



# October 2020

## GRADUATION CEREMONY BLOEMFONTEIN CAMPUS

Faculties of Economic and Management Sciences, Education,  
Health Sciences, The Humanities, Law, Natural and Agricultural Sciences  
and Theology and Religion

Master's and Doctoral Degrees

**FRIDAY, 9 OCTOBER 2020 | 10:00**



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



## PROGRAMME

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### BLOEMFONTEIN CAMPUS

#### CONSTITUTION OF THE CONGREGATION

Chancellor: Prof B Mohale

#### OFFICIAL WELCOME

Rector and Vice-Chancellor: Prof FW Petersen

#### PRESENTATION OF CANDIDATES

Vice- Rector: Research, Innovation and Internationalisation: Prof RC Witthuhn

#### CONGRATULATORY MESSAGE

Chancellor: Prof B Mohale

#### DISSOLUTION OF CONGREGATION

Chancellor: Prof B Mohale

9 OCTOBER 2020



# NATIONAL ANTHEM OF SOUTH AFRICA

## Nkosi sikelel' iAfrika

Maluphakanyisw' uphondo lwayo,  
Yizwa imithandazo yethu,  
Nkosi sikelela, thina lusapho lwayo.  
Morena boloka setjhaba sa heso,  
O fedise dintwa le matshwenyeho,  
O se boloke, O se boloke setjhaba sa heso,  
Setjhaba sa South Afrika -  
South Afrika.  
Uit die blou van onse hemel,  
Uit die diepte van ons see,  
Oor ons ewige gebergtes,  
Waar die kranse antwoord gee,  
Sounds the call to come together,  
And united we shall stand,  
Let us live and strive for freedom,  
In South Africa our land.

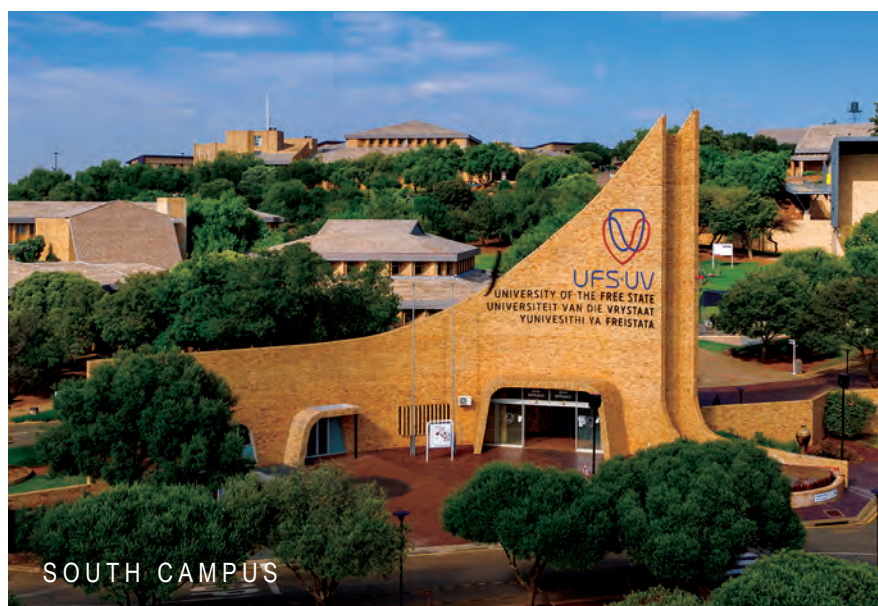


## ABOUT THE UFS

The University of the Free State (UFS) is one of the oldest institutions of higher education in South Africa. It opened its doors in 1904 in Bloemfontein as the Grey University College, with six students in the Humanities. Since then, the institution has grown to more than 40 000 students, spread over three campuses and across seven faculties (Economic and Management Sciences, Education, Health Sciences, the Humanities, Law, Natural and Agricultural Sciences, Theology and Religion).

Most of the students are located on the Bloemfontein Campus, with the Qwaqwa Campus situated in the picturesque Eastern Free State, serving a rapidly-growing number of rural students from the immediate area and surrounding provinces. The South Campus – also situated in Bloemfontein – serves as the centre for distance-learning programmes offered by the UFS, as well as alternative access to higher education for promising students who have not obtained the required marks in their final school examinations.

Over the years, the university has grown into an education hub which has positioned itself on the global stage, promoting research excellence, with exceptionally talented scholars and students who are recognised the world over, as well as alumni who have grown into influential leaders in society.





# DEVELOPMENT OF THE UFS CREST OVER MORE THAN A CENTURY



1904

Up to 1935, the same coat of arms was used as the Grey College School.



1935

By 1935, with the name change to University College of the Orange Free State, the coat of arms fell into disuse, especially among students.



1947

In 1947, an agreement between management and students led to the new motto *Per Fidem ad Sapientiam* (Through faith to wisdom).



1950

In 1952, it was changed to *In Deo Sapientiae Lux* (In God is the light of wisdom). The traditional orange, white and blue, linking the UFS to the South African national colours, changed in the late 1990s.

The orange was replaced by cherry red.



2011

The academic brand - the historic University of the Free State crest that has been the symbol of the university since 1952, has evolved to embrace the aesthetic expectations of the stakeholders. The shape of the traditional academic shield has been simplified and contemporised. Much of the symbolism of the crest remains intact, acknowledging the location of the UFS brand as one of the country's premier institutions of higher education, with a proud history of academic excellence and an ever evolving, vibrant culture.

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



# GRADUATION CEREMONY 2019

## Honorary Awards | Honorary Doctorates

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

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

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



# MESSAGE FROM THE RECTOR AND VICE-CHANCELLOR

Dear Student

**C**ongratulations to our newest alumni, the Class of 2019! Today is a memorable day and a culmination of the time you spent here at the University of the Free State (UFS).

You are not only becoming an alumnus of this great 116-year-old institution, but you are now also part of a fraternity of exceptional individuals who have graduated before you.

Our alumni include educators, health professionals, scientists, entrepreneurs, agriculturists, artists, humanitarians, legal professionals, clergy, sportsmen and women, etc., who contribute to the welfare and growth of so many people in our beautiful country and beyond.

Graduation is a time to recognise the completion of a study programme and to celebrate a beginning, the commencing of a new chapter in your life. It is a time to embrace new opportunities.

You have accomplished much, and you have even greater potential than when you started your studies at Kovsies. Your newly acquired education will serve you well throughout your life, and the friendships and memories you have made here are something I hope you will return to often.

This is a significant day for all of us who have been involved in the lives of our graduates. For us – and for your fellow students, friends, and loved ones, this is a time to celebrate and acknowledge your accomplishments, and to bless you with our confidence and hope as you embark on the next stage of your journey.

May you look back with a sense of pride, knowing that you possess the required knowledge and skills to build and succeed in your chosen career.

The UFS is, after all, a place that inspires excellence and transforms lives.

Best wishes

PROF FW PETERSEN

RECTOR AND VICE-CHANCELLOR | UNIVERSITY OF THE FREE STATE

## Beste Student

**B**aie geluk aan ons nuutste alumni, die Klas van 2019! Vandag is 'n onvergeetlike dag en die hoogtepunt van die tyd wat jy hier aan die Universiteit van die Vrystaat (UV) deurgebring het.

Jy word nie net 'n alumnus van hierdie wonderlike 116-jaar-oue instelling nie, maar jy is nou ook deel van 'n gemeenskap van uitsonderlike individue wat voor jou gegradueer het.

Onder ons alumni is daar opvoeders, gesondheidswerkers, wetenskaplikes, entrepreneurs, landboukundiges, kunstenaars, filantropie, regslui, geestelikes, sportmanne en -vroue, ens., wat tot die welsyn en groei van so baie mense in ons pragtige land en verder bygedra het.

Gradeplegtigheid is 'n tyd om erkenning te gee aan die voltooiing van 'n studieprogram en om 'n nuwe begin te vier – die aanvang van 'n nuwe hoofstuk in jou lewe. Dit is 'n tyd om nuwe geleenthede aan te gryp.

Jy het baie bereik en jy het selfs groter potensiaal as toe jy met jou studies by Kovsies begin het. Jou nuut verworwe opvoeding sal jou goed te staan kom deur jou hele lewe, en die vriendskappe en herinneringe wat jy hier gemaak het, is iets waarna ek hoop jy gereeld sal terugkeer.

Dit is 'n belangrike dag vir ons almal wat in ons graduandi se lewens betrokke was. Vir ons – en vir jou medestudente, vriende en geliefdes, is dit 'n tyd om jou prestasies te erken en te vier en om jou te seën met ons hoop en vertroue terwyl jy die volgende stadium van jou reis begin.

Mag jy terugkyk met 'n gevoel van trots en met die wete dat jy oor die nodige kennis en vaardighede beskik om jou gekose loopbaan te bou en 'n sukses daarvan te maak.

Die UV is immers 'n plek wat uitnemendheid inspireer en lewens verander.

Beste wense

PROF FW PETERSEN

REKTOR EN VISEKANSLIER | UNIVERSITEIT VAN DIE VRYSTAAT



## Moithuti ya Ratehang

**R**e a o lebohisa ho ba alumni ya rona e ntjha-ntjha, Tlase ya 2019! Kajeno ke letsatsi leo o tla le hopola le ho fihla sehlohlolong sa nako eo o e qetileng mona University of the Free State (UFS).

Ha se feela hore o ba Alumni ya Setheo sena se sehlo sa Thuto, se qetileng dilemo tse 116, o bile o karoloya mokgatlo wa batho ba kgethehileng ba atlehileng pele ho wena.

Di-alumni tsa rona di kenyeletsa barupelli, diprofeshenale tsa bophelo, ditsebi tsa saense, borakgwebo, ditsebi tsa temo, batshwantshisi, basebeletsi ba setjhaba, diprofeshenale tsa molao, baruti, dibapadi tsa banna le tsa basadi, jj., ba tlatsatsang boiketlong le kgolong ya batho ba bang naheng ena ya rona e ntle le ka nqane ho meedi ya naha.

Graduation ke nako ya ho leboha sephetho sa lenaneo la thuto le ho keteka qalo, le tshimoloho ya kgaolo e ntjha bophelong ba lona. Ke nako ya ho tshwara ka diatla tse pedi menyella e metjha.

O fihleletse dintho tse ngata haholo, mme o na le tebello e kgolo haholwanyane ho feta ha o ne o qala dithuto tsa hao mona Kovsies. Thuto eo o sa tswa e fumana e tla o sebeletsa hantle bophelong bohle ba hao, mme maqhama a botswalle le mehopolole e metle eo o e entseng mona ke tse ding tsa dintho tseo ke tshepang hore o tla dula o di hopola.

Lena ke letsatsi la bohlokwa bakeng sa rona kaofela ba ileng ba ameha bophelo ba di-graduate tsa rona. Bakeng sa rona mona – le bakeng sa baithuti-mmoho le wena, metswalle, le baratuwa ba hao, ena ke nako ya ho keteka le ho leboha ka kamohelo diphilhello tsa hao, le ho o hlolonolofatsa ka tshepo ya rona jwalo ka ha o kena leetong la hao la mokgahlelo o latelang wa tsela ya hao.

E se e ka ha o hetla morao o ke ikutiwa o le motlotlo, o tseba hore o fumane tsebo le bokgoni bakeng sa ho hahla le ho atleha mosebetsing oo o o kgethileng.

Sa bohlokwa ka ho fetisisa, UFS ke sebaka se susumetsang tshebetso e ipabolang le ho fetola bophelo.

Ke le lakaletsa dintho tse molemo ka ho fetisisa

PROF FW PETERSEN

REKTOR AND VICE-CHANCELLOR | UNIVERSITY OF THE FREE STATE

## VISION

The University of the Free State is 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.

## MOTTO

IN VERITATE SAPIENTIAE LUX

(In Truth is the Light of Wisdom)



# OFFICE BEARERS



CHANCELLOR  
Prof B Mohale  
Professor of Practice (JBS)



RECTOR AND  
VICE-CHANCELLOR  
Prof FW Petersen  
PhD (SU)



CHAIR OF COUNCIL  
Dr W Louw  
PhD (SU)



VICE-RECTOR:  
INSTITUTIONAL CHANGE,  
STUDENT AFFAIRS  
AND COMMUNITY  
ENGAGEMENT  
Prof P LenkaBula  
PhD (UNISA)



VICE RECTOR:  
OPERATIONS  
Prof P Naidoo  
PhD (VISTA)



VICE-RECTOR:  
ACADEMIC  
Dr EL van Staden  
DPhil (UJ)



VICE-RECTOR:  
RESEARCH  
Prof RC Witthuhn  
PhD (UFS)



REGISTRAR:  
Mr NN Ntsababa  
MPA (NMU)



CAMPUS PRINCIPAL:  
SOUTH CAMPUS  
Dr M Madioppe  
DEd (Unisa)



CAMPUS PRINCIPAL:  
QWAQWA  
Dr M Mandew  
PhD (UN)



PRESIDENT OF  
CONVOCATION  
Dr PD du Toit  
PhD (UFS)



PRESIDENT: STUDENT  
REPRESENTATIVE  
COUNCIL  
Mr MKB Lechoo





## DEANS



DEAN:  
ECONOMIC AND  
MANAGEMENT SCIENCES

Prof HJ Kroukamp  
DPhil (UPE)



DEAN:  
EDUCATION

Prof LC Jita  
PhD (MSU)



DEAN:  
HEALTH SCIENCES

Prof GJ van Zyl  
PhD (UFS)



DEAN:  
THE HUMANITIES

Prof H Hudson  
PhD (UFS)



DEAN:  
LAW

Prof JC Mubangizi  
LLD (UDW)



DEAN:  
NATURAL AND  
AGRICULTURAL SCIENCES

Prof PD Vermeulen  
PhD (UFS)



DEAN:  
THEOLOGY AND RELIGION

Prof RS Letšosa  
PhD (PU/CHE)



DEAN: STUDENT AFFAIRS

Mr P Mgolombane  
MA (WU)



## GUEST SPEAKER

### PROF BONANG MOHALE

(Professor of Practice, JBS)



A Professor of Practice at the

Johannesburg Business School's College of Business and Economics, and Chairman of the Bidvest Group Limited, Prof Mohale is a published author and respected business leader

who has held chairmanships and directorships at some of South Africa's top companies. He currently serves on the boards of Swiss Re Africa Limited, Rand Merchant Bank Limited (RMB), the Automobile Association of South Africa, and SBV.

Prof Mohale was former Chief Executive Officer of Business Leadership South Africa (BLSA). In 2001, he received the President's Award for his servanthood in South African industry, and in 2019 the Free Market Foundation's Luminary Award.

Prior to joining BLSA, Prof Mohale was the Chairman of Shell Downstream South Africa (Pty) Limited, and Vice-President of Shell Upstream.

He also served as Chairman of the Southern African Netherlands Chamber of Commerce, the Marketing Association of South Africa, the Institute of Marketing Management, and as Deputy Chairman of the national Heart Foundation. Prof Mohale also held directorships at the Airports Company South Africa, Sanlam, and the Tourism Business Council of South Africa, and was the Managing Director of Otis Elevators: Africa.

Prof Mohale is the author of the book, *Lift As You Rise*.

#### PLEASE NOTE

List of candidates receiving degrees, diplomas and certificates:

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



DEAN |  
**PROF HJ KROUKAMP**

## MASTER'S DEGREES

### MASTER OF ACCOUNTING

SERFONTEIN, Carla\*

**Dissertation Title:** FINANCIAL  
VIABILITY OF COSTING  
TEACHING MODULES AT A  
SOUTH AFRICAN UNIVERSITY

**Supervisor:** Dr C Crous

**Co-Supervisor:** Prof AVA Smit

### MASTER OF BUSINESS ADMINISTRATION

CHALATSE, Malori Jeminah

GOVENDER, Vaneetha

KOK, Joelene\*

KUKAME, Mamorena Gladys  
Mamokupo

KWENANE, Itumeleng Elliot

MASINDE, Euphraith Muthoni Ireri

MATSOETLANE, Thabang

MOJAJE, Thabang

MOKHATI, Lehlomela Leonard

MUSGRAVE, Sarah

THAELE, Nthako

TSIMONG, Tsepo Abner

VAN DER LINDE, Lourens

### MASTER OF COMMERCE WITH SPECIALISATION IN ADVANCED BUSINESS

GWILI, Maletsatsi Thatohatsi

### MASTER OF COMMERCE WITH SPECIALISATION IN BUSINESS MANAGEMENT

PIENAAR, Jacobus Johannes

**Dissertation Title:** FACTORS  
INFLUENCING CUSTOMERS'  
INTENTION TO COMPLAIN  
DIRECTLY TO A FIRM, USING  
FACEBOOK

**Supervisor:** Prof J Nel

**Co-Supervisor:** Dr W Vermeulen

### MASTER OF COMMERCE WITH SPECIALISATION IN COMPUTER INFORMATION TECHNOLOGY

LONERGAN, Marie Ad  lle\*

**Dissertation Title:**  
INVESTIGATING THE USABILITY  
AND USER EXPERIENCE  
OF A TRADITIONAL PAPER-  
BASED ASSESSMENT AND  
A COMPUTER GAME-BASED  
ASSESSMENT METHOD  
IN UNDERSTANDING  
ASSESSMENT QUESTIONS

**Supervisor:** Dr L de Wet

**Co-Supervisor:** Dr AJ Burger

### MASTER OF COMMERCE WITH SPECIALISATION IN ECONOMICS

BADENHORST, Erasmus  
Stephanus

CHISHAKA, Milton

VAN DEN BERG, Dewald Jacobus

VAN DR  NICK, Armand

VORSTER, Monja

### MASTER OF COMMERCE WITH SPECIALISATION IN INDUSTRIAL PSYCHOLOGY

CHIKOBVU, Pardon

DE ABREU, Natalia

DE WIT, Jacobus

ENGELBRECHT, Cee-Ja

JACOBS, Anel

MOTLHABANE, Gloria Kgalalelo

**Dissertation Title:** THE EFFECT  
OF TRANSFORMATIONAL  
LEADERSHIP AND  
PERSONALITY ON EMPLOYEES'  
WORK ENGAGEMENT IN A  
CONSUMER GOODS COMPANY

**Supervisor:** Prof ES van Zyl

**Co-supervisor:** Prof P Nel

VERMEULEN, Madr  \*

### MASTER OF COMMERCE WITH SPECIALISATION IN TAXATION

CUCCIOLILLO, Doria Maria





**Dissertation Title:** BOOK TAX  
DIFFERENCES OF ENTITIES  
APPLYING THE IFRS FOR SMES

**Supervisor:** Prof AD Koekemoer

**Co-supervisor:** Prof J Rossouw

**MASTER OF DEVELOPMENT  
STUDIES**

ADAM, Julia

ADELEKE, Moriam Oluwakemi

CHUENE, Thabo Moalenaga

DIPHALANE, Anneroy Resolofetse

HATUTALE, Gabriel Kamanya

HLOJENG, Tsepo Damase

HUNGI, Kahorere Daryl

KEGAKILWE-PIKI, Lorato  
Veronica\*

MORAHANYE, Mokhabelane

NAMBALA, Josephina Pombili\*

NCUBE, Outracy

NDLELA, Yvonne Zukiswa

NZIMA, Isaiah

VISAGIE, Annelize

## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN BUSINESS ADMINISTRATION

**BISSCHOFF, Zelda Salomé**

Zelda Bisschoff was born on 1 November 1964 in Ladysmith, Kwa-Zulu Natal. She matriculated at the Touwsrivier High School in 1982. She attained a Bachelor of Commerce in Accountancy and Industrial Psychology at the University of South Africa in 1996. She proceeded with a Bachelors of Commerce Honours in Accountancy in 2000. In 2011, she graduated with a Master in Business Administration at the University of Stellenbosch and received a distinction for her research project.

With her thesis, **A SOFT SKILLS COMPETENCY FRAMEWORK FOR THE ENHANCEMENT OF INTERN EMPLOYABILITY WITHIN ESKOM**, the candidate developed a soft skills competency framework. The literature review identified constructs that would render soft skill employability of graduates through the lens of the Fourth Industrial Revolution. A pragmatic research paradigm with a concurrent transformative mixed-methods design was selected to investigate the research problem. The results of the investigation indicate 15 primary soft skills with 22 secondary soft skills representing 214 soft skill competency behaviours. Confirmation was found that graduate employability can be enhanced by (i) graduate employability capital, which, when (ii) facilitated by emotional and social intelligence practices within work-integrated learning opportunities, will (iii) render soft skill competence. The study contributes to the theoretical and empirical knowledge of employability capital knowledge.

**Promoter:** Dr L Massyn



## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN BUSINESS ADMINISTRATION

**NKHOLISE, Wetsi**

Wetsi Nkholise completed his secondary education in Lesotho where he matriculated from Lesotho High School in 1999. He went on to obtain a National Diploma (2006), Mechanical Engineering and Certificate in Project Management (2008) and Baccalaureus Technologiae (2009) from the Nelson Mandela University in addition to a Master's in Business Administration from the Tshwane University of Technology (2015).

With his thesis, **COMMERCIALISATION OF MERINO SHEEP FARMING BY EMERGING FARMERS IN LESOTHO**, the candidate developed an in-depth understanding of the constraints faced by commercialising emerging Merino sheep farmers in Lesotho. This is imperative to develop a strategic and tactical support framework for commercialisation to meet the research objectives. The findings revealed that the potential benefits of the commercialisation contributed towards the development of the proposed support framework including innovative options to facilitate commercialisation for inclusive agricultural growth in Lesotho. Addressing prevailing constraints in this research area could enhance market participation for inclusive economic and agricultural growth in rural Lesotho.

**Promoter:** Dr DB Strydom

**Co-Promoter:** Dr JW Swanepoel

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN DEVELOPMENT STUDIES

**SESELE, Kentse Berryl**

Sesele started her working career at the CSIR and later joined the South African Housing Trust, as a junior researcher. She also worked as an environmental planner for the Natal Parks Board and Portnet, as the Planning and Development Manager for the Port of Durban and the regional general manager of the IDT in Gauteng. She was also Special Advisor to Prof Kader Asmal (Minister of Water Affairs). Up to registering fulltime for her PhD, she worked as a development consultant.

With her thesis, **WOMEN AND MINING DECLINE IN THE FREE STATE GOLDFIELDS**, the candidate argues that the mining industry is a double edged sword afflicting women. First, the mining industry excludes women from equal-employment opportunities and, secondly, decline reinforces the household role of women. The study uses theoretical constructs from critical feminist theory and resource-curse theory to assess the consequences of mine decline for women in the Free State Goldfields. It is one of the first ethnographic gender-based studies conducted on mine downscaling. The study emphasises the vulnerability of women because of mine decline and argues that gender-equality debates often take place within the context of a growing economy. There is also a need to plan for the social and economic consequences of decline and policymakers need to consider the relationship between mining and gender policy.

**Promoter:** Prof JGL Marais

**Co-Promoter:** Dr D van Rooyen





## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ECONOMICS

**CAMPHER**, Celeste Sharon

Celeste Campher was born in Kimberley on 18 November 1977. She matriculated from William Pescod High School in 1995 and later obtained her B.Com, B.Com Hons and M.Com degrees from the University of the Free State in 1998; 1999 and 2001 respectively. Her career as an academic started as a junior lecturer in 2000 at Vista University and she also served as a public servant for seven years in the Premier's Office and the Provincial Treasury of the Free State province.

With her thesis, **SOCIAL DISCOUNTING AND RISK ATTITUDES, TIME PREFERENCES AND SOCIAL PREFERENCES: AN EXPERIMENTAL STUDY**, the candidate makes a contribution to the field of behavioural economics. This thesis employs incentivised laboratory- and artefactual field experiments in exploring the interrelationships between giving and social discounting and other elicited preferences such as risk and time preferences and social preferences as captured by behaviours in trust and ultimatum games. The study finds that giving and social discounting are important features of human behaviour and that altruism is associated with economic and other social preferences in a complex and non-linear nature. The findings of this investigation serve as a foundation for further research into the economic and social consequences of giving and social discounting.

**Promoter:** Prof F Booyen

**Co-Promoter:** Dr S Guvuririo



DEAN |  
**PROF LC JITA**

## MASTER'S DEGREES

### MASTER OF ARTS IN HIGHER EDUCATION STUDIES

ADEBOLA, Oyinlola Omolara

**Dissertation Title:** USING  
SUPPLEMENTAL INSTRUCTION  
TO ENHANCE ACADEMIC  
PERFORMANCE OF FIRST  
YEAR STUDENTS IN  
UNIVERSITIES

**Supervisor:** Dr B Dube

**Co-supervisor:** Dr CT Tsotetsi

### MASTER OF EDUCATION WITH SPECIALISATION IN CURRICULUM STUDIES

MPHATSOANE, Mofeleng Ameline

**Dissertation Title:**  
SOCIALLY CONSTRUCTED  
FRAMEWORK TO IMPROVE  
ASSESSMENT OF ARTS AND  
ENTREPRENEURSHIP IN  
CURRICULUM PRACTICE

**Supervisor:** Dr MD Tshelane

SELEBALO, Makopoi Jeanett

**Dissertation Title:** CHALLENGES  
FACED BY NON-SPECIALISED  
PRIMARY SCHOOL  
MATHEMATICS TEACHERS IN  
LESOTHO

**Supervisor:** Dr KE Junqueira

SMITH, Natalie Jane Pauline

**Dissertation Title:** THE IMPACT  
OF ASSESSMENT PRACTICES  
ON THE PERFORMANCE OF  
GRADE 9 AFRIKAANS HOME  
LANGUAGE LEARNERS

**Supervisor:** Dr M Muller

TSIMANE, Maletsatsi Agnes

**Dissertation Title:** AN ACTIVE  
LEARNING STRATEGY FOR  
OVERCOMING MATHEMATICS  
ANXIETY IN A RURAL LEARNING  
ECOLOGY

**Supervisor:** Prof D Hlalele

**Co-supervisor:** Dr MM Moleko

### MASTER OF EDUCATION WITH SPECIALISATION IN EDUCATION MANAGEMENT

MOKGOTHO, Manoko Rosah

**Dissertation Title:** REFINING  
GROSS-FINE MOTOR SKILLS  
OF PRIMARY SCHOOL  
LEARNERS AT MOKOPANE  
CIRCUIT THROUGH NETBALL

**Supervisor:** Prof MM Nkoane

**Co-supervisor:** Dr JS Kabi

### MASTER OF EDUCATION WITH SPECIALISATION IN POLICY STUDIES AND GOVERNANCE IN EDUCATION

MAKHATE, Maseeiso Grace

**Dissertation Title:** EXPLORING  
TEACHERS PERCEPTIONS OF  
THE RELATIONSHIP BETWEEN  
RESOURCE AVAILABILITY AND  
STUDENT PERFORMANCE IN  
LESOTHO HIGH SCHOOLS

**Supervisor:** Dr A Le Roux

PRETORIUS, Marzaan

**Dissertation Title:** HINDERNISSE  
WAT LEERDERS VERHOED  
OM WISKUNDE AS VAK TOT  
GRAAD 12 TE VOLTOOI: 'N  
GEVALLESTUDIE

**Supervisor:** Prof L Jacobs

### MASTER OF EDUCATION WITH SPECIALISATION IN PSYCHOLOGY OF EDUCATION (INCLUSIVE EDUCATION)

MOFILIKOANE, Mamonuku  
Alexmary

### MASTER OF EDUCATION WITH SPECIALISATION IN SUBJECT EDUCATION IN MATHEMATICS

HANSEN, Roselle

**Dissertation Title:** TEACHING  
MENTAL CALCULATION  
STRATEGIES TO GRADE 4  
LEARNERS IN ORDER TO  
IMPROVE NUMBER SENSE: A  
COGNITIVE NEUROSCIENTIFIC  
APPROACH

**Supervisor:** Dr M Rabaza





## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN CURRICULUM STUDIES

**SEKWENA**, Gailele Lucas

Gailele Lucas Sekwena was born in Bloemfontein on 11 May 1970. He received his secondary education in Bloemfontein, where he matriculated at Ikaelelo Senior Secondary School in 1988. He obtained the degree Bachelor of Arts Education in 1992 and Bachelor of Arts Honours degree in Economics in 1999 all with Vista University, Master of Education degree in 2014 at University of the Free State. In 1993 he was appointed as a post level 1 teacher by the Department of Education at Ikaelelo Senior Secondary School and he is presently serving in the same post. In 2010 he was appointed as a part-time lecturer by the Central University of Technology (BFN campus) offering Economics and is currently occupying the same position.

With his thesis titled: **A CONTEXT- BASED APPROACH TO ENRICH STUDENTS' APPLICATION OF ABSTRACT ECONOMIC CONCEPTS**, the candidate contributes to the scholarship in Economic Education, focusing on how context-based teaching and learning environments can be created in Economic education. This pedagogic praxis is aimed at enhancing the students' ability to apply abstract Economic concepts in the real world. The thesis is that with an alteration from a theory to a context-based approach, the pedagogic content knowledge in Economic Education becomes less abstract. Students are afforded opportunities to see relevance of Economic concepts and advance economic literacy. The findings of this intellectual piece serve to add value into the discourses of pedagogic praxis in Economic Education and enhance pedagogic content knowledge amongst students to apply abstract concepts as they learn the subject.

**Promoter:** Prof MM Nkoane

**Co- Promoter:** Prof MG Mahlomaholo

**TLHABANELO**, Bontle Beauty

Bontle Beauty Tlhabanelo was born on 10 January 1960 at Kuruman in the Northern Cape Province, South Africa. She matriculated at Batlharo-Tlhaping Senior Secondary School (1980) and obtained the Secondary Teachers' Diploma with at the Strydom College of Education in Thaba'Nchu (1985). She attained a BA (Education) with distinction (1999) and a MEd (Environmental Education) at the University of South Africa in 2004. She worked as a teacher, head of department, acting principal, deputy principal, subject advisor for Biology and Natural Science and deputy chief education specialist. She is currently a Circuit Manager at the North West Department of Education.

With her thesis titled **A CURRICULUM FRAMEWORK FOR ENVIRONMENTAL EDUCATION IN THE SOUTH AFRICAN FURTHER EDUCATION AND TRAINING BAND**, the candidate proposes a curriculum framework for Environmental Education (EE) as a separate, elective subject in the Further Education and Training (FET) band. She found the growing global consciousness of challenges posed by environmental issues to necessitate an urgent change in the South African school curriculum regarding EE. Themes on EE are currently scattered between Life Sciences, Geography, Physical Science and Life Orientation. She identified the dispersed structure of the curriculum as a major challenge in the teaching and learning



of EE. The examiners commend the candidate on an innovative research of a realistic, practical and real-life problem and a new “look” at curriculum for EE. It is envisaged that this study will resuscitate and strengthen arguments on the status of EE as an independent elective subject in the FET curriculum.

**Promoter:** Prof LP Louw

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN HIGHER EDUCATION STUDIES

**MEINTJES, Rina**

Rina Meintjes was born on 25 July 1966 in Klerksdorp. She matriculated at Schoonspruit High School in 1983. She completed the BSc degree (Chemistry and Physics) in 1986, the Postgraduate Education Diploma (HED) with distinction in 1987, Hons (Chemistry) with distinction in 1988 and an MSc degree in Physical Chemistry with distinction in 1990. All qualifications were obtained at the North West University. She started her career as a teacher in 1992. Currently, she is the Coordinator for Chemistry in the UAP and BSc extended programme of the University of the Free State, a position she has held since 1997.

With her thesis, **DEPRESSION AND SELF-REGULATED LEARNING AS PREDICTORS OF FIRST-YEAR STUDENTS’ ACADEMIC PERFORMANCE: A CASE STUDY**, the candidate contributes to the existing body of knowledge available on the factors that might influence the academic performance of university first-year students. Particularly, this quantitative study has shown that depression, self-regulated learning dimensions and academic performance are indeed interconnected and that the group of students studied in this research did present alarmingly high levels of depression. Furthermore, the researcher compared the influence of depression and self-regulated learning on the academic achievement of students in the access programme to that of students in the mainstream programme of the UFS Faculty of Natural and Agricultural Sciences. It transpired that the levels of depression are high among students in both programmes and that mainstream students are not more prone to applying self-regulated learning techniques than those in access programmes.

**Promoter:** Dr SM Brüssow

**Co- Promoter:** Dr A Neethling

**MOTSIE, Sehlabaka Johannes**

Sehlabaka Johannes Motsie was born on the 3rd of February 1979 in Welkom. He attained his senior certificate at Lepholo Secondary School in 1997. He enrolled and was awarded a Bachelor of Social Sciences degree at University of the Free State in 2001. He pursued further studies at the same university, where he attained an Honours degree in Governance and Political Transformation in 2006 and a Master’s degree in Governance and Political Transformation in 2012. He was then appointed as Senior Officer and worked at the University of the Free State for more than 10 years. Currently, he is the Research Manager at Vaal University of Technology, Southern Gauteng Campus.

With a thesis, **A FRAMEWORK FOR THE ENHANCEMENT OF POSTGRADUATE ENGINEERING STUDENT SUPERVISION AT UNIVERSITIES OF TECHNOLOGY: PERSPECTIVES FROM THE FACULTY OF ENGINEERING**, the candidate makes



a contribution to postgraduate research in engineering at Universities of Technology (UoTs). The research demonstrates the need to address specific postgraduate research related aspects in order to contribute to effective postgraduate engineering student success at UoTs. The study argues that focusing merely on pedagogy-related aspects or the knowledge aspects of postgraduate supervision will not provide the required change. The proposed engineering postgraduate supervision framework, however, portrays and addresses critical contextual aspects as provided by the participants in the study and suggested in related literature. The study suggests a comprehensive and holistic plan of action required to create a conducive fundamental postgraduate human learning activity at UoTs. The study further suggests that a high quality of supervision practice, in conjunction with improved research capacity, is central to enhance and improve postgraduate engineering students' supervision at UoTs.

**Promoter:** Dr NJP Teis

**Co- Promoter:** Dr M Rabaza

**MUZAMBI, Talent**

Talent Muzambi was born in Marondera, Zimbabwe on 28 November 1973. He matriculated at Goromonzi High School in 1990. He obtained the degree Bachelor of Science Honours in Economics in 1996, at the University of Zimbabwe, the Diploma in banking in 2000, the degree Master of Science in Strategic Management in 2007 from Chinhoyi University of Technology. He started his career in 1996 with several banking institutions. In 2007 he moved to consulting project management and small business enterprise development with Deloitte Consulting. He did consulting work for several companies since 2007. Currently he is doing consulting work with Royal Bafokeng Platinum.

With his thesis titled: **ASKILLS TRAINING FRAMEWORK FOR STAFF OF NONPROFIT ORGANISATIONS: AN ADULT LEARNING PERSPECTIVE**, the candidate contributes to scholarship on Skills Training for Staff of NPOs, focusing on challenges contributing to poor performance by most NPOs. Using mixed methods approach, Muzambi sampled NPOs from the Bafokeng Region of Rustenburg to understand the role that is supposed to be played by office-bearers in ensuring relevant in-house training as well as outsourcing training. The study uncovered that lack of skills to sustain funding, poor financial management and underqualified personnel are among major contributing factors. The study presents an argument that proper SWOT analysis and regular revision of the operational plan, through the cycle of planning, implementation, observation, re-planning and training can improve the effectiveness of staff. Hence collaboration becomes one of the cornerstones of accessing relevant training.

**Promoter:** Dr JS Kabi

**VENTER, Christiaan**

Christiaan Venter was born in Pretoria, South Africa on 23 September 1979. He matriculated in 1997 at Sentraal High School in Bloemfontein. Tertiary studies at the University of the Free State (UFS) led to the degrees Bachelor of Science in 2000, Honours in Applied Mathematics in 2001 and MSc in Applied Mathematics in 2002, all with distinction. In 2003 a career as lecturer ensued at the UFS. In 2014 he was additionally appointed as programme director of Mathematics. Further studies led to the degree Honours in Mathematics in 2006 and the Higher Certificate in Pastoral Care in 2015.





With his thesis, **CONCEPTUALISING THE FUNCTION CONCEPT: AN IMAGE FUNCTIONS INTERVENTION**, the candidate makes a contribution to the pedagogical content knowledge of Mathematics, and in particular the learning of the function concept at the Higher Education level. With this contribution, he attempts to address the learning of the function concept, which is considered an epistemological obstacle. An intervention, based on the study of digital images as functions, was designed and tested for adherence to the APOS (Action-Process-Object-Schema) theory of concept learning. Through a mixed methods approach, quantitative and qualitative data were gathered and analysed in order to investigate the effects of the Image Functions Intervention (IFI). The results of this investigation indicated that the IFI could in some settings positively address the common conceptual difficulties associated with functions.

**Promoter:** Prof GF du Toit

**Co- Promoter:** Prof JH Meyer

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN PSYCHOLOGY OF EDUCATION

**NTSETO, RACHEL MOTSHIDISI**

Rachel Motshidisi Ntseto was born in Bloemfontein on 1968-03-30. She received her Secondary Education in Bloemfontein, where she matriculated at Sehunelo Secondary School in 1986. She obtained the Junior Primary Teacher's Diploma in 1990, Further Education Diploma in Remedial Education in 1995, BEd Honours in Leadership and Management in 2000, Advanced Certificate in Values and Human Rights Education in 2005, MEd degree in Inclusive Education with Distinction 2015. She started her career as the teacher in 1991 and later promoted to the position of Head of Department from 2010. Currently appointed as Learning Support Advisor/ Senior Education Specialist at Lejweleputswa District.

With his thesis, **IMPROVING THE IMPLEMENTATION OF POLICY ON SCREENING, IDENTIFICATION, ASSESSMENT AND SUPPORT WITH TEACHER TRAINING**, the candidate contributes to the discourses in Inclusive Education, focusing on participation of significant "others" in Education Fraternity. This study used a Participatory Action Research approach, with Critical Discourse Analysis as an analytic tool and it is underpinned by the Social Development Theory. Key findings confirms a deficit in the implementation of Inclusive Education and SIAS policies due to lack of training and participation by significant "others" (i.e. Departmental Officials).

**Promoter:** Dr RJ Kgothule and Prof MM Nkoane

**SEYI-ODERINDE, DAMILOLA RUTH**

Damilola Ruth Seyi-Oderinde was born in Ikere-Ekiti, Nigeria on 26 February 1989. She matriculated at Camila High School, Ila-Orangun in 2004. She obtained her B.Ed Hons degree in Guidance and Counselling at the University of Ado-Ekiti in 2011, graduating with a distinction and claiming several merit awards and M.Ed degree in Guidance and Counselling in 2015 at the University of Ilorin. She started her career as a graduate assistant at the Ekiti State University in 2012, and currently a Lecturer II at the same University.

With her thesis titled: **COUNSELLING HELP-SEEKING BEHAVIOUR AMONG MALE STUDENTS IN A HIGHER LEARNING ECOLOGY**, the candidate contributes to scholarship on Guidance and Counselling and Enabling Learning Environments



(ELEs), focusing on how male students navigate higher education institutions to seek counselling. Using a participatory mixed-methods approach, Seyi-Oderinde sampled 333 participants to understand and explain facilitative and obstructive factors that influence counselling help-seeking behavior among male students in a higher learning ecology. While most obstructive factors appeared to be typified by dominant masculine ideologies, a sense of spirituality and religiosity, myth and misconception, a non-discriminatory environment facilitated counselling help-seeking behavior among male students. The study presents the argument for an enabling counselling environment and proposes a framework for creating an enabling environment for the improved counselling help-seeking experience and behavior among male students in the universities in Nigeria.

**Promoter:** Dr FP Khanare

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN PHILOSOPHY AND POLICY STUDIES IN EDUCATION

**DOLLEBO**, Medhin Marcho

Medhin M. Dollebo was born in Wolayta, Ethiopia on 12 October 1972. He received his secondary education in Wolayta Soddo town where he matriculated at the Wolayta Soddo Secondary school in 1993. He obtained a Teaching Diploma from Kotebe College with distinction in 1995, a BA degree in Foreign Languages and Literature with distinction in 1999 and an MA in Language Education in 2003, from Addis Ababa University. He received an MA in Governance and Development Management from Hawassa University in 2016 and worked as a Graduate Assistant at the Arbaminch Water Technology Institute before being appointed at the Hawassa University.

With his thesis **USING COMMUNITY STRUCTURES TO SUPPORT INCLUSIVE BASIC EDUCATION IN URBANISED VULNERABLE SETTING IN WOLAYTA SODDO, ETHIOPIA**, the candidate exposed the vulnerability that urbanisation caused to former farming communities and how children from the mostly illiterate farmer-parents were excluded from education opportunities. From a social realist framework of thinking, and drawing from theory, literature and the policy framework, he engaged with different sets of role-players in the community towards a sustainable solution. He designed a framework to strategically identify and involve core stakeholders, including the government and residential societal structures to sustainably support the provision of inclusive basic education in these vulnerable settings.

**Promoter:** Prof L Jacobs

**Co- Promoter:** Dr FJ Kruger

**MATOANE**, Tebogo

Tebogo Matoane was born in Johannesburg on the 27th October 1971. She matriculated at Masalanabo High School in 1988. She obtained the degree Library and Information Science in Education at the University of Limpopo (UL) in 1996; Bachelor of Education (HONS) from University of Witwatersrand in 1998; Postgraduate Diploma (HIV/AIDS Management in the Workplace) at Stellenbosch University in 2003; Master of Education from the University of Johannesburg in 2008 as well as Masters in Development Studies from UL in 2015. She is currently the General Manager at Nkangala District Municipality.



With her thesis, **GIRL CHILDREN'S ACCESS TO SUSTAINABLE LEARNING IN RURAL ECOLOGIES: A BOURDIEUIAN POLICY AND PRACTICE ANALYSIS**, the candidate contributes to worldwide debates around rural girl children's access [including meaningful participation and achievement] to quality education. Undergirded by Bourdieu's work that was primarily concerned with the dynamics of power in society and drawing from feminised participatory action research methodologies, her study interrogates the power struggles, contestations and manifestations associated with girl children rural school and home settings. The study concedes that gendered roles in these settings continue to undermine girl children's access to quality education. The candidate advocates for appreciation and development of rural girl children's agency and full potential. The study proposes a deconstruction of gendered practices for gendered re-socialisation as well as gender mainstreaming to facilitate gender sensitive and responsive educational policies and practices in rural learning ecologies.

**Promoter:** Prof DJ Hlalele

**MAZIRE, Davies**

Davies Mazire was born on 27 October 1974 in Chiredzi, Masvingo Province, Zimbabwe. He completed his secondary education at Churchill Boys High School, Harare in 1993 and attained a Diploma in Secondary Education at the Gweru Teachers' College in 1999. He graduated with a BEd degree in 2006 and a MEd degree at the Midlands State University in 2011. His career as a teacher began in 2000 at the St James Chivamba High School. He was appointed in 2007 as a lecturer in Philosophy of Education at the Morgenster Teachers' College and is currently head of the Department Theory of Education.

With his thesis, **ZIMBABWEAN TEACHER EDUCATION: STUDENT TEACHERS' PERCEPTIONS OF A TEACHER EDUCATION CURRICULUM INFUSED WITH AFRICAN TRADITIONAL EDUCATION**, the candidate contributes to scholarship on philosophy of education, by questioning the lingering colonial epistemological legacy and negotiating the place for African traditional education in teacher education. In drawing on post-colonial theory, the candidate argues for the reconceptualization and the recentering of African traditional education in the teacher education curriculum. The reconceptualization of this course on African traditional education offers a dialogical space for student teachers and teacher educators to critically engage with its relevance for contemporary education in Zimbabwe. Furthermore, the recentering of the reconceptualised understanding of African traditional education as a theoretical lens to propose a Zimbabwean interpretation of teacher education, can potentially lead to the dismantling of a colonial epistemology and the reconstruction of an epistemology founded on Zimbabwean culture and tradition.

**Promoter:** Dr A Le Roux

**Co- Promoter:** Dr FJ Kruger

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN PSYCHOLOGY OF EDUCATION

**MKUZO, Nkosivelile Nkosivile Nkosiymntu**

Nkosivelile Nkosivile Nkosiymntu Mkuzo was born on 15 March 1963 in Ntabankulu in the Eastern Cape. He matriculated at Mfundisweni High School in Flagstaff in 1980 and thereafter obtained a Primary Teachers Course in 1981. He graduated





with BA (distinction in Anthropology) and BEd degrees from the University of Transkei, now called Walter Sisulu University, in 1988 and 1990 respectively. He completed his MEd in Psycho-pedagogics in 1993 at the University of Free State. He got a scholarship from the Institute of International Education to do an MSc degree in Curriculum Designing and Development in Emporia State University in the USA and graduated in 1995. He is currently employed by the Eastern Cape Department of Education as a Chief Education Specialist for Curriculum Services.

With his thesis **COMPLEXITIES OF ADOLESCENT LEARNER BEHAVIOUR WITHIN MULTICULTURAL INDIGENT SOCIETIES**, the candidate exposes the difficulties that result in self-destructive behaviour by secondary school learners in multicultural indigent Eastern Cape communities. While negative behaviour by adolescent learners is a universal problem, the interplay between poverty, culture, unsafe school environments and societal challenges result in particular dynamics. Adolescent learners' misbehaviour, such as gangsterism, substance abuse, and reckless sexual conduct, can be linked with the need to belong, be accepted and to gain recognition. The study showed that when young initiates return to the school environment, particular challenges arise. There is a need to close the gap between the traditional schools and formal schools. He designed his own model to manage school discipline and strongly recommends a multi-disciplinary approach based on partnership and democratic principles to create nurturing and accepting school environments.

**Promoter:** Prof L Jacobs

**Co- Promoters:** Dr KLG Teise and Prof J M Reyneke

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## DEAN'S MEDAL

**AWARDED TO A STUDENT WHO ACHIEVED THE BEST RESULTS IN RESPECT OF A MASTER'S DEGREE  
IN THE FACULTY OF EDUCATION DURING THE YEAR 2019**

Nicole Purcell

(Master of Education with specialisation in Psychology of Education)



DEAN |  
**PROF GJ VAN ZYL**

## SCHOOL FOR ALLIED HEALTH PROFESSIONS

### MASTER'S DEGREES

#### MASTER OF HEALTH PROFESSIONS EDUCATION

ARENDS, Zane

**Dissertation Title:**  
EDUCATIONAL  
RECOMMENDATIONS FROM  
THE KNOWLEDGE, ATTITUDES  
AND PRACTICE OF FREE  
STATE PROVINCE PARAMEDICS  
REGARDING VACCINATION  
POLICIES

**Supervisor:** Dr C van Wyk

COLYN, Hendrik Jacobus

**Dissertation Title:** EXPLORING  
VIRTUAL REALITY TRAINING  
FOR ALLIED HEALTH  
PROFESSIONS EDUCATION IN  
AN INSTITUTION OF HIGHER  
EDUCATION

**Supervisor:** Dr C van Wyk

LOUW, Marshe

**Dissertation Title:** CRITICAL-  
THINKING SKILLS OF  
UNDERGRADUATE ALLIED

HEALTH PROFESSIONS  
STUDENTS IN THE CLINICAL  
ROTATION YEARS AT THE  
UNIVERSITY OF THE FREE  
STATE

**Supervisor:** Dr C van Wyk

MORULE, Mpho Jane\*

**Dissertation Title:** AN  
EVALUATION OF THE ORAL  
HYGIENE SERVICE-LEARNING  
PROGRAMME AT SEFAKO  
MAKGATHO UNIVERSITY

**Supervisor:** Dr RW Botha

**Co-Supervisor:** Dr A Adefuye

MOTHIBI, Jani Daniel

**Dissertation Title:**  
DETERMINING THE NEED  
FOR TEACHING ON PRE-  
HOSPITAL MANAGEMENT OF  
PSYCHIATRIC EMERGENCIES  
IN THE EMERGENCY MEDICAL  
CARE CURRICULUM IN SOUTH  
AFRICA

**Supervisor:** Dr AO Adefuye

**Co- Supervisor:** Dr MP Jama

MOTHUPI, Kelebogile Annastacia

**Dissertation Title:**  
CONTEXTUALISING THE  
RELEVANCE OF ELECTIVES  
IN THE DENTAL AND ORAL  
HYGIENE CURRICULUM AT  
THE UNIVERSITY OF THE  
WITWATERSRAND

**Supervisor:** Dr AO Adefuye

SWINFEN, Dirkie\*

**Dissertation Title:** A STUDENT  
REVIEW OF DOCTOR-  
PATIENT COMMUNICATION  
SKILLS TRAINING IN THE UFS  
UNDERGRADUATE MEDICAL  
PROGRAMME

**Supervisors:** Prof MJ  
Labuschagne

**Co-Supervisor:** Prof G Joubert

#### MASTER OF ARTS IN HUMAN MOVEMENT SCIENCE

CALLDO, Jacobus Gerber

**Dissertation Title:** THE MOTION  
ANALYSIS OF VARSITY  
CUP RUGBY USING GPS  
TECHNOLOGY

**Supervisor:** Prof FF Coetzee

**Co-Supervisor:** Dr R Schoeman

MOLOPYANE, Obakeng Daniel

**Dissertation Title:** THE EFFECT  
OF BLOCK PERIODISATION ON  
ATHLETIC PERFORMANCE IN  
AN ELITE SPRINTER: A CASE  
STUDY

**Supervisor:** Prof FF Coetzee

#### MASTER OF OCCUPATIONAL THERAPY

KRUGER, Elizabeth Annelien\*



**Dissertation Title:** ASSESSMENT OF IN-HAND MANIPULATION BY OCCUPATIONAL THERAPISTS IN PAEDIATRIC PRACTICES IN SOUTH AFRICA

**Supervisor:** Mrs M Strauss

**Co-Supervisor:** Mrs MM Visser

O'REILLY, Zelda Colette

**Dissertation Title:** THE RELEVANCE OF THE UFS OCCUPATIONAL THERAPY MODEL – PERCEPTIONS OF STUDENTS AND PRACTITIONERS

**Supervisor:** Mrs ME van Schalkwyk

**Co-Supervisors:** Dr SHJ du Toit and Mrs MM Visser

PHATELA, Nteboheling Adelina

**Dissertation Title:** SENSED AND ACTUAL POSTURE OF GRADE 5 LEARNERS WHILE CARRYING A SCHOOLBAG

**Supervisor:** Mrs PA Hough

**MASTER OF OPTOMETRY**

VENTER, Liza-Marié

**Dissertation Title:** THE KNOWLEDGE AND ATTITUDES OF GRADE R SCHOOL TEACHERS REGARDING THE

PSYCHOSOCIAL IMPACT OF STRABISMUS AMONGST SCHOOL CHILDREN

**Supervisor:** Prof TA Rasengane

**Co-Supervisor:** Mrs M Makhado

**MASTER OF SCIENCE IN  
PHYSIOTHERAPY**

EYGELAAR, Madeleen

**Dissertation Title:** A CULTURAL COMPETENCE MEASUREMENT TOOL FOR SOUTH AFRICAN HEALTHCARE PRACTITIONERS: AN ITEM GUIDELINE

**Supervisor:** Mrs A van der Merwe

**Co-Supervisor:** Dr R Smith

JOHNSON, Shabnam

**Dissertation Title:** PHYSICAL ACTIVITY, LIFESTYLE HABITS AND GENERAL HEALTH STATUS OF RECREATIONAL SPORT PARTICIPATING AND NON-RECREATIONAL SPORT PARTICIPATING MALES IN KIMBERLEY, NORTHERN CAPE

**Supervisors:** Prof EC Janse van Vuuren and Mrs K Bodenstein

**Co-Supervisors:** Dr R Smith and Mrs H Nel





## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY IN HEALTH PROFESSIONS EDUCATION

**KEMPEN, Elzana**

Elzana Kempen was born in Bloemfontein on 9 July 1984. She matriculated at Hartebeespoort High School in 2002 and obtained a Bachelor's in Optometry at the University of Johannesburg in 2006. She obtained a postgraduate diploma in Sports Vision at the same university in 2012. She graduated cum laude with a Master's in Health Professions Education from the University of the Free State in 2015. She joined the lecturing staff of the UFS Department of Optometry in 2012, where she still lectures, sharing her passion for Optometry with the students.

With her thesis, **EXPERIENTIAL LEARNING IN THE EXPANDED SCOPE OF THE UNDERGRADUATE OPTOMETRY PROGRAMME AT THE UNIVERSITY OF THE FREE STATE**, the candidate contributes to scholarship in experiential learning, focusing on how to create meaningful learning experiences with effective teaching-learning methods to facilitate theory-practice integration. Using a qualitative case study design, she collected information on the experiences and perceptions of undergraduate Optometry students at the University of the Free State regarding several teaching-learning methods to understand and respond better to the real needs of students. This study provides recommendations for the effective transformation of a student to progress from being a student to adopting the role of a professional optometrist. The thesis is pedagogically sound, innovative and based on empirical evidence, addressing issues such as the approachability of educators, consistency in the learning environment, student-lecturer relationships, creating a safe clinical environment, and peer mentoring and assessment.

**Promoter:** Prof MJ Labuschagne

**Co-Promoter:** Dr MP Jama

**KOTZE, Irma**

Irma Kotzé was born in Vredendal, Western Cape on 5 April 1972. Her secondary education commenced in Potchefstroom and ended in Witbank, where she matriculated at Generaal Hertzog High School in 1990. She obtained the degree Baccalaureus Pharmacy in 1995, and a Master in Business Administration in 2011 at the North-West University. She began her career as an intern pharmacist in Kimberley in 1995 and in 1996 she was appointed as a pharmacist at the Area Military Health Unit, North-West situated in Potchefstroom. In 2011 she was appointed as a senior lecturer at the North-West University, School of Pharmacy in the Department of Pharmacy Practice.

With her thesis **A WORK-INTEGRATED LEARNING FRAMEWORK FOR AN UNDERGRADUATE PHARMACY PROGRAMME IN A SOUTH AFRICAN CONTEXT**, the candidate contributes to the scholarship work-integrated learning (WIL) in pharmacy education by focusing on the principles of Good Pharmacy Practice. Using a mixed-method approach, she interviewed heads of pharmacy schools in South Africa on the value of, and challenges experienced with the implementation of WIL. The interviews were followed by a survey of undergraduate pharmacy lecturers in South Africa on the implementation



of WIL. Irma developed a framework to assist pharmacy schools and professional bodies with the management and support necessary for the implementation of WIL, and different campus-based and practice-based WIL experiences that can be embedded in the curriculum to comply with the requirements for Good Pharmacy Education (GPE). The study results indicate the value that the identified intervention holds for the effective implementation of WIL in undergraduate pharmacy education.

**Promoter:** Prof GM Reitsma

**Co-Promoter:** Dr RW Botha

## DOCTOR OF PHILOSOPHY IN HUMAN MOVEMENT SCIENCE

**SINCLAIR, Colleen Jo-Ann**

Colleen Jo-Ann Sinclair was born in Bloemfontein on 22 February 1979. She received her secondary education in Bloemfontein, matriculating at Brebner High School in 1996. She obtained her Baccalaureus degree in Human Movement Science cum laude in 1999, BA Hons in Human Movement Science (Biokinetics) in 2000, BA Hons in Human Movement Science (Sport Science) cum laude in 2008, and MA in Human Movement Science (Biokinetics) in 2013, all at the University of the Free State. In July 2013, she was appointed as junior lecturer in the then Department of Human Movement Science (now Exercise and Sport Sciences) at the University of the Free State in Bloemfontein.

With her thesis, **FUNCTIONAL TESTING AND EPIDEMIOLOGY OF INJURIES IN ELITE NETBALL PLAYERS IN THE FREE STATE REGION**, the promovenda addresses the current lack of research on the functional testing and epidemiology of injuries among netball players. She proposes pre-participation screening programmes to identify fitness deficits in netball players to improve overall performance. The study provides information to netball players, coaches and governing bodies on the epidemiological evidence of injury risk and injury profiles in netball, with a view to implement effective preventative measures. The results of this study demonstrate that skill-related fitness components do not predict injuries in netball. Three articles were submitted for publication, of which two have already been accepted for publication in accredited, peer-reviewed journals.

**Promoter:** Prof FF Coetzee

**Co-Promoter:** Prof R Schall

## SCHOOL OF CLINICAL MEDICINE

### MASTER'S DEGREES

#### MASTER OF MEDICAL SCIENCE WITH SPECIALISATION IN HUMAN MOLECULAR BIOLOGY

BOOYSEN, Chant lle

**Dissertation Title:** EVALUATION OF DNA EXTRACTION METHODS TO DETERMINE FOOD AUTHENTICITY WITH REGARD TO ANIMAL SPECIES IN ULTRAPROCESSED FOOD PRODUCTS IN SOUTH AFRICA

**Supervisor:** Prof CD Viljoen  
**Co-Supervisor:** Mrs S Sreenivasan Tantuan

#### MASTER OF MEDICAL SCIENCE WITH SPECIALISATION IN MEDICAL PHYSICS

QEBETU, Milani

**Dissertation Title:** THE ACCURACY OF LU-177 ACTIVITY QUANTIFICATION ON PHANTOMS USING MOTE CARLO SIMULATED SPECT IMAGING



**Supervisor:** Dr JA van Staden  
**Co-Supervisor:** Mrs K  
Ramonaheng and Dr H Du Raan

## MASTER OF MEDICINE IN ANAESTHESIOLOGY

VAN BILJON, Wilbur

## MASTER OF MEDICINE IN DERMATOLOGY

VAN ASWEGEN, Marietjie

## MASTER OF MEDICINE IN DIAGNOSTIC RADIOLOGY

MÖLLER, Jacobus Steenkamp

## MASTER OF MEDICINE IN INTERNAL MEDICINE

NIENKEMPER, Marisan

SIKHIPHA, Tshifhiwa Beatrice

WUNG, Pei-Chee

## MASTER OF MEDICINE IN OBSTETRICS AND GYNAECOLOGY

GANATHI, Xolile

MAKHETHA, Dikeledi

## MASTER OF MEDICINE IN OPHTHALMOLOGY

MBELWA, Samkelo Leon

## MASTER OF MEDICINE IN ORTHOPAEDIC SURGERY

SWART, Ignatius

## MASTER OF MEDICINE IN PAEDIATRICS

VETMAN-MLOMO, Asanda

## MASTER OF MEDICINE IN PLASTIC SURGERY

AGARWAL, Shashikant  
Viplavkumar

## MASTER OF MEDICINE IN PSYCHIATRY

MAKHOBHA, Nombulelo Lebohang

STRATING, Ceri

## MASTER OF MEDICINE IN UROLOGY

FOURIE, Johannes Lodewickus

## DOCTORAL DEGREES

### DOCTOR OF MEDICAL SCIENCE WITH SPECIALISATION IN HAEMATOLOGY

**MEIRING, Sarah Muriel**

Muriel Meiring was born on 25 March 1968. She matriculated in 1986 and started her University education at the North West University, where she completed her BSc in 1990 and BSc Honours degrees in 1991 with distinction. She started her academic career at the University of the Free State where she completed her MMedSc degree in 1994 with distinction, her PhD in Haematology in 1996 and an MBA degree in Healthcare management in 2003. She is currently employed by the National Health Laboratory Service and the UFS as an Associate Professor in the Department of Haematology and Cell Biology.





With her titled: **HAEMOSTATIC AND THROMBOTIC DISORDERS: A JOURNEY FROM BENCH TO BEDSIDE**, the candidate illustrated her journey from basic research on thrombotic and bleeding disorders to the differential diagnoses of these disorders. Her main contribution to the knowledge of haemostatic disorders was the development and testing of new and existing antithrombotic drugs, the development of cost-effective tests that diagnose these disorders, and the unravelling of mechanisms underlying the diagnoses of these disorders. This compilation of thirty-six high-impact journal publications, was accepted unconditionally by all three assessors. The journals, in which she published her results, are also the official journals of international societies for Thrombosis and Hemostasis, Laboratory Hematology and the World Federation of Hemophilia. Prof Meiring's expertise in the field of hereditary bleeding disorders allowed her to develop a much-needed diagnostic reference center for thrombotic and bleeding disorders.

**Promoter:** Prof SC Brown

**Co-Promoter:** Prof HF Kotzé

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN CARDIOTHORACIC SURGERY

**BOTES, Lezelle**

Lezelle qualified as a Biomedical and Clinical Technologist (Critical Care) at the Central University of Technology (CUT) in 2000. She obtained a Masters in 2001 and a D Tech on HIV-genotyping in 2005. As a senior lecturer and programme coordinator of Clinical Technology at the CUT, she supervised and co-supervised 11 Masters and 4 Doctorate students. This was done in collaboration with the Robert W M Frater Cardiovascular Research Centre at the UFS, of which she was also a key role player as far as the development and establishment thereof. She co-ordinates and supervises post graduate studies conducted at the Centre.

With her thesis, **THE IMPACT OF PROCESSING METHODS ON BOVINE PERICARDIAL TISSUE INTEGRITY** the candidate makes a contribution in the field of tissue engineering. Gluteraldehyde fixed and detoxified bovine pericardial patches (GABPP), widely used in cardiovascular surgery, biological heart valves, and other surgical applications, degenerate and calcify as a result of immune responses and possible toxicity, especially in young patients. Tissue engineered decellularised bovine pericardial patches (DBPP) attenuate or abolish these processes, allowing for recellularisation and remodelling of patches to produce "living tissue". In an experimental study in the juvenile ovine model, a novel proprietary process (Patent No./ 16702008.0 – 1455) developed at the Frater Centre, was used to create tissue engineered (DBPP), that were compared to commercial GABPP. Recellularisation and remodelling of DBPP were confirmed, but was virtually absent in GABPP, whilst retaining tissue strength. Results have been presented internationally and was awarded best scientific paper at the 28<sup>th</sup> SA Tissue Society Congress in 2019.

**Promoter:** Prof FE Smit

**Co-Promoter:** Prof PM Dohmen

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN HAEMATOLOGY AND CELL BIOLOGY

**KHEMISI, Mmakgabu Martha**

Mmakgabu Khemisi was born in Mahikeng in the North West province on the 20<sup>th</sup> of August 1987. She matriculated in 2005 at Thuto Tsebo High School in Orkney and furthered her education at the University of the Free State, where she obtained a BSc



degree in Genetics in 2011, Basic Medical Sciences Hons in Physiology in 2012, and a Master's degree in Medical Sciences in Haematology with distinction in 2015. She was appointed as a research assistant in the department of Haematology and Cell Biology in 2014 while pursuing a PhD at the University of the Free State. She is also a registered Medical Biological Scientist with the Health professional council of South Africa since 2016.

With her thesis, **CHARACTERIZATION OF AUTOANTIBODIES TO ADAMTS13 IN HIV-ASSOCIATED THROMBOTIC THROMBOCYTOPENIC PURPURA (TTP)**, the candidate addressed the important aspects to understand this fatal thrombotic disorder, TTP that is associated with HIV infection by investigating the role of autoantibodies to the essential ADAMTS13 protein. The study highlighted the differences in autoantibody epitope specificity between the HIV positive population without TTP and the HIV positive population with TTP in detail in South Africa. This thesis also provides a novel insight into the specific antigenic regions on the ADAMTS13 protein affected by these autoantibodies, thus making a significant contribution to the understanding of the pathophysiology of HIV-associated TTP.

**Promoter:** Prof SM Meiring

**Co-Promoter:** Dr S Louw

<b>SCHOOL OF NURSING</b>	WOMEN IN BOTSHABELO ON ENSURING POSITIVE PREGNANCY OUTCOMES	<b>Supervisor:</b> Dr L Hugo <b>Co-Supervisor:</b> Prof Y Botma
<b>MASTER'S DEGREES</b>		
<b>MASTER OF NURSING</b>	<b>Supervisor:</b> Mrs MR Mpeli <b>Co-Supervisor:</b> Mrs MWA Motlolometsi	<b>MASTER OF SOCIAL SCIENCE IN NURSING</b>
HERSELMAN, Hannelie*	MUKURUNGE, Eva	DANISA, Duduzile Angela
<b>Dissertation Title:</b> UNDERSTANDING PEOPLE- CENTRED CARE AMONG COLLABORATORS IN AN ONCOLOGY CRITICAL CARE UNIT: AN ASSOCIATIVE GROUP ANALYSIS	<b>Dissertation Title:</b> FEASIBILITY OF INTERACTIVE DIABETES WORKSHOPS FOR PRIMARY HEALTH CARE NURSES IN A FREE- STATE SUB-DISTRICT	<b>Dissertation Title:</b> ADHERENCE TO NATIONAL TUBERCULOSIS CLINICAL GUIDELINES AMONGST PRIMARY HEALTHCARE NURSES WITHIN SOL PLAATJE MUNICIPALITY
<b>Supervisor:</b> Prof Y Botma	<b>Supervisor:</b> Dr M Reid <b>Co-Supervisor:</b> Dr AE Fichardt	<b>Supervisor:</b> Dr T Letsie
KORTMAN, Ditsietsi Palesa Valeria	NDHLOVU, Mercy Mwape	LEKOATSA, Mpho Lorraine
<b>Dissertation Title:</b> INDIGENOUS STORIES OF PREGNANT	<b>Dissertation Title:</b> A CONCEPT ANALYSIS ON THE TRANSFER CLIMATE IN HEALTH SCIENCES	<b>Dissertation Title:</b> POSTNATAL INFORMATION IN COMMUNITY HEALTH CARE SETTINGS IN BLOEMFONTEIN: AN



EVALUATION ACCORDING  
TO PENDER'S HEALTH  
PROMOTION MODEL

**Supervisor:** Dr DE Botha

## SCHOOL OF PATHOLOGY

### MASTER'S DEGREES

MASTER OF MEDICAL SCIENCE  
WITH SPECIALISATION IN  
MEDICAL MICROBIOLOGY

MAHLOANE, Masingoaneng Julia

**Dissertation Title:**  
MOLECULAR EPIDEMIOLOGY  
OF MYCOBACTERIUM  
TUBERCULOSIS COMPLEX  
STRAINS CIRCULATING IN  
ADULTS IN THE FREE STATE  
PROVINCE, SOUTH AFRICA.

**Supervisor:** Mrs A van der Spel  
van Dijk

**Co-Supervisor:** Dr J Musoke

MASTER OF MEDICAL SCIENCE  
WITH SPECIALISATION IN  
VIROLOGY

LITABE, Matefo Millicent

**Dissertation Title:** IN VITRO  
IMMUNE RESPONSES TO  
SINDBIS VIRUS

**Supervisor:** Prof FJ Burt

### DOCTORAL DEGREES

#### DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN MEDICAL PHYSICS

**MAHUVAVA, Courage**

Courage-Mahuvava was born in Kwekwe district, in the Midlands Province of Zimbabwe. He completed A-level education in 2008; then received a presidential scholarship to pursue a BSc in Computational Physics, which he completed with a distinction, along-with-over 20 merit-awards from the University of Kwa-Zulu Natal. Courage later obtained an Honours degree in Medicine, specializing in Medical Physics from the University of Cape Town. He also holds a Masters' degree in clinical Medical-Physics from the University of Free-State and is a professional member of the South-African-Institute-of- Physicists.

With his thesis, **RELATIONSHIP BETWEEN THE INTEGRAL QUALITY MONITOR (IQM®) OUTPUT SIGNAL AND DOSE**, the candidate makes a significant contribution to real time X-ray beam output analysis with a novel device in an attempt to reconstruct the radiation dose delivered to a patient. This is crucial for effective cancer treatment when using high energy X-rays. With this contribution, he attempted to measure the amount of radiation using arbitrary field X-ray field shapes. This study makes important novel progress into 3D dose reconstruction based on output signals from the beam monitor for future use with the IQM in combination with sophisticated dose calculation algorithms. The quality of this work is manifested in three peer-reviewed publications in international medical science journals.

**Promoter:** Dr FCP Du Plessis





## **MAPHANGA, Tsidiso Gugu**

Tsidiso Maphanga was born in Clau-Clau, Mpumalanga on the 23rd of February 1985. She matriculated at Hlanganani Secondary School in 2002. She completed a BSc degree in Medical Biosciences in 2005 and a BSc Honours degree in Herbal Sciences in 2006, both at the University of the Western Cape. She obtained her Master of Medical Microbiology degree with distinction in 2013 at the University of Pretoria. In 2013, she was appointed as a Medical Scientist in the Centre for Healthcare-Associated Infections, Antimicrobial Resistance and Mycoses at the National Institute for Communicable Diseases, where she is currently based.

With her thesis titled: **DIAGNOSTIC METHODS FOR DETECTION AND CHARACTERISATION OF DIMORPHIC FUNGI CAUSING INVASIVE DISEASE IN AFRICA: DEVELOPMENT AND EVALUATION**, the candidate makes a significant contribution to current knowledge regarding methods to rapidly detect dimorphic fungal pathogens causing invasive human disease. The candidate used clinical samples to develop and evaluate laboratory assays for detection and antifungal susceptibility testing of dimorphic fungi in order to improve diagnosis and management of clinical disease. Using advanced molecular methods, she discovered a new dimorphic pathogen named *Blastomyces emzantsi* that caused invasive disease in South African patients. The candidate showed that DNA sequence-based assays can accurately identify dimorphic pathogens. She evaluated the use of a commercially-available method that was recently approved as a diagnostic tool for patients with disseminated fungal disease. Susceptibility findings from her study supported the use of certain antifungal agents for treatment of HIV-infected patients with disseminated fungal disease. The series of studies undertaken by the candidate increased awareness of dimorphic pathogens particularly in resource-limited countries and will facilitate implementation of advanced diagnostic methods to assist in rapid therapeutic decision-making in a clinical setting.

**Promoter:** Dr NP Govender

## **DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ANATOMICAL PATHOLOGY**

## **GOEDHALS, Jacqueline**

Jacqueline Goedhals was born on 28 June 1973 in Johannesburg. She matriculated at St Michael's School, Bloemfontein in 1990 and attained the degree MBChB in 1996 and the degree MMed (Anatomical Pathology) with honours in 2004 at the University of the Free State. She obtained a Diploma in Tropical Medicine and Hygiene from the University of the Witwatersrand in 2004 and an MSc Med Sci in Cytology in 2011 at the University of Stellenbosch. At present she is the Head of the Department of Anatomical Pathology at the University of the Free State and the National Health Laboratory Service.

With her thesis, **DEMOGRAPHIC AND GENETIC FEATURES OF GESTATIONAL TROPHOBLASTIC DISEASE IN THE PUBLIC SECTOR OF THE FREE STATE PROVINCE, SOUTH AFRICA**, the candidate contributes to the understanding



of gestational trophoblastic disease in the local population. The study showed a low incidence of hydatidiform mole and choriocarcinoma and confirmed that patients with human immunodeficiency virus infection and a compromised immune status have a significantly worse prognosis. One novel pathogenic NLRP7 variant and two novel variants of unknown clinical significance were identified in patients with hydatidiform mole and recurrent reproductive wastage. These are the first reported cases of NLRP7 variants in the South African population. Microsatellite genotyping of the choriocarcinoma cases confirmed that the majority are gestational which has implications for treatment and prognosis. The molecular techniques will now be available for use on the routine diagnostic platform

**Promoter:** Prof M Theron

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## DEAN'S MEDAL

**AWARDED TO A STUDENT WHO ACHIEVED THE BEST RESULTS IN RESPECT OF A MASTER'S DEGREE  
IN THE FACULTY OF HEALTH SCIENCES DURING THE YEAR 2019**

Dr Dirkie Swinfen  
(Master of Health Professions Education)



DEAN |  
**PROF H HUDSON**

## MASTER'S DEGREES

### MASTER OF ARTS IN AFRICA STUDIES

NENE, Sizwe Innocent

### MASTER OF ARTS IN CLINICAL PSYCHOLOGY

JACOBS, Chante

OLIVIER, Menanteaux

### MASTER OF ARTS IN COMMUNICATION SCIENCE

KHANYELA, Sebusi Charles

**Dissertation Title:** A CULTURE-CENTRED STUDY ON MATERNAL HEALTH COMMUNICATION IN RURAL LESOTHO

**Supervisor:** Prof. Milagros Rivera

**Co-supervisor:** Dr. Mvuzo Ponono

### MASTER OF ARTS IN DRAMA AND THEATRE ARTS

DE RIDDER, Adriaan

**Dissertation Title:** DIE IDENTIFISERING EN KLASSIFISERING VAN DIE

AFRIKAANSE GOTIESE GENRE IN DIE SPELTEKS: PLASTON: DNS-KIND (P.G. DU PLESSIS) EN MIRAKEL (REZA DE WET)

**Supervisor:** Ms A Smit

**Co-supervisor:** Mr D.C. Cloete

SWART, Berlie Patricia\*

**Dissertation TITLE:** ADAM SMALL - THE ALIENATED WRITER: A CRITICAL ANALYSIS OF SMALL AND KANNA HY KÔ HYSTOE (1965)

**Supervisor:** Dr A van Jaarsveld

**Co-supervisor:** Mr D.C. Cloete

### MASTER OF ARTS IN GENDER STUDIES

BANDA, Ruvimbo

### MASTER OF ARTS IN GOVERNANCE AND POLITICAL TRANSFORMATION

JILI, Nhlanhla

KAPA, Angel Nombulelo

LIPHOLLO, Moitshepi Thembaletu

MADIKIZA-SAMBANE, Ndiliwe Christabell

MAFETHE, Mokome Marorisang

MAGAGULA, Hendri Bhazamusi

MARAIS, Kathleen Yvonne

MARINGA, Zondeka Erick

MATLANYANE, Masiteng Paul

MATLOU, Molefe

MOEPA, Pulane Claudia

PHATSHWANE, Rebaone Jeremia

SIFUBA, Ntombizanele Beauty

TAU, Toka Justice

THAELA, Lefu

THELETSANE, Joyce Masentle

VAN WYK, Anna Carolina

VREUGDENBURG, Andre Collin

WILLIAMS, Margaret Mpeea

### MASTER OF ARTS WITH SPECIALISATION IN AFRIKAANS AND DUTCH

ESTERHUIZEN, Johanna Albertina Sarah

FERREIRA, Ansja

FLEISCHMANN, Anneen

**Dissertation Title:** 'N KORPUSGEBASEERDE ONDERSOEK NA KOHESIEPATRONE AS MOONTLIKE STILISTIESE KENMERK VAN OUTEURSTYL

**Supervisor:** Prof. A. van Niekerk

**Co-supervisor:** Dr R. Wasserman

KOSTER, HanneFren

NAUDÉ, Mary-Ann

STOFFBERG, Pieter Andries\*

VISSER, Hendrik Gideon





## MASTER OF ARTS WITH SPECIALISATION IN ENGLISH

GUILLAUME, Anna Magrieta

**Dissertation Title:** EXPLORING THE LYRICS OF A PERFECT CIRCLE IN ASSESSING THE VALUE OF MUSIC LYRICS AS AN AID TO TEACHING MODERN POETRY

**Supervisor:** Dr M Brooks

**Co-supervisor:** Ms MMG Lovisa

MARAIS, Lorette Martli\*

**Dissertation Title:** THE CARE WORKER IN THREE CONTEMPORARY VISUAL CULTURAL TEXTS

**Supervisor:** Prof HJ Strauss

**Co-supervisor:** Dr M Brooks

## MASTER OF ARTS WITH SPECIALISATION IN FRENCH

KIRSTEN, Trudalise

**Dissertation Title:** Une enquête sur la facilitation du vocabulaire sportif pour les joueurs de rugby sud-africains en France [A study on the facilitation of sport vocabulary for South-African rugby players in France]

**Supervisor:** Mr ADP Barkhuizen

**Co-Supervisor:** Ms C Grobler

## MASTER OF ARTS WITH SPECIALISATION IN PHILOSOPHY

KOSTER, Johannes Marthinus\*

**Dissertation Title:** WORLDVIEW-PHILOSOPHY-THROUGH-FILM: AN ACCOUNT OF COGNITIVE DISCOMFITURE IN VIEWER-ENGAGEMENT

**Supervisor:** Prof B Olivier

## MASTER OF ARTS WITH SPECIALISATION IN SOUTH AFRICAN SIGN LANGUAGE

VAN DER WESTHUIZEN, Erica Hasle

**Dissertation Title:** THE ROLE OF COCHLEAR IMPLANTS ON THE SOUTH AFRICAN DEAF CULTURE

**Supervisor:** Dr M Stander

**Co-Supervisor:** Dr SZ Matebesi

## MASTER OF ARTS WITH SPECIALISATION IN SESOTHO

MONYAKANE, Mathai Calextina

**Dissertation Title:** EVALUATIVE LANGUAGE IN MAPHALLA'S POETIC TEXTS WITH REFERENCE TO HIS COLLECTION OF POEMS IN 'DITEMA'

**Supervisor:** Dr EN Malete

## MASTER OF MUSIC

CILLIERS, Salomé\*

**Dissertation Title:** CONTEMPORARY WORSHIP MUSIC AS RHETORICAL TEXT: THE USE OF MULTIMEDIA IN SELECTED SOUTH AFRICAN CHARISMATIC CONGREGATIONS

**Supervisor:** Prof M Viljoen

CLOETE, Xavier Clinton

SCHOEMAN, Heiletta

**Dissertation Title:** DIE ROL VAN LOKUS VAN KONTROLE IN VOLGEHOUE INSTRUMENTALE ONDERRIG BY LEERDERS OP SEKONDÊRE VLAK

**Supervisor:** Dr AMF De Villiers

**Co-supervisor:** Dr RBI Beukes

## MASTER OF PSYCHOLOGY

HUGO, Quinli\*

**Dissertation Title:** EUGÉNE NIELEN MARAIS: AN ADLERIAN PSYCHOBIOGRAPHY

**Supervisor:** Prof JP Fouché

**Co-supervisor:** Dr P Naidoo



VAN TONDER, Johanna Isabella\*

**Dissertation Title:** PREDICTORS  
OF LONELINESS AMONGST  
UNIVERSITY STUDENTS

**Supervisor:** Dr J Jordaan

**Co-supervisor:** Prof KGF  
Esterhuysen

**MASTER OF SOCIAL SCIENCE  
IN CLINICAL PSYCHOLOGY**

FICK, Lara

FRANKEN, Anneke Louise

MARTIN, Andrew France\*

**MASTER OF SOCIAL WORK**

DU TOIT, Cynthia Yolande

**Dissertation Title:** PROCESS  
EVALUATION OF THE  
IMPLEMENTATION OF SECTION  
148 OF THE CHILDREN'S ACT 38  
OF 2005

**Supervisor:** Prof SB Ferreira

**Co-supervisor:** Mr CJ van Wyk

## DOCTORAL DEGREES

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

**MAZARIRE, Tichaona Trust**

Tichaona Mazarire was born in Bulawayo on 26 March, 1985. He obtained his bachelor's degree in English and Communication jointly from Midlands State University (Zimbabwe) and the University of Tromsø (Norway) in 2009. Thereafter, he obtained a Master of Philosophy in Peace and Conflict Transformation from the University of Tromsø in 2012. Presently, he is a researcher in the Department of Social Sciences at Namibia University of Science and Technology (NUST).

With his thesis, **EXPLORING ECONOMIC REINTEGRATION IN NAMIBIA: INDIVIDUAL TRAJECTORIES OF PLAN EX-FIGHTERS AND SWAPO EXILES, 1989 – 2018**, Mazarire contributes to our understanding of how displaced Namibians incorporated themselves into Namibia following its independence from South African rule. Through life history research, the author delves into the experiences of individual former SWAPO exiles, illuminating how and to what extent they have incorporated themselves into the Namibian economy. Moreover, he problematizes methods that have been used beyond Namibia to analyse the reintegration of ex-combatants, critiquing approaches that focus on formal reintegration programmes. As Mazarire maintains, former SWAPO exiles have profited unevenly from the United Nations' and Namibian government's approach to reintegration due to a range of factors, including "patriotic" credentials, access to human and social capital, and personal efforts to reintegrate. Thus, there is no single narrative that can describe their unique experiences or the efficacy reintegration programming in Namibia.

**Promoter:** Dr CA Williams

**Co- Promoter:** Prof H Melber

**DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN SESOTHO****KHETOA**, Soyiso Godsave

Soyiso Godsave Khetoa was born on 03 December 1989 in Trompsburg in the Free State, South Africa. He completed his secondary education at Trompsburg Secondary in 2008. He graduated his Bachelor of Arts in 2012, BA Honours (with specialization in African languages) in 2015, Master of Arts (with specialization in African languages) in 2017 at the University of the Free State. When he commenced with his Master's, he was coopted into an Academic Student Tutorial Excellence Programme where he tutored in the Department of African Languages in 2015. Later that year he also worked as a research assistant in a program titled "Towards Effective Language Development and Application in African Languages". In August 2017 he started working in Supply Chain Management at Free State Department of Health

With his thesis titled, **ATTITUDES OF UNIVERSITY STUDENTS TOWARDS SESOTHO: A CASE STUDY OF STUDENTS ENROLLED IN SESOTHO MODULES**, the candidate contributes to an area of Sociolinguistics that is scarcely researched. With this study, Khetoa sought to establish university students' attitudes towards Sesotho. The issue of language attitudes amongst speakers of African languages remain unexplored. Many statements and opinions suggest that African languages are held in low esteem, such opinions are often delivered as proven facts. As a result, many researchers in African languages continue to suggest that speakers of African languages do not believe that African languages should be developed and used beyond their current domains. Contrary to this, Khetoa's research provides empirical evidence which suggest that perhaps the commonly held beliefs on African languages speakers about their languages are not necessarily common. The findings suggest that there are positive attitudes towards Sesotho, and there is a strong advocacy for the intellectualization and use of Sesotho in higher-domains.

**Promoter:** Dr AS Motsei**Co- promoter:** Dr PA Phindane**MANGWEGAPE**, Bridget Kesaobaka

Bridget Kesaobaka Mangwegape was born on 7 March 1961 in Kimberley in the Northern Cape Province of South Africa. She achieved her Senior Certificate at Kgomoitso High School in 1981. She obtained her Teacher's Diploma in Secondary Education and her BA degree at Vista University in 1989 and in 1996 respectively. She furthered her studies in African Languages at Stellenbosch University. She completed her BA Honours degree in 1999 and her Master's degree in 2005. She started working at Kagisho Comprehensive School as a Setswana teacher and became an HOD for African Languages. She then joined the Central University of Technology at the beginning of 2015 as a Setswana Lecturer for undergraduate courses.

With her thesis, **'REFLECTIONS ON UBUNTU PRINCIPLES IN SETSWANA DRAMA TEXTS'**, the candidate contributes to the scholarship of African Languages Literary Studies. The three philosophical principles of Ubuntu, namely caring, sharing and respect serve as key pillars to underpin the social relationship which ensure harmony, dignity and nation building in real life situations. The candidate explored the general behaviour of the characters in selected Setswana drama texts to determine to what extent they maintained or contravened the core values and principles of Ubuntu. In doing so, she applied an explanatory research design informed by Harrington's (1997) approach to ethics in literary studies. This study illustrates the view that





African literary authors are more concerned with showing how failure to maintain the core values and principles of Ubuntu could lead to disaster and tragedy. However, upholding the principles of Ubuntu could lead to harmony, peace and stability in society.

**Promoter:** Dr EN Malete

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN CHILD PSYCHOLOGY

**RAATH**, Francilié

Francilié Raath (née Hoek) matriculated in Witbank in 1996. She holds a Bachelor degree in Publishing, an Honours degree in Psychology and a Higher Education Diploma from the University of Pretoria. After working as a teacher in the UK, she completed a Master Degree in Counselling Psychology at the University of the Free State. Francilié gained extensive work experience as a psychologist at a school for learners with special educational needs. She is married to Rudolph and a devoted mother of three. Francilié is passionate about stories, integrating the expressive arts into psychology practice, celebrating resilience and making life more beautiful!

With her thesis, **EXPLORING THE DIGITAL NARRATIVES OF RESILIENCE OF SOUTH AFRICAN ADOLESCENTS EXPOSED TO VIOLENT CRIME** the candidate makes a meaningful and novel contribution to the field of adolescent resilience, focusing on this phenomenon from a narrative perspective. Falling victim to a violent crime in the transitional life-stage of adolescence, can have a lasting impact on the physical and mental health outcomes in adulthood. Results indicated that a connection with nature, culture, the role of faith in God / spirituality, a positive future orientation, love and kindness, friendship and the digital storytelling and making experience itself, served as enablers and protective mechanisms which played a role in adolescents' resilience processes. The findings were of particular value in informing intervention programmes aimed at enhancing well-being in adolescents. These efforts must not focus on the adolescent exclusively but give equal attention to transforming low-resource environments into more resilience enabling contexts.

**Promoter:** Dr L Nel

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN ENGLISH

**DRENNAN**, Laura Maria

Laura Drennan matriculated at Eunice Girls School. She obtained a BA Drama and Theatre Arts degree with distinction at the University of the Free State in 2003, a Postgraduate Certificate in Education with distinction in 2009, the BA Honours (Language Studies) with distinction in 2010, and an MA in Language Studies with distinction in 2011. Laura has been involved in English literacy development since 2002, when she was appointed as academic literacy facilitator at the Unit for Language Development. After obtaining her MA, she was appointed as Lecturer in the Centre for Teaching and Learning, where she heads up the Write Site



In her thesis, **DEFENSIBILITY AND ACCOUNTABILITY: DEVELOPING A THEORETICALLY JUSTIFIABLE ACADEMIC WRITING INTERVENTION FOR STUDENTS AT TERTIARY LEVEL**, the candidate examines the theoretical justification for the design of discipline-specific writing interventions. Such justification is to be found in assessing whether these writing courses comply with the conditions for the responsible design of applied linguistic language solutions. In particular, the various language interventions of the Write Site are analysed and critiqued. The language needs analyses, assessments of language ability and the impact of the interventions are closely scrutinised. In commenting on the thesis, all examiners had praise for its comprehensiveness and thoroughness, while the two external examiners remarked about its “profound appreciation for the ... measures required to provide defensible evidence and justification” for academic language support programmes. One calls it “an exceptional contribution” to our knowledge of academic writing, while the other finds the “meticulous data collection especially impressive.”

**Promoter:** Prof AJ Weideman

**Co- Promoter:** Dr CL Du Plessis

**MHITI, Timothy**

Timothy Mhiti was born in Masvingo in Zimbabwe. He matriculated at Tongogara High School in the Midlands Province of Zimbabwe in 1995. In 2002, he obtained a Bachelor of Arts Honours in English Degree at the University of Zimbabwe; and in 2013 graduated with a distinction in the Master of Arts in African and Diasporan Literature Degree at Midlands State University in Zimbabwe. He started his career as a high school teacher and at one point also doubled as a part-time lecturer at the Great Zimbabwe University. At present, he is a lecturer at Midlands State University in Zimbabwe.

With his thesis, **CONTESTING PATRIOTIC IDENTITIES: A STUDY OF LITERARY COUNTER-DISCOURSE IN THE ADVENT OF THE THIRD CHIMURENGA**, the candidate contributes to scholarship on identity, nation, patriotism and counter-narratives in postcolonial discourse. Mhiti draws on the critical literary and cultural textual analysis method rooted in postcolonial theory to analyse literature about post-2000 and the Third Chimurenga in Zimbabwe produced by authors of different genders and race and the third literary generation, to reveal the relationship between the elite’s construction of national and patriotic identities and ordinary people’s perceptions of self and the nation. The study notes that a literary approach can intervene to interject, unsettle, unmake and re-make knowledge about contemporary experiences and (ab)uses of the concepts the nation and patriotism. Mhiti argues that, while the concept of patriotic identities is deeply political in post-2000 Zimbabwe, there exists multiple literary counter-discourses that map alternate ideas and memories of the nation.

**Promoter:** Prof I Manase

**Co- Promoter:** Dr O Nyambi

**SILUONDE, Mwaka**

Mwaka Siluonde was born in Luanshya, Zambia in 1986. She completed her high school education at Ibenga Girls Secondary School in 2004. She obtained both a Bachelor of Arts with Education Degree in 2010 and a Master of Arts in Literature in 2015 at the University of Zambia. She taught Secondary School English from 2011 to 2016 before joining Mulungushi University in Kabwe, Zambia where she has been lecturing English to date.



With her thesis **ORAL NARRATIVE MNEMONIC DEVICES AND THE FRAMING OF THE ZAMBIAN NOVEL IN ENGLISH: A STUDY OF SELECTED ZAMBIAN NOVELS**, the candidate contributes to scholarship on the role that oral narrative mnemonic devices play in defining the Zambian novel in English. The study, which draws on Derridian deconstruction and other concepts such as Bakhtin's heteroglossia and chronotope, departs from oral narrative fixity and argues that while oral narrative devices play a role in framing the novel in English, the images themselves are subject to a multicultural, temporal and fluid context of the novel. Mwaka's findings deconstruct logocentric assumptions and hierarchised binary pairs in which oral narratives are considered the logocentric signified of images in the African novel. Therefore, the study disrupts the essentialist reading of the oral and written text and modifies the deconstruction theory in proffering a revisionist reading of Zambian and African literature in English.

**Promoter:** Prof I Manase

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN HISTORY

**VAN ZYL**, Jan Johannes Rudolph

Johan van Zyl was born in Cape Town on 7 December 1965. He received his secondary school education in Bethulie, where he matriculated at the Pellissier High School in 1984. He obtained his B.A. degree at the University of South Africa in 1993 and his M.A. degree (History) at the University of the Free State in 2005. He started his career in the diplomatic corps (Department of Foreign Affairs) in Pretoria in 1988. In 2002, he was appointed as Manager: Museum Human Scientists at the War Museum of the Boer Republics in Bloemfontein, where he currently works.

With his thesis, **BETHULIE 1896-1907, MET SPESIFIEKE VERWYSING NA DIE ANGLO-BOEREOORLOG**, the candidate makes an original contribution to the knowledge of the history of the Anglo-Boer War, specifically regarding Bethulie as a strategic town, and the impact that the war had on the community and district in the period before, during and after the war. It provides a holistic view of the Bethulie community, and places the historical events in context in order to create a more comprehensive understanding thereof. The study indicates that the Anglo-Boer War had an extensive, complex and long-lasting impact on Bethulie and its people. The examiners commended the candidate for his remarkable usage of scarce sources, leading to the compilation and analysis of new statistical data lists. One examiner commented: "[I]t is seldom that such a mass of thorough and finely synthesized research is uncovered. The thesis personifies scientific passion and seasoned insights, which reflect intellectual maturity. A rare construction of all those facets which interplay to realize an exceptional contribution to the historiography is found in this unique thesis."

**Promoter:** Dr MM Oelofse

**Co- Promoter:** Prof A Wessels

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN PHILOSOPHY

**AMIRADAKIS**, Mark Jacob

Mark Jacob Amiradakis was born in Johannesburg on 30 August 1983. He received his secondary education in Johannesburg, matriculating at the Jeppe High school for Boys in 2001. He obtained the degree BA Psychology (cum laude) in 2006 (UJ);





Hons Psychology in 2007 (UJ), Post Graduate Certificate in Education (cum laude) in 2008 (UJ), Hons Philosophy (Cum laude) in 2009 (UJ), and Master of Philosophy (Cum laude) in 2015 (NWU). He started his career as a teacher in Johannesburg 2010, where he taught at a secondary school for five years, before returning to academia to continue with his Postgraduate studies.

With his study, **A CRITIQUE OF SOCIAL NETWORKING SERVICES WITHIN THE PUBLIC SPHERE OF THE 21ST CENTURY**, the candidate focuses on the role and impact of social media technology, social networking services and other interrelated Information Communication Technologies (ICTs) within the contemporary public sphere. By explicitly drawing from the First Generation of Critical Theory (and beyond), this study makes a concerted attempt to ascertain what impact(s) these digital devices are wielding upon the modern citizenry, and whether or not these technologies are proving to undermine the notion of democracy within the 21st century.

**Promoter:** Prof B Olivier

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN PSYCHOLOGY

**KRUGER**, Bridget O'Neill

Bridget O'Neill Kruger, born on 9 July 1981, is a qualified and practicing Clinical Psychologist. After graduating with her MA in Clinical Psychology from the University of the Free State she completed an internship at 3 Military Hospital followed by a community service placement at Groote Schuur Hospital. Apart from her passion for psychology, Bridget is an avid animal rights advocate dedicating her time to intersectional social justice advocacy. She lives in Cape Town with her husband and their 8 feline and canine family members.

With her thesis, **THE MINDFULNESS, ATTACHMENT AND SATISFACTION EXPERIENCES OF COUPLES**, The candidate aimed to explore and describe the mindfulness, attachment and satisfaction experiences amongst South African couples in intimate relationships. Given the range of factors that could potentially influence couples' relationship satisfaction, it was deemed important to understand the mechanisms that enabled couples to achieve satisfaction and optimal functioning within their relationships. The study was conceptualised within the theoretical framework of interpersonal neurobiology (IPNB) which views both individuals and their well-being as the product of the interaction between their brain, mind and relationships. A convergent mixed methods research design, using a multiple case study design, was employed. The findings supported associations between mindfulness and both relationship satisfaction and secure attachment. This study made a noteworthy contribution towards the understanding of intimate relationships by placing them within a novel conceptual framework that illustrated the different components involved in creating satisfying, flourishing and optimally functioning intimate relationships.

**Promoter:** Dr P Naidoo

**WELMAN**, Crystal Alicia

Crystal Alicia Welman was born in Graaff-Reinet, a small Karoo town in the Eastern Cape. In 1998, she completed her high school education there and moved to Port Elizabeth to study Psychology at the University of Port Elizabeth (present-day



Nelson Mandela University). She obtained her BPsych and BA Honours degrees in Psychology there and later obtained her MA (Counselling Psychology) degree at the University of the Free State in Bloemfontein. Ms Welman is currently employed as a senior psychologist at the Central University of Technology in Bloemfontein, where she is Head of the Counselling portfolio within the University's Wellness Centre.

With her thesis, **SOL PLAATJE: A PSYCHOBIOGRAPHICAL STUDY** the candidate makes an exceptional contribution to the field of African psychobiography. Solomon Plaatje (1876-1932) was an enigmatic multilingual novelist, journalist and leading figure in South Africa's liberation history. He is remembered as one of the founding members of the 1912 South African Native National Congress, the forerunner of the African National Congress. This study entails a psychological reconstruction of his life, within a socio-historical context. This was achieved via two psychological frameworks, namely (a) psychosocial development, and (b) the Wheel of Wellness model. Findings indicate that Plaatje successfully navigated all the psychosocial developmental stages and also achieved a high degree of wellness. The study highlights the impact of significant socio-political events on his psychological functioning. The candidate has published a chapter on Plaatje in an internationally acclaimed book by Springer, titled: *New Trends in Psychobiography*.

**Promoter:** Prof JP Fouche

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## DEAN'S MEDAL

**AWARDED TO A STUDENT WHO ACHIEVED THE BEST RESULTS IN RESPECT OF A MASTER'S DEGREE  
IN THE FACULTY OF THE HUMANITIES DURING THE YEAR 2019**

Johannes Koster  
(Master of Arts with specialisation in Philosophy)



DEAN |  
**PROF JC MUBANGIZI**

## MASTER'S DEGREES

### MASTER OF HUMAN RIGHTS

LEEUEW, Tembisa  
MOKHELE, Chaka Andrew  
NHLAPO, Mpho Penelope  
NTOYI, Aphiwe Nosisa  
NYADU, Anathi  
VAN KRAAYENBURG, Maria\*  
WESSELS, Erika\*

### MASTER OF LAWS WITH SPECIALISATION IN CONSTITUTIONAL LAW AND PHILOSOPHY OF LAW

MOTHIBI, Reneilwe  
NDLAZI, Sikelela\*

**Dissertation Title:** THE  
CONSTITUTIONAL  
IMPERATIVES FOR THE  
DEVELOPMENT OF ARTISANAL  
AND SMALL-SCALE MINING IN  
SOUTH AFRICA

**Supervisor:** Prof JL Pretorius  
**Co-Supervisor:** Adv. LJ Gerber

### MASTER OF LAWS WITH SPECIALISATION IN CRIMINAL LAW

GOVENDER, Ramona  
**Dissertation Title:** THE  
FEASIBILITY AND POSSIBLE  
EFFECTIVENESS OF  
CRIMINALISING MATERNAL  
SUBSTANCE ABUSE IN SOUTH  
AFRICA

**Supervisor:** Dr R Botha

### MASTER OF LAWS WITH SPECIALISATION IN ENVIRONMENTAL LAW

MOKEKE, Lesitsi Matthews  
MPAMA, Sibongile Motlalepula\*

### MASTER OF LAWS WITH SPECIALISATION IN HUMAN RIGHTS

TOLOLI, David

### MASTER OF LAWS WITH SPECIALISATION IN FINANCIAL PLANNING LAW

RADEBE, Thokozani Nokuthula

### MASTER OF LAWS WITH SPECIALISATION IN INTERNATIONAL ECONOMIC LAW

MASEDI, Lehakoe  
RABOLINYANE, Christopher Tefo

### MASTER OF LAWS WITH SPECIALISATION IN LABOUR LAW

KLEYNHANS, Ézanne\*  
MAYET, Zurayda  
MOJAI, Pule Joseph  
NDHLOVU, Abgail Tafadzwa  
PIENAAR, Ezel  
SADIKI, Mulalo Valentia  
SEPHAPO, Moshoeshoe Paulus

### MASTER OF LAWS WITH SPECIALISATION IN LAW OF BUSINESS ENTITIES

HLABANYANE, Monyake George  
JANKIE, Ntebaleng Jeanett  
KALAKE, Tsolo Everrit  
MAPETLA, Malifuo Eugenia  
Tsoana  
MZINJANA, Litha Buyelekhaya

### MASTER OF LAWS WITH SPECIALISATION IN MEDICAL LAW

MOORE, Christine  
TSOEUNYANE, Mosito Edwin

### MASTER OF LAWS WITH SPECIALISATION IN MERCANTILE LAW

HATTINGH, Magdalena Maria



**Dissertation Title:** CORPORATE GOVERNANCE IN SOUTH AFRICAN AIRWAYS (SAA) AS A STATE-OWNED COMPANY

**Supervisor:** Prof E. Snyman-van Deventer

MOLAPO, Mamello Innocentia

**MASTER OF LAWS WITH SPECIALISATION IN PRIVATE LAW**

CORNELIUS, Carmin

MONETHI, Dimakatso Neo Dineo

## DOCTORAL DEGREES

### DOCTOR OF LAWS WITH SPECIALISATION IN CONSTITUTIONAL LAW AND PHILOSOPHY OF LAW

**MUHAMMAD**, Bello

Bello Muhammad was born on 20 May, 1985 in Kaduna, Kaduna State, Nigeria. He attended the prestigious Barewa College Zaria for his secondary education and later proceeded to Bayero University Kano where he obtained an LLB (Hons) in 2007, graduating as the best student. He obtained his BL from the Nigerian Law School, Lagos Campus and was enrolled as a Barrister and Solicitor of the Supreme Court in 2008. In 2014, Bello obtained his LLM (with distinction) from Bayero University, Kano. He started his legal career in 2008 and served as a Law Clerk to the Chief Judge of Kaduna State.

With his thesis, **THE PLACE OF SOCIO-ECONOMIC RIGHTS IN SOVEREIGN DEBT GOVERNANCE**, the candidate contributes to the sovereign debt scholarship by providing fresh perspectives on the doctrinal tension between sovereign debtors' contractual obligations and their treaty obligations. Using doctrinal methodology, he examines the extent to which contractual obligations may be honoured where socio-economic rights of debtor's citizens face a clear danger of non-realisation. The research argues that the recurring circles of debt crises around the world could be linked to the continuing influence of the dominant private law paradigm in sovereign debt governance. The study therefore proposes the prioritisation of socio-economic rights considerations in debt contracting, restructuring and adjudication through a more concrete, statutory recognition of creditors' socio-economic rights responsibilities.

**Promoter:** Prof E Snyman-Van Deventer

**Co- Promoter:** Dr A De Mann

### DOCTOR OF LAWS WITH SPECIALISATION IN MERCANTILE LAW

**BOBO**, Nation

Nation Bobo did high school studies in Zimbabwe and later obtained his first degree at University of Zimbabwe. In 2013, he obtained LLM in Law and Finance at Duisenberg School of Finance under University of Amsterdam, in Netherlands. He





worked at for various Organisations in Zimbabwe which includes Ministry of Finance (2006 – 2007), Amalgamated Regional Trading Corporations (2008 - 2009) and now works at State Enterprises Restructuring Agency, in Investment Department, where he had been involved in negotiating and drafting investment agreements. He also obtained various certificates in law and finance offered by International Monetary Fund and World Bank.

With his thesis, **THE THREAT OF STATE-SOVEREIGNTY AND STATE-CONSENT ON INTERNATIONAL INVESTMENT LAW, GLOBAL DEVELOPMENT AND MUTUAL SURVIVAL**, the candidate contributes to scholarship by adopting a three-staged analytical study on threat of state-sovereignty and state-consent on international investment law (IIL), global development and mutual survival. The first stage test confirmed that restriction of state-sovereignty improves effectiveness of IIL on attracting foreign investment. The results guides that a country should ratify investment treaties with more restrictive provisions so as to attract more foreign investment. The second stage test confirmed that giving away of state-sovereignty improves human development. The findings at second stage revealed that the level of state-sovereignty given away have different impact on development through its effect on IIL, which gave insight, why at times IIL is an enemies of development. The third stage results showed increasing interdependence among countries through investment treaties encourages them to assist each other. An article from the thesis has been submitted to an accredited journal.

**Promoter:** Prof E Snyman-Van Deventer



DEAN |  
**PROF PD VERMEULEN**

## AGRICULTURAL SCIENCES

### MASTER'S DEGREES

#### MASTER OF SCIENCE IN AGRICULTURE MAJORING IN AGRONOMY

MOTA, Maipato Margaret

**Dissertation Title:**  
THE POTENTIAL OF A  
BRASSINOSTEROID TO  
ALLEVIATE THE EFFECT OF  
MESOTRIONE RESIDUES ON  
THREE LEGUME CROPS

**Supervisor:** Dr E Van Der Watt

**Co-supervisor:** Dr J Allemann

#### MASTER OF SCIENCE IN AGRICULTURE MAJORING IN AGROMETEOROLOGY

MUELELWA, Lutendo Nally

**Dissertation Title:** IMPACT  
OF CLIMATE CHANGE ON  
POTATO YIELD AND WATER  
USE EFFICIENCY IN SOUTH  
AFRICA AND OPTIONS FOR  
ADAPTATION

**Supervisor:** Prof AC Franke

SEKOBOANE, Itumeleng Elias

**Dissertation Title:** ASSESSING  
VARIABILITY IN RESOURCE  
USE EFFICIENCIES OF  
SMALLHOLDER POTATO FARMS  
IN TWO REGIONS OF SOUTH  
AFRICA

**Supervisor:** Prof AC Franke

**Co-Supervisor:** Dr JA Van  
Niekerk

#### MASTER OF SCIENCE IN AGRICULTURE MAJORING IN ANIMAL SCIENCE

ELAGO, Benita Tonateni

**Dissertation Title:** THE USE  
OF CORTISOL METABOLITES  
TO DETERMINE LEVELS OF  
STRESS ASSOCIATED WITH  
FIBRE INCLUSION RATE AND  
FIBRE QUALITY IN OVIS ARIES  
(SOUTH AFRICAN MUTTON  
MERINO SHEEP)

**Supervisor:** Dr HA O'Neill

**Co-supervisor:** Prof A Ganswindt

MUDZUNGWANE, Thandululo

**Dissertation Title:** PROPOSING  
THE USE OF PERCENTILE  
GRAPHS TO SET MINIMUM  
BREED STANDARDS FOR  
SCROTAL CIRCUMFERENCE  
IN DRAKENSBERGER  
BULLS IN PHASE C AND D  
PERFORMANCE TESTING

**Supervisor:** Dr HA O'Neill

**Co-supervisor:** DR M Fair

#### MASTER OF SCIENCE IN AGRICULTURE MAJORING IN FOOD SCIENCE

FREITAG, Alicia\*

**Dissertation Title:** THE  
GROWTH AND SURVIVAL  
OF *ESCHERICHIA COLI* AND  
*STAPHYLOCOCCUS AUREUS* IN  
BOEREWORS MANUFACTURED  
WITH REDUCED AND/OR  
REPLACED SALT

**Supervisor:** Prof CJ Hugo

**Co-Supervisors:** Prof A Hugo, Dr  
AC Hitzeroth and Dr M Cluff

HILLS, Carla

**Dissertation Title:** SENSORY  
PROFILING OF, AND  
CONSUMER BEHAVIOUR  
TOWARDS, EDAMAME  
GENOTYPES IN SOUTH AFRICA

**Supervisor:** Dr C Bothma and Dr  
R van der Merwe

**Co-Supervisor:** Prof A Hugo

SCHMIDT, Lauren Lorraine

**Dissertation Title:** THE MILK  
AND SERUM NMR-BASED  
METABOLIC PROFILES OF THE  
SOUTH AFRICAN GIRAFFE  
(*GIRAFFA CAMELOPARDALIS*  
*GIRAFFA*) AND THEIR RELATION  
TO OTHER MILK NUTRIENTS

**Supervisor:** Prof F.H Osthoff

**Co-Supervisor:** Prof ASW Tordiffe



## MASTER OF SCIENCE IN AGRICULTURE MAJORING IN SOIL SCIENCES

**JORDAAN**, Daniël Reynders

**Dissertation Title:** RESPONSE OF A SANDY SOIL AND MAIZE PLANTS TO SYNTHETIC- AND BIONEMATICIDES

**Supervisors:** Prof H Fourie and Dr E Kotzé

**Co-supervisor:** Prof CC Du Preez

## MASTER OF SUSTAINABLE AGRICULTURE

**AVONTUUR**, Ian Hadley

**BOSHOMANE**, Maphuti Joseph

**DABULA**, Siyasanga

**DE WEE**, Zabion Reagan

**DLAMINI**, Mildred Nomthandazo

**DUTOIT**, Eric Bernard

**ERASMUS**, Vianca Sue-Allen

**GCWILI**, Zamile Jacob

**GEDZE**, Antonette Vela Nokhanyo

**HAKWEENDA**, Daniel Ndume

**KOBA**, Andisiwe

**LEDIGA**, Phaladi Samuel

**LETUKA**, Maseli Augustinus

**MABIKAHAMA**, Tinashe

**MADLALA**, Xolani Pius

**MAMOKHERE**, Thabang

**MANGALISO**, Zukisa

**MANQELE**, Vincent Pollen

**MASILO**, Mpontsheng Olive

**MASONDO**, Richard Thulani

**MATLA**, Seganedi Sossie

**MATLALA**, Molebatja Octavia

**MHLONGO**, Sakhiwo Vernon

**MINYELELA**, Bakhangele

**MKHUNGELA**, Mabuto Nolton

**MKIZE**, Marilyn Zanele

**MKOSANA**, Ayabulela

**MNISI**, Mohlatso Anna Magoro

**MOFOLO**, Khothatso Moretlo

**MOKHELE**, Nthabeleng  
Pascalinah

**MOKHESENGOANE**, Thabiso  
Emmanuel

**MOLEPO**, Tediso Ivin

**MUDAU**, Tshifhiwa Odrien

**MUSHAANDJA**, Immanuel  
Kamonde

**NDABA**, Andile Linient

**NDABA**, Asanda Gwendoline

**NDLOVU**, Sibusisiwe Benedicta  
Ngobile

**NENE**, Duduzile Happiness

**NKOSI**, Thandeka Nonhlanhla

**NTSIAPANE**, Alina Dimakatso

**NZUZA**, Buyile Zenzele

**OSEKENG**, Tebogo Elliot

**PHOSWA**, Bulela Oscar

**RADIOPANE**, Malefu Florence

**SHASHA**, Mary Maggie Brenda

**SHIMWAFENI**, Justina Itaveleni

**SHIVAMBU**, Murhandiwani Guilty

**SHONGWE**, Bhekiwe

**SILELE**, Akhona

**TJISEUA**, Venomukona

**VAN DEN BERG**, Jacobus Petrus

**VAN RONGE**, George Napier Van  
Ryneveld

**XOXANI**, Azola

## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY MAJORING IN SUSTAINABLE AGRICULTURE

**BESE**, David Fundisile

David Fundisile Bese was born on the 10 of June 1963 in Lady Frere, Khundulu Administrative Area in Eastern Cape Province, South Africa. He matriculated at Mthikrakra Senior Secondary School in 1985 and later obtained the following qualifications:



Diploma Agriculture (Tsolo College of agriculture-1988) Advance Diploma Agricultural Extension and Rural development (UFH-1996) Baccalaureus Technologiae Agric-management (NMMU-1999), Magister Sustainable Agriculture (UFS-2005). His career in the Department of Rural Development and Agrarian Reform: Director for Extension and advisory Services at Bisho (2007-2010), Chief Director for Research Services (2011-2019), Currently MPL Eastern Cape Legislature & Chairperson Portfolio committee of Agriculture.

With his thesis, **SUSTAINABLE FARMER LIVELIHOODS AND ENHANCEMENT OF FOOD SECURITY IN MBASHE MUNICIPALITY, EASTERN CAPE, SOUTH AFRICA**, the candidate makes an important contribution on knowledge and provide insight into the discipline dealing with issues of sustainable farmer livelihoods and food security, focusing on elements that promotes sustainable development in communal farming. Using a mixed approach, combining qualitative and quantitative methods, Mr. Bese sampled 130 farmers in Mbashe local Municipality in an attempt to understand the strategies used to address poverty and food insecurity by different stakeholders. Poverty remains as one of the core targets that the South African government is addressing. Poverty and lack of food still affects a number of people in Provinces and Eastern Cape in particular. The study has developed a sustainable management model for communal farming in Mbashe local municipality in order to reduce poverty and ensure food security as a freelance translator and language practitioner.

**Promoters:** Prof E Zwane and Prof JA van Niekerk

**KUIPA**, Prince Jonathan Tutsirai

Prince Jonathan Tutsirai Kuipa was born on 17 May 1967 in Mutare, Manicaland Province, Zimbabwe. He graduated with a Bachelor of Science Honors Degree in Agricultural Economics and a Graduate Certificate in Education with merit at the University of Zimbabwe in 1989 and 1993 respectively. He graduated with a Masters in Sustainable Agriculture at the University of the Free State in 2014 with a distinction award. He started his Career as a teacher in 1990, and from 2001 as an Economist for the Ministry of Lands and Agriculture and from 2009 to date as Zimbabwe Farmers Union's Chief Economist.

With his thesis, **THE AGRICULTURAL FINANCING GAP IN ZIMBABWE: RATIONING, SUSTAINABLE CREDIT ACCESS AND PARTICIPATION IN RURAL FINANCIAL MARKETS**, the candidate contributes to scholarship on Rural and Agricultural Finance, focusing on econometric analysis of the determinants of credit rationing, access and intensity of participation in rural credit markets and analysis of the effects of government policy on access to credit markets. Using a mixed-methods approach, Kuipa sampled 950 smallholder farmers to unpack the constraints to access agricultural credit in Zimbabwe's rural financial markets. The study presents the argument that government agricultural support should shift from provision of cheap credit to a financial systems approach involving all players in rural finance markets including the private sector and that strengthening agricultural extension and training, land tenure security and linking informal and formal financial institutions can narrow the rural agricultural finance gap in Zimbabwe.

**Promoter:** Dr D Ncube

**Co- Promoter:** Prof JA van Niekerk

**MANENZHE**, Teboho Derick

Teboho Derick Manenzhe was born on 13 September 1981 in the Vosloorus township of Gauteng Province, South Africa. He matriculated at Masereni High School in 2001 and later attained a Diploma in Agricultural Management at Tshwane





University of Technology (TUT) in 2004. He later graduated with a Baccalaureus Technologiae (B-Tech) at Tshwane University of Technology (TUT) in 2011 and a Magister in Sustainable Agriculture at the University of Free State in 2015. His career in agriculture, land reform and rural development began in 2006 as agricultural technician at the National Emergent Red Meat Producers Organization (NERPO) and he left NERPO in 2008 to join Nkuzi Development Association as Land Reform Project Officer. In 2010, he left Nkuzi Development Association to become a Land Reform Senior Project Officer at the Department of Rural Development and Land Reform. He still working for the Department of Rural Development and Land Reform.

With his thesis, **A SUSTAINABLE FARM MANAGEMENT MODEL FOR LAND REFORM IN SOUTH AFRICA**, the candidate makes important contribution to scholarship on knowledge of and insight into the discipline dealing with issues of management for sustainable performance of land reform projects, focusing on elements that promotes true sustainable citrus farming. Using a mixed-methods approach, Manenzhe sampled 190 farmers in Mpumalanga Province to understand factors that promote performance and sustainability of sole proprietors' farms, elements of success and failures in land reform and state farms and elements that promotes true sustainable citrus farming to develop a new sustainable farm management model for land reform. While most sole proprietor farms performs better and are sustainable, while land reform and state owned farms appeared to understand reasons of their failures. This positively revealed how sole proprietors, land reform and state farmers manages their farms. The study has developed a sustainable farm management model for land reform.

**Promoter:** Prof E Zwane

**Co- Promoter:** Prof JA van Niekerk

## BUILDING SCIENCES

## MASTER'S DEGREES

### MASTER OF ARCHITECTURE

BARKHUYSEN, Francois  
Albertus\*  
BESSER, Carmen Bernadine  
BITZER, Linka\*  
BOCK, Bratwin Rufshe  
BOVILL, Edwin Falkner  
CALDEIRA, Bianca Fernandes  
CILLIERS, Xander Pieter-Dirk\*  
COERTZEN, Minette  
DE WET, Hendrik\*  
DIEDERICKS, Stephanus Petrus\*  
DOMAN, Janeske  
DZANSI, Daniel Enyonam Kodzo  
ENGELBRECHT, Jeanne Isabelle\*

ERASMUS, Adèle  
ERASMUS, Liesl  
GOODRICH, Natasha Samantha  
GREEFF, Willem Herculaas\*  
HANEKOM, Abraham Johannes  
KOEGELENBERG, Luke Nicholas  
KOTZE, Nicolaas Jacobus  
LE ROUX, Monique\*  
LINDER-HABER, Gabriella\*  
MAKEKA, Jane Marc  
MOJANAGA, Ketumile  
NEETHLING, Ivan  
RAS, Jan Willem  
ROODE, Reuben Jacobus\*  
RUSSELL, Matthew John  
TOPKIN, Aiden Albrecht  
TSIU, Tebatso Charles Luwanga  
VAN AARDT, Gideon Francois  
VAN BLERK, Dawid Hendrik\*

VAN DEN BERG, Hendrik  
Francois  
VAN DER LINDE, Wilna  
VAN DER WESTHUIZEN, Mieke  
VAN NIEKERK, Francois  
Christoffel  
VIVIER, Nicole Stephanie  
VON DELFT, Thomas  
VORSTER, Penelope Joy\*  
WESSELS, Louis Johannes  
WILD, Nicholas  
WILLIAMSON, Mitchell Cameron

### MASTER OF LAND AND PROPERTY DEVELOPMENT MANAGEMENT MAJORING IN PROJECT MANAGEMENT

BAM, Juanita Marise  
PAILMAN, Sasha  
THOMAS, Farzana



## MASTER OF LAND AND PROPERTY DEVELOPMENT MANAGEMENT MAJORING IN VALUATION

BALADZI, Malwandla

BIKITSHA, Linda Elizabeth

CHILOANE, Dikarabo Florence  
Grace

GROENEWALD, Barend

KOALANE, Tsotiso

TEMBA, Twapewa Oshali

TYEKELA, Nwabisa

## MASTER OF HUMAN SETTLEMENTS

MSHUMPELA, Andile Sympathy

**Dissertation Title:** AN  
EXPLORATION OF THE PLIGHT  
OF HOUSEHOLDS LIVING IN

INFORMAL SETTLEMENTS:  
A CASE OF MDANTSANE  
TOWNSHIP IN THE BUFFALO  
CITY METROPOLITAN  
MUNICIPALITY, SOUTH AFRICA

**Supervisor:** Mr T Stewart and  
Prof N Ekelund

**Co-Supervisor** Prof MM  
Campbell: and Dr P Schubert

## MASTER OF URBAN AND REGIONAL PLANNING

BOTHMA, Jacolene

CHACHA, Thapelo Sylvester

DIKWAYO, Masixole  
Masalel`Obuya

GROENEWALD, Susanna Adriana

JASON, Denny

JONAS, Mokgosi Walter

KHUMALO, Amukelani Basani

LEKGARI, Segabo Precious

LETSIE, Thakanyane Eliza

LUNGAMENI, Indileni Tuhadeleni

MAHLELELA, Nhlakanipho  
Richard

MAMETJA, Kgaugelo Selaelo

MKHIZE, Phelelani Anthony

MOIKETSI, Mbali Vikile

MWANDA, Nqabakazi Latoya

MZOLO, Londiwe

NAUKUSHU, Rachel Ndilimeke  
Tuwilika

NEMUTUDI, Unarine

PHALANE, Kgolla

RADEBE, Nkululeko

RAMAHUMA, Nkotlana Flora

REYNOLDS, Carolyn\*

## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY MAJORING IN URBAN AND REGIONAL PLANNING

**BURGER**, Everardt André

Everardt Burger was born in Welkom on 27 September 1983. He received his secondary education in Bethlehem and matriculated from Bethlehem Voortrekker High School in 2002. He obtained a BTech degree in Civil Engineering in 2007 and an MTech degree in Civil Engineering in 2013, both from the Central University of Technology, Free State (CUT). He started his career as a Junior Lecturer in 2007 at CUT, after which he was promoted to a Lecturer in 2012. At the end of 2015, he relocated to Pretoria to join the Tshwane University of Technology's Civil Engineering department where he is currently lectures in transportation and supervises research students.

With his thesis, **AN EXPLORATION OF THE SUSTAINABILITY OF A PUBLIC TRANSPORTATION SYSTEM FOR A SMALLER METROPOLITAN AREA IN SOUTH AFRICA: A CASE STUDY OF MANGAUNG METROPOLITAN MUNICIPALITY**, the



candidate makes a significant contribution to address the gap in knowledge regarding commuting preferences in Mangaung, but also combines the three knowledge areas of spatial, transportation and sustainable development to propose plausible policy guidelines for the development of a sustainable public transportation system for the Mangaung Metropolitan region. His contribution acknowledges the need to protect the environment, contribute to the economic development of the country and provide social justice to the residents of the study area. Not only is this the first study of its kind in the Free State but it may assist other smaller metropolitan municipalities in South Africa which face similar challenges.

**Promoter:** Prof VJ Nel

**SINXADI**, Mildred Lindelwa

Mildred Lindelwa Sinxadi was born on 09 October 1976 in Worcester. She matriculated at Mehlomakhulu High School in 1993. She obtained the Secondary Teacher's Diploma at Transkei College of Education in 1996, BA at Vista University in 2001, Honours in Spatial Planning in 2007, Master's in Urban and Regional Planning at UFS in 2009. She started her career as teacher in Koffiefontein in 2000 and became an HOD for Natural Sciences in Dewetsdorp, Free State, in 2005. From 2009-2017 she worked as a town planner at Mangaung Metropolitan Municipality. She is currently a lecturer at Central University of Technology, Bloemfontein.

With her thesis, **RECONCEPTUALISING URBAN PUBLIC OPEN SPACES: A CASE OF FREEDOM SQUARE IN MANGAUNG, SOUTH AFRICA**, the candidate makes a contribution to the planning profession and focusses on the barriers in planning and management of urban public open spaces in Mangaung. With this contribution, she attempted to reconceptualise urban public open spaces to maximize its value to planning and develop a framework to be used by planners. The findings gave rise to the Urban Public Open Space Management Framework which addresses the lack of understanding of the value and usefulness of urban public open spaces. This framework indicates that effective community participation and effective value conflict management can lead to effective urban public open space management to curb the incidence of open space encroachment. It is expected that the framework would guide planning professionals and policymakers to manage open spaces effectively within the province and beyond.

**Promoters:** Prof MM Campbell and Prof G Bosman

<b>NATURAL SCIENCES</b>  <b>MASTER'S DEGREES</b>  <b>MASTER OF DISASTER MANAGEMENT</b>  KHOZA, Moses KUMANG, Mojatsohle Patronella	MAKHUBU, Thobile Penelope MASINGE, Granny Malope MOHLAKOANA, Dikeledi Gloria MOKATI, Joseph Tsoeu Washi MPINKE, Bongeka NANGULA, Shivute Ndeshimona Ngeendina NXUMALO, Mduduzi Thimoth ZUNGU, Nomsa	<b>MASTER OF ENVIRONMENTAL MANAGEMENT</b>  DINGA, Priscilla GOSNEY, Gwen GOVENDER, Sarika GWEDE, Dumisane Joseph IKKING, Suretha* MAHLANGENI, Cebisa Bridget
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MANYATSHA, Khuthadzo  
MKHIZE, Ntando Celimpilo Sabelo  
MOTJOTJI, Lisebo Monica  
MUDAU, Fulufhelo  
NDZIMBOMVU, Nosipho  
Thembeke  
NGOBENI, Idah  
NTUNZI, Nolubabalo  
RIBA, Malele Ordain  
SERFONTEIN, Susan\*  
SHIWEDA, Helena Nakuti  
SICHULA, Josphat  
SIHLAHLA, Ntombizanele Lauretta  
SITHOLE, Zama  
SMIT, Matthew

## MASTER OF SCIENCE IN NANOSCIENCE

ABRAHA, Yuel Weldemichael\*  
MASIU, Motlalepula Patriciah  
MODUNGWE, Tshegofatso  
Memory  
TLADI, Boitumelo Charlotte

## MASTER OF SCIENCE MAJORING IN AGRICULTURAL ECONOMICS

MASEMOLA, Mampe\*

**Dissertation Title:** SMALL  
HOLDER FARMERS  
PREFERENCE AND  
WILLINGNESS TO PAY FOR  
VETERINARY VACCINES:  
A CASE STUDY OF CATTLE  
FARMERS IN THE FREE STATE  
PROVINCE

**Supervisor:** Dr AA Ogundeji

**Co-supervisors:** Mr HN van  
Niekerk and Dr P Chaminuka

VON MALTITZ, Lindie\*

**Dissertation Title:** RESILIENCE  
OF FEMALE SMALLHOLDER  
LIVESTOCK FARMERS TO  
AGRICULTURAL DROUGHT IN  
THE NORTHERN CAPE, SOUTH  
AFRICA

**Supervisor:** Dr YT Bahta

## MASTER OF SCIENCE MAJORING IN BOTANY

MEYER, Wilku Basie\*

**Dissertation Title:** PHENOTYPIC  
AND GENOTYPIC VARIATION OF  
*PUCCINIA HELIANTHI* IN SOUTH  
AFRICA

**Supervisor:** Prof B Visser

**Co-supervisors:** Dr WHP Boshoff  
and Dr A Minnaar-Ontong

PRETORIUS, Diné

**Dissertation Title:** EFFECT OF  
NATURAL BIO-STIMULANTS ON  
VEGETATIVE DEVELOPMENT  
AND YIELD OF TOMATO

**Supervisor:** Dr GP Potgieter

## MASTER OF SCIENCE MAJORING IN CHEMISTRY

FABER, Jani\*

### **Dissertation Title:**

INVESTIGATION INTO THE  
OXIDATION REACTIONS OF THE  
C-GLUCOSYLATED XANTHONE,  
MANGIFERIN

**Supervisor:** Dr A Wilhelm

**Co-supervisor:** Dr C Marais

JACOBS, Frederick Jacobus  
Francois\*

### **Dissertation Title:**

FUNCTIONALISED NITROGEN  
BASED LIGANDS IN  
DINUCLEAR RHENIUM MODEL  
RADIOPHARMACEUTICALS

**Supervisor:** Dr A Brink

**Co-supervisor:** Dr GJS Venter

JANSEN VAN VUUREN, Leandri\*

**Dissertation Title:** A STUDY  
OF THE SYNTHESIS,  
CHARACTERISATION AND  
CYTOTOXICITY OF TROPONES  
AND TROPONIMINES AND ITS  
RHENIUM(I) COORDINATION  
COMPOUNDS

**Supervisor:** Dr M Schutte-Smith

**Co-supervisor:** Prof HG Visser

MENTOOR, Kgauhelo

**Dissertation Title:** SUPPORTED  
"FRUSTRATED LEWIS PAIRS"  
FOR CO<sub>2</sub> CAPTURE AND  
HYDROGENATION OF DOUBLE  
BONDS

**Supervisor:** Prof E Erasmus





MULLER, Fabian Michael  
Augustus\*

**Dissertation Title:**  
DENSITY FUNCTIONAL  
THEORY ELUCIDATION  
OF NITROFORMAZAN AND  
KINETICS OF CHROMIC  
S-METHYLDITHIZONE

**Supervisor:** Prof KG Von  
Eschwege

**Co-supervisor:** Prof J Conradie  
TRUSCOTT, James Charles\*

**Dissertation Title:** A  
PHOTOLUMINESCENCE OF  
GROUP 13 METAL COMPLEXES  
USING COMPUTATIONAL,  
SPECTROSCOPIC AND X-RAY  
DIFFRACTION METHODS

**Supervisor:** Prof HG Visser

**Co-supervisor:** Prof J Conradie

VAN DER WESTHUIZEN, Deidré\*

**Dissertation Title:** ELECTRONIC  
PROPERTIES OF RUTHENIUM  
AND OSMIUM CHARGE  
TRANSFER COMPLEXES - A  
COMBINED EXPERIMENTAL  
AND THEORETICAL APPROACH

**Supervisor:** Prof. K.G. von  
Eschwege

**Co-supervisor:** Prof. J. Conradie

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

BOTHA, Benjamin Stephanus\*

**Dissertation Title:** MEASURING  
THE USABILITY AND USER  
EXPERIENCE OF VIRTUAL  
REALITY AS A TEACHING AND  
LEARNING METHOD FOR  
NURSING STUDENTS

**Supervisor:** Dr. L de Wet

**Co-Supervisor:** Prof. Y Botma

**MASTER OF SCIENCE  
MAJORING IN COMPUTER  
INFORMATION SYSTEMS**

VAN DER LINDE, Ian Daniel

**Dissertation Title:** A  
COMPARISON OF SENTIMENT  
ANALYSIS TECHNIQUES IN A  
PARALLEL AND DISTRIBUTED  
NOSQL ENVIRONMENT

**Supervisor:** Dr JE Kotzé

**Co-supervisor:** Mr GJ Dollman

**MASTER OF SCIENCE  
MAJORING IN CONSUMER  
SCIENCE**

CHENENE, Mateboho Lucia

**Dissertation Title:** THE  
RELATIONSHIP BETWEEN  
HOUSEHOLD GENERATED  
FOOD WASTE IN RURAL  
AND URBAN LESOTHO: AN  
INVESTIGATION.

**Supervisor:** Dr N Cronjé

**Co-supervisor:** Dr I van der  
Merwe

JOOSTE, Nina

**Dissertation Title:**  
SUSTAINABILITY AND  
RECYCLING: CLOTHING  
PRODUCT CONSUMPTION  
AND DISPOSAL BEHAVIOUR  
OF CONSUMERS IN  
BLOEMFONTEIN

**Supervisor:** Dr JF Vermaas

**Co-supervisor:** Dr N Tinta

MATHEE, Lize-Marie

**Dissertation Title:**  
EXPLORING HOUSEHOLD  
BEHAVIOUR CONTRIBUTING  
TOWARDS FOOD WASTE IN  
BLOEMFONTEIN, FREE STATE

**Supervisor:** Dr N Cronjé

**Co-supervisor:** Dr I van der  
Merwe

MPEMBA, Onele Suzan

**Dissertation Title:** INFLUENCE  
OF THE PHYSICO-CHEMICAL  
CHARACTERISTICS OF  
NOPALITOS ON ITS EATING  
QUALITY

**Supervisor:** Dr A du Toit

**Co-supervisors:** Dr M de Wit and  
Prof A Hugo

NKOKO, Nthabeleng

**Dissertation Title:** THE  
INFLUENCE OF THE OYSTER



MUSHROOM PRODUCTION  
PROJECT ON THE FOOD  
SECURITY AND QUALITY  
OF LIFE OF THE ENGAGED  
HOUSEHOLDS IN MASERU,  
LESOTHO

**Supervisor:** Dr N Cronjé

**Co-supervisor:** Prof HJH Steyn

SIGWELA, Vuyisa Ntombiyolwazi

**Dissertation Title:** EXTRACTION,  
CHARACTERISATION AND  
APPLICATION OF BETALAINS  
FROM CACTUS PEAR,  
AMARANTH AND BEETROOT

**Supervisor:** Dr M de Wit

**Co-supervisors:** Dr S Amoo and  
Dr A du Toit

**MASTER OF SCIENCE  
MAJORING IN ENTOMOLOGY**

BOOYSEN, Ruan\*

**Dissertation Title:** REVISION,  
MOLECULAR PHYLOGENY  
AND BIOLOGY OF THE  
ANT-LIKE GROUND SPIDER  
GENUS *MICARIA* (ARANEAE:  
GNAPHOSIDAE) IN THE  
AFROTROPICAL REGION

**Supervisor:** Prof CR Haddad

**Co-supervisor:** Prof S Pekár

MARAIS, Abrè

**Dissertation Title:** THE  
DISTRIBUTION OF *BABESIA*  
*BIGEMINA* AND *BABESIA*  
*BOVIS* TRANSMITTED BY  
*RHIPICEPHALUS* SPP. ON A  
FARM IN THE EASTERN CAPE

**Supervisor:** Ms EMSP van Dalen

**MASTER OF SCIENCE  
MAJORING IN FOOD SCIENCE**

GAVU, Masabata Lydia

**Dissertation Title:**  
CLASSIFICATION,  
IDENTIFICATION AND  
SPOILAGE CHARACTERISTICS  
OF *CHRYSEOBACTERIUM*  
ISOLATES FROM FISH

**Supervisor:** Prof CJ Hugo

**Co-supervisors:** Dr AC Hitzeroth  
and Dr M Gryzenhout

**MASTER OF SCIENCE  
MAJORING IN FORENSIC  
CHEMISTRY**

CHIYINDIKO, Emmie\*

**Dissertation Title:** SYNTHESIS,  
ELECTROCHEMISTRY, PHASE  
STUDIES AND COMPUTATIONAL  
CHEMISTRY OF BIS (BETA-  
DIKETONATO) COPPER (II)  
COMPLEXES

**Supervisor:** Prof J Conradie

**Co-supervisor:** Dr EHG Langner

**MASTER OF SCIENCE  
MAJORING IN GENETICS**

CHETTY, Kerissa

**Dissertation Title:** SCREENING  
FOR BIOMARKERS PREDICTIVE  
OF TYPE 2 DIABETES MELLITUS  
IN A CENTRAL SOUTH AFRICAN  
POPULATION

**Supervisor:** Dr GM Marx

**Co-Supervisors:** Ms SR  
Schneider and Mr A Khati

NKONKA, Lulama

**Dissertation Title:** THE  
EXPRESSION PROFILE OF  
GENES IN TYPE 2 DIABETIC  
PATIENTS, ORIGINATING FROM  
THE FREE STATE

**Supervisor:** Dr GM Marx

**Co-supervisor:** Dr M van de  
Vyver

**MASTER OF SCIENCE  
MAJORING IN  
GEOHYDROLOGY**

CHAKA, Venoliah Disebo\*

**Dissertation Title:** MODELLING  
GROUNDWATER FLOW IN  
CONFINED AQUIFER WITH  
DUAL LAYERS

**Supervisor:** Prof A Atangana



DU TOIT, Marnus

**Dissertation Title:** POST-MINING HYDROGEOLOGICAL SITE CHARACTERISATION AT A SOUTH AFRICAN COAL MINE

**Supervisor:** Mr PJH Lourens

FOURIE, Stefanus Andreas\*

**Dissertation Title:** DEVELOPMENT OF A GROUNDWATER MANAGEMENT PLAN AND APPLICABILITY ON DIFFERENT AQUIFER TYPES

**Supervisor:** Prof P.D. Vermeulen

LUBBE, Rolene\*

**Dissertation Title:** A CRITICAL REVIEW OF EXISTING PUMP TEST ANALYSIS METHODOLOGY IN FRACTURED ROCK AQUIFERS TO INCLUDE CONSTANT DRAWDOWN TESTS

**Supervisor:** Mr F de Lange

**Co-supervisor:** Dr JJP Vivier

MAHLAHLANE, Kgotsso Caswell

**Dissertation Title:** URBAN GROUNDWATER DEVELOPMENT AND MANAGEMENT FOR METROPOLITAN AREAS IN SOUTH AFRICA - CASE STUDY: GAUTRAIN TUNNEL

**Supervisor:** Prof K Witthüser

MORAKALADI, Makosha  
Ishmaeline Charlotte\*

**Dissertation Title:** NEW MODEL TO CAPTURE THE CONVERSION OF FLOW FROM CONFINED TO UNCONFINED

**Supervisor:** Prof A. Atangana

MUKHWATHI, Unarine\*

**Dissertation Title:** THE INFLUENCE OF ANGLED SURVEY LINES ON THE DATA AND RESULTS OF 2D ERT SURVEYS USING THE WENNER (a) ARRAY

**Supervisor:** Dr. F. Fourie

MWETULUNDILA, Asteria-Lea\*

**Dissertation Title:** MODELLING AQUIFER HYDRAULICS OF AN ARTIFICIALLY RECHARGED FRACTURED AQUIFER: A CASE STUDY OF WINDHOEK AQUIFER, NAMIBIA

**Supervisor:** Prof A. Atangana

**MASTER OF SCIENCE  
MAJORING IN GEOLOGY**

NICHOLSON, Mariska

**Dissertation Title:** A GEOCHEMICAL AND PETROLOGICAL

INVESTIGATION OF BIFURCATING CHROMITITE LAYERS OF THE UG1 AT THE IMPALA PLATINUM MINE, RUSTENBURG

**Supervisor:** Prof F. Roelofse

**Co-supervisor:** Ms J Magson

**MASTER OF SCIENCE  
MAJORING IN MATHEMATICS**

MAKAU, Lemakase

**MASTER OF SCIENCE  
MAJORING IN MINERAL  
RESOURCE MANAGEMENT**

BITTAH, Gorgozcynski

BOTHA, Annelizle

KABASO, George Bwale

KASHIDINGE, Ndinela

RIEKERT, Simon Lodewyk

STEENKAMP, Barand Fredrick\*

VENKILE, Cindrella Dolly

**MASTER OF SCIENCE  
MAJORING IN PHYSICS**

NEMUFULWI, Murendeni Isaac\*

**Dissertation Title:** SPINEL-TYPE ZINC FERRITE NANO-STRUCTURES FOR ENHANCEMENT OF GAS SENSING PROPERTIES: EFFECTS OF SYNTHETIC



## PARAMETERS AND SURFACE MODIFICATION

**Supervisor:** Prof G Mhlongo

**Co-Supervisor:** Prof HC Swart

## MASTER OF SCIENCE MAJORING IN PLANT BREEDING

MABIRIMISA, Andani\*

**Dissertation Title:**  
MORPHOLOGY,  
REPRODUCTION, POLLEN  
VIABILITY AND GERMINATION  
OF IMPORTED LITCHI  
CULTIVARS

**Supervisor:** Prof MT  
Labuschagne

**Co-supervisors:** Dr A Minnaar-  
Ontong, Dr Z Bijzet and Dr M  
Booyse

## MASTER OF SCIENCE MAJORING IN PLANT PATHOLOGY

EDWARDS, Alec

**Dissertation Title:** THE  
SOYBEAN RHIZOMICROBIOME  
AS AFFECTED BY SALICYLIC  
ACID AND THE EFFECT ON  
*SCLEROTINIA* STEM ROT

**Supervisor:** Prof W.J. Swart

**Co-supervisor:** Dr M. Nyoni

LESSING, Andrea

**Dissertation title:** EVALUATION  
OF FUNGI FOR DRY RETTING  
OF KENAF

**Supervisor:** Dr. G.J. MARAIS

**Co-supervisor:** Prof W J Swart

MOJAPELO, Masefudi Pinkie

**Dissertation Title:** SORGHUM  
ROOT ROT AND GRAIN MOLD  
PATHOGEN RESPONSES TO  
LEGUME ROTATIONS SYSTEMS

**Supervisor:** Prof. N.W McLaren

**Co-supervisor:** Dr M. Craven

## MASTER OF SCIENCE MAJORING IN WILDLIFE

REUSCH, Christopher

**Dissertation Title:** FEEDING  
ECOLOGY, HABITAT USE  
AND ACTIVITY PATTERNS  
OF THE VERVET  
MONKEY, *CHLOROCEBUS*  
*PYGERYTHRUS*

**Supervisor:** Dr. B. B. Janecke

**Co-supervisor:** Dr. R. Mullers

## MASTER OF SCIENCE MAJORING IN ZOOLOGY

LE ROUX, Johannes Christiaan

**Dissertation Title:** AN  
ECOLOGICAL STUDY OF A  
CONSTRUCTED TREATMENT

WETLAND ON A COMMERCIAL  
CROCODILE FARM ALONG THE  
OKAVANGO RIVER, BOTSWANA

**Supervisor:** Prof L.L van As

**Co-supervisor:** Dr C. Jansen van  
Rensburg





## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY MAJORING IN AGROMETEOROLOGY

**STEYN, Abraham Stephanus**

Abraham Stephanus (Stephan) Steyn was born in Randfontein on 17 April 1975. There he received his secondary education and matriculated from Hoërskool Riebeeck in 1993. He obtained the degrees B.Sc. in Meteorology in 1997 and BScHons in Meteorology with distinction in 1999 at the University of Pretoria, and an M.Sc. in Agrometeorology in 2009 at the University of the Free State. He started his career as a weather forecaster at the South African Weather Service in Pretoria in 1998. In 2003 he was appointed in the Department of Soil, Crop and Climate Sciences at the University of the Free State where he is a lecturer in Agrometeorology.

With his thesis, **ASSESSING CLIMATE-RELATED FIRE DANGER ACROSS THE CENTRAL GRASSLAND BIOME OF SOUTH AFRICA**, the candidate assessed historical and future dynamics of wildland fires in an area frequently subjected to uncontrolled fires. Future scenarios of fire incidence largely depend on the outcome of climate change. Historical data indicated a large inter-annual variability in the total burned area. A negative trend in annual total burned area was observed over the study area, despite an increase in climate-related fire danger. The use of Self-Organizing Maps to identify weather patterns associated with high fire danger revealed a clustering around well-developed frontal troughs at different stages of progression over the subcontinent. Future predictions of climate danger were uncertain, due to discrepancies among climate scenarios and unrepresented processes such as vegetation dynamics. The findings indicate that future fire suppression requirements are likely to impose greater demands on fire fighting and exceed the current capacity.

**Promoter:** Prof AC Franke

### DOCTOR OF PHILOSOPHY MAJORING IN BIOCHEMISTRY

**DU PREEZ, Louis Lategan**

Louis Lategan du Preez was born on 12 June 1987 in Bloemfontein. He obtained his bachelor's degree in bioinformatics at the UFS in 2008 with distinction. He subsequently completed both his B.Sc. Hons and M.Sc. in Biochemistry with distinction between 2009 and 2012 and was the recipient of a UFS Prestige Scholar bursary in 2013. He is currently lecturing in Biochemistry at the UFS and lending his molecular modelling expertise to local collaborators.

With his thesis, **THE STRUCTURE AND POSITION OF THE HISTONE TERMINAL DOMAINS AS A FUNCTION OF LINKER HISTONE VARIANTS AND POST-TRANSLATIONAL MODIFICATIONS - A MOLECULAR DYNAMICS STUDY**, the candidate contributes to the scholarship on chromatin biology, and particularly the histone terminal domains. The candidate used long-time scale molecular dynamics to identify the position, interaction and structure of terminal domains within the context of the nucleosome core particle (NCP). He demonstrated that the terminal domains were complexed with DNA in the NCP and exhibited asymmetry with regards to their binding configurations. This differentially exposed target residues to modification and effected a difference in the fluctuation of the linker DNA arms. In subsequent experiments it was demonstrated that full



length linker histone variants and asymmetrically introduced post-translational modifications to the terminal domains resulted in unique binding configurations with the NCP, which led to unique behaviour in terms of linker DNA dynamics

**Promoter:** Prof DJ Opperman

**Co-Promoter:** Dr G Koorsen

## DOCTOR OF PHILOSOPHY MAJORING IN BOTANY

**MASUPHA**, Pitso Victor

Pitso Victor Masupha was born on September 29, 1972 in the Berea district of Lesotho. He received his junior certificate from Piting Secondary School in 1989 and proceeded to Zenon High School where he completed his O-level in 1991. He attained a Diploma in Agricultural Science education 1996 and BSc degree in 1999, both from the National University of Lesotho. He then graduated with a master of science in Plant Protection at the University of Zimbabwe in 2002. Upon completion, he worked for the Department of Agricultural Research in Lesotho from 2003 to 2009, when he joined the National University of Lesotho as a lecturer.

With his thesis, **RUSSIAN WHEAT BIOTYPES IN LESOTHO: DISTRIBUTION, IMPACT ON WHEAT PRODUCTION AND THE ROLE OF PHYTOHORMONES IN HOST RESISTANCE**, the candidate contributes to the scholarship of pest management in wheat production. Masupha maps the distribution and diversity of the Russian wheat aphid in the wheat growing regions of Lesotho, and demonstrates the impact on wheat production under various environmental conditions. He employs phenotypic and biochemical expression of defence related enzymes and hormones to elucidate plant-aphid interactions. The widespread aphid distribution, native agronomic practices, suppressed host defence responses, and escalating reduction in wheat production, indicate the vulnerability of wheat production in Lesotho and the potential value this study holds in transforming wheat production in Lesotho. This is the first study of its kind in Lesotho; it could inform local policy that guides wheat production in Lesotho, which may possibly improve agricultural practices and rural life in Lesotho.

**Promoter:** Dr L Mohase

**Co-Promoter:** Dr A. Jankielsohn

## DOCTOR OF PHILOSOPHY MAJORING IN CHEMISTRY

**GOVENDER**, Maheshini

Maheshini Govender was born in Durban on 15 January 1990. She received her secondary education in Durban, where she matriculated at Southlands Secondary in 2007. She obtained her BSc degree in Pure and Applied Chemistry in 2010 at the University of KwaZulu-Natal, her Chemistry BSc Hons in 2012 at the University of the Free State, and her MSc (Chemistry) with distinction in 2015, also from the University of the Free State. She started her career in 2011 as a Trainee Laboratory Technician at Federal Mogul Vehicle Safety and Protection in Durban and is currently a Medical Writer at Parexel International.



With her thesis, **SYNTHESIS AND CHARACTERISATION OF FERROCENYLALKOXY-FUNCTIONALISED POLYPHOSPHAZENES FOR BIOMEDICAL APPLICATIONS**, the candidate substantially expands the knowledge associated with drug delivery systems. She successfully synthesized ferrocenyl-based antineoplastic agents attached to new phosphorous- and nitrogen-containing polymer drug carriers. These new polymeric antineoplastic systems were fully characterised and studied for their spectroscopic, electrochemical and thermal properties. They were also tested on cervical cancer cell lines. The water-soluble drug carriers were found to successfully and slowly deliver the water-insoluble antineoplastic agents to the cancer cells. Good cancer inhibition data were obtained for the new ferrocenyl-containing antineoplastic agents. The triphasic pattern of drug release was found to involve first slow and sustained drug release from the carriers, then polymeric carrier refolding, and finally, polymer carrier decomposition into harmless products. This study places future research on drug delivery systems to selectively target cancerous tissue, thereby reducing the side effects of traditional chemotherapy, on a firm foundation

**Promoter:** Dr E Müller

**Co-Promoter:** Prof JC Swarts

**MABALEHA**, Mohale Benedict

Mohale Mabaleha was born on 20th January 1974 at Mateka village, in the foothills of the Berea district of Lesotho. He matriculated, sponsored by the Save the Children Fund, at Maseru Day High School in 1993. He graduated with a Bachelor of Science (BSc) degree (Chemistry and Biology) at the National University of Lesotho in 1998, after which his career as a lecturer was launched. In 2002, he obtained a Master of Science (MSc) degree (Organic Chemistry) at the University of Botswana. He is currently working as an organic chemistry lecturer at the National University of Lesotho, in Lesotho

With his thesis, **SEARCH FOR PSYCHOACTIVE COMPOUNDS: SURVEY AND BIOASSAY-GUIDED ISOLATION OF PHYTOCHEMICALS FROM THE LESOTHO MEDICINAL PLANT CUSSONIA PANICULATA (ARALIACEAE)**, the candidate investigated natural remedies for mental illnesses. He surveyed the Lesotho medicinal plants used in the treatment of mental illnesses via interviews with traditional healers. The plants were screened for GABAergic activity via a two-microelectrode voltage clamp assay, and subsequently the leave extract of *Cussonia paniculata* was subjected to activity guided isolation of psycho-active compounds. Several compounds showed good GABAergic activity and his work thus provided scientific evidence that supports the traditional use of this plant in the treatment of mental conditions. With his thesis he contributed to the worldwide search for alternative and cost-effective medication from plant sources, since, despite the observable advances in the biomedical treatment of neurological and neuropsychiatric disorders, the ever increasing number of mental cases globally is a cause for concern.

**Promoter:** Dr SL Bonnet

**Co-Promoter:** Dr A Wilhelm

**NGARIVHUME**, Talkmore

Talkmore Ngarivhume was born on 28 July 1962 in Mutare, Manicaland, Zimbabwe. He matriculated from Seke Mhuriimwe High School in Zimbabwe in 1985, attained his BSc degree at the Instituto Superior Enrique Jose Varona, Cuba, in 1991 and subsequently his MSc at the Havana University, Cuba, in 2001. He started his teaching career as general science teacher



in 1991 in Zimbabwe and later in Limpopo, South Africa. After attaining his MSc, he was appointed as lecturer firstly at Bindura University, Zimbabwe and then in 2001 at Walter Sisulu University, South Africa.

With his thesis, **A SURVEY OF PLANTS USED BY TRADITIONAL HEALERS FOR THE TREATMENT OF MALARIA IN ZIMBABWE, AND ACTIVITY-GUIDED ISOLATION OF ANTI-MALARIAL COMPOUNDS FROM TITHONIA DIVERSIFOLIA LEAVES**, the candidate makes a contribution to the documentation of medicinal plants used in the control and treatment of malaria from Zimbabwean herbal remedies. Interviews with traditional healers in Zimbabwe constituted an important step in preserving local traditions and providing candidate plants for bioactivity assessments. The plants were screened for antimalarial activity against a chloroquine resistant malaria strain, and subsequently the highly active leave extract of *Tithonia diversifolia* was subjected to activity guided isolation of compounds, of which two showed promising antimalarial activity. The candidate contributed to the screening of the efficacy and safety of traditional remedies and he identified two drug candidates that may act as scaffolds for the development of novel anti-malarial drugs, bringing hope to those suffering from extreme drug resistant malaria.

**Promoter:** Dr SL Bonnet

**Co- Promoter:** Dr A Wilhelm

**SWARTS**, Petrus Johannes

Petrus Swarts was born on 27 February 1990 in Bloemfontein, South Africa. He matriculated at Grey College High School in 2008. He graduated with a B.Sc. degree in Chemistry in 2014, a BScHons in Chemistry in 2015 and a M.Sc. in Chemistry with distinction in 2017, at the University of the Free State. During his studies he has published ten publications in internationally recognized journals. He has also paid short research visits to the “Technische Universität Chemnitz” in Germany and to “Universidad Complutense de Madrid” in Spain.

With his thesis, **SYNTHETIC, ELECTROCHEMICAL, SPECTROSCOPIC AND COMPUTATIONAL ASPECTS OF FERROCENE DERIVATIVES COORDINATED TO SUBPHthalOCYANINES**, the candidate contributes to organometallic chemistry, focusing on macrocyclic systems and metallocenes. Using a variety of different chemistry techniques, he has successfully synthesized and fully characterized novel compounds, namely subphthalocyanines with ferrocenylcarboxylic acids in the axial position, which contain properties that can be used in anti-cancer research, in the field of photodynamic therapy (PDT). This combination of subphthalocyanines and ferrocene moieties, enhances the effectiveness of photodynamic therapy.

**Promoter:** Prof J Conradie

**DOCTOR OF PHILOSOPHY MAJORING IN COMPUTER INFORMATION SYSTEMS**

**KHOMOKHOANA**, Pakiso Joseph

Pakiso Khomokhoana was born on 23 October 1979 in Lesotho. He matriculated at St. Michael's High School in 1997. He received his BSc Physics and Computer Science degree in 2002 from the National University of Lesotho. In 2008, he attained





a Postgraduate Diploma in Management in Distributed Commercial Information Systems from the University of Cape Town. He obtained both the BSc. Honours degree, and MSc. degree (cum laude) in Computer Information Systems at the University of the Free State in 2009 and 2011 respectively. His career as a lecturer began in 2014.

With his thesis, **SOURCE CODE COMPREHENSION: DECODING THE COGNITIVE CHALLENGES OF NOVICE PROGRAMMERS**, the candidate contributes to scholarship on Computer Science Education, focusing on exploring source code comprehension (SCC) bottlenecks experienced by novice programmers, decoding expert instructors' explicit cognitive strategies to extract mental scaffolding techniques for efficient SCC, and developing a framework to help narrow the gap between expert and novice thinking toward SCC. By utilising the Decoding the Disciplines framework, the candidate identified six learning bottlenecks experienced by novice programmers. He outlines specific mental scaffolding techniques that can be utilised by instructors to model efficient SCC to novice programmers. He further presents a framework that can be used by instructors in the teaching of SCC skills. The study presents a promising avenue for a renewed focus on the explicit learning and teaching of SCC skills in undergraduate computer programming courses.

**Promoter:** Prof E Nel

**NEL, Guillaume**

Guillaume was born in Sannieshof on 13 December 1974. He received his secondary education in Potchefstroom, where he matriculated at the Hoërskool Ferdinand Postma in 1992. He obtained the degree BSc (Computer Science & Physics) in 1996, BSc Hons (Computer Information Systems) in 2001 and the degree MSc (Computer Information Systems) with distinction in 2005 at the University of the Free State. He started his lecturing career in 1998 when he was appointed in the Department of Information Technology at Central University of Technology, Free State (then Technikon Free State). At present he is a lecturer in the same department.

With his thesis, **ATTRIBUTES CONTRIBUTING TO THE EFFECTIVE USE OF QUALITY APPRAISAL TECHNIQUES BY NOVICE PROGRAMMERS**, the candidate contributes to the field of Computer Science Education, focusing on an exploration of the attributes that could potentially influence novice programmers' effective use of specific quality appraisal techniques (QATs) in an educational context. Using a mixed-methods approach, three distinct research activities were conducted to identify 15 potentially contributing attributes (including seven related to skills and abilities, and eight related to behaviour and motivation). With this contribution, he attempts to direct the focus of Computer Science instructors towards attributes that could influence the effective use of QATs by their programming students. The study presents the argument that a process improvement strategy that focuses on a measured defect management approach might be more effective to encourage the use of QATs by novice programmers.

**Promoter:** Prof JC Cronje

## DOCTOR OF PHILOSOPHY MAJORING IN CONSUMER SCIENCE

**BEKKER, Aninke**

Aninke Bekker was born in Bloemfontein on 2 November 1990. She received her secondary education in Bloemfontein, where she matriculated at the Jim Fouché High School in 2009. She obtained the degree Baccalaureus Consumer Science in 2013



with distinction, Baccalaureus Scientiae Honours in 2014 with distinction, the degree Master of Science in 2017 and the PhD in Dairy Science in 2019 at the University of the Free State.

With her thesis titled, **THE EFFECT OF PLASMIN ON AGE GELATION IN UHT MILK**, the candidate makes a contribution towards Milk South Africa research regarding the complexity of plasminogen activation. The candidate discovered that inactive plasminogen survives the UHT process of milk. This study proved that a variety of peptides are present within milk which has the ability to activate plasminogen to plasmin which in turn digest milk and result in coagulation which is known as Age Gelation. This contributes tremendously to the prolonged shelf life of UHT milk.

**Promoter:** Dr J Myburgh

## DOCTOR OF PHILOSOPHY MAJORING IN ENTOMOLOGY

**BOTHAM**, Jason Lee

Jason Lee Botham was born in Johannesburg on the 20th of May 1991. He received his secondary education in Kimberley, where he matriculated at St. Patrick's College in 2009. He obtained the degree BSc in Genetics in 2013, BSc Honours in Entomology in 2014, MSc in Entomology in 2016, and now his PhD majoring in Entomology in 2020, all at the University of the Free State.

With his thesis titled: **INVESTIGATION OF INTERSPERSED SHRUBLAND PATCHES ALONG DIFFERENT TOPOGRAPHICAL CONDITIONS WITHIN AFROMONTANE GRASSLANDS, AND THEIR POTENTIAL AS CONSERVATION HOTSPOTS**, the candidate makes a meaningful contribution to the ecology of arthropods and their relation to conservation hotspots. The candidate shows that multiple contributing factors, together with stratification, affect arthropod assemblages. The candidate highlights the importance of shrub land patches as refugia zones during seasonal change, as well as periods of disturbance in National Parks, hinting at their significance in conservation strategies. He showed that populations of five spider species showed differing genetic differentiation, which indicated gene flow as being maintained to a certain degree, despite the mountainous terrain within the site. The candidate provides a unique insight into the state of montane arthropod diversity, and their association with shrub land patches, by investigating assemblage responses, and determining the current state of gene flow and genetic diversity of spider species.

**Promoter:** Dr VR Swart

**Co- Promoters:** Prof CR Haddad and Dr E Bredenhand

**SEBATA**, Sicelo

Sicelo Sebata was born on the 25th of June 1984 in Bulawayo, Zimbabwe. She did her primary education at Thomas Rudland Primary school (1989-1996), secondary education in part at David Livingstone (1997-2000), matriculating at St James High School in 2002. She graduated with a BSc Honours in Biological Sciences at Midlands State University (MSU) in 2006, and a



Master of Science in Ecological Resources Management in 2012, also obtained at MSU. Her career as a teaching assistant began in 2009 and she rose through the ranks to become a lecturer upon attainment of her Master of Science degree.

With her thesis, **SPIDER ECOLOGY IN SOUTHWESTERN ZIMBABWE, WITH EMPHASIS ON THE IMPACT OF HOLISTIC PLANNED GRAZING PRACTICES**, the candidate contributes to scholarship on the effects of holistic planned grazing on biodiversity patterns within miombo woodlands at Debshan Ranch, Shangani, focusing on spiders as an indicator group. She also assessed whether standardised spider sampling protocols of a South African inventory program are suitable for sampling different habitats in the Khami World Heritage Site, Bulawayo. This is the first study focused on holistic grazing management practices on arthropods in Africa, and provides valuable data for understanding the effects of cattle farming on ecosystems and their associated biodiversity. The work helps improve the future efficiency of standardized arthropod sampling protocols, as they vary between habitats in their ability to generate biodiversity data. Three papers have been submitted for publication in international ecological journals.

**Promoter:** Prof CR Haddad

**Co- Promoters:** Prof SH Foord and Dr MJ FitzPatrick

**VAN DER MERWE**, Sylvia Shalomé

Sylvia Shalomé van der Merwe was born in Kimberley on the 27th of March 1991. She received her secondary education in Kimberley, where she matriculated at Northern Cape High in 2009. She obtained her BSc majoring in Entomology and Genetics in 2013, BSc Honours in Entomology in 2014 and MSc in Entomology in 2016 all at the University of the Free State.

With her thesis, **SOIL BIOTA AS BIOINDICATORS OF LEVELS OF EROSION AND FIRE DISTURBANCES IN AFROMONTANE GRASSLAND AREAS WITHIN THE GOLDEN GATE HIGHLANDS**, the candidate makes a meaningful contribution to the management of conservation areas in South Africa. The overall objective was to determine the state of soil-dwelling arthropods across eroded and rehabilitated localities, as well as their responses to fire regimes. By comparing assemblage patterns and responses of species richness and diversity between a burnt and non-burnt locality, the candidate highlighted the impact of prescribed burning on soil-dwelling arthropods in an Afromontane grassland habitat. She identified a strong indicator of erosion and showed that soil mineralogy, in conjunction with soil arthropod richness, may provide sufficient usability in monitoring strategies of erosion. The importance of fire and erosion in conservation areas as natural ecosystem phenomena, and the association of soil arthropods to these areas, are highlighted.

**Promoter:** Dr VR Swart

**Co- Promoters:** Prof CR Haddad and Dr E Bredenhand

## DOCTOR OF PHILOSOPHY MAJORING IN ENVIRONMENTAL MANAGEMENT

**ESTERHUYSE**, Surina

Surina Esterhuyse (nee Hohne) was born in Gobabis, Namibia on 18 August 1978. She received her secondary education in Bloemfontein, where she matriculated at Sand du Plessis High School in 1996. During her tertiary education at the University



of the Free State, she obtained a BSc in Geology in 1999 and a BSc Hons in Geohydrology in 2000, both Cum Laude. She also received the Dean's medal for her BSc Hons. The MSc in Geohydrology was awarded to her in 2004. After 10 years in industry, she joined the UFS in 2010 and is currently a lecturer at the Centre for Environmental Management.

With her thesis, **TOWARDS A REGULATORY FRAMEWORK TO PROTECT GROUNDWATER RESOURCES DURING AND AS A RESULT OF UNCONVENTIONAL OIL AND GAS EXTRACTION**, the candidate makes a unique contribution to hydrogeological and legal scholarship, by proposing a regulatory framework to protect groundwater resources during unconventional oil and gas extraction. This work addresses the current regulatory gap in groundwater resource protection during unconventional oil and gas extraction in South Africa. It provides guidance on policy-making for energy development and proposes a process for the development of unconventional oil and gas extraction regulations. It also recommends specific regulatory approaches (including command-and-control, market-based and voluntary regulation) and related groundwater protection regulations. Lastly it recommends enforcement mechanisms for the proposed regulations. Although this framework and its related regulations considers specifically the South African context, this research is generalizable to other countries where similar regulatory frameworks for groundwater resource protection during unconventional oil and gas extraction may need to be developed.

**Promoter:** Prof PD Vermeulen

**Co- Promoter:** Prof J Glazewski

## DOCTOR OF PHILOSOPHY MAJORING IN GENETICS

**MALEKA**, Mathabatha Frank

Mathabatha Frank Maleka was born (09 August 1980) in Seshego outside Polokwane, Limpopo Province. He completed primary education in 1992 after attending Dorothy Langa Lower Primary and Tsutsumetša Higher Primary schools. Afterward, he matriculated at Harry Oppenheimer Agricultural High School (Limburg, Ga-Matlala, Limpopo Province) in 1997. Post-matric, 'Frankie' obtained a BSc (Genetics) degree at the University of Pretoria in 2002 along with BSc (Hons) and MSc (Genetics) degrees from the same alma mater in 2003 and 2007, respectively. In March 2007, he was appointed as a lecturer in the Department of Genetics at the University of the Free State – a post that he still holds.

With his thesis, **SEQUENCING AND CHARACTERIZATION OF THE CLIVIA MINIATA FLOWER TRANSCRIPTOME**, the candidate made a major contribution to the Clivia breeding industry. The candidate presented the first Clivia miniata tepal transcriptome. In this process the major genes responsible for flower pigmentation were identified, both structural and regulatory genes. Expression levels of these genes were tested through qRT-PCR. Testing the phenotypes of a small sample of C. miniata plants indicated that the mutations present in four genes can predict the pigmentation. This study forms the basis of the final aim to predict flower pigmentation by molecular studies, thus a major contribution to the Clivia industry. The research already resulted in two publications and five conference contributions and a further three publications are envisaged.

**Promoter:** Prof JJ Spies

**Co- Promoter:** Prof J Albertyn





## DOCTOR OF PHILOSOPHY MAJORING IN GEOHYDROLOGY

**DE LANGE**, Stephanus Steyn

Fanie de Lange was born in Pretoria on 15 November 1968. He matriculated from Die Adelaar High School in 1986. He obtained his B.Sc. degree in 1995, B.Sc.Hons degree in geohydrology in 1996 and M.Sc. degree in geohydrology 1999. In 2010 he joined the University of the Free State as research assistant. During his enrolment period as Ph.D. student, he progressed through the ranks to assistant researcher and was finally appointed as lecturer in 2015. With the completion of his PhD in geohydrology in 2020, he will continue with lecturing and supervising postgrad students as part of his research responsibilities.

With his thesis titled, **A THEORETICAL ANALYSIS OF POSSIBLE GEOHYDROLOGICAL IMPACTS ASSOCIATED WITH PROPOSED HYDRAULIC FRACTURING ACTIVITIES IN THE KAROO BASIN OF SOUTH AFRICA**, the candidate highlights a lack of knowledge of South Africa's deep groundwater systems. Although focused on possible impacts on shallow groundwater resources, the lack of information on the deep physical environment is highlighted. An urgency for highlighting this deficiency is due to possible hydraulic fracturing activities within this environment, searching for methane within the Karoo shales. He warns that fracking should not be considered without proper groundwater governance. Making use of groundwater models, a worst case scenario of potential impacts from fracking highlights the importance of groundwater management and research to fill in gaps on deep Karoo aquifer characteristics. A basic tool (GW-RAT) was developed to assess potential risks to shallow aquifers and conclusions arrived at that are useful for regulators and authorities to implement further.

**Promoter:** Prof PD Vermeulen

**DEYI**, Mpafane

Mpafane Deyi was born on the 29 July 1980 in Mthatha in the Eastern Cape. She matriculated at Vuli Valley High School in 1997 and later attained a Diploma in Civil Engineering with Durban University of Technology in 2001. He graduated with a BSc Honours degree in Geography and Environmental Science from the University of Fort Hare in 2010 and a Master of Science Degree in Municipal Water Infrastructure – Water Supply Engineering Specialisation from the International Institute for Infrastructure, Hydraulic and Environmental Engineering (now UNESCO-IHE), Delft, The Netherlands in 2012.

With his thesis titled, **A NEW MODEL FOR GROUNDWATER TRANSPORT IN DUAL MEDIA**, A new model was proposed which considers the transition of movement from matrix-to-fracture, this helped to obtain a new mathematical model with variable dispersion-and-advection. The numerical simulations obtained from this model using classical differentiation with variable dispersion-and-advection showed the variation of dispersion and advection coefficient play a crucial role to depict the effect of change in fracture aperture size. This is a new step forward, to capture the effect of elasticity of the geological formation, the well-known Caputo-Fabrizio fractional derivative was utilised to extend the classical model. A differential operator based on power law kernel was used to extend the classical advection-dispersion equation with variable coefficient. Finally, the Atangana-Baleanu differential operators was used to build a model with cross-over property. A new numerical scheme was used for each case to solve the model and numerical simulations were performed for different values of fractional orders and variable coefficients.

**Promoter:** Prof A Atangana



## **MAKAHANE, Rendani Vele**

Rendani Vele Makahane was born on the 22nd November 1994 in a small village called Masia in Limpopo, South Africa. She matriculated at Liivha Combined School in 2012. She joined the University of the Free State in 2013 and graduated her BSc degree in 2015, BSc Hon in 2016, and her MSc degree in 2017

With her thesis, **MODELLING THE VERTICAL FLOW OF GROUNDWATER IN THE SATURATED-UNSATURATED MEDIUM**, the candidate managed to formulate new, reliable and effective models using mathematical tools that can capture complex real-world problems such as flow in a heterogeneous media. Most equation used in groundwater studies are based on the concept of rate of change, and therefore cannot accurately replicate the reality. Using fractional derivatives, fractional-stochastic approach and fractal-fractional approach, the candidate developed new models that are able to accurately represent the natural complexity of the groundwater flow in the saturated-unsaturated zone. Her work showed that the model with fractal-fractional is a more effective mathematical tool and can reconstruct observed complex scenarios. The candidate also introduced a new transform for modelling groundwater flow.

**Promoter:** Prof A Atangana

**MATHOBO, Mashudu Clifford**

Mashudu Mathobo was born in Pretoria on the 21st of February 1990. He received his secondary education in Louis Trichardt, where he matriculated at Louis Trichardt High School in 2007. He obtained the degree Mining and Environmental Geology in 2012, Hons in 2013, MSc in Geohydrology with distinction in 2018 and the PhD in Geohydrology in 2020 at the University of the Free State. He started his career as Graduate Engineering Geologist in Pretoria in 2015. In 2019 he was appointed as an Environmental Consultant at Environmental Resource Management Southern Africa and at present he is Hydrogeologist (Scientist) at Geo Pollution Technologies Pty LTD.

With his thesis, **ANALYSIS OF GENERAL GROUNDWATER FLOW EQUATION WITH NON-LOCAL OPERATORS**, the candidate makes a contribution to groundwater numerical modelling. With this contribution, he attempts to introduce mathematical formulation of memory and random walk to his equation by using non-local operators. The results of this PhD investigation showed evidence of three different types of flow according to fractional orders. Slow flow was observed in fractional order from 0.99 to 0.51, depicting that the geological media is not well connected and thus not helping water to pass easily. When the fractional order is below 0.5, fast flow was observed and when the fractional order is 1, normal flow was recovered and the geology was assumed to be homogenous.

**Promoter:** Prof A Atangana

**MOKHAHLANE, Lehlohonolo Sehai**

The candidate has over 7 years' experience in the field of hydrogeology and has worked previously at Eskom and the Department of Water Affairs. He is currently a lecturer at the School of Chemical and Metallurgical Engineering at the University of the Witwatersrand. He has pioneered geochemical research in underground coal gasification which is one of the clean coal



technologies that are important for energy security in South Africa. He has published his work extensively in international journals and presented in a number of international conferences.

With his thesis, **AN ASSESSMENT OF GROUNDWATER CONTAMINANT SOURCE AND EVOLUTION FROM UNDERGROUND COAL GASIFICATION AT THE MAJUBA PILOT PLANT**, the candidate research undertook to investigate the geochemistry of the potential sources of inorganic groundwater contamination from a spent underground coal gasification (UCG) chamber. The comprehensive analysis of the water-rock interaction in the spent geo-reactor takes into account the mineralogy, petrology and geochemical implications of this clean coal technology. The general trend shows minimum contamination from the UCG chamber and the groundwater chemistry in the geo-reactor showed a trend of reverting to background levels. The knowledge attained through this work has provided for a simple but comprehensive groundwater risk assessment for a spent UCG chamber via an integrated model. The model follows the source-pathway-receptor arrangement where groundwater contamination sources are identified as ash, char, roof and floor. This research has laid a firm foundation in understanding groundwater contamination from UCG operations.

**Promoter:** Prof PD Vermeulen

**Co- Promoter:** Dr M Gomo

**RAMOTSHO**, Mmanthupi Amanda

Amanda Mmanthupi Ramotsho was born at Kraalhoek on the 12 December 1992. She matriculated at Nkobong Senior Secondary School in 2010. She obtained BSc Degree in Physical sciences with specialisation in Geology and Chemistry in 2014 from University of Johannesburg. She later attained her BSc Honours majoring in Geohydrology in 2016 and Master of Science specialisation in Geohydrology with distinction in 2018 at University of the Free State. She started her career as Graduate trainee at Hartbeespoort in 2015. In 2018 she was appointed under Water use and Regulation as a Candidate Scientist at the Department of Water and Sanitation

With her thesis, **GROUNDWATER FLOW: NEW MODELS FOR LEAKY AND SELF-SIMILAR LEAKY AQUIFERS WITH NONLOCAL DIFFERENTIAL OPERATORS**, the candidate contributes to groundwater flow studies to improve the existing models for leaky and self-similar leaky aquifers. With this contribution, she advanced the existing mathematical equation by introducing fractal operators. The concept of non-local operators was adopted with three different laws, power law, exponential decay law and the generalized Mittag-Leffler function. The classical nonlocal fractional differential and integral operators were replaced with fractal-fractional operators. The following classes of flow which are observed in real world problems were depicted from the simulations: (i) the equations can normally be used in multi-steps case where the aquifer is divided in multi-parts each part with same geological formation, (ii) the class presents the flow with fading velocity, (iii) the flow changes from normal to fading and (iv) the flow with self-similar feature was represented.

**Promoter:** Prof A Atangana

**DOCTOR OF PHILOSOPHY MAJORING IN MATHEMATICS**

**JANSEN**, Renier Stefan



Renier Jansen was born in Bloemfontein on the 25th of July, 1990. He received his secondary education in Bloemfontein, where he matriculated at the Secondary School Jim Fouché in 2008. He obtained the degrees B.Sc. in 2013, B.Sc.-Hons. in 2014, M.Sc. in 2015 and Ph.D. in 2020, all in Mathematics, from the University of the Free State. Since 2015 he has been appointed as lecturer in the Department of Mathematics and Applied Mathematics at the UFS, a position that he still holds.

In the thesis, **DUAL CLOSURE OPERATORS ON A CATEGORY AND THEIR APPLICATIONS**, the candidate investigates dual closure operators via generalizations and variations of the factorization of the left- and right-constant subcategories and their Galois correspondence. The thesis offers new and strong results on the Cassidy-Hébert-Kelly dual closure operator, which, in turn, leads to a very satisfactory general treatment of Collins-style (concordant, dissonant)-factorizations, as well as the Eilenberg-Whyburn dual closure operator.

**Promoter:** Prof DB Holgate

**Co- Promoter:** Prof JH Meyer

## DOCTOR OF PHILOSOPHY MAJORING IN MICROBIAL BIOTECHNOLOGY

**KULOYO**, Oluwasegun Olalekan

Oluwasegun Olalekan Kuloyo was born on 9 October 1985 in Lagos, Nigeria. He received his secondary education in Ogun State Nigeria and matriculated from Mayflower School in 2002. He obtained a BSc Hons degree in Microbiology at Babcock University, Ogun State, Nigeria in 2009, a BSc Hons degree in Biotechnology in 2011, and a MSc in Biotechnology 2014, both at the University of the Free State South Africa.

With his thesis, **INVESTIGATION INTO THE MECHANISM OF ARACHIDONIC ACID INCREASED FLUCONAZOLE SUSCEPTIBILITY IN CANDIDA ALBICANS BIOFILMS AND APPLICATION TO DRUG REPURPOSING**, the candidate contributed towards understanding a potential alternative treatment for yeast biofilm infections, using multiple state-of-the art molecular and biochemical techniques. With this contribution, he explains the role of arachidonic acid, a polyunsaturated fatty acid, in increasing the antifungal susceptibility of *Candida albicans* biofilms. His investigation identified possible mechanisms of action, including inhibition of known drug resistance mechanisms. He also identified several novel drug targets and applied this knowledge to repurposing of drugs approved for other conditions as possible new antifungal drugs.

**Promoter:** Prof CH Pohl-Albertyn

**Co-Promoter:** Prof J-Albertyn

## DOCTOR OF PHILOSOPHY MAJORING IN MICROBIOLOGY

**FOURIE**, Ruan

Ruan Fourie was born in Bloemfontein on 12 March 1990. He received his secondary education at Hoërskool Jim Fouché and matriculated in 2008. After this, he obtained his BSc degree in 2011 at the University of the Free State and pursued his



postgraduate studies in Microbiology with a BSc Hons in 2012 and Masters in 2016 at the same institution. He then furthered his passion for research at the University of the Free State and started a career in clinical research at IQVIA.

With his thesis titled **INVESTIGATING THE INFLUENCE OF ARACHIDONIC ACID ON CANDIDA ALBICANS AND ITS INTERACTION WITH PSEUDOMONAS AERUGINOSA**, the candidate elucidates the influence of a frequently overlooked factor present during infections. Using the interaction between *Candida albicans* and *Pseudomonas aeruginosa* as a model for clinically relevant microbial interactions, the influence of a fatty acid released during infection was evaluated. He identified the molecular basis by which the *C. albicans* responds to the fatty acid in both the absence and presence of *Pseudomonas aeruginosa*. He then proceeded to evaluate this molecular response by isolating and removing genetic elements to identify their roles in the interaction, both in vitro and in vivo, using lung epithelial cells and the nematode, *Caenorhabditis elegans* as infection models. Through this approach, he not only expanded the information regarding the interaction between *C. albicans* and *P. aeruginosa*, but provided a basis for future studies to evaluate potential targets that can be used to intervene during polymicrobial infections.

**Promoter:** Prof CH Pohl-Albertyn

**Co-Promoter:** Prof J-Albertyn

**LUM NDE**, Adeline

Adeline Lum Nde was born on 26 February 1987 in Cameroon. She received her secondary school education at St. Bede's College Ashing-Kom, Bamenda in 2003, and later obtained the Advanced Level Certificate in 2005. She graduated with a BSc in Microbiology at the University of Buea, Cameroon, in 2008, and later completed the BScHons in 2011 and MSc in 2016 in Microbiology at the University of the Free State. She has been working at the Centre for Teaching and Learning at the University of the Free State, in the First Year Experience Programme, UFS Skills, since 2014.

With her thesis titled: **POLYPHASIC STUDY, SPECIES DESCRIPTION AND SIGNIFICANCE OF NOVEL CHRYSEOBACTERIUM SPECIES ISOLATED FROM POULTRY SOURCES**, the candidate makes a contribution to the knowledge and significance of the *Chryseobacterium* genus in the food and agriculture industry. A novel species, *Chryseobacterium pennae*, from chicken feathers, was characterized by using a genotypic, chemotypic and phenotypic approach. During predictive modelling, this species showed comparable food spoilage characteristics to *Pseudomonas fluorescens*, one of the biggest food spoilage bacteria at refrigeration temperatures. The Huang model was the more effective model in predicting the minimum and maximum temperatures for growth. The BIOLOG Phenotype MicroArray (PM) system showed the ability of *Chryseobacterium pennae* to oxidise a wide range of substrates, which is linked to its spoilage potential. This species was also able to oxidise a number of fungicides which showed potential of this organism to be used in agricultural applications.

**Promoters:** Prof CJ Hugo and Prof JD Newman

**Co-Promoters:** Dr G Charimba, Dr AC Hitzeroth and Ms L Steyn

## DOCTOR OF PHILOSOPHY MAJORING IN PHYSICS

**HASABELDAIM**, Emad Hasabeldaim Hadi

Emad Hasabeldaim was born in Al-Fashir on 1 st of September 1988. He received his secondary education in Al-Fashir, where he matriculated at the Al-Fashir Secondary school in 2005. He obtained the degree BSc hons in Applied Physics and





Electronics (2012) at the Red Sea University, the degree MSc with distinction in Physics (2016) and the PhD in Physics (2019) at the University of the Free State. He started his career as a LAB Technician in Al-Fashir. In 2013) he was appointed in the Department of Physics.

With his thesis, **LUMINESCENCE PROPERTIES OF ZNO AND ZNO:Eu<sup>3+</sup> NANOSTRUCTURES AND THIN FILMS**, the candidate makes a contribution to Solid State lighting. ZnO nanorods and ZnO:Eu<sup>3+</sup> powders and thin films were successfully fabricated. Their fundamental properties including the structure, morphology, optical and luminescence were investigated. Improvement on the luminescence efficiency of the green and red emission was achieved. The surface, chemical and luminescence stability of the samples were studied under electron beam irradiation. These nanostructures and thin films were found to be very stable under electron beam irradiation and therefore have the potential to be used in the next generation of solid-state lighting devices such as light emitting diodes and flat panel displays.

**Promoter:** Prof HC Swart

**Co- Promoters:** Prof OM Ntwaeaborwa and Prof RE Kroon

**SAEED**, Nadir Azhari Mustafa

Nadir Azhari Mustafa Saeed was born in Khartoum, Sudan on 08/08/1989. He received his secondary education in Khartoum, where he matriculated at the Bahry Model High School for Boys in 2005. He obtained the B.Sc. degree of physics with honors in 2011 at Al Neelain University and the M.Sc. degree of Physics with distinction in 2015 at Al Neelain University. He started his career as a part-time teaching assistant at the University of Bahry in Khartoum in 2012. In 2015 he was appointed as a part-time lecturer in the Department of Physics at Sudan University of Science and Technology and at present, he is a research assistant in the Physics Department at the University of the Free State.

With his thesis, **LUMINESCENT PROPERTIES OF YOF PHOSPHOR FOR SOLAR CELL APPLICATION**, the candidate explored the YOF host material doped and co-doped with praseodymium (Pr<sup>3+</sup>), cerium (Ce<sup>3+</sup>), ytterbium (Yb<sup>3+</sup>) and bismuth (Bi<sup>3+</sup>) ions as potential downconverters of ultraviolet to infrared (IR) photons, to be applied to Si solar cells in order to enhance the energy efficiency. The candidate made a significant contribution towards the phosphor research field and to the search to find the ideal candidate that can be applied as a spectral converter. Results obtained for the Pr<sup>3+</sup>-Yb<sup>3+</sup> and the Bi<sup>3+</sup>-Ho<sup>3+</sup> couples showed enhancement in the IR photoluminescence (PL) emission through the down-conversion process at the effective response range for Si solar cells. The candidate succeeded to proof and published, that the PL excitation band obtained at 250 nm in the YOF:Pr<sup>3+</sup> material was not a charge transfer band as reported by other researchers.

**Promoter:** Prof E Coetsee-Hugo

**Co- Promoter:** Prof HC Swart

**SHINGANGE**, Katekani

Katekani Shingange was born in Gavaza on 21st November 1989. She received her secondary education in Nkowankowa where she matriculated from DZJ Mtebule Secondary school in 2007. She obtained the degree BSc honours in Physics (2012) at the University of Limpopo, the degree MSc with distinction in Physics (2016) and the PhD in Physics (2020) at the University



of the Free State. She started her career as a Physics intern at the University of Venda (2013). In 2014 she was appointed by the Council of Scientific and Industrial Research in collaboration with the University of the Free State, Physics department.

With her dissertation titled, **THE EXPLORATION OF LANTHANUM BASED COMPLEXES OXIDES: PREPARATION, CHARACTERIZATION AND GAS SENSING PROPERTIES**, the candidate makes a contribution to gas Nano sensors technology development. Nano sensors based on Lanthanum doped ZnO, LaBO<sub>3</sub> (B= Co and Fe), Au loaded LaFeO<sub>3</sub> and La<sub>1-x</sub>Ce<sub>x</sub>CoO<sub>3</sub> nanostructures were successfully fabricated. Their fundamental properties including the structure, morphology, porosity, chemical and luminescence were investigated. Gas sensing measurements investigating the sensing behaviour of the nanostructures upon exposure to different gases at different concentrations and under different relative humidity levels at different operating temperatures were conducted. Lanthanum doped ZnO and LaCoO<sub>3</sub>/La<sub>1-x</sub>Ce<sub>x</sub>CoO<sub>3</sub> revealed improved sensitivity and selectivity to hydrogen sulphide and ethanol, respectively while LaFeO<sub>3</sub> loaded with Au showed enhanced acetone response performance at low operating temperatures. The sensing performance of these Nano sensors demonstrated the potential to be used in different sensing applications including disease diagnostics and food quality monitoring for health and safety purposes.

**Promoter:** Prof G Mhlongo

**Co- Promoter:** Prof HC Swart

**TSHABALALA, Zamaswazi Portia**

Zamaswazi Tshabalala was born in Newcastle, Kwa-Zulu Natal on 20 July 1991. She received her secondary education in Newcastle, where she matriculated at Sesiwabonga Technical High School in 2008. She obtained the degree BSc Applied Physics with a Dean's commendation in 2012 and BSc Hons Applied Physics in 2013 at the University of Kwa-Zulu Natal. Later, she attained MSc Physics with distinction in 2016 at the University of the Free State. She started her career as a Physics tutor and demonstrator in 2012 at UKZN until she joined the CSIR as a research student in 2014.

With her thesis, **INFLUENCE OF EXPOSED FACETS AND ACID TREATMENT ON THE SENSITIVITY AND SELECTIVITY OF ROOM TEMPERATURE TiO<sub>2</sub> SEMICONDUCTOR GAS SENSING PROPERTIES**, the candidate makes a significant contribution in a gas sensing community, by fabricating a noble temperature-dependent admirable dual-functionality sensor to selectively detect various vapours in a robust behaviour at room-temperature. She discovered a simple synthesis strategy that permits the realization of a Mn-TiO<sub>2</sub> hierarchical structure having, beyond a doubt, the uppermost surface area that has never been reported. This work resulted to a filing of an innovation disclosure (T18/19-00029) with the CSIR and an international patent is currently being filed.

**Promoter:** Prof DE Motaung

**Co-Promoter:** Prof HC Swart

**DOCTOR OF PHILOSOPHY MAJORING IN PLANT BREEDING**

**CHEMONGES, Martin**

Martin Chemonges was born on 17 June 1984 in the Kapchorwa District, Uganda. He obtained the Uganda Advanced Certificate of Education (UACE) at Jinja College in 2003. He graduated with a BSc Agric Honours degree in 2009 and a MSc



degree in Crop Science in 2015, both from the Makerere University, Uganda. His career as an agricultural scientist began in 2009 and he has held the position of agricultural inspector at the Ministry of Agriculture, Animal Industry and Fisheries in Uganda since 2011.

With his thesis, **GENETICS OF STEM RUST RESISTANCE IN SOUTH AFRICAN WINTER WHEAT VARIETIES**, the candidate makes a constructive contribution towards the understanding of rust resistance in South African winter wheat varieties. Using phenotyping, allelism tests and microsatellite markers combined with bulked segregant analysis, the candidate identified a single, dominant stem rust resistance gene in each of four mapping populations and a quantitative trait locus for adult-plant resistance in a fifth population. The genes were mapped to both known and novel chromosome regions and linked molecular markers will facilitate efficient marker-assisted selection for stem rust resistance in wheat breeding programmes.

**Promoter:** Prof L Herselman

**Co- Promoters:** Prof ZA Pretorius and Dr WHP Boshoff

**CHIIPANTHENG**A, Margaret

Margaret Kondowe Chiipanthenga was born on 29 September 1973 in the Rumphi district in Malawi. She received her secondary education at Ekwendeni Girls Secondary School in the Mzimba district and was selected to go the University of Malawi in 1994. She obtained both the BSc (Agriculture) in 2002 and MSc (Plant Breeding) degrees in 2011 at the University of Malawi, Bunda College of Agriculture. She started her professional career as an agricultural research scientist in the Department of Agricultural Research Services under the Ministry of Agriculture and Water Development in 2003. In 2011 she was appointed as the Chief Agricultural Research Scientist.

With her thesis: **DROUGHT TOLERANCE IN MALAWIAN SOYBEAN GERMPLASM**, the candidate made a contribution towards the understanding of soybean's morphological and physiological traits, water use efficiency, seed yield and their interrelationships in response to water-limited stress. Plant height, number of nodes, 100-seed weight, water use efficiency and relative chlorophyll content were less affected by change in water-limited stress levels, while water use efficiency and relative chlorophyll content contributed most to variation in seed yield. Two genotypes were identified that showed a positive association with seed yield under severe water-limited stress. Results further displayed the role of both additive and dominance gene effects in expression of drought tolerance in soybean. Three parent combinations were identified that showed exceptional combining ability for seed yield, number of pods and number of seeds per plant. Three papers are being prepared for publication that will contribute towards the knowledge base of soybean drought tolerance breeding.

**Promoter:** Dr R van der Merwe

**Co- Promoters:** Prof MT Labuschagne and Dr I Fandika

**PEPRAH**, Bright Boakye

Bright Peprah was born on 2 August 1981 in Goaso municipal district in Ghana. He received his secondary education at Kumasi Academy Senior High. He obtained a BSc Agric degree from the Kwame Nkrumah University of Science and Technology,



Ghana, in 2005 and his MPhil (Crop Science) degree in 2011 from the University of Ghana, Legon. He started his career at the CSIR-Crops Research Institute in 2008 and is now the head of the cassava improvement programme. He won an award from the competitive programme for Emerging Agricultural Research Leaders of the Bill and Melinda Gates Foundation in 2014.

With his thesis: **GENETIC IMPROVEMENT OF BETA-CAROTENE IN CASSAVA (*MANIHOT ESCULENTA CRANTZ*)**, the candidate established consumer acceptability of bio fortified provitamin A (yellow flesh) cassava and determined heritability and stability of total carotenoid content, proximate values and hydrogen cyanide of yellow cassava, and the retention of carotenoids during processing into boiled cassava. Parent and progeny trials were done in Ghana at different locations for two seasons. Consumers and producers were largely unaware of the availability of yellow cassava. Carotenoid-rich varieties showed variation for important characteristics, which are key drivers of variety adoption in Ghana. With breeding it is possible to combine high carotenoid and dry matter content in a high yielding, cassava mosaic disease free, background. Two genotypes from this study were identified for possible commercial release. These genotypes had cyanide levels within the World Health Organisation acceptable limits, although they still have to be processed before consumption.

**Promoter:** Prof MT Labuschagne

**Co- Promoters:** Dr E Parkes and Dr A van Biljon

## DOCTOR OF PHILOSOPHY MAJORING IN PLANT PATHOLOGY

**BENDER**, Cornelia Magrietha

Cornel Bender was born on 14 August 1966 in Upington, Northern Cape. She matriculated at Upington High School in 1984 and graduated with a BSc degree in 1988 and a BSc Honours in 1989 at the University of the Free State (UFS). Her career started as a tobacco breeder in 1990 but she returned to UFS and obtained a MSc with specialisation in wheat genetics in 1996. She is currently employed as a professional officer in the plant pathology division of the Department of Plant Sciences at UFS

With her thesis **STEM RUST RESISTANCE IN SOUTH AFRICAN WHEAT AND TRITICALE**, the candidate contributes valuable information on the assessment and genetics of resistance to stem rust, an important fungal disease of small grain cereals. She provided a long-term analysis of how South African wheat germplasm responds to the disease, taking into account pathotype changes, seasonal variation and development of new breeding lines and varieties. Using an innovative approach, Cornel Bender developed a cost-effective phenotyping method to select for more durable resistance types in a controlled greenhouse environment. In addition, she used meticulous histological techniques to elucidate the infection and colonisation processes of the stem rust fungus in wheat and triticale. This study unquestionably extends our understanding of an important crop disease in the global drive towards sustainable food security.

**Promoter:** Prof ZA Pretorius

**Co- Promoter:** Dr WHP Boshoff

**JOUBERT**, Sonia Mari

Sonia-Mari Joubert (Greyling) was born in Boksburg on 13 May 1987. She received her secondary education at Goudrif High School where she matriculated in 2005. She obtained her BSc in Botany and Biochemistry in 2008, BSc Hons in Botany and



Plant Biotechnology in 2010 and MSc in Botany and Plant Biotechnology in 2012 at the University of Johannesburg. In 2013 she was granted a professional development programme scholarship from the Agricultural Research Council – Grain Crops Institute to pursue her PhD studies. After completing her studies she was appointed as a Product Development Specialist at Villa Crop Protection.

With her thesis, **FUSARIUM SPP. AND ASSOCIATED MYCOTOXINS IN SOUTH AFRICAN MAIZE**, the candidate enhances our knowledge of biotic and abiotic variables that influence the epidemiology of three *Fusarium* spp. associated with root, stalk and cob rots of maize and the impact of agricultural practices on their distribution. The impact of soil nutrients on *Fusarium graminearum* species complex target DNA concentrations were evaluated in an area known for Gibberella ear rot and five key nutrients were found to influence plant disease susceptibility. The risk of mycotoxin translocation from root and stalk tissues to grain was assessed and results indicated that fumonisins may move systemically. The study broadened the current knowledge on PR proteins activated in response to *Fusarium* stalk rot fungi in maize. The study contributes to the prediction of infection of maize by *Fusarium* spp. and the adaption of farming practices to reduce disease and mycotoxin contamination of grain.

**Promoter:** Prof NW Mc Laren and Prof BC Flett

**Co- Promoter:** Dr A Schoeman

## DOCTOR OF PHILOSOPHY MAJORING IN WILDLIFE

**KRUGER, Quinette**

Quinette Kruger was born in Cape Town on 4 June 1982. She matriculated at Sand du Plessis High School in 2000 in Bloemfontein, and received tertiary education at the University of the Free State. She obtained a B.Sc. in Zoology in 2004, and an Honours degree in Wildlife in 2005, receiving an award for best postgraduate student in grassland sciences. She graduated with a MSc in Wildlife in 2008. During 2012 – 2014 she was a research associate at Clinvet International. Since 2016 she is the Manager of the Predation Management Centre in the Department of Animal, Wildlife and Grassland Sciences.

With her thesis, **DEVELOPING A MANAGEMENT INFORMATION SYSTEM FOR COORDINATED PREDATION MANAGEMENT IN SOUTH AFRICA**, the candidate contributes to scholarship and practical methodologies to manage predation, focusing on more effective technology and procedures to collate relevant information for incorporation into a national database as part of an information management system (MIS). Data collected with such methodology presents the opportunity to assist authorities, landowners and other role players with a notable range of coordinated predation management options. The effective and sustainable management of mesopredators poses a range of complicated and varying challenges for responsible authorities and landowners, in South Africa but also worldwide. The development of two mobile device applications are valuable tools to assist role players in livestock predation management. Without doubt, the outcome of this study is considered an important and valuable contribution to the knowledge base and insights available to manage damage-causing predators more sustainably.

**Promoter:** Prof HO De Waal

**Co- Promoter:** Dr NL Avenant





## DOCTOR OF PHILOSOPHY MAJORING IN ZOOLOGY

**ZHAO**, Zhongning

Zhongning Zhao was born on 20th October 1985 in Shen Yang, China. He matriculated at Shen Yang No.11 High School in 2004 and thereafter obtained a Diploma in Education in Aquatic Animal Breeding, as a talent student at Panjin Vocational and Technical College in 2007. He graduated with a BSc degree (Zoology and Genetics) in 2013 and an Honours BSc (Zoology) in 2014 at the University of the Free State. During his MSc study from 2015, his study was upgraded to a PhD in 2017. He spent a further two years (2018 and 2019) completing the PhD study.

With his thesis: **A PHYLOGENETIC ANALYSIS OF THE TENT TORTOISE PSAMMOBATES TENTORIUS (BELL, 1828) SPECIES COMPLEX, USING MOLECULAR AND MORPHOLOGICAL MARKERS**, The candidate used multiple genetic and morphometric markers, together with powerful current analytical programmes, to study the evolutionary history, population dynamics, taxonomy and conservation challenges of the highly polymorphic endemic *Psammobates tentorius* (tent tortoise) species complex of Southern Africa. The methodologies utilized and the findings made can serve as bench marks in the fields of phylogeny, phylogeography, population genetics, morphology and evolutionary biology in general. Furthermore, the results facilitate a deeper understanding of the development of evolutionary patterns, of complex genetic structure, cladogenesis and population dynamics as driven by temporal factors and spatial heterogeneity. The conclusions should assist in clarifying the taxonomy of the group which has baffled herpetologists for decades, having filled critical knowledge gaps. The study also generated important evidence which opens up considerable scope for further research, including geographic studies which have bearing on the conservation management of the species complex.

**Promoter:** Prof NJL Heideman

**Co- Promoter:** Prof JP Grobler

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## DEAN'S MEDAL

**AWARDED TO A STUDENT WHO ACHIEVED THE BEST RESULTS IN RESPECT OF A MASTER'S DEGREE  
IN THE FACULTY OF NATURAL AND AGRICULTURAL SCIENCES DURING THE YEAR 2019**

Asteria-Lea Mwetulundila  
(Master of Science majoring in Geohydrology)



DEAN |  
**PROF RS LETŠOSA**

## MASTER'S DEGREES

### MASTER OF ARTS IN BIBLE TRANSLATION

MEYA, Lovemore\*

### MASTER OF ARTS IN THEOLOGY WITH SPECIALISATION IN BIBLE TRANSLATION

LOEA, David Papari

### MASTER OF DIVINITY

ELS, Adrie\*

MATHEWSON, Charné Paula

MOLEFE, Lehlohonolo Samuel

SANDERS, Anika

SHWENI, Lonwabo

### MASTER OF RECONCILIATION AND SOCIAL COHESION

RAMPHADI, Ngwako Elly

RAZWIEDANI, Ntakuseni Thendo

### MASTER OF THEOLOGY WITH SPECIALISATION IN CHURCH HISTORY AND POLITY

JOOSTE, Hector Frederick

**Dissertation Title:** KERKBEGRIIP  
IN DIE NAMIBIESE  
GEREFORMEERDE KONTEKS

**Supervisor:** Prof PJ Strauss

### MASTER OF THEOLOGY WITH SPECIALISATION IN MISSIOLOGY

PAGE, Athean Barticne Monray

### MASTER OF THEOLOGY WITH SPECIALISATION IN PRACTICAL THEOLOGY

CILLIERS, Pierre

**LATEGAN**, Willem Hermanus\*

**Dissertation Title:** 'RICH' IN  
GENEROSITY: A PRACTICAL  
THEOLOGICAL REFLECTION

**Supervisor:** Prof SJ Joubert

MAPHALLA, Lefu Tefo\*

OOSTHUIZEN, Frans\*

VAN SCHALKWYK, Hester Helena

### MASTER OF THEOLOGY WITH SPECIALISATION IN SPIRITUALITY

DU PLESSIS, Johannes Stefanus\*

MARCHINKOWSKI, George  
Wilhelm

### MASTER OF THEOLOGY WITH SPECIALISATION IN SYSTEMATIC THEOLOGY

SINYAMA, Muimui

STRÜWIG, Kevin



## DOCTORAL DEGREES

### DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN BIBLE TRANSLATION

**JOUBERT, Morne**

Morné Joubert was born in Kimberley on 29 August 1973. He matriculated from Adamantia High School in Kimberley with distinction. He obtained a BA degree in 1994, BA Hons with distinction in 1995 and a MA degree in 1998 with distinction from the University of the Free State. He was involved in a family business in Kimberley between 2003 and 2017. After the business was sold, he relocated to the Garden Route where he currently works as a freelance translator and language practitioner.

With his thesis, **THE INFLUENCE OF SOCIAL RIGHTEOUSNESS TERMINOLOGY EMPLOYED IN THE 1983 AFRIKAANS BIBLE TRANSLATION FOR SHAPING AFRIKANER SOCIAL IDENTITIES**, the candidate utilised structuration theory to demonstrate the agency of Bible translators in shaping society by their choice of key religious terminology in the target language. By employing narrative frame analysis for describing the data found in the archival material of the Bible Society of South Africa, official church policy documents, theological publications, sermons, as well as correspondence in church magazines and newspapers, the candidate examined the broadest possible spectrum of influences of the social righteousness terminology employed in the 1983 New Afrikaans Bible Translation. He demonstrated that these influences were at play in radically transforming the Afrikaner psyche and the social, religious, linguistic and ultimately political self-identity of the Afrikaner, thereby opening the door in 1994 for a new democratic South Africa and social reconciliation.

**Promoter:** Prof JA Naude

**OUATTARA, Toua**

Toua OUATTARA was born on 01 January 1975 in the Toussiana Area of Hauts bassins, Houet, Burkina Faso. He matriculated at the Banfora High School and obtained the Bachelor's degree in 1995. He received the Diplome d'Etudes Universitaires Generales in literature at the University of Ouagadougou and the MA Bible Translation in 2010 at the Faculté de Théologie Evangelique de l'Alliance Chrétienne in Ivory Coast. Since 2005 he has worked as a Bible translator and then translation consultant with ANTBA, the national association for Bible translation and literacy in Burkina Faso. He is also a lecturer at Logos University in Burkina Faso.

With his thesis, **TRANSLATING TERMS FOR RECONCILIATION IN THE TOUSSIAN NEW TESTAMENT (BURKINA FASO): BIBLE TRANSLATION AS A MEANS FOR SOCIAL CHANGE**, the candidate innovatively examines the problem of inadequate terminology in Toussian for translating the biblical concept of reconciliation. Within the theoretical framework of complexity theory based on inter alia sociological structuration theory, an in-depth ethnographic analysis of the traditional social structures for reconciliation in Toussian culture was undertaken and appropriate strategies for translating the biblical texts involving reconciliation were proposed. On the basis of a new Toussian translation of the biblical reconciliation texts, a model for community engagement was proposed involving oral performance of biblical texts as well as songs utilising the proposed reconciliation terminology in order to effect social change and cohesion. The proposed integrated community model provides innovative means for future Bible translation projects to develop key religious concepts for societal change.

**Promoter:** Prof JA Naude

**Co- Promoters:** Dr CL Muller-Naude and Dr J-C Loba-Mkole



## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN MISSIOLOGY

**NDHLOVU, John**

John Ndhlovu was born in Pretoria in a township called Atteridgeville on 15 August 1963. He matriculated at Ithuteng High School in 1985 and later attained a degree in theology (B.Th.) cum laude at the Christ Seminary in 2008. He obtained his B.Th. (Honours) degree at the International College of Bible and Missions in 2011 and Master of Theology at the South African Theological seminary in 2016. He started his career as a pastor of the Baptist Church in 2002. He serves his denomination (Baptist Union of South Africa) as pastoral panellist, trust fund member and church planter.

With his thesis, **THE ATTITUDE OF EVANGELICAL CHURCHES TOWARDS SYNCRETISM IN TSHWANE TOWNSHIPS**, the candidate contributes to the discussion on syncretism in Tshwane townships, especially in Soshanguve. He explains the biblical aspects of the church's task regarding syncretism. Regarding the huge challenges posed to the churches, his qualitative research among pastors established the most important aspects of the challenge of syncretism. His suggestions on how to deal with these challenges from a biblical background and from an evangelical perspective are of importance for churches, not only in the townships, but also for the larger church community. According to him, the church needs to emulate and practice the five Solas of the reformation. The church also needs to develop mutual accountability structures and should have a better understanding of the doctrine of the church. Evangelism and discipleship are important aspects of the church's reply to syncretism.

**Promoter:** Prof P Verster

## DOCTOR OF PHILOSOPHY WITH SPECIALISATION IN PRACTICAL THEOLOGY

**VAN DEVENTER, Hendrik Pieter**

Hendrik Pieter van Deventer was born on 16 March 1977 in Germiston and matriculated from the Afrikaanse Hoërskool Germiston in 1995. He holds the following degrees: BA Law from North-West University (2004); BA Hons (Theology) from North-West University (2006); MA (Theology) from North-West University (2010), and BA Hons (Theology) from the University of Pretoria (2011). He has been a pastor at the Gereformeerde Kerk Linden for the past 16 years.

With his thesis, **CHRISTOLOGIE, DISSIPELSKAP EN JEUGBEDIENING – 'N PRAKTIES-TEOLOGIESE ONDERSOEK (Christology, discipleship and youth ministry – a practical-theological investigation)**, the candidate addresses the challenges regarding relevance and content that face youth ministry in congregations and communities of faith. Through a practical-theological study of Christology, the Great Commission, the Great Commandment and some models for disciple-making in youth ministry, the candidate records information for a curriculum for youth ministry. He uses an empirical, qualitative research by means of in-depth interviews with ministers, pastors and professors in missional and youth ministries, in order to gain insight into current patterns of disciple-making in youth ministries in South Africa. Based on the theoretical and empirical research, the candidate presents a curriculum for disciple-making in youth ministry.

**Promoter:** Dr L Hoffman



# The Main Procession graduation gowns - embroidered with rich diversity

**S**outh 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 Vice-Rector

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 Vice-Rector 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.





## CONGRATULATIONS FROM THE ALUMNI OFFICE

Warmest congratulations on your graduation and best wishes for your next adventure! We are very proud of you. We hope that you will stay in touch with your Alma Mater and share your future achievements with other Kowsie alumni.

### CELEBRATE EXCELLENCE

Alumni are a real measure of a university's brand and we strive to keep you informed of the crop of exceptional young leaders and pioneers emerging from the UFS. We do this through our online platforms, social media, publications like *BULT* and events such as the Chancellor's Distinguished Alumni Awards.

### GROW THE COMMUNITY

We exist not only to keep you, our most valued brand ambassadors, connected to your alma mater but to help you stay connected to each other. We encourage engagement and networking opportunities through events, informal visits and guest lectures. You can connect with alumni globally and reconnect with former class mates through the Alumni Office.

### CELEBRATE ACHIEVEMENTS

The extraordinary achievements of Kowsies, both current and past, have placed the University of the Free State on the world stage.

Read about some of those achievements at: [www.ufs.ac.za/alumni/noteworthy-alumni](http://www.ufs.ac.za/alumni/noteworthy-alumni). These alumni have gone on to inspire the next generation of Kowsies and their communities.

### GIVE BACK

The UFS values your financial contributions, your time and your skills. Strengthen your bond with your Alma Mater by becoming involved in projects, events and initiatives aimed at creating a fulfilling student and alumni experience for fellow Kowsies.

Give to a variety of impactful projects via

- the Kowsie ABSA affinity credit card
- a MySchool card
- Mentorship opportunities
- Organisational involvement
- Our donations web page [www.ufs.ac.za/giving](http://www.ufs.ac.za/giving)

### UPDATE YOUR DETAILS

- email: [alumni@ufs.ac.za](mailto:alumni@ufs.ac.za) – Include your date of birth, cell phone number and full names or
- online at [www.ufs.ac.za/alumni](http://www.ufs.ac.za/alumni)

T: +27 51 401 3966 | [alumni@ufs.ac.za](mailto:alumni@ufs.ac.za) | [www.ufs.ac.za](http://www.ufs.ac.za)

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*Inspiring excellence. Transforming lives.*



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UNIVERSITEIT VAN DIE VRYSTAAT  
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**ALUMNI**



