

GRADUATION CEREMONY

VISION130

Renew and Reimagine
towards 2034



EXCELLENCE



WEDNESDAY
17 APRIL 2024
18:00

BLOEMFONTEIN CAMPUS

Faculty of Natural and Agricultural Sciences

Diplomas, bachelor's degrees, honours degrees, master's degrees, and doctoral degrees



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



PROGRAMME

17 APRIL 2024 | 18:00
BLOEMFONTEIN CAMPUS

CONSTITUTION OF THE CONGREGATION

OFFICIAL WELCOME

MUSICAL ITEM

PRESENTATION OF CANDIDATES

CONGRATULATORY MESSAGE

NATIONAL ANTHEM OF SOUTH AFRICA

DISSOLUTION OF THE CONGREGATION

PLEASE NOTE

List of candidates receiving degrees, diplomas, and certificates:

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

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

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

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



Nkosi sikelel' iAfrika

NATIONAL ANTHEM OF SOUTH AFRICA

Maluphakanyisw' uphondo lwayo,
Yizwa imithandazo yethu,
Nkosi sikelela, thina lusapho lwayo.
Morena boloka setjhaba sa heso,
O fedise dintwa le matshwenyeho,
O se boloke, O se boloke setjhaba sa heso,
Setjhaba sa South Afrika -
South Afrika.

Uit die blou van onse hemel,
Uit die diepte van ons see,
Oor ons ewige gebergtes,
Waar die kranse antwoord gee,
Sounds the call to come together,
And united we shall stand,
Let us live and strive for freedom,
In South Africa our land.

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

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

ABOUT THE UFS

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

For the past 120 years, the UFS has been delivering quality graduates who have made their mark in various sectors. What sets the institution apart is its holistic student support initiatives, enabling it to achieve some of the highest success rates in the country. Delivering students who are in high demand in the global job market remains a top priority. An established network of industry partners and close collaboration with the public and private sectors, as well as a continuous process of transformation and curriculum renewal, dovetail to produce highly employable graduates.

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

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

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

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

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



BLOEMFONTEIN, QWAQWA AND SOUTH CAMPUSES

UFS Honorary Awards | UFS Honorary Doctorates

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

Shields of Honour, Council and Chancellor's Medals

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

MESSAGE FROM VICE-CHANCELLOR AND PRINCIPAL | PROF FW PETERSEN

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

Today is a special day indeed. Few events and occasions hold as much significance as your graduation. This day is just as important for those who have supported you along the way. Many of you had to overcome a lot during your journey to get here today. Many of you are the first in your families to reach this milestone. You have earned this moment, and you should be extremely proud. Always acknowledge and recognise the significance of your achievements as you transition from being a University of the Free State (UFS) student to a UFS graduate.

Graduands, you have had the honour of studying at a 120-year-old institution that has a track record on par with well-regarded national peers, as reflected in the 2024 Times Higher Education World University and Impact Rankings. Sufficient evidence indicates that higher education has the potential to function as an agent of change and a means of serving the greater good. Although the mission of our university has always been to equip you with the knowledge and skills needed to make a difference in your field of study, we are also mindful that values are as important for you to make a difference in your communities.

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

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

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

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

Best wishes

PROF FW PETERSEN

VICE-CHANCELLOR AND PRINCIPAL | UNIVERSITY OF THE FREE STATE

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

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

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

Gegradeerdes, julle het die eer gehad om aan 'n 120-jaar-oue instelling te studeer wat 'n prestasierekord het wat gelykstaande is aan welbekende nasionale eweknieë, soos weerspieël in die 2024 Times Higher Education World University and Impact-ranglys. Talle bewyse dui daarop dat hoër onderwys die potensiaal het om te dien. Alhoewel die missie van ons universiteit nog altyd was om julle toe te rus met kennis en vaardighede wat nodig is om 'n verskil in julle studieveld te maak, is ons ook bedag daarop dat waardes vir julle net so belangrik is om 'n verskil in julle gemeenskappe te maak.

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

Gegradeerdes, ongeag wat julle in die toekoms aanpak, onthou om julle passie na te streef en behou die begeerte om voortdurend 'n verskil in ander se lewens te maak. Omring juis met regte mense in regte gemeenskappe, terwyl julle welwillendheid, empatie, passie en bewustheid van werklike kwessies inskerp. As



julle die onvoltooide doelwitte van hierdie land wil aanpak en 'n beter wêreld wil skep – bou brûe, bly moreel skerpinnig, en laat julle koaliesies groei. Die lewe kan uitdagend wees as 'n mens op jou eie is – goeie resultate kan egter behaal word as julle as 'n groep saamwerk.

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

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

Beste wense

PROF FW PETERSEN

VISEKANSELIER EN PRINSIPAAL | UNIVERSITEIT VAN DIE VRYSTAAT

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

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

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

Baithuti ba seng ba tla abelwa dikgau tsa yunivesithi e nang le dilemo tse 120, le bile le tlotla ya ho ithuta setheong sa thuto se nang le nalane e ntle e kgemang le bomphato ba yona ba hlomphehang naheng, jwalo ka ha ho boletswe ho 2024 Times Higher Education World University and Impact Rankings. Ho na le bopaki bo hlwellanang hodimo bo bontshang hore thuto e phahameng e na le monyetla wa ho sebetsa jwalo ka kofuto e hlahisang phetoho le mokgwa o hlahisang melemo e mehoro ka ho fetisisa. Le hoja Mishini- thomo ya yunivesithi ya rona ka dinako tsohle e bile ho le hlomella ka tsebo le bokgoni bo hlokalang ho etsa phetoho dithutong, re boela re lemoha hore dinto tsa boleng di bohlokwa ho etsa phapang metseng ya lona.

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

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

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

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

Ditakaletso tse ntle

MOPROFESARA FW PETERSEN

MOLAETSA: MOTLATSA MOKANSELIRI LE HLOOHO YA UNIVESITHI

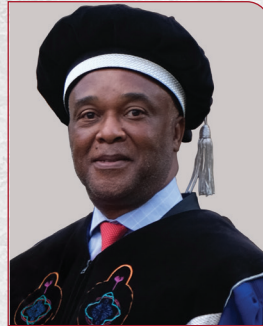
OFFICE-BEARERS



Prof BF Mohale
Professor of Practice (JBS)
CHANCELLOR



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



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



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



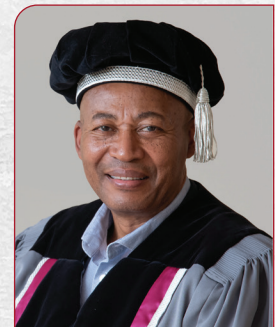
Prof P Naidoo
PhD (VISTA)
DEPUTY
VICE-CHANCELLOR:
OPERATIONS



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



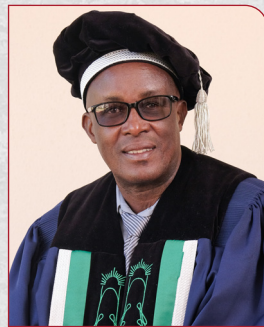
Prof A Rhoda
PhD (UWC)
DEPUTY
VICE-CHANCELLOR:
ACADEMIC



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



Mr NN Ntsababa
MPA (NMU)
REGISTRAR



Prof P Ngobeni
DTech (TUT)
CAMPUS PRINCIPAL:
QWAQWA CAMPUS



Dr PD du Toit
PhD (UFS)
PRESIDENT OF
CONVOCAION



Sifundo Thami Masuku
PRESIDENT GENERAL:
INSTITUTIONAL STUDENT
REPRESENTATIVE COUNCIL

DEANS



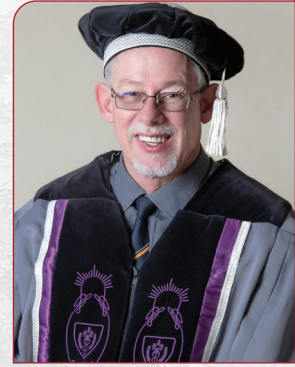
Prof P Burger
PhD in Economics (UFS)

DEAN:
ECONOMIC AND
MANAGEMENT SCIENCES



Prof LC Jita
PhD (MSU)

DEAN:
EDUCATION



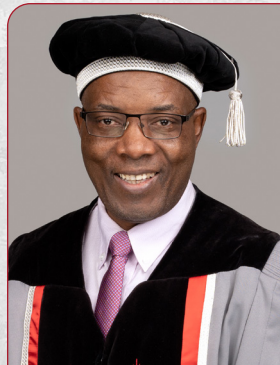
Prof GJ van Zyl
PhD (UFS)

DEAN:
HEALTH SCIENCES



Prof MA Masoga
PhD in Philosophy (UFS)

DEAN:
THE HUMANITIES



Prof SD Kamga
LLD (UP)

DEAN:
LAW



Prof P Oberholster
PhD (UP)

DEAN:
NATURAL AND
AGRICULTURAL SCIENCES



Prof JS Klaasen
DTh (US)

DEAN:
THEOLOGY AND RELIGION

GUEST SPEAKER

DR JACK ARMOUR



Dr Jack Armour is an Agricultural Economics graduate from the University of the Free State; in 2002, he received the award for best master's thesis from the Agricultural Economics Association of South Africa (AEASA). His postgraduate research was based on quantifying the economics of irrigated crops subjected to soil- and water-quality constraints, costing farm-level management solutions with policy recommendations. Currently, he is the commercial manager of Free State Agriculture / Vrystaat Landbou – a provincial affiliate of AgriSA.

Dr Armour completed postgraduate courses in Geo-hydrochemistry and Pollution, Mathematical Programming, and Environmental Impact Assessment. He has presented internationally at the Xth World Water Congress (Australia 2000), was the best poster finalist at the 25th International Association of Agricultural Economists Conference in 2003, and he won the 2012 AEASA best poster paper, titled: A Virtual Market System: Reducing Transaction Costs to Bridge the Economic Divide. He also completed the TIA/UFS Business School short learning programme in Innovation and Entrepreneurship in 2016.

He joined Free State Agriculture in 2008 as manager of the portfolios of Land Reform/Agricultural Development, Municipal Liaison, Infrastructure and

Natural Resources. A major achievement was the completion of the racial land ownership audit of Free State agricultural land in 2013 in collaboration with the Department of Rural Development and Land Reform.

During his career, Dr Armour has represented Free State Agriculture on several committees and is a member of the Glen Agricultural College Advisory Board. He is also a guest lecturer in the UFS Centre for Development Studies and co-promotor and external examiner of MSc and PhD dissertations and theses.



DEAN |

PROF PJ OBERHOLSTER

BACHELOR'S DEGREES

BACHELOR OF ARCHITECTURE

ALAM, Nazif
BALA, Sibahle Lubabalo
BLAKE, Devan
BLIGNAUT, Jean-Marie
BODLANI, Khanyisile
BORNMAN, Wilandri
BOTH A, Hester N. A.
BOTH A, Karla
CANTOR, Keanan*
COETZEE, Magdel
COOPER, Anja
DE ABREU, Elena Algerina Akakios
DE JAGER, Kayla
ENGELBRECHT, Elani
FERREIRA, Gert Andries
FOURIE, Johannes Louis
FRANKEN, Hendre Nicolaas
GOUWS, Su-Mari
GRIESSEL, Lijani
HARMSE, Anel
HOFFMAN, Handre
HOFFMAN, Zander
JANSE VAN RENSBURG, Emile

KATSE, Lifa
KOTZÉ, Marita
KRUGER, Nicolene
LAREMAN, Rynard
LOUW, Mercia
MJIYAKHO, Nzuzo Immaculate
MONAPATI, Phungwazana Reginah
MOSIME, Karabo
MOSTERT, Michaela
MPHOSI, Matshego Tumelo
NDONGA, Latiel Tanaka
PHATLANE, Tefo
RADEBE, Khalipha Ziphezinhle
RALL, Kevin
RAYNARD, Dominic
SERFONTEIN, Gideon Johannes
SIMELANE, Yamkelwa
STRYDOM, Anya
SWANEPOEL, Ulrich
TRUTER, Jan Johannes
VILJOEN, Jean
WOITYCZKA, Leopoldt Edward

BACHELOR OF COMPUTER INFORMATION SYSTEMS

GWEDE, Lindokuhle
JELE, Manqoba Andries
KANYILE, Aphelele Bulelani
LESHABA, Mpumelelo Caleb
LOGGENBERG, Kgopotso

MACHITJE, Kamohelo
MANDIUDZA, Tatenda
MANYERUKE, Tinomudaishe Terera
MBHALATI, Buhle Mariano
MDITSHWA, Ayola Ande
MNENGISA, Ambesiwe
MNISI, Siyabonga Collen
NDLOVU, Siphamandla
NGOVENI, Rhulani
NTULI, Sfiso Giff*
PILANE, Ofentse*
RADEBE, Asande Senamile
SHADUNG, Rorisang

BACHELOR OF CONSUMER SCIENCE

BOSHOFF, Ancke*
CINDI, Andiswa
COETZER, Mia*
DITSHAKE, Sikelela Luv
DLAMINI, Aretha Sonja
DUBE, Nosipho
KOEGELENBERG, Merize Emmerentia Magrieta
LANGA, Zenande Joy*
LEHLAKOLA, Reabetswe Mpho
MATILE, Ellain Mathoto
MGONANA, Sesethu
MOFOKENG, Fikile Lebohng
MTHOMBENI, Thandeka Praise
MTSHWENI, Lesego Tamia



MUTHIVHITHI, Rendani Witness
NCONGWANE, Celimpilo Gloria
NDLELA, Emihle
NGXINCWENI, Sivuyisiwe
NTJIYO, Nomaqekha Maggie
NTOPO, Didintle
PAIVA, Rosa
PEREIRA, Tayla Amber*
PULA, Goaratwa Lethabo
RAVELE, Anzani
SHEZI, Lwandile Nolwazi
SIMAMANE, Zamanguni
SOLOMONS, Andrea Melissa*
STEYN, Varene
THABEDE, Anele Winnster
TLANYA, Tseleng Anna
VAN QUICKELBERGE, Bianca
WILSON, Chané Isabelle

BACHELOR OF SCIENCE IN CONSTRUCTION ECONOMICS AND MANAGEMENT

FUMA, Nthati
MABASA, Dunisani
MPHOMANE, Reamohetse
NKUNA, Peter
PULE, Thato Kgosietsile Godwill

BACHELOR OF SCIENCE IN CONSTRUCTION MANAGEMENT

BARTHUS, Jade
BOSHOFF, Johannes

DLAMINI, Nhlanhla Salven
LE ROUX, Jade Amie
MAKHUVHA, Victoria*

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

MAHLANGU, Michael Manqoba
MULAUDZI, Takalani Steve
VUMANE, Nhlamulo Desmond

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

DITLOU, Tumelo Donald*
FREITAG, Dieter
FUNIKA, Mathanzima Dennis*
HEUNIS, Bradley*
KOUTRIS, Aikaterini
LEBITSA, Lineo Angela
LOADER, Kyle
MAHLAKWANE, Boreadi
MAKHOOANE, Katleho Eric*
MAREMANE, John Kgosietsile
MATLALA, Thato
MAYABA, Tsepo
MOKAUTU, Shereen Tumiso
MOLETE, Katleho Success
MUGWABANA, Edzani Daisy
SAHLULO, Ndumiso
SMIT, Barend Christiaan
TIBANE, Nikiwile Shaun

TSOTETSI, Lerato
VREY, Hendrik Lodewicus

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

NKWANYANA, Sinqobile Londiwe Faith
PHASHA, Maboeletje Jimmy
TSHIVHUNDO, Tshedza

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MAJORING IN COMPUTER SCIENCE AND MATHEMATICS

MOTSEKI, Thato Origin
NGWENYA, Thato Moeketsi

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

KOMAZI, Zintle Bridgette Elsie
NGUBANE, Siphwe
PETERSEN, Xena Natalie
VENTER, Handré

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MAJORING IN DATA SCIENCE

BOTES, Ettienne
BULANNGA, Rofhiwa Michelle



IDEBI, Motunrayo Oreoluwa*
MACHABELELE, Kgotso William
SMITH, Jocelyne*

BACHELOR OF SCIENCE IN QUANTITY SURVEYING

ESTERHUIZEN, Sonel Aletta
KEELE, Maphale Glen
KHAN, Adam Ali
NAZO, Lisakhanya
NEL, Johann
OOSTHUIZEN, Enzo
PAKISI, Mhlonipheni
RAMASEHLA, Kabelo Alfred

BACHELOR OF SCIENCE MAJORING IN ACTUARIAL SCIENCES

LEKELETSANA, Mpoekae
Christina

POSTGRADUATE DIPLOMAS

POSTGRADUATE DIPLOMA IN DISASTER MANAGEMENT

ABRAMS, Marlin Shaun*
BESSENGER, Marachel
BLOCK, Thato John
DE LANGE, Johan Frederik

DIKO, Onke
DUBE, Nelly Nolwazi
HEPBURN, Clyde Brad
JOHN, Diagracia Nokwanda
LEBEKO, Lemohang
LESEMELA, Tselane
MABASA, Nkateko Caroline
MAHAMBA, Sivuyile
MALUNGA, Sandile Reginald
MANWELI, Fhulufhelo Eric
MAPHANGA, Tonicca Mcmallan
MAQUVANA, Pumza Portia
MASABALLA, Moalosi Willem
MASHIANE, Shirley Mmatshweu
MASHILO, Germinah Jane
MASUNGA, Mara Melonie
MOLAPO, Tholoana
MOLEFE, Orapeleng
MORAKE, Chairmaine Dipalesa
MSOKANA, Yomelelani
MTABANE, Siphokazi
MTHEMBU, Anele Ntokozo Pearl
MTHEMBU, Nozipho Faith
MTSHALI, Sifiso Zola Mngqobi
MUNYAI, Zwodangani Almon
NETSHINEULU, Tshilidzi Godfrey
NGWABE, Mpumelelo Mthembeni
NXUMALO, Nontobeko
Nompumelelo Pretty
NYONGO, Phuthuma
OWOLABI, Victoria Olajumoke

PHOTO, Tebogo
RAMOKONE, Bernice Lipolelo
SEFATSA, Rorisang Confidence
SIGA, Nontuthuzelo
SOPETE, Mandelandile
TSHANGANA, Milani
TSHUMA, Mthulisi*
VAN DER SPOEL, Anneska*
VEZI, Zimele Ngcebo
ZUMA, Henry Siphwiwe

HONOURS DEGREES

BACHELOR OF ARCHITECTURE HONOURS

BADENHORST, Mieke
BARNARD, Jaco Robert
BOTH A, Alida Elizabeth
BOTHMA, Anika
BUNU, Emihle
CLOETE, Michail Thomas
COLEMAN, Chad Wayne
DE KLERK, Thereza
DU TOIT, Megan Elizabeth
ERASMUS, Pieter Hermanus
FOURIE, Jacqueliën Joharina
JACOBS, Johannes Petrus
KAFFKA GENAAMD DENGLER,
Vlasta Maria
KAMTHUNZI, Glory*
KILIAN, Carla



LOUW, Marike Naomi
 MAISCHATZ, Stephan
 MAKAPELA, Lihle Ayakha
 MANTHE, Andrew William Temple
 MKUKWANA, Lutho Qhayiya
 MOSTERT, Drian Martin
 MTSHALI, Leo Nkosiphile
 MYBURGH, Paige Jill Ann
 NIEHAUS, Jani
 PRETORIUS, Meghan
 PRINSLOO, Jak
 SMITH, Donel Daniel
 STILLER, Konrad Micha
 THEUNISSEN, Tersea Maria
 VAN HEERDEN, Chris Reinhardt
 VAN MUYLWYK, Zhante
 VAN ZYL, Janka
 VOLSCHENK, Kian
 VORSTER, Zanri

BACHELOR OF COMPUTER INFORMATION SYSTEMS HONOURS

NCHABENG, Tshepo
 SMITH, Ilano Zendo

BACHELOR OF SCIENCE HONOURS IN CONSTRUCTION MANAGEMENT

GENTLES, Benjamin Jerobeam
 LEPELE, Hlonolofatso Matjeka
 MACHITJE, Lebohang Abel

MAINE, Thato
 MTSI, Zamani Kanyisa
 NETSIANDA, Unarine Blessing
 NKADIMENG, Kamogelo Mmakabe
 PHETLA, Magosebo Lydia

BACHELOR OF SCIENCE HONOURS IN CONSUMER SCIENCE

CRONJE, Suleze
 KEKANA, Tshiamo Virginia
 KGOWEDI, Tlou
 MACDONALD, Rozanne
 MAJOLA, Sineliso
 MC GALT, Jade Shallonne
 MOKGOTHU, Omphile Lesedi
 MTHIYANE, Thandiswa
 NDLOVU, Siyamthanda Asanda
 NTSELE, Thembelihle*
 SIKHOSANA, Nqobile Precious
 SIMELANE, Bafana Sibongiseni*
 SINGH, Leishara Len*
 SMITH, Helé*
 TABANE, Lesedi
 TERBLANCHE, Charla

BACHELOR OF SCIENCE HONOURS IN QUANTITY SURVEYING

BARNARD, Wilhelm*
 BESTER, Refuwe Charles

BOTHA, Milné
 BREFO, Kwame
 DA COSTA, Daniela
 DE KOCK, Marco
 EDWARDS, Bandile Phathizwe*
 GROENEWALD, Bianca
 JENKINSON, Megan
 KHAKHU, Phumudzo
 KHUMALO, Mawande Sphelele
 KOEKEMOER, Stephanus Adriaan
 KRUGER, Minke
 LAUBSER, Ivan Niël
 LOURENS, Johmic Heinz
 MAEDER, Daniel
 MALEBANYE, Nthati Bernice
 MASHOALA, Monnapule
 MNTAMBO, Sibusiso Patrick
 MODIAKGOTLA, Relebogile
 MODISAESI, Limpho Isabella
 MOHALE, Monyane Edwin
 MOJAKI, Boichoko
 MTSHALI, Nontokazi Pamela
 NGULUBE, Lyton
 NKOBA, Naledi Lebohang
 NYSSCHENS, Gerhard Louis
 SCHULTZ, Dillan
 SEBUYE, Betty
 SETHOSA, Modimana Katlego
 SIGIDANE, Uhone Cyril Desmond
 SMITH, Will Albert
 TSIPANE, Kaizer Karabo



VAN DER MERWE, Dylan Peter
VAN RIET, Sophie Christel René
VIVIER, Chris
WOHLITZ, Ebert George

BACHELOR OF SPATIAL PLANNING HONOURS

AYOB, Fatima
CILLIERS, Ruhan
KAMPONG, Limakatso Shadrack
LIPALI, Relebohile Bridgette
LUMKO, Lumphumlo Mthulisi
MADILONGA, Michelle*
MAFA, Lipalesa
MSWELI, Nombuyiselo Ayanda
Nonkazimulo
NQOKO, Thulile
PANDLE, Sibulele
PHAFOLI, Makabelo Alice
TONG, Tumelo Julian
VOLKWYN, Adrian Peter
ZULU, Njabulo Wiseman

BACHELOR OF SPATIAL PLANNING HONOURS WITH SPECIALISATION IN HUMAN SETTLEMENTS

BILLY, Lucy
DONDOLO, Puseletso
MALITI, Papama
MANKWALI, Sesethu

MKUZANGWE, Bonga
MOSOLE, Matonki Simon
MTSHAKAZA, Asa
MVELASE, Siphephelo
NGOBENI, Alpha Matimu
NKILI, Sikhusele Stephen

MASTER'S DEGREES

MASTER OF ARCHITECTURE

ADENDORFF, Maliza
BOTHA, Stephanus
COETZER, Leon
CONRADIE, Thomas Albertus*
DE BRUYN, Dené
DE KOCK, Jesse Denne
DE WET, Johannes Jacobus
DU PLESSIS, Cara Donaye*
DU TOIT, Lize-Marie*
DUVENHAGE, Gert Pieter
Johannes
ENGELBRECHT, Carmi
FOURIE, Lielie
FRANCIS, Adelin
GUTTER, Juan-Amié*
HALLOWELL, Cayla-Jade
HORN, Alicia*
KHOBOTLO, Setenane Mark
KOTZE, Christiaan Marthinus
KOTZE, Elizabeth Magdalena

LABUSCHAGNE, Willem Karel
Steffen
MAIMELA, Shaun Khutso
MAREE, Bernard Dickens
MKHIZE, Thembela Grant Ngcebo
PALMER, John-Gordon
ROOS, Taline
SANDER, Carien
SCHOEMAN, Johannes Cornelius
STEENKAMP, Jodia*
SWARTS, Karmen
VAN DER MERWE, Es-Mari
VAN DER RIJST, Michelle*
VAN RHIJN, Ronel Leonora
VILJOEN, Herman
WOOD, Arran Daniel*

MASTER OF ARCHITECTURE

GELDENHUYS, Albert Barend
Dissertation Title: THE LIFE
AND WORK OF ARCHITECT
WYNAND H LOUW (1883 -
1967) WITH A FOCUS ON THE
DESIGN OF ECCLESIASTICAL
BUILDINGS

Supervisor: Mr JL Du Preez

MASTER OF ARCHITECTURE WITH SPECIALISATION IN DESIGN

SMUTS, Catharina Johanna

Dissertation Title:
PARTICIPATION AT ZOLANI
CENTRE. HOW PARTICIPATORY



DESIGN PRODUCES A VIBRANT DYNAMIC URBAN ENVIRONMENT

Supervisor: Prof JA Noble

Co-Supervisor: Dr M Minguzzi

MASTER OF DISASTER MANAGEMENT

CHEELI, Fukuthu Isdorina

GAENE, Peggy Tlou

LE ROUX, Jacob Johannes

LESENYEHO, Mathe Helekia

MANQELE, Nelisiwe

MASHA-MATSEMELA, Makgwale Consolation

MATSABA, Lethukubonga Inertia

MENTE, Alvina Milka

MONARE, Dithuso Confidence

MUNYAI, Ndinannyi Sedwell

NAKE, Ntshalle Stella

NDABA, Ndivhuwo Gladstone

PETERSEN, Ilona

MASTER OF LAND AND PROPERTY DEVELOPMENT MANAGEMENT

MASUABI, George Eustice

MASTER OF LAND AND PROPERTY DEVELOPMENT MANAGEMENT WITH SPECIALISATION IN PROJECT MANAGEMENT

RABAPANE, Tebogo Gratitude

SACOLO, Thabiso

MASTER OF LAND AND PROPERTY DEVELOPMENT MANAGEMENT WITH SPECIALISATION IN VALUATION

MAMABOLO, Leponyo Terry

MASHAMAITE, Pitsi Maxilia

MOJANAGA, Bulelwa Dawn

NDALA-KA DLAMINI, Tiny Mankutlweng

PUTSOA, Ntsebo Relebohile

SITHOLE, Kedibone

MASTER OF SCIENCE MAJORING IN CHEMISTRY

ATHANASOPOULOS, Evangelia*

Dissertation Title: DFT STUDY OF Fe COMPLEXES CONTAINING ELECTRONICALLY ALTERED TERPYRIDINE DERIVATIVE

Supervisor: Prof J Conradie

Co-Supervisor: Dr MM Conradie-Bekker

MASTER OF SCIENCE MAJORING IN CONSTRUCTION MANAGEMENT

MOETI, Mathopa*

Dissertation Title: WASTE MINIMISATION TECHNIQUES

FOR SUSTAINABLE CONSTRUCTION IN THE BUILDING SECTOR

Supervisor: Dr Christopher Amoah

Co-Supervisor: Prof K Kajimo-Shakantu

MASTER OF SCIENCE MAJORING IN FOOD SCIENCE

HATTING, Melissa*

Dissertation Title: THE EVALUATION OF REJECTED WET CARCASS SYNDROME LAMB MEAT FOR HUMAN OR ANIMAL CONSUMPTION

Supervisor: Prof A Hugo

Co-Supervisor: Prof CJ Hugo

MASTER OF SCIENCE MAJORING IN GEOLOGY

MOLOTO, Phuthego

Dissertation Title: Reassessing the refolding of the Eureka Syncline of the Barberton Greenstone Belt, South Africa

Supervisor: Dr MD Clark

REYNDERS, Marthinus Schalk

Dissertation Title: STRATIGRAPHIC DELINEATION OF THE Ni-Cu-(PGE) MINERALISATION OF THE AURORA PROJECT, NORTHERN LIMB, BUSHVELD COMPLEX

Supervisor: Prof F Roelofse

Co-Supervisor: Mrs J Magson



MASTER OF SCIENCE MAJORING IN MATHEMATICAL STATISTICS

MBONGO, Sfiso Doctor

Dissertation Title:
INVESTIGATING
GENERALIZATIONS OF THE
GENERALISED PARETO
DISTRIBUTION

Supervisor: Prof A Verster

MASTER OF SCIENCE MAJORING IN PHYSICS

MAKOLOANE, Lehlohonolo Eric*

Dissertation Title: TOF-SIMS
AND AES STUDIES ON THE
SEGREGATION OF INDIUM
FROM COPPER CRYSTALS.

Supervisor: Prof JJ Terblans

Co-Supervisor: Dr S Cronje and
Prof HC Swart

ODENDAAL, Johane Johanna*

Dissertation Title: REDUCTION
METHODS FOR SM^{3+} TO SM^{2+}
IN STRONTIUM BORATES FOR
SOLAR ENERGY APPLICATIONS

Supervisor: Prof HC Swart

Co-Supervisor: Prof RE Kroon
and Mr LJB Erasmus

THAMAGA, Boiketlo
Ramathathe Judy*

Dissertation Title: SELECTIVE
DETECTION OF VOCs
UTILIZING P-N JUNCTION

OF NIO-CEO₂ LOADED
WITH NOBLE METALS
FOR LOW- TEMPERATURE
PERFORMANCE

Supervisor: Prof DE Motaung

Co-Supervisor: Prof HC Swart

THEKA, Thabang Jackson*

Dissertation Title:
DEVELOPMENT OF METAL-
ORGANIC FRAMEWORKS-
DERIVED CO₃O₄ LOADED ON
VARIOUS SEMICONDUCTOR
METAL OXIDES: INFLUENCE
OF TRANSITIONAL AND NOBLE
METALS ON THE SENSING
CHARACTERISTICS

SUPERVISOR: PROF DE
MOTAUNG

Co-Supervisor: Prof HC Swart

MASTER OF SCIENCE MAJORING IN PLANT BREEDING

KOBEDI, Faith Karabo*

Dissertation Title: BREEDING
FOR RESISTANCE AGAINST
SCLEROTINIA SCLEROTIORUM
IN SOYBEAN (*GLYCINE MAX. L*)

Supervisor: Prof A Minnaar-
Ontong

Co-Supervisor: Dr A Maré

MASTER OF SCIENCE MAJORING IN PLANT HEALTH ECOLOGY

CLAYTON, Justin John

Dissertation Title: BENEFITS
OF PLANT GROWTH-
PROMOTING BACTERIA ON THE
HEALTH AND PRODUCTIVITY
OF OATS AND SOYBEAN

Supervisor: Prof WJ Swart

Co-Supervisor: Dr ED Cason
and Dr C Rothmann

MASTER OF URBAN AND REGIONAL PLANNING

BEZUIDENHOUDT, Gerda Joann*

KELEPA, Malehlohonolo
Magdalena

MAJIEDT, Darren Stephan

MALEKA, Boitumelo Philadelphia

MHLONGO, Nomvelo Pretty

MKHOMBO, Bongzi Bianca

NOLONOLO, Karabo

PALO, Madisemelo Cornelia

TSOTETSI, Mpho Barbara



DOCTORAL DEGREES

DOCTOR OF PHILOSOPHY

ANDERSON, Ryan Leigh

Ryan Anderson was born in Springs on 16 September 1984. He completed his matriculation at Shanan Christian School in Benoni in 2002. He achieved his educational milestones by obtaining a BSc in Geography in 2008, followed by a BSc Honours in Environmental Management and Analysis in 2009, achieving Top Honours student for that cohort. In 2012, he successfully obtained a Master's degree in Geography with distinction. His professional journey began as a part-time lecturer in Pretoria. In 2014, Ryan Anderson assumed and currently holds the position of lecturer in the Department of Geography at the University of South Africa.

With his thesis titled: **MEDIUM TO LONG-TERM IMPACTS OF RAINFALL EVENTS ON LARGE GULLY NETWORKS IN THE EASTERN CAPE, SOUTH AFRICA**, the candidate contributes to the complex field of gully erosion. His research made use of unmanned aerial vehicles and structure from motion software to assess the impact of intense erosive rainfall on gully evolution in the Eastern Cape, South Africa, which currently are the largest documented gullies on the African continent. His study provides new insight to the understudied research of rainfall interactions with large gully networks. The study incorporated data captured from unmanned aerial vehicles, structure from motion software, high-resolution rainfall data, and GIS mapping software. Findings from his study has provided new understanding for land management in potentially mitigating the growth of large gully networks.

Supervisor: Prof J le Roux

Co-Supervisor: Prof K Rowntree

DOCTOR OF PHILOSOPHY MAJORING IN GENETICS

SCHNEIDER, Sue-Rica

Sue-Rica Schneider was born on 23 March 1983 in Bethlehem. She completed her secondary education in 2001 at Fichardt Park High School, Bloemfontein. She obtained a BSc honours degree at the University of the Free State in 2005, whereafter she continued with an internship as a Medical Biological Scientist and registered with the South African Health Professional Council in 2009. She continued her postgraduate studies at the University of the Free State and obtained an MMedSc degree (Human Genetics) with distinction. She currently holds a lecturer position in the Department of Genetics at the University of the Free State.

With her thesis titled: **GENETIC DETERMINANTS OF SCHIZOPHRENIA AND BIPOLAR I DISORDER IN SELECTED SOUTHERN AFRICAN POPULATION GROUPS**, the candidate contributed to the local and global knowledge base of psychiatric genetics. Using a multi-faceted approach of surveying South African psychiatrists, conducting an exploratory microarray analysis and candidate gene study on Schizophrenia and Bipolar I disorder patients of Afrikaner and Sotho descent, a comprehensive narrative on the relationship between genetics and psychiatric disorders within a South African context was explored. The study revealed knowledge gaps in the psychiatric clinical and genetic research settings as well as possible causal and overlapping variants in Calcium and Cadherin-catenin pathway genes in the cohort of Schizophrenia and Bipolar I patients. The study enhanced the understanding of population-specific susceptibility in psychiatric disorders, which is a crucial step towards more inclusive and effective future mental health interventions.

Supervisor: Prof R Rebello

Co-supervisor: Prof ED Cason



DOCTOR OF PHILOSOPHY MAJORING IN FORENSIC GENETICS

WESSELS, Letecia

Letecia Wessels, born on 2 June 1984 in Kempton Park, completed her secondary education in Wolmaransstad, graduating from Wolmaransstad High School in 2002. She obtained her bachelor's degree in Genetics from the University of the Free State in 2005. Following this, she obtained her BSc Hons with distinction from the UFS in 2006, and her MSc in Conservation Genetics, also with distinction, from the same institution. She began her career as a junior lecturer in the Department of Genetics at the UFS in 2010, and currently holds the position of lecturer in Forensic Genetics at the same institution.

With her thesis titled: **INVESTIGATING THE FEASIBILITY OF MOLECULAR TECHNIQUES IN AUGMENTING INSECT-BASED POST-MORTEM INTERVAL ESTIMATION**, the candidate contributes to the accuracy of post-mortem interval estimation by merging the disciplines of forensic genetics and forensic entomology. With this contribution, she attempts to enhance the two primary methodologies used in entomology for PMI estimation, incorporating molecular techniques where possible. Insect succession data generated and compared to historic data contributed to a regional- specific database and allowed for a comparative analysis with three decades of historical information. The results of the molecular techniques serve as an indication of the value this type of intervention holds in the attempt to find a solution to accurate and consistent PMI estimation. Notably, techniques such as high-resolution melting and gene expression analysis prove to be valuable additions to the forensic entomologist's toolkit, enabling precise species identification and the detection of developmental stage-specific gene expression changes.

Supervisor: Dr K Ehlers

Co-Supervisor: Dr SL Brink

DOCTOR OF PHILOSOPHY IN ARCHITECTURE WITH SPECIALISATION IN DESIGN

MC INERNEY, Patrick John

Patrick Mcinerney was born in Johannesburg on the 29th of March 1956. He attended St. Benedict's College in Bedfordview, matriculating in 1973. Whilst obtaining the degrees of Bachelor of Architecture in 1982, and Master of Environmental Design (Urban Design) from the University of the Witwatersrand in 1985, he trained as an architect, being admitted to the profession in 1984. He worked briefly for Morass and GAPP Architects, before joining Meyer Pienaar where he rose through the ranks, ultimately becoming a senior partner. A founding member when the practice became CoArc International Architects in 2003, he is its current CEO.

With his thesis titled: **FROM SILENCE TO LIGHT: ESTABLISHING HOW RIBBONS OF IMPLICIT DESIGN ENDEAVOUR AFFECT THE ETHOS OF A PRACTICE IN A CHANGING WORLD**, the candidate illuminates a processes of personal design endeavour, in a practice that is responsible for significant public buildings in South Africa, during and after apartheid. Using narrative as a form of 'afterwardness' the thesis investigates unconscious design drivers, desires and intentions that informed the work. Recording, unpicking and unravelling, the thesis delves into the most significant moments that informed decisions, and identifies influencers and collaborators whose work and teachings inspired a shift in the ethos of the practice. In particular, the seminar influence of Louis Kahn is highlighted and accessed. The thesis demonstrates how Kahn's injunction to seek the essence of meaning in architecture in universal principles of geometry, light and form, is shifted to include African approaches to place-making.

Supervisor: Prof JA Noble

Co-Supervisor: Dr R Fisher

DOCTOR OF PHILOSOPHY MAJORING IN AGRICULTURAL ECONOMICS

MADENDE, Primrose

Primrose Madende was born on the 4th of February 1990 in Gweru, Zimbabwe. She matriculated at Regina Mundi Girls High school in 2008. She obtained her Bachelor's degree in Agricultural Economics with a distinction (2012), her Hons degree in



Agricultural Economics with distinction (2013), Master's degree in agricultural Economics (2017) and the PhD in Agricultural Economics (2023) at the University of the Free State. She started her career as a research assistant at the department of Agricultural Economics in 2013. In 2017, she was appointed on a permanent basis as a researcher in the Department of Agricultural Economics, which is the position she is currently holding.

With her thesis titled: **TAILOR-MADE DEVELOPMENT PATHWAYS TO ENHANCE YOUTH PARTICIPATION IN AGRICULTURE**, the candidate contributes to knowledge on the agriculture-youth unemployment nexus. Specifically, the candidate illustrates how the heterogeneous resource endowment of youth, including 'soft' skills, can inform the development of tailor-made pathways for enhancing active youth participation in agricultural activities. Tailor-made development pathways explicitly address the unique needs of youth by recommending particular support strategies that third-party development partners can utilise to coordinate and coherently implement youth support initiatives, thereby enhancing access to resources and promoting active engagement in agricultural activities. The candidate further developed an integrated development pathway that provided youth with a functional self-help tool that they could use to map a personalised strategy. The candidate argues that engaging youth in agriculture as a livelihood strategy will beneficially impact food security, mitigate youth unemployment, and stimulate economic growth in developing economies such as South Africa.

Supervisor: Dr JIF Henning

Co-Supervisor: Prof H Jordaan

DOCTOR OF PHILOSOPHY MAJORING IN AGRONOMY

DLAMINI, Njabulo Eugene Musawenkhosi

Njabulo Dlamini was born on 20 November 1975 in Siteki, Lubombo region of Eswatini. He matriculated at St John Bosco High School in 1993 and later attained a BSc degree in Agriculture, Specialising in Agronomy at the University of Eswatini in 2000. He graduated with an MSc in Agriculture, with specialisation in Plant Breeding at the University of the Free State in 2017. His professional career began in 2000 when he joined the Royal Eswatini Sugar Corporation as a Farm Manager. Currently, he works for Eswatini Sugar Association as a Research Agronomist, a position he holds since 2013.

With his thesis titled: **VARIETY AND ENVIRONMENTAL EFFECTS ON RATOON YIELDS OF IRRIGATED SUGARCANE**, the candidate contributes to the knowledge of sugarcane research, modelling and growing. Using commercial and trial data, the candidate showed that varieties, harvest times and soil hydraulic properties significantly affect longevity of profitable sugarcane ratoon crop cycles. Using findings thereof, sugarcane yield models can now be fine-tuned to incorporate these factors to estimate yield under different growing scenarios. Stalk height, population and weight were identified as essential traits must be sustain if long ratoon crop cycles are to be achieved. Management practices that enhance these traits must be adopted by growers for profitable and sustainable sugarcane farming. "Mean of ratoon crops to plant cane yield ratios" and "means of test crops" indices proofed to be useful methodologies that researchers and growers can utilize to predict ratooning ability of sugarcane varieties for long ratoon crop cycles.

Supervisor: Prof AC Franke

Co-Supervisor: Prof M Zhou

DOCTOR OF PHILOSOPHY MAJORING IN CHEMISTRY

CARROLL, Lenard Leslie

Lenard Carroll obtained a BSc in Chemistry and Pure Mathematics from the University of Cape Town (UCT) in 2016, followed by an Honours degree in Chemistry with distinction in 2017. The past 7 years, he has been distinguished with several



accolades, including placement on the 2016 Dean's Merit List, the class medal in third-year chemistry for top performance, recognition among the top 15% of academic achievers in 2017, and multiple scholarships and awards. Carroll's interests led him to computational chemistry, culminating in a MSc degree at UCT with distinction and a PhD at the UFS, where both focused primarily on molecular dynamics.

In his thesis titled, **INVESTIGATING ADSORBATE MOBILITY AND SURFACE REACTIONS ON GOLD CATALYSTS AND GRAPHENE: AN AB INITIO MOLECULAR DYNAMICS STUDY**, Lenard Carroll makes significant contributions to the study of nanoporous materials. He meticulously examined the surface restructuring induced by oxygen atoms adsorbed on Au(221) surfaces through static density functional theory (DFT) computations and ab initio molecular dynamics simulations, evaluating both the presence and absence of co-adsorbates such as carbon monoxide and water. Additionally, Carroll explored the dimerization and segregation phenomena of Cu₅ clusters on both pristine and defective graphene supports using ab initio molecular dynamics. His research not only advances the existing body of knowledge but is also among the pioneering studies to investigate these specific systems, notably the random adsorption of oxygen atoms on Au(221) surfaces and the complex behavior of Cu₅ clusters on graphene, thereby opening new avenues for understanding and application in the field of material science.

Supervisor: Prof L Moskaleva

VAN DER WESTHUIZEN, Deidré

Deidré van der Westhuizen was born on June-27 1991 in Kimberley, where she also completed her secondary education, matriculating from Adamantia High School in 2009. She completed her BSc, BSc(hons), MSc with distinction, and PhD in Chemistry at the University of the Free State in 2015, 2017, 2019 and 2023 respectively. Her part time career as a researcher and educator began in 2012 when she worked in the Department of Chemistry at the University of the Free State. During 2023 she worked as an A-step tutor at the UFS.

With her thesis titled: **ANALYSIS AND SOURCE APPORTIONMENT OF ATMOSPHERIC PARTICULATE MATTER IN CENTRAL, NORTH AND WESTERN FREE STATE**, the candidate makes a contribution to the field of chemistry in environmental air pollution studies, which directly impacts human health and the environment. Through this contribution the candidate increased knowledge of fine dust particles as one of the major components in air pollution. Analyses of such particulate matter, sampled over all seasons, in the greater Bloemfontein, Kimberley and Vanderbijlpark areas, together with determination of its sources of origin, serve as an indication of the causes of air pollution and how it may be reduced. The study also provides pointers towards additional future research and actions that may be undertaken.

Supervisor: Prof KG von Eschwege

Co-Supervisor: Prof J Wichmann (UP)

DOCTOR OF PHILOSOPHY MAJORING IN CONSTRUCTION MANAGEMENT

MUKUMBA, Charles Poleni

Charles Poleni Mukumba born in Lusaka, Zambia, on December 13, 1979 received his education in Livingstone, where he matriculated at Hillcrest National Technical Secondary School in 1996. He obtained a Bachelor of Architecture degree in 2005 from the Copperbelt University in Kitwe, Zambia. He further graduated with a Master of Land and Property Development Management specialising in Housing, in 2019 from the University of the Free State. He started his career in private practice as an Architect in Lusaka in 2006. He has acted as a project manager for the construction of a number of physical infrastructural projects.



With his thesis titled: **A FRAMEWORK FOR IMPROVING SMALL, MICRO AND MEDIUM ENTERPRISE CONTRACTOR PARTICIPATION IN CONSTRUCTION PUBLIC PROCUREMENT IN ZAMBIA**, the candidate contributes to the scholarship of public construction procurement and Small and Medium Enterprise development. The candidate demonstrated a strong methodological contribution by using an explanatory sequential mixed methods research design to derive significant inferential results through quantitative methods and clarifying emerging issues using qualitative methods. The study found a significant relationship between SMEs' perceptions of and experiences in the public procurement process with their participation. A number of critical success factors were also identified for SMEs' successful participation in public construction procurement. The framework developed focused on policy adjustments and effective implementation, with recommendations for specific SME contractors' capabilities to enhance their participation in public construction procurement. This would mitigate the current lack of construction specific public procurement-related policies which hinders participation, growth and development.

Supervisor: Prof K Kajimo-Shakantu

DOCTOR OF PHILOSOPHY MAJORING IN ENVIRONMENTAL GEOLOGY

ABRAHAMS, Jamie-Leigh Robin

Jamie-Leigh Robin Abrahams was born in Cape Town on 22nd June 1992. She received her secondary education at Rocklands Senior Secondary School and matriculated in 2009. She attained a BSc degree in Applied Geology at the University of the Western Cape in 2015. She continued at the University of the Western Cape and attained a BSc Hons degree in Applied Geology, graduating with distinction, in 2016 and a BSc Master's degree in Applied Geology, graduating with distinction, in 2018.

With her thesis titled: **PREDICTION AND MAPPING OF TRACE METAL CONTAMINATION RELATED TO ACID MINE DRAINAGE VIA GEOCHEMISTRY AND SPECTROMETRY**, the candidate makes an original contribution to the existing knowledge in the field of environmental geology. With this contribution, she attempts to map trace metal contamination linked to acid mine drainage in the Witbank Coalfield in South Africa, with the combined use of geochemistry, field and airborne reflectance spectrometry. The study demonstrates a statistical approach to mapping trace metal contamination in coal mine-affected sediments and shows that reflectance spectrometry may be a valuable technique for rapidly predicting trace metal contamination in mine areas, as a precursor to more intensive geochemical sampling and analysis.

Supervisor: Prof EJM Carranza

DOCTOR OF PHILOSOPHY MAJORING IN ENVIRONMENTAL MANAGEMENT

MOLOI, Mbuyiselwa Shadrack

Mbuyiselwa Shadrack Moloi was born on the 31st August 1994 in Qwaqwa, Free State. He matriculated from Mmathabo Secondary School in 2012. He obtained all his tertiary qualifications from the University of the Free State; BSc in Zoology & Life Sciences (2016), BSc Honours in Zoology (2017), MSc in Zoology (2019) and PhD in Environmental Management (2023). He is currently a Research Scientist at the Council of Scientific and Industrial Research's Water Research Centre.

With his thesis titled: **ASSESSING SURFACE WATER NANOPOLLUTION EFFECTS FROM PRIORITY ENVIRONMENTAL EXPOSURE POTENTIAL NANO-ENABLED PRODUCTS IN SOUTH AFRICA**, the candidate contributes to the environmental risk assessment of engineered nanomaterials (ENMs), focusing on the exposure and effects of product-released (PR) EN Ms in aquatic ecosystems. The candidate assessed the release of PR- ENMs from consumer products sold in South Africa, characterised environmental exposure, and respective ecotoxicological effects at different trophic levels of the aquatic



ecosystem. Furthermore, the phenomenon of designing cosmetic products that are inherently safer for the environment, termed safer-by-design, was explored.

The study confirmed the commercialisation of nano-enabled consumer products, that PR-EN Ms induced various sublethal and lethal effects in aquatic organisms. The safer-by-design investigation confirmed the possibility of reducing nTiO₂ nanopollution extent from examined cosmetic products. Overall, these results contribute significantly to the national and global efforts to characterise the risk of nanopollution and implement mitigation strategies at industrial and research platforms.

Supervisor: Dr M Thwala

Co-Supervisors: Prof. PJ Oberholster and Dr. M Erasmus

DOCTOR OF PHILOSOPHY MAJORING IN GENETICS

LE CLERCQ, Louis Stephanus

Louis-Stephane Le Clercq was born on 8 July 1987 in Pretoria. He completed his secondary education in 2005 at Hoerskool Overkruin, Pretoria. He obtained a BSc degree in 2010, an Honours degree in 2011, and an MSc degree in 2014 from the University of Pretoria. Thereafter he continued with a DST-NRF internship from 2017 to 2018 and registered as Candidate Biological Scientist with the South African Council for Natural Scientific Professions in 2021. He continued his postgraduate studies at the University of the Free State with a PhD in Genetics. From his thesis, a total of eight articles were published.

With the thesis titled: **BIOLOGICAL CLOCK MEASURES: ASSESSING THE ASSOCIATION BETWEEN THE CIRCADIAN AND EPIGENETIC CLOCK AS PREDICTORS OF MIGRATION PHENOLOGY AND BIOLOGICAL AGING IN WILDLIFE**, the candidate explored the use of biological clocks, studied at the molecular level, in understanding and predicting animal traits that change over time. In particular, their focus was centred on two biological clocks: the circadian clock and the epigenetic clock. Two systematic reviews were conducted to define the state-of-art for the field and identify the central dogmas later used to study migration genetics in Diederik cuckoo and develop an age-estimation tool in African cheetah. The candidates' work emphasized the utility of biological clocks in understanding temporal traits, from annual life events in birds to lifelong aging in mammals. The generated datasets and tools contribute to ecological systematic reviews and individual genetic studies, expanding our knowledge of biological clocks and guiding future research endeavours.

Supervisor: Prof DL Dalton

Co-Supervisor: Prof JP Grobler and Prof A Kotze

DOCTOR OF PHILOSOPHY MAJORING IN GEOGRAPHY

MUNYAI, Nthabeliseni

Nthabeliseni Munyai was born at Ha-Makhuvha Village on the 25-10-1989. She received her secondary education at Muhuyuwathomba high school and matriculated in 2007. She graduated with a BSc degree in botany and zoology, then an honours degree in biodiversity conservation at the University of Venda. She/he obtained the BSc degree in 2011 and Hons in 2014 (year). She graduated with an MSc in biological sciences from the University of Cape Town in 2018. She started her career in 2013 and She is currently an Ecologist at SAN Parks.

With her/his thesis titled: **EVALUATING ENVIRONMENTAL FACTORS & FIRE DISTURBANCE INFLUENCING SPECIES DIVERSITY IN A MOUNTAINOUS PROTECTED AREA**, the candidate contributes to understanding the plant productivity



influence on species richness, how environmental factors influences vegetation distribution across the park and what fire presence and absence does on plant functional traits. Sentinel and Modis satellite images was used to determine fire occurrences and frequency throughout the park from year 2000 to 2020. The study findings indicate that the chemical properties of soil significantly impacted species richness and diversity and that clay and sand content positively affected species diversity. In contrast, the physical properties of soil did not affect plant species richness and diversity. The study findings are important for conservation of mountainous grassland and for the understanding of fire ecology and development of fire management plan. Candidates have published 3 articles with the 4th one under review.

Supervisor: Prof S Adelabu

Co-Supervisor: Prof A Ramoelo

DOCTOR OF PHILOSOPHY MAJORING IN GEOHYDROLOGY

ADADZI, Patrick Cudjoe

Patrick Cudjoe Adadzi was born on 12 July 1976 in Aflao, Ghana. He received his secondary education at Saint Paul's Secondary School, Denu and matriculated in 1994. He obtained a BSc Hons degree in Agriculture at Kwame Nkrumah University of Science & Technology, Ghana in 2002, and an MSc in Hydrology in 2013 at the University of KwaZulu-Natal, South Africa. His career started in 2002, working over the years as a teacher and later as consultant in various Government and International organizations whilst lecturing part-time at various universities in Ghana. He is currently a Hydrogeochemist at SRK Consulting in Johannesburg.

With his thesis titled: **GROUNDWATER QUALITY ASSESSMENT WITH COUPLED SOIL AND GROUNDWATER MODELLING OF FLOW AND TRANSPORT AT WASTE ROCK DUMP AND TAILINGS STORAGE SITE**, the candidate contributes towards the assessment of temporal changes in groundwater quality from Acid Rock Drainage and Mineral Leaching (ARDML) using an integrated hydrogeochemical method validated by multivariate geostatistics; and developed a new numerical scheme for coupled unsaturated-saturated flow using the classical and Caputo fractional derivative formulation of a coupled unsaturated-saturated flow equation with Newton polynomial interpolation. The limitation of many coupled numerical models is that they generate instabilities in water fluxes at the saturated-unsaturated interface, complex processes at different scales, lateral flow challenges and high computational costs. This contribution adds to the collective progress in the research of ARDML assessment, characterisation and subsurface flow and transport modelling for effective environmental impact assessment and water resources management strategies.

Supervisor: Dr AJ Allwright

Co-Supervisor: Prof FD Fourie

LUKAS, Anton

Anton Lukas was born in Bloemfontein on the 17th of December 1990. He received his secondary education in Bloemfontein, where he matriculated at the high school Jim Fouche in 2009. He obtained the degree B.Sc. Geology in 2014, BSc Geology Hons in 2015, and the degree MSc geohydrology with distinction in 2021 at the University of the Free State. At present he is an independent numerical groundwater modeller.

With his thesis titled: **MACHINE LEARNING APPLIED TO AQUIFER TEST ANALYSIS: DRAWDOWN LOG-DERIVATIVE CLASSIFICATION WITH CONVOLUTIONAL NEURAL NETWORKS**, the candidate contributes to geohydrology. With this contribution, he provides a methodology for the application of machine learning to aquifer test analysis. By means of this



groundbreaking methodology, the automatic classification of aquifer test data creates possibilities to assist and enhance the workflow of groundwater scientists.

Supervisor: Dr SS de Lange

Co-Supervisor: Dr AJ Allwright

MBAH, Hans Tah

Hans Tah, MBAH was born on the 26th of February 1988 in Nso, in the North West Province of Cameroon. He received his secondary education at the Government Bilingual High School (GBHS) Kumbo, and his high school studies in 2008 at St. Augustine's College Nso, from where he matriculated with a general Certificate of Education (GCE) Advanced level certificate, specialising in core the sciences. He obtained a B.Sc. and Hons degree in Geology at the University of the Free State in 2014 and 2015 respectively, Master's degree in Geohydrology with distinction in 2019 from the institute of groundwater Studies (IGS-UFS), and a PhD in 2023 from the University of the Free State. His career in academia began in 2022 as researcher and lecture assistant of Aquifer Mechanics, at the Institute for groundwater Studies. As an undergraduate, Hans also worked as research assistant for the Rectors office, under international academic affairs.

With his thesis titled: **MATHEMATICAL MODELLING OF PRESSURE BUILD-UP DUE TO GEOLOGICAL CARBON DIOXIDE STORAGE IN DEEP SALINE AQUIFERS, USING NON-LOCAL OPERATORS: THE CONTEXT OF GROUNDWATER PROTECTION IN THE CLIMATE CHANGE MITIGATION ERA**, the candidate contributes to our understanding of CO₂ pressurisation risks in sedimentary basins during injection, with primary goal of protecting shallow groundwater resources amidst efforts to mitigate climate change. Pressure accumulation can trigger micro seismicity and fault reactivation, which can negatively affect quality of Underground Sources of Drinking water (USDW) by leakage. Employing advanced tools - non-local operators to account for memory dependent behaviours, the models developed allow for a more comprehensive understanding of the transient pressure dynamics associated with CO₂ injection. By focusing on time fractional modelling, the study aims to provide useful tools for accurate risk assessment, sustainable reservoir management and operational safety during geosequestration in basins with shallow freshwater capture zones.

Supervisor: Prof A Atangana

DOCTOR OF PHILOSOPHY MAJORING IN GEOLOGY

ALIMI, Sodiq Abiodun

Sadiq Abiodun Alimi was born in Osogbo, Osun State, Nigeria on 30/12/1991. He received his secondary school education at the School of Science, Ikirun, Osun State, in 2007. He obtained his Bachelor of Science degree in geology from Osun State University, Nigeria, in 2014, Master of Science degree in Geology from the University of Ilorin, Nigeria, in 2019. His areas of expertise are in exploration geophysics, economic geology, GIS and remote sensing, and predictive modelling using machine learning.

With his thesis titled: **DATA-DRIVEN PREDICTIVE MAPPING FOR OROGENIC GOLD PROSPECTIVITY IN WAWA AREA, WESTERN NIGERIA, USING MACHINE LEARNING AS A PREDICTIVE TOOL**, the candidate demonstrated the application of machine learning algorithms for integrating gee-exploration datasets for mineral prospectivity mapping, which would contribute to the Nigerian government's efforts towards diversification of its economy, which is presently over-reliant on the proceeds from oil and gas to the solid mineral sector. The results of his research showed a strong link between the known gold occurrences and the regional Anka Fault System, a higher concentration of gold pathfinder elements in the area than the reported average for the upper continental crust, dominant iron-clay alterations around the gold-enriched regions, and machine learning-based mineral prospectivity predictions delineated 25% of the study area as high-potential for orogenic gold deposits. These outcomes of his research can be used to guide mineral exploration decisions in western Nigeria.

Supervisor: Prof EJM Carranza



DOCTOR OF PHILOSOPHY MAJORING IN MICROBIOLOGY

MJOKANE, Nozethu

Nozethu Mjokane was born on 04 September 1993 in Mount Ayliff, South Africa. She completed her secondary education in 2013 at Mount Ayliff Senior Secondary School. She graduated with a BSc (2018) and BSc Hons (2019) degrees at Fort Hare University, South Africa, before pursuing an MSc degree at the University of the Free State, South Africa. She obtained her MSc, cum laude, in Microbiology (2021) from the University of the Free State. In 2022, she was appointed as a teaching assistant in the Department of Microbiology and Biochemistry at the University of the Free State.

With her thesis titled: **ACTIVATION OF THE SARS-COV-2 SPIKE PROTEIN BY *Cryptococcus neoformans* PROTEASES**, the candidate examined the impact of the respiratory fungal pathogen, *Cryptococcus neoformans*, on COVID-19 development. COVID-19-associated mycosis was brought to the forefront during the second wave of the COVID-19 pandemic in India. Since then, the respiratory fungal pathogen *Cryptococcus neoformans* has emerged as an important independent risk factor that complicates COVID-19. However, it is still unclear what the extent of the immune dysregulation that may co-occur during COVID-19-associated mycosis is. Therefore, with her thesis, Activation of the SARS-CoV-2 spike protein by *Cryptococcus neoformans* proteases, the candidate showed that in the presence of *Cryptococcus neoformans*, SARS-CoV-2, the causative agent of COVID-19 could access fungal proteases and distort them to activate its latent spike glycoprotein - leading to viral invasion. Equally important, she showed that the medicinal plant *Artemisia afra* and its active compound, artemisinin, could limit the unwanted activation of the latent spike glycoprotein. The latter may be one of the viable interventional measures for controlling COVID-19 development.

Co-Supervisors: Prof J Albertyn, Prof CH Pohl and Dr OMN Gcilitshana

DOCTOR OF PHILOSOPHY MAJORING IN PHYSICS

ERASMUS, Lucas Johannes Bartel

Lucas Erasmus was born in Bloemfontein on June 10, 1992. He also received his secondary education in Bloemfontein, where he matriculated at Sentraal High School in 2010. He obtained his Undergraduate degree in Physics and Chemistry in 2014, an Honours degree with specialisation in Physics in 2015 and his Master's degree in Solid-State Physics, with distinction in 2018, all at the University of the Free State (UFS). In 2019, he embarked on a joint Doctorate degree between the UFS and Ghent University, during which time he actively did research at both institutions. Currently, he is appointed as a physicist at the UFS.

With his thesis titled: **LUMINESCENT SOLAR CONCENTRATORS - WHERE SM²⁺ DOPED PHOSPHORS SHINE**, the candidate contributes to the field of physics. This study describes a complete and thorough investigation into the potential of using divalent samarium (Sm²⁺)-doped phosphors to realise an efficient photovoltaic device based on the principle of a luminescent solar concentrator (LSC). The study follows a clear and systematic approach with three logical steps. The first step reports the relation between the Sm²⁺ luminescent efficiency and several factors like the synthesis method, chemical composition, and annealing treatment. The second step extensively describes the making of high-purity polystyrene waveguides by dip coating. Finally, the third step describes the actual doping of these particles into the polymer waveguide, including a detailed characterisation and ray-tracing simulation of the various optical processes in an LSC. Due to its extended, systematic approach and the extensive number of applied experimental methods, this research compares well with the state-of-the-art.

Supervisors: Prof HC Swart and Prof DRC Poelman

Co-Supervisors: Prof JJ Terblans and Prof PF Smet



KGOMO, Mosima Bernice

Mosima Bernice Kgomo was born on 28 December 1989 in Polokwane, Limpopo province. She matriculated at Northern Academy high school in 2007. She obtained a BSc degree (Physics) with cum-laude, received the best student trophy award in 2011, BSc (Hons) Geology in 2012, and BSc (Hons) Physics in 2015 with cum-laude from the University of Limpopo. Mosima further obtained MSc (Physics) and data-analysis certificate from the University of the Witwatersrand and University of Cape Town in 2018 and 2022, respectively. She then pursued PhD studies through University of the Free State and Council for Scientific and Industrial Research (CSIR) partnership.

With her thesis titled: **HIGHLY SELECTIVE AND RESPONSIVE In_2O_3 PRODUCTS DISPLAYING VARIOUS MORPHOLOGIES INDUCED BY DIFFERENT METAL-ION ADDITION FOR FOOD-AGRI SECTOR**, the candidate contributes to the field of semiconductor metal oxide-based gas sensors. Using the unique In_2O_3 as a sensing layer material, Mosima showed the capabilities of enhancing the gas sensing performance of the 1-D and 3-0 pure In_2O_3 gas sensor towards detecting low concentrations of acetone, ethanol accumulated and emitted by decomposing food products through addition of rare-earth metal and different transition metal-ions as dopants. While most 1-0 and 3-0 pure In_2O_3 gas sensors are limited to operating at high working temperatures and poor selectivity towards acetone and ethanol, this work displayed addition of different dopant ions can induce a plethora of oxygen defects such that improved selectivity, response towards acetone and ethanol is monitored at low concentration, low operating temperatures and even under harsh humidity conditions.

Supervisor: Prof GH Mhlongo

Co-Supervisor: Prof HC Swart

MAKOLE, Rethabile

Rethabile Makole was born on the 9th of April 1993 in Welkom, Free State. She received her secondary education at Leseding Technical Secondary School where she matriculated in 2010. She later got her tertiary education from the University of the Free State. In 2016, she obtained her Hons degree in Physics, and her Masters in Nanoscience degree in 2019.

With her thesis titled: **FABRICATION OF HIGHLY SENSITIVE P-N Co_3O_4 - In_2O_3 -HETEROSTRUCTURE-BASED SENSOR DOPED WITH PHOSPHORS AND NOBLE METALS FOR DETECTION OF BTEX COMPOUNDS**, the candidate's research study aims to introduce novel gas sensing properties of cobalt oxide and cobalt oxide-based sensors operated at temperatures ≤ 150 °C. Using the microwave-assisted hydrothermal method, she synthesized Co_3O_4 nanorods-structured gas sensors that were able to detect 5 ppm benzene at a low working temperature of 75 °C, with a gas response of 360. She later introduced various materials to make Co_3O_4 -based sensors such as Co_3O_4 - In_2O_3 , Sm/Yb doped- Co_3O_4 - In_2O_3 and Au-loaded Yb-doped- Co_3O_4 - In_2O_3 . The gas sensing results of these materials showed impeccable detection of xylene, ethylbenzene and acetone. Her exceptional research findings won her two awards for best poster presentations at the Emerging Researchers Symposium and the SACPM. She also published 1 article from her work.

Supervisor: Prof DE Motauna

Co-Supervisor: Prof HC Swart

NEMUFULWI, Murendeni Isaac

Murendeni Isaac Nemufulwi was born on January 14, 1992, in Mufulwi village, Venda, South Africa. He matriculated at Thengwe High School in 2009 and later attained a Bachelor of Science and an Honours specializing in Astrophysics in 2016 from the University of Johannesburg (UJ). He completed a Master of Science degree at the University of the Free State (UFS) in 2020 under a Council of Scientific and Industrial Research (CSIR) studentship programme and later appointed as a PhD visiting student at CSIR through a partnership between CSIR and UFS.



With his thesis titled: **EXPLOITATION OF THE PURE, CR-DOPED AND ZNO LOADED SPINEL-TYPE $ZnFe_2O_4$ BASED CHEMIRISTIVE SENSOR FOR THEIR DETECTION CAPABILITIES TOWARDS VOCs FOR POTENTIAL USE IN THE FOOD SECTOR**, the candidate contributes to the synthesis, characterization, followed by fabrication and testing of n $ZnFe_2O_4$ sensing layers towards development of highly selective metal oxide-based gas sensor devices. Nemufulwi optimized the extensively utilized drop-casting method to fabricate $ZnFe_2O_4$ sensing layers aiming at eliminating the repeatability issues that hinders their practical usage. The candidate developed surface-engineered $ZnFe_2O_4$ sensing layers through increment of gas diffusion across the porous nature of the sensing-layer thus improving the sensitivity and selectivity. He also incorporated Cr dopant ions to improve the sensitivity of porous $ZnFe_2O_4$ and combined classification models to address the selectivity issues. The candidate further contributed to the general understanding of heterostructures by proposing the use of heterojunctions to control and monitor oxygen vacancies.

Supervisor: Prof GH Mhlongo

Co-Supervisor: Prof HC Swart

DOCTOR OF PHILOSOPHY MAJORING IN PLANT BREEDING

ENGIDA, Chalachew Endalamaw

Chalachew Endalamaw Engida was born in Ethiopia in June 1987. He obtained a BSc degree in Plant Science from Jimma University in 2008 and an MSc in Plant Breeding from Hawassa University in 2016. He works as a sorghum breeder at the Ethiopian Institute of Agricultural Research, Melkassa. He has contributed significantly to sorghum breeding in Ethiopia, releasing four new commercial sorghum varieties. He is managing modernization of sorghum breeding through the development of product profiles for improvement of multiple stress-tolerance and nutritional quality of sorghum in Ethiopia.

With his thesis titled: **GENETIC DIVERSITY IN YIELD TRAITS AND KERNEL COMPOSITION OF SELECTED ETHIOPIAN SORGHUM LANDRACES** the candidate assessed the genetic diversity and drought tolerance of 365 Ethiopian sorghum landraces, using agronomic and grain quality traits. There was a significant environmental effect on the nutritional composition of sorghum grains. Ten genotypes with a high stress tolerance index, geometric and mean productivity and yield in both stressed and optimal conditions were identified. A genome-wide association study on the landraces identified candidate genes significantly associated with grain zinc, iron, starch, protein and ash content. Several tightly linked genes involved in stress tolerance, sugar transport, biosynthesis, gene regulation and transcription were implicated in the regulation of these traits. The identification of loci associated with grain quality provides new insight into the genetic control of traits, while sorghum landraces with nutritious grains can serve as sources of genes for breeding for good nutritional value.

Supervisor: Prof MT Labuschagne

Co-Supervisors: Prof L Herselman, Drs H Nida and A van Biljon

RICHARDSON, Grant Anthony

Grant Richardson was born in Bloemfontein in September 1984. He obtained a BSc in Genetics, BMedSci Honours and MMedSci degree (Molecular Biology) from the University of the Free State, in 2006, 2007 and 2012, respectively. During his MMedSci, he worked as a Research Assistant for the GMO Testing Facility from 2010 to 2014. Thereafter, he joined Corteva Agriscience as a Senior Research Associate, providing data science and informatics support to the Corteva Africa Plant Breeding team. He is currently the Research Operations and Systems Lead for Africa. One paper was published from his thesis with more in preparation.

With his thesis titled: **UNDERSTANDING GENOTYPE BY ENVIRONMENT BY MANAGEMENT INTERACTIONS IN THE WESTERN MAIZE GROWING REGION OF SOUTH AFRICA** the candidate refined and extended the Corteva maize crop



growth model with a specific focus on tiller expression at low plant densities, as a maize breeding tool in the drought-prone western maize-growing region. Central to this was the exploration of genotype-by-environment-by-management interactions affecting tiller expression. Through a multi-environment trial and population study, variables and trends that influence tiller expression were identified and integrated into an appropriate framework for simulating daily tiller expression rates, culminating in the construction of a quantitative model. This model explained 73% of the observed variance in the final simulated tiller number per plant, and an R^2 of 0.65 for actual site values. Tiller number per plant proved to be a complex trait influenced by variables such as genotype, plant density, leaf area index, temperature and solar radiation.

Supervisor: Prof MT Labuschagne

Co-Supervisor: Prof C Messina

DOCTOR OF PHILOSOPHY MAJORING IN SOIL SCIENCE

DLAMINI, Lindokuhle Xolani

Lindokuhle Xolani Dlamini was born on the 31 July 1994 at KwesakwaBiyela, Emfule Village in Empangeni, KwaZulu-Natal, South Africa. He started schooling at Inhlube Combined Primary and continued through to Grade 9 at Ihawulethu High. He then joined Aquadene Secondary in Richards Bay and matriculated in 2011. He graduated with a BSc degree Environmental Sciences in record time, BSc Hons in 2016, and MSc Ecological Sciences in 2018 with an Exceptional Thesis Award, all at University of KwaZulu-Natal. His 2-year SAEON internship helped him develop his PhD topic, collaborating with University of Burgundy to facilitate his cotutelle PhD.

With his thesis titled: **SOIL CARBON DYNAMICS IN AFROMONTANE GRASSLANDS, CATHEDRAL PEAK, DRAKENSBERG, SOUTH AFRICA**, the candidate contributes to the understanding of soil organic carbon (SOC) dynamics and biogeochemical cycling in important but understudied Afromontane grasslands, South Africa. Using long-term Cathedral Peak Research Catchments initiated in the 1940s, Lindokuhle combined state-of-the-art techniques of Stable Isotope probing, SOC stocks analysis, soil aggregate distribution, manual continuous monitoring of CO₂ emissions, and automated soil CO₂ Flux Systems to understand the impact of fire exclusion, aspect, and post-afforestation grassland degradation. Despite global concerns about fire use, results revealed that excluding fire reduced SOC storage, macro-aggregates, and increased CO₂ release. Cooler south-facing slopes stored more SOC than north-facing slopes. Post-afforestation degradation led to accelerated soil erosion and SOC losses. This study cautions against afforestation in these vulnerable, Afromontane grasslands which serve as valuable SOC reservoirs with potential stability amidst rising droughts and wildfires.

Supervisor: Prof E Kotzé and Prof J Lévêque

Co-Supervisor: Dr GT Feig, Dr M Thevenot and Dr O Mathieu

SMIT, Isadore Edward

Isadore Edward Smit was born on the 24th of October 1997 in Pretoria, South Africa. He matriculated in 2015 after attending Oakdale Agricultural High School in Riversdale. He then went on to obtain his BSc. Agric degree majoring in Soil Science and Agronomy in 2019 and MSc. Agric degree in Soil Science (cum laude) in 2021, both at the University of the Free State. He is actively involved in both the academic and private sector as consulting soil scientist and postdoctoral fellow at the North-West University.

With his thesis titled: **THE VALUE OF HYDROLOGICAL SOIL INFORMATION IN HYDROLOGICAL MODELLING: A CASE STUDY OF THE SABIE-SAND CATCHMENT, SOUTH AFRICA**, investigated the role of improved hydrological soil information to improve hydrological modelling accuracy. This research involved the use of modern digital soil mapping techniques, parameterizing process based hydrological models and applying novel calibration approaches using hydro pedology within



the Sabie-Sand catchment. This research emphasizes the valuable role of soil information within water resource planning, monitoring and management and provides credible solutions to handle predictions in ungauged basins, reduce modelling uncertainty and improve modelling accuracy.

Supervisor: Prof JJ van Toi

Co-Supervisor: Prof GM van Ziil and Dr ES Riddell

STRYDOM, Tercia

Tercia Strydom was born in Cape Town in 1988. She completed her matric at Grassy Park High School in 2006 before enrolling at the University of the Western Cape (UWC). She completed her BSc Honours in Environmental and Water Science at UWC in 2010. She then completed her MSc in Hydrology at the University of Kwazulu-Natal in 2013. She has been working as a scientist at South African National Parks in Kruger National Park since 2011.

With her thesis titled: **SHORT- AND LONG-TERM IMPACTS OF EXPERIMENTAL FIRES ON SELECTED SOIL PROPERTIES IN THE KRUGER NATIONAL PARK, SOUTH AFRICA**, investigated how veldfires affected soil physical, hydrological and chemical properties in Kruger National Park. She used experimental burns to look at how burning impacted soils in the short-term and the long-term after nearly 70 years of burning. Fires affected soils differently in the short versus long-term but in general, soils were found to be resilient to veldfires.

Supervisor: Prof JJ van Toi

Co-Supervisor: Dr IPJ Smit

DOCTOR OF PHILOSOPHY MAJORING IN SUSTAINABLE AGRICULTURE

BRUWER, Pieter Willem

Pieter Bruwer was born in 1963 and grew up on a farm in the Wakkerstroom area of Mpumalanga and matriculated in Volksrust. He obtained a Hons BSc Agric at the UFS in 1989 after which he joined the family farming business. His career as an Agronomist on the Eastern Highveld started only in 2016. He furthered his studies in 2020 and completed a Masters degree in Sustainable Agriculture (with distinction). Bruwer was named National Agriculturalist of the Year by Agricultural Writers South Africa for the year 2022. Between himself and his 3 children they completed 10 degrees at the UFS. Bruwer is currently a full-time agronomist and part-time lecturer at the department of Sustainable Food Systems and Development.

With his thesis titled: **ESTABLISHING EFFECTIVE COMMUNICATION BETWEEN THE AGRICULTURAL RESEARCHER AND THE FARMER WITH SPECIAL REFERENCE TO THE LARGE-SCALE SUGAR CANE, SOYBEANS AND MAIZE INDUSTRY - A COMPARATIVE CASE STUDY IN SOUTH AFRICA**, the candidate contributes towards better communication of scientific research results from researcher to the producer. After many years of practical experience in agriculture the candidate became aware of a possible breakdown of communication between the researcher and the producer. He decided to investigate and research different models of information dissemination and the effectiveness thereof. A comparative Case Study was performed with successful and less-successful models of dissemination as foundation. A mixed-methods approach was taken to analyse the perceptions of agricultural researchers and advisors. He concludes the qualified and accredited agricultural advisor or extensionist to be the most effective link between science and practice. This study will make an important contribution to the knowledge of, and insight into the discipline dealing with agricultural extension.

Supervisor: Prof J van Niekerk

Co-Supervisor: Prof JW Swanepoel and Dr Bradley Flett



GANTSHO, Siyaze Knowledge

Siyaze Knowledge Gantsho was born in Thaba Nchu, Free State Province on 06 November 1976. He received his secondary education in Botshabelo where he matriculated at Ntemoseng Secondary School in 1995. He graduated with BSc degree at The University of the Free State in 2006 and Master of Business Administration (MBA) at MANCOSA in 2013. He started his career as Quality Analyst in Klerksdorp, Northwest Province in 2007. In 2012 he was appointed at PAREXEL International as Project Specialist. At present, he is employed as a Business Advisor at Small Enterprise Development Agency (SEDA) in Pretoria, Gauteng Province.

With his thesis titled: **INTEGRATED INNOVATION STRATEGIES ON SUSTAINABILITY OF AGRICULTURE COOPERATIVES IN LEJWELEPUTSWA DISTRICT, FREESTATE PROVINCE, SOUTH AFRICA**, the candidate contributes to the body of knowledge on integrated innovation strategies by focusing on the application of innovations for sustainability of agriculture cooperatives. Gantsho used a mixed-methods approach, sampling 139 participants from 25 crop cooperatives in the Lejweleputswa district, to understand and clarify the impact of innovation strategies on the sustainability of agriculture cooperatives. With this work, he hopes to provide policy recommendations for the implementation of innovation strategies. The study's conclusions highlight the significance of this form of intervention in the pursuit of sustainable solution to the problems facing agricultural cooperatives.

Supervisor: Prof JA Van Niekerk

Co-Supervisor: Prof JW Swanepoel

MOKHESENGOANE, Thabiso Emmanuel

Thabiso Emmanuel Mokhesengoane was born in Qwa-Qwa on 26 April 1984. He matriculated at the Seotlong Agriculture and Hotel school in 2002, whereafter he obtained a diploma in agriculture, specialising in animal production, from Glen college of Agriculture in 2009. He completed a 8-tech in agricultural management in 2010 from CUT and obtained his masters' degree in sustainable agriculture in 2020 from the UFS. His career started as training facilitator and in 2011 he was appointed as Agricultural extension practitioner with the provincial Department of Agriculture and Rural development in the Free State, where he is still making a valuable contribution.

With his thesis titled: **AGRO-ECOLOGICAL RANGELAND CONDITION ASSESSMENT OF EXTENSIVE LAND REFORM PASTORAL FARMING SITES, IN BLOEMFONTEIN MAJESTERIAL AREA POST TWO WET SEASONS PRECEDED BY DROUGHTS**, the candidate contributes toward sustainable utilization of rangeland resources amongst Bloemfontein land-reform farmers. The study advocates for food security and livelihood development through sustainable and efficient extensive livestock farming enterprises. As primary meat producers, extensive livestock land-reform farmers are pivotal in the South African food value chain. On the other hand, literature unambiguously agrees that the substantial number of livestock within South African borders belongs to emerging farmers, mostly land-reform farmers, and predominately historically disadvantaged individuals. Considering twenty-nine years of land-reform existence in South Africa, it became imperative to measure the performance of land-reform farmers through comparison means amongst themselves, as opposed to comparing them with other farmers in different categories, i.e., commercial farmers.

Supervisor: Prof J.A Van Niekerk

Co-Supervisor: Dr H.C Van. der Westhuizen

MPHAHLELE, Ramakgodu

Ramakgodu Benjamin Mphahlele was born in Zebediel in the Limpopo Province on 17 March 1978, and matriculated at Matladi High School. He obtained a Baccalaureus Technologiae Degree in Animal production at the Tshwane University of Technology and a Masters in Sustainable Agriculture at the University of Free State. Mphahlele also holds a B.A. Honours Degree in



Development Studies from the University of South Africa. He started his career as an agriculturist in 2004 and occupied various roles within the agricultural sector in Limpopo Province. Currently, he is employed at the National Department of Agriculture, Land Reform and Rural Development.

With his thesis titled: **EVALUATING THE IMPACT OF GOVERNMENT SUPPORT PROGRAMMES ON THE DEVELOPMENT OF LAND REFORM FARMS IN SOUTH AFRICA**, the candidate contributes to the land discourse and development of government-funded commercial farms. The study employed a mixed methods design wherein data was collected from a total of 122 land reform beneficiaries and commodity organizations. With this contribution, the researcher observes land reform to be one of the critical drivers for social and economic justice in South Africa. The results highlight the programmes' effectiveness in providing access to resources. The study also identifies areas for improvement, advocating for streamlined funding processes, reinforced partnership arrangements, and enhanced entrepreneurial attributes among farmers. The researcher emphasizes a need to implement a balanced land reform programme that addresses social imperatives whilst promoting sustainable agricultural production. The study concludes by proposing an integrated support model that can be adopted within government support programmes.

Supervisor: Dr QN Qwabe

Co-Supervisor: Prof JW Swanepoel

DOCTOR OF PHILOSOPHY MAJORING IN WILDLIFE SCIENCE

SMIT, Zacharias Martinus

Marnus Smit was born on 24 December 1987 in Bela-Bela, Limpopo, South Africa. He matriculated at Grey College in Bloemfontein in 2006. He graduated with a BSc degree in Zoology in 2010, a BSc honours degree in Wildlife science in 2011 and a BSc Master's degree in wildlife science in 2014 at the University of the Free State. He started his career in 2014 as a candidate scientist at the Department of Agriculture, Environmental Affairs, Rural Development and Land Reform in the Northern Cape, where he is still currently employed as a production scientist.

With his thesis titled: **THE IMPACT OF SEVERE DROUGHT ON THE VEGETATION OF THE SOUTHERN KALAHARI**, investigated the impacts of severe drought on the semi-arid rangelands of the southern Kalahari region of South Africa. More specifically, his study focused on the effect of drought on vegetation dynamics and the ecological functioning of these rangelands and the implications thereof for animal production systems. This included studying the impact of drought on vegetation growth, plant species composition, nutrient status of plants, woody plant phenology and ability of vegetation to recover post-drought. The study emphasized the importance of rangeland health in determining the resilience of vegetation to drought conditions and consequently its ability to provide forage to herbivores. The study concluded that in the face of climate change and increased drought frequencies, the proper management of semi-arid rangelands will become increasingly important. His findings also provided valuable recommendations for the improved management of rangelands.

Supervisor: Dr PJ Malan

Co-Supervisor: Prof F Deacon

VAN DER WALT, Marna Suzanne

Marna Suzanne van der Walt was born in Kimberley on the 18th of September 1983. She received her secondary education in Pretoria, where she matriculated at Highschool Eldoraigue in 2001. She obtained her BSc Zoology and Microbiology in 2004 (University of Pretoria), her Honours degree in Zoology (University of Pretoria) with distinction in 2005. She then completed her National Diploma in Animal Health (University of South Africa) in 2012. Her MSc degree in Physiology (University of



the Witwatersrand) was completed in 2011 and her PhD in Wildlife Science 2023 at the University of the Free State. She is currently working in the Private sector, as a Wildlife Manager at a Veterinary Pharmaceutical company.

With her thesis titled: **THE LONG-NECKED ANIMALS, SEARCHING FOR A MILLION YEARS OF SIMILARITIES**, the candidate contributes to our understanding of giraffe physiology and anatomy regarding cranial blood circulation, blood pressure, and evolutionary aspects. The thesis stimulates critical thought and speculation on the blood supply to the brain in species with an extended head-to-heart distance, which will surely stimulate more research. Systems as utterly complex and magnificent as the mammalian body are still not understood in full and will remain a work of slow incremental progress and increase in knowledge. This study confirmed that several systems work in unison to allow successful cranial circulation, blood pressure control and altered anatomy in giraffe, additionally stimulating the need for future related research to further understand the complexity of the various anatomical and physiological systems. Three international papers were already published from this study.

Supervisor: Prof F Deacon and Prof J Goedhals

Co-Supervisor: Dr W Daffue

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 AGRICULTURE SCIENCES**

WOOD, Arran Daniel

MASTER OF ARCHITECTURE

VISION130

*Renew and Reimagine
towards 2034*

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

VISION

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

MISSION

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

VALUES

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



EXCELLENCE



**INNOVATION
AND IMPACT**



ACCOUNTABILITY



CARE



SOCIAL JUSTICE



SUSTAINABILITY

Our values are realised through the conduct of the wider university community:
excellence, innovation and impact, accountability, care, social justice, and sustainability.



2024

#UFSAlumni #UFSGrad

CONGRATULATIONS, CLASS OF 2023

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

KEEPING YOU INFORMED

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

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

KEEPING YOU CONNECTED

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VISION 130
Renewal and Reimagination
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