents the foundation for research of a key role player in the development of Afrikaner intellectual and theological history.

**Supervisor:** Prof RM Britz

## **DOCTOR OF PHILOSOPHY IN THEOLOGY WITH SPECIALISATION IN PRACTICAL THEOLOGY**

### **MOYO, Masauso**

Masauso Moyo was born in Lundazi, Zambia on 14 March 1974. He received his secondary education in Petauke, where he matriculated from the Petauke Boarding Secondary School in 1991. He obtained the Bachelor of Theology degree from Justo Mwale University in 2000, the Master of Theology degree with distinction in 2015. He started his career as Pastor in Chipata in 2001. In 2009, he was appointed as the National Youth Desk Coordinator. At present, he is Pastor of the Reformed Church in Zambia.

With his thesis, titled: **CHRISTIAN FAITH FORMATION AND CULTURE: A THEOLOGICAL STUDY OF THE NSENGA PEOPLE**, the candidate contributes to Practical Theology, especially the field of Christian faith formation within the African cultural context. With this contribution, he attempts to address the problem of the antagonistic dichotomy between the seemingly antithetical Christian faith and African culture. Using the qualitative method and ethnography approaches, the candidate theologically studied the Nsenga people through observation and oral interviews with seven sampled leaders of the Reformed Church in Zambia and seven traditional leaders in Nsengaland. He recommends a responsible hermeneutics of the Bible, culture and church faith traditions with, for and by the Nsenga people as the means to form authentic Christian faith that would resolve the antagonistic dichotomy between Christianity and culture.

**Supervisor:** Dr KJ Pali

### **WILLIAMS, Sicelo James**

James Williams was born on 6 July 1968 in De Aar, in the Northern Cape, South Africa. He matriculated at Monwabisi Secondary School in 1988, and later obtained a Diploma in Personal Ministry from Griggs University in 2002. He graduated



with a B.Th. degree at Helderberg College in 2006, and a Master of Arts in Leadership at the Adventist University of Africa in 2016. His ministry career began in 1993 when he worked as a missionary, and he became a pastor in 2007 when he presided over churches in Uitenhage, Khayelitsha, and Kimberley in South Africa.

With his thesis, titled: **A MISSIOLOGICAL ANALYSIS OF STRATEGIES OF THE SEVENTH-DAY ADVENTIST CHURCH MISSIONARIES IN SOUTH AFRICA**, the candidate contributes to scholarship in the analysis of the activities and strategies of the SDA missionaries in South Africa. Using a literature review as methodology, James Williams sampled three mission stations where the archives and selected books were accessed to analyze the missionary activities of the SDA missionaries at these stations. The study found that the strategies were marked by evils such as racism, militant sectarianism, and blind support of oppressive economic and political systems. The missionary strategies had not been contextualized to fit in with the local situation of the African people. The missionary strategies had focused only on the teachings of the Bible and failed to address issues of human dignity and social justice. The SDA missionary strategies were Eurocentric and failed to consider the local cultures of the African people.

**Supervisor:** Prof E Baron

**Co-Supervisor:** Dr KJ Pali

## DOCTOR OF PHILOSOPHY IN THEOLOGY WITH SPECIALISATION IN RELIGION STUDIES

**MOKHUTSO, Jacob**

Jacob Mokhutso was born in Mabeskraal, in the North-West province, on 28 December 1981. He received his secondary education in Selamodi Middle School, before moving to Tshepagalang Secondary School in Letlhabile, Brits, where he matriculated in 2000. He obtained the degree Bachelor of Theology in 2008; the Honours degree in Christian Spirituality 2011; the Master's degree in 2019, and a PhD in Religion Studies in 2023 from the University of the Free State. He started his career as an ordained minister in Soweto in 2005. In 2021, he was appointed in the Department of Religion Studies, and is presently a lecturer at the University of the Free State.

His thesis, titled: **THE AFRICAN TRADITIONAL PHILOSOPHY OF COMMUNITY AS THE ENABLER OR DISABLER OF THE CHRISTIAN FAITH**, examines the African traditional philosophy of community with reference to the concept of Ubuntu/Botho, in order to establish whether this philosophy is the enabler or the disabler of the Christian faith. The study focuses on young adults within the three mainline churches in Mamelodi, Tshwane Metro, in Gauteng. The research shows that the African traditional philosophy of community can serve as both the enabler and the disabler of the Christian faith, depending on the relative dynamics of the family involved.

**Supervisor:** Prof J Mokhoathi

## DOCTOR OF PHILOSOPHY IN THEOLOGY WITH SPECIALISATION IN SYSTEMATIC THEOLOGY

**SEBEGO, Tebogo Zakia**

Mr Sebego is a Minister in the Uniting Reformed Church in Southern Africa. He is also a Senior Social Scientist with expertise in Social Research and Resettlement Planning. He serves on the panel of expert advisors for the Trans-Caledon Tunnel Authority on Resettlement and Livelihood Restoration as well as Social Risk and Impact Assessment. He served on the panel





of Social Facilitators for the Development Bank of Southern Africa. He is a member of the International Association for Impact Assessment, International Association for Public Participation and Association of Social Engagement Facilitators of Southern Africa. He is registered with the South African Council for Educators.

With his thesis, titled: **AFRICAN LOCAL COMMUNITIES AND THE BENEFIT-SHARING AGREEMENTS ON BIOPROSPECTING: AN ETHICAL STUDY**, his study engages in an ethical analysis of the exploitation of traditional knowledge holders by pharmaceutical and commercial industries in the process of bioprospecting. These traditional knowledge holders, being African indigenous people, are denied recognition as custodians of traditional knowledge of genetic resources. They are also denied equitable access, just beneficiation and benefit-sharing rights for sustainable bioprospecting. Their sacred interconnectedness to natural resources and God is affected. Four case studies were used to illustrate how commercial industries claim genetic resources as their intellectual property. A sustainable, bioprospecting benefit-sharing model based on African spirituality and the African ethical principles of *Ubuntu*, humanity, and justice is proposed. The model draws attention to the Convention on Biological Diversity and the Nagoya Protocol. The study concludes that traditional knowledge of genetic resources will continue to be crucial for bioprospecting, and by recognising its value, new knowledge about the exploitation of genetic resources may be generated.

**Supervisor:** Dr EA Fortein

# THE SEANAMARENA THE TRADITIONAL BASOTHO BLANKET

The Main Procession Graduation Gowns – embroidered with rich diversity



South Africa, and the Free State in particular, has a long-standing friendship with our neighbouring country, Lesotho.

Through a shared history, we have become co-creators of our futures. For this reason, the UFS decided to incorporate our tradition with that of the Basotho in the design of our Main Procession graduation gowns.

The gowns are inspired by the Seanamarena – the traditional Basotho blanket. The different patterns on the Seanamarena indicate the status one holds in the Basotho nation or reflect the occasion being celebrated. Keeping the Seanamarena pattern in mind, we combined our traditional academic designs with that of the Basotho nation.

## YOKE PATTERNS

### Yoke pattern for the Chancellor and Vice-Chancellor



This Seanamarena pattern is an interpretation of a design used exclusively for the king and chiefs – which means ‘to swear by the king’. This blanket has the highest status of all Basotho blankets.

### Yoke pattern for the Chairperson of the Council



This Seanamarena Victorian crest motif appeared after the visit of the Prince of Wales to Lesotho in 1925, which made a profound impression on the local people. Customers refer to this blanket as ‘lesiba’ – meaning feathers – when buying it.

### Yoke pattern for the Deputy Vice-Chancellor



This Seanamarena Poone design symbolises good crops, wealth, and fertility. The Poone is given as a present to honour an important visitor.


### Yoke pattern for Registrar



The same Seanamarena Poone design used for the Deputy Vice-Chancellor applies to the Registrar, with some slight design and colour alterations.

The Deans wear gowns made in the colours of the faculties, or others which indicate the office they hold.





# 2023

## #UFSAlumni #UFSGrad

# CONGRATULATIONS CLASS OF 2023

Congratulations on your graduation! This officially makes you alumni of the University of the Free State. We are very proud of your achievements, excited to see what your future holds, and to connect with you in the bright future ahead of you!

### KEEPING YOU INFORMED

Alumni are a real measure of a university's brand, and we strive to keep you informed of the latest news, campaigns, events, reunions, and projects emerging from the UFS. Stay connected by keeping an eye on our website, Facebook and LinkedIn pages, and email.

Through us, you are not just staying connected with the UFS, but also with other alumni. Let us connect you with alumni globally and reconnect with former peers.

### KEEPING YOU CONNECTED

Not only do we want to keep you connected with what is happening at your alma mater, we want to keep on celebrating you too!

Make sure that you update your details every year in one of the following ways:

- Online at [www.ufs.ac.za/alumni](http://www.ufs.ac.za/alumni)
- Email us at [alumni@ufs.ac.za](mailto:alumni@ufs.ac.za)
- [www.facebook.com/UFS.Alumni](http://www.facebook.com/UFS.Alumni)
- [www.linkedin.com/school u-f-s](http://www.linkedin.com/school/u-f-s)

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