



# Graduation Programme

The Future. Reimagined.



**Welcome to the  
Graduation Ceremony of the  
University of Johannesburg  
19 October 2023 at 09:30**

**Welkom by die  
Gradeplegtigheid van die  
Universiteit van Johannesburg  
19 Oktober 2023 om 09:30**

**Le a Amogelwa  
Moletlong wa Dikapešo wa  
Yunibesithi ya Johannesburg  
19 Diphlane 2023 ka 09:30**

**Niyamukelwa  
eMcimbini wokweThweswa kweZiqu  
weNyuvesi yaseJohannesburg  
19 kuMfumfu 2023 ngele 09:30**

# **UNIVERSITY OF JOHANNESBURG**

## **CHANCELLOR**

Dr P Mlambo-Ngcuka

BA Ed (NUL, Lesotho), MPhil (UCT), DTech Ed (Warwick, UK)

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### **VICE-CHANCELLOR AND PRINCIPAL**

Prof LG Mpedi

B Juris, LLB (Vista), LLM (RAU), LLD (UJ)

Doctor Honoris Causa (CU, Georgia)

### **DEPUTY VICE-CHANCELLOR: ACADEMIC**

Prof S Khan

BSc, BSc Hons, MSc, PhD (UWC)

### **DEPUTY VICE-CHANCELLOR: RESEARCH AND INTERNATIONALISATION**

Prof SJ Gravett (Acting)

BA, HEd (PU for CHE), BEd, MEd, DEd (RAU)

**REGISTRAR**

Prof B van Vuuren  
BSc, BSc Hons, MSc, PhD (UP)

**CHIEF FINANCIAL OFFICER**

Ms N Mamorare  
BCom (Rhodes), BCom Hons (UKZN), CA (SA)

**CHIEF OPERATING OFFICER**

Dr M Ralephata  
BSc Eng (Wits), MBA (UOVS), MSc, DBA (Heriot-Watt, UK)

**SENIOR EXECUTIVE DIRECTOR**

Dr N Vukuza  
BA (Fort Hare), BA Hons (Rhodes), DTE (UNISA), MA (Wits),  
PhD (SUN)

**GENERAL COUNSEL**

Mr D Pretorius  
BCom, LLB, LLM (NWU)

## **EXECUTIVE DEANS**

### **COLLEGE OF BUSINESS AND ECONOMICS**

Prof L Ntsalaze

BCom, BCom Hons (NMMU), MPhil (UCT), PhD (SUN)

### **FACULTY OF ART, DESIGN AND ARCHITECTURE**

Prof F Freschi

BAFA (Wits), BA Hons (UCT), PhD (Wits)

### **FACULTY OF EDUCATION**

Prof N Petersen

BA Ed (UNISA), BEd Hons, MEd (RAU), DEd (UJ)

### **FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT**

Prof DJ Mashao

BSc Eng, MSc Eng (UCT), MSc AM, PhD (Brown, USA)

### **FACULTY OF HEALTH SCIENCES**

Prof A Temane (Acting)

BNSc (UNW), MCur (RAU), PhD (UJ)

## **FACULTY OF HUMANITIES**

Prof K Naidoo

BA, BA Hons, MA (UDW), DTE (UNISA), PhD (Manchester, UK)

## **FACULTY OF LAW**

Prof W Domingo

B SoSc (UCT), LLB (UWC), LLM (Columbia, USA),  
SJD (Wisconsin-Madison, USA)

## **FACULTY OF SCIENCE**

Prof A Moteetee

BSc (NUL, Lesotho), MPhil (University of London, UK), PhD (RAU)

## **DEAN**

## **JOHANNESBURG BUSINESS SCHOOL**

Dr R Carolissen

BSc, BSc Hons, MSc (UWC), BBA Hons,  
MBA (SUN), MCom (NWU), PhD (UWC)

# **MEMBERS OF COUNCIL**

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## **DEPUTY CHAIRPERSON**

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Dr H Coovadia

Ms K Gugushe

Prof S Khan

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Ms L Mateza

Prof TA Meyer

Dr A Mokoena

Ms N Molope

Prof A Moteetee

Prof LG Mpedi

Mr LM Mpunzi

Ms NP Mvubu

Ms JA Schreiner

Prof A Strydom

Mr T Thobejane

## **PRESIDENT OF CONVOCATION**

Mr LM Mpunzi

# GAUDEAMUS IGITUR

Gaudeamus igitur,  
Juvenes dum sumus;  
Post iucundum iuventutem,  
Post molestam senectutem  
Nos habebit humus.  
Vivat academia,  
Vivant professores,  
Vivat membrum quodlibet,  
Vivat membra quaelibet;  
Semper sint in flore!

## English

Let us rejoice, therefore,  
While we are young.  
After a pleasant youth  
After a troubling old age  
The earth will have us.  
Long live the academy!  
Long live the professors!  
Long live each student;  
Long live the whole fraternity;  
For ever may they flourish!

## Sesotho sa Leboa

Ka gona, a re thabeng,  
Re sa le ba bafsa.  
Ka morago ga bofsa bjo bo bose  
Ka morago ga go tšofala mo go nago le  
mathata  
Lefase le tla ba le rena.  
Phela thuto phela!  
Phelang diprofesa phelang!  
Phelang baithuti phelang;  
Phela kagišano ka botlalo phela;  
O ka re ba ka phela gabotse goyagoile!

## Afrikaans

Laat ons dan vrolik wees,  
Terwyl ons jonk is;  
Na 'n aangename jeug.  
Na 'n onaangename oudag,  
Sal die aarde ons hou.  
Lank lewe die universiteit,  
Lank lewe die professore,  
Lank lewe elke student,  
Lank lewe al die studente,  
Mag hulle vir ewig hul jeug behou!

## Zulu

Ngakho, masithokoze  
Sisebasha nje.  
Emva kobumnandi bobusha  
Emva kwezinkinga zobudala  
Umhlaba uzosithatha.  
Phambili ngemfundo!  
Phambili boSolwazi!  
Phambili nakuwe mfundi;  
Phambili ngenhlangano yonke;  
Maziqhubeke ngonaphakade!



# FACULTY OF HEALTH SCIENCES

## QUALIFICATIONS

### 1. Higher Certificate

**Mogano, Lesego** (Sport Administration)

### 2. Diploma

**Hlophe, Siyabonga** (Sport Management)

**Mkhize, Nontshisekelo Nontethelelo** (Sport Management)

**Ntuba, Aphindile** (Sport Management)

**Zungu, Nomsa Extricate** (Sport Management)

### 3. National Diploma

**Kriel, Tenika** (Sport Management)

**Makhubu, Lunga** (Sport Management)

**Malgas, Zanele Happiness** (Sport Management)

**Mbata, Mhengi Menzi** (Sport Management)

**Ncengwa, Simphiwe Sphesihle** (Sport Management)

**Sitole, Thando Ayanda** (Sport Management)

**Tengimfene, Likhaya** (Sport Management)

#### **4. Bachelor of Arts**

**Ntshingila**, Boikanyo Philani Maxwell (Sport Communication)

**Pheeha**, Rolivhuwa Octavia (Sport Psychology)

#### **5. Bachelor of Health Sciences**

**Lines**, Haylee Nicole (Emergency Medical Care)

**Mhlongo**, Lindokuhle Choice (Emergency Medical Care)

**Myanga**, Ndumiso Evelyn Hope (Emergency Medical Care)

#### **6. Master of Technology**

**Mazibuko**, Alfred (Radiography)

**Dissertation:** Radiographers perceptions of optimal preparedness for paediatric radiography practice in Johannesburg, Gauteng

**Supervisor:** Ms NR Badriparsad

**Co-supervisor:** Ms L Mokoena

## 7. Masters

**Hoshela, Cecilia Nnaniki** (Master of Public Health)

**Minor Dissertation:** Physical and mental health impacts of Covid-19 pandemic in nurses working for both private and public hospitals in Gauteng, West Rand district

**Supervisor:** Dr B Shezi

**Kayode, Olubunmi Abimbola** (Master of Public Health)

**Minor Dissertation:** Environmental factors associated with Atopic Dermatitis among children aged 6 to 14 years in Alimosho local government, Lagos, Nigeria

**Supervisor:** Dr TP Mbonane

**Kotelo, Gladness Balekane** (Master of Public Health)

**Minor Dissertation:** Utilization of personal protective equipment and associated factors among health care workers in South Africa: An online survey

**Supervisor:** Prof R Phaswana-Mafuya

**Co-supervisor:** Dr E Phalane

**Mangokwana, Nomahlubi Julia** (Master of Public Health)

**Minor Dissertation:** Assessment of mental health among community healthcare workers during the COVID-19 pandemic in Limpopo, South Africa

**Supervisor:** Prof N Naicker

**Co-supervisor:** Dr N Ndaba

**Maziya, Phumulani** (Master of Public Health)

**Minor Dissertation:** Awareness, attitudes and perceptions of adult population regarding COVID-19 vaccine in the rural areas of Ladysmith, South Africa

**Supervisor:** Dr EE Agbenyeku

**Mhlongo, Joy Hlengiwe** (Master of Public Health)

**Minor Dissertation:** Factors associated with COVID-19 vaccine uptake among Forestry employees in a selected municipality, Mpumalanga province, South Africa

**Supervisor:** Prof R Phaswana-Mafuya

**Co-supervisor:** Dr E Phalane

**Mohlala, Antoinette Amanda** (Master of Public Health)

**Minor Dissertation:** Factors associated with the accuracy of HIV test performance among Primary Health Care workers who received HIV rapid tester training in Health Care facilities in Eastern Cape, South Africa

**Supervisor:** Prof R Phaswana-Mafuya

**Co-supervisor:** Dr E Phalane

**Moonsammy, Nicole Tenille** (Master of Public Health) **(with distinction)**

**Minor Dissertation:** Mental health during the Covid-19 pandemic among nurse clinicians in Primary Health Care facilities in the Ekurhuleni health district

**Supervisor:** Dr B Shezi

**Co-supervisor:** Ms M Chadyiwa

**Mpe, Matela Adolph** (Master of Public Health)  
**Minor Dissertation:** Factors associated with HIV testing among men who have sex with men in South Africa  
**Supervisor:** Prof R Phaswana-Mafuya  
**Co-supervisor:** Dr E Phalane

**Mufamadi, Ntsieni Maureen** (Master of Public Health)  
**Minor Dissertation:** Assessment of the awareness, knowledge, and perceptions of healthcare workers regarding the underreporting of Organophosphate poisoning in the Institutions in Johannesburg district, Gauteng province  
**Supervisor:** Ms RH Van Wyk

**Naicker, Ranjini** (Master of Public Health)  
**Minor Dissertation:** Occupational exposure and associated injuries among informal waste pickers in the City of Ekurhuleni, Gauteng Province  
**Supervisor:** Dr RA Street  
**Co-supervisor:** Dr TP Mbonane

**Ndwandwe, Nompumelelo Siyaphi** (Master of Public Health)  
**Minor Dissertation:** Assessing the knowledge and compliance with COVID-19 precautions among healthcare workers in Eswatini  
**Supervisor:** Ms RH Van Wyk

**Njikhó,** Sunnieboy Lot (Master of Public Health)  
**Minor Dissertation:** Evaluation of schistosomiasis prevalence and distribution amongst school-aged children in Ehlanzeni District of Mpumalanga  
**Supervisor:** Ms RH Van Wyk  
**Co-supervisor:** Dr VC Quan

**Nkomo,** Madlela (Master of Public Health)  
**Minor Dissertation:** Knowledge, attitudes and practices on indoor residual spraying as a Malaria control intervention amongst residents of Shakawe and Xakao  
**Supervisor:** Mr BT Magunga  
**Co-supervisor:** Dr TP Mbonane

**Oluwarinde,** Bukola Opeyemi (Master of Public Health) (**with distinction**)  
**Minor Dissertation:** The relationship between eye defects and online learning at a South African university: A cross-sectional study  
**Supervisor:** Dr V Nkosi  
**Co-supervisor:** Dr N Tlotleng

**Phakathi,** Buyani Artwell Mxolisi (Master of Public Health)  
**Minor Dissertation:** Investigation of noise exposure levels in an aircraft maintenance organisation in Gauteng  
**Supervisor:** Ms J Manganyi  
**Co-supervisor:** Dr W Utembe

**Sibisi, Musa** (Master of Public Health)

**Minor Dissertation:** Occupational incident reporting in King Cetshwayo Primary Care facilities, KwaZulu-Natal, South Africa

**Supervisor:** Dr B Shezi

**Sitole, Lungile JR** (Master of Public Health)

**Minor Dissertation:** Knowledge, attitude, and practices of COVID-19 prevention among staff at the University of Johannesburg

**Supervisor:** Prof N Naicker

**Sosibo, Cedrick Phelelani** (Master of Public Health)

**Minor Dissertation:** Assessment of the association between HIV infection and COVID-19 severity among COVID-19 cases in a high burdened district of KwaZulu-Natal Province, South Africa: A retrospective cohort study

**Supervisor:** Prof R Phaswana-Mafuya

**Co-supervisor:** Dr E Phalane

**Titus, Phyllis May** (Master of Public Health)

**Minor Dissertation:** Factors related to hearing loss among foundry workers in Gqeberha in the Eastern Cape province of South Africa

**Supervisor:** Dr PH Myburgh

**Tsotetsi, Keagaisa Angela (Master of Public Health)**  
**Minor Dissertation:** Institutional barriers to effective municipal solid waste management in Ngaka Modiri Molema district, South Africa  
**Supervisor:** Dr WR Utembe

## **8. Master of Health Sciences**

**Dawkins, Erin (Chiropractic)**  
**Minor Dissertation:** Secondary analysis of South African chiropractors' perceptions of the clinical relevance of anatomical sciences and adequacy of teaching in chiropractic curricula  
**Supervisor:** Prof CJ Yelverton

**Jaykaran, Varina (Complementary Medicine)**  
**Minor Dissertation:** Homeopathic medicine use, administration and storage by patients attending a university health training facility  
**Supervisor:** Dr RK Razlog

**Jordaan, Kamilah Jayne (Chiropractic) (with distinction)**  
**Minor Dissertation:** A quantitative analysis of the experiences of female South African chiropractors with inappropriate patient sexual behaviour  
**Supervisor:** Prof CJ Yelverton



**Juwele, Thandazile** (Human Physiology)

**Dissertation:** Effect of combination antiretroviral therapy on the development of toxic neuropathy in rats

**Supervisor:** Mr IG Patel

**Co-supervisor:** Dr P Nkomozepe

**Kantuchitani, Selby** (Biomedical Sciences)

**Dissertation:** The potential protective effect of catharanthus roseus leaf extract against type 1 diabetes induced neuropathology in the adult Sprague Dawley rat forebrain

**Supervisor:** Dr P Nkomozepe

**Mortlock, Debralea** (Chiropractic)

**Minor Dissertation:** Chiropractic students' perspective on lecturer qualities at a South African university

**Supervisor:** Dr F Ismail

**Co-supervisor:** Dr S Naidoo

**Mothosola, Rethabile Whitney** (Environmental Health)

**Dissertation:** Exposure knowledge and risk perception of radiofrequency electromagnetic fields among environmental health practitioners in Mpumalanga province

**Supervisor:** Dr PC Rathebe

**Sithebe, Nompumelelo Benedicta** (Complementary Medicine)

**Minor Dissertation:** A review of regulatory compliance of complementary medicines consisting of *Echinacea purpurea* (L.) Moench on the South African market

**Supervisor:** Dr NT Gower

**Van Biljon, Natasha** (Medical Imaging & Radiation Sciences) **(with distinction)**

**Dissertation:** Testing the cut-off value for a normal posterior tibial nerve to diagnose tarsal tunnel syndrome amongst people of different races in Pretoria, South Africa

**Supervisor:** Ms TB Mahlaola

**Supervisor:** Ms LJ Hazell

**Wentzel, Elani** (Complementary Medicine)

**Minor Dissertation:** A Delphi study on the management of attention deficit hyperactivity disorder in children by homeopathic practitioners in South Africa

**Supervisor:** Dr J Pellow

**Wessels, Myra** (Chiropractic)

**Minor Dissertation:** Chiropractic student perceptions of cultural competency at a South African university

**Supervisor:** Dr F Ismail

## 9. Master of Nursing Science

**Heyns, Betina** (Professional Nursing Science: Ethos & Professional Practice)

**Dissertation:** Validation of the adapted theory of health promotion in the neonatal intensive care units

**Supervisor:** Prof C Downing

**Co-supervisor:** Dr AS Du Plessis- Faurie

**Mazibu, Andiswa** (Professional Nursing Science: Nursing Management)

**Dissertation:** Expatriate professional nurses' experiences of preceptorship in a tertiary hospital in Saudi Arabia

**Supervisor:** Prof C Downing

**Co-supervisor:** Dr RM Rasesemola

**Shongwe, Bonginkosi Iron** (Professional Nursing Science: Nursing Management)

**Dissertation:** The quality of clinical supervision and patient safety: Operational nursing managers' experiences in a Johannesburg hospital

**Supervisor:** Prof C Downing

**Co-supervisor:** Mr SE Nene

## **10. Doctor of Technology**

**Hazell, Lynne Janette (Radiography)**

**Thesis:** A model to facilitate clinical readiness through simulation based learning in a diagnostic radiography programme

**Supervisor:** Dr HA Lawrence

**Co-supervisor:** Prof H Friedrich-Nel

**Co-supervisor:** Prof C Vincent- Lambert

## **11. PhD**

**Sakala, Michael (Sport Science)**

**Thesis:** Indigenous games as part of school- based physical activity delivery programmes: Prospects for optimum implementation for primary school learners' holistic health outcomes

**Supervisor:** Prof CJ Roux

# FACULTY OF SCIENCE

## QUALIFICATIONS

### 12. Diploma

**Dhladhla**, Nomvula Engel (Analytical Chemistry)  
**Dhlamini**, Khomotso Betty (Biotechnology)  
**Gqoli**, Lindela (Analytical Chemistry)  
**Gumede**, Snokwanda Andiswa (Biotechnology)  
**Khumalo**, Julia (Biotechnology)  
**Mabatamela**, Michelle (Biotechnology)  
**Makhubele**, Monica Natasha (Analytical Chemistry)  
**Maliza**, Seipati Lerato (Analytical Chemistry)  
**Maseko**, Gqinaphi Evidence (Biotechnology)  
**Monaheng**, Mamello Naledi (Analytical Chemistry)  
**Mwanangongo**, Sephora (Biotechnology)  
**Nemadzivhanani**, Mukhethwa (Analytical Chemistry)  
**Ngobese**, Khumbulani Nduduzo (Analytical Chemistry)  
**Rammutla**, Lebogang Disree (Biotechnology)  
**Ranoko**, Mmathoto Ruth (Biotechnology)  
**Shabane**, Sandile (Analytical Chemistry)  
**Tshotwana**, Wongeka (Biotechnology)

### 13. Advanced Diploma

**Mukundji**, Kabasele Rachel (Analytical Chemistry)  
**Shongwe**, Lydia (Analytical Chemistry)

## 14. Bachelor of Science (BSc)

**Appolis**, Boudine Sabrina (Botany and Zoology)

**Chuene**, Karabo Lesiba (Computer Science and Informatics)

**Dinala**, Mpho (Computer Science and Informatics)

**Hoffmann**, Dominique Michelle (Biochemistry and Physiology)

**Khoza**, Linda Innocent (Physics and Mathematics)

**Khoza**, Nkosinaye Siyanda (Physics and Mathematics)

**Lefala**, Kgaugelo Loretta (Applied Mathematics and Mathematics)

**Maboho**, Hector (Computer Science and Informatics)

**Mahabir**, Jarryd (Computer Science and Informatics)

**Mahlakwane**, Mohau Comfort (Computer Science and Informatics)

**Mahudu**, Taunyane Monare (Applied Mathematics and Mathematics)

**Makola**, Ragosebo Charlotte (Biochemistry and Botany)

**Malebye**, Otshepeng Lethabo (Computer Science and Informatics)

**Mamadisa**, Boitumelo (Mathematics and Mathematical Statistics)

**Maphosa**, Bonginkosi (Computer Science and Informatics)

**Maseko**, Lindiwe Bonolo (Applied Mathematics and Mathematics Statistics)

**Mashishi**, Welliam Pudula (Applied Mathematics and Mathematics Statistics)

**Maubane, Gontse Agisanang** (Applied Mathematics and Mathematics Statistics)

**Maziba, Joshua Piciswa Maziba** (Applied Mathematics and Computer Science)

**Mazibuko, Ndabenhle Cyprian** (Geology and Geography)

**Moloatse, Tshephiso** (Information Technology)

**Moodley, Dayllin** (Computer Science and Informatics)

**Motlhakane, Tshegofatso Patricia** (Computer Science and Informatics)

**Nkosi, Gcina** (Computer Science and Informatics)

**Nogantsho, Yolokazi** (Computer Science and Informatics)

**Omar, Ayesha** (Computer Science and Informatics)

**Rasebotsa, Moore Michelle** (Mathematics and Computer Science)

**Sebiloane, Katleho Brayn** (Computer Science and Informatics)

**Sithuba, Elihle** (Chemistry and Mathematics)

**Tami, Lindokuhle** (Mathematical Statistics and Computer Science)

**Thaga, Mogomotsi Oleboge Robie** (Computer Science and Informatics)

**Tshikhovhokhovho, Ndivhudzannyi Israel** (Mathematics Statistics and Computer Science)

**Zungu, Nduduzo Thamsanqa** (Computer Science and Informatics)

## 15. Bachelor of Science Hons (BSc Hons)

**Hlungwani**, Adroit Masingita (Applied Mathematics)

**Kadiaka**, Tsholofelo (Physics)

**Magubane**, Alwande Sphephelo (Geology)

**Nekhubvi**, Mulanga Marshall (Computer Science)

**Rakgokong**, Karabo Ben (Geology)

## 16. Master of Science (MSc)

**Dlepu**, Sanelisiwe (Environmental Management)

**Minor Dissertation:** The prevalence of environmental crimes: working towards effective environmental crime prevention in South Africa

**Supervisor:** Prof K Yessoufou

**Gamede**, Noluthando Vuyelwa  
(Chemistry)

**Dissertation:** Synthesis and Characterization of Rh(I) salicylaaldimine  $N^{\wedge}O$ , pyrazolpyridylimine  $N^{\wedge}N$  and pincer pyrazolpyridyl  $N^{\wedge}N^{\wedge}N$  complexes as pre-catalysts for hydroformylation of olefins

**Supervisor:** Prof BCE Makhubela

**Co-Supervisor:** Dr LC Matsinha-Kandengwa

**Hoenselaar**, Micheala Tatum (Mathematics) (**with distinction**)

**Dissertation:** Facets of  $\text{Spec}(R)$

**Supervisor:** Dr A Goswami



**Hoosen, Fatima (Biochemistry)**

**Dissertation:** The Anti-Cancer Potential Of Active Compounds Extracted From *Leptospermum petersonii* On Cancer Cells

**Supervisor:** Dr MS Choene

**Co-Supervisor:** Mrs PP Raphela-Choma

**Kekana, Lebohang (Chemistry) (with distinction)**

**Dissertation:** Application of heterogeneous multicationic perovskite catalysts in organic transformations

**Supervisor:** Dr NS Bingwa

**Kgoale, Sebotse Dolly Potlako (Biotechnology) (with distinction)**

**Dissertation:** Bacterial microbiota and metabolomic profiling of *amahewu* production

**Supervisor:** Prof OA Adebo

**Co-Supervisor:** Dr AM Abrahams

**Lele, Ntando (Chemistry) (with distinction)**

**Dissertation:** Synthesis and characterization of a photocatalytic  $\beta$ -cyclodextrin MXene nanocomposite towards the photodegradation of emerging pollutants in a wastewater treatment plant.

**Supervisor:** Prof LN Dlamini

**Co-Supervisor:** Dr Mmutlane

**Co-Supervisor:** Dr MF Bambo (MINTEK)

**Leping, Omphemetse (Nanoscience)**

**Minor Dissertation:** Capacitive removal of salts from contaminated water using Fe<sub>3</sub>O<sub>4</sub>@PEDOT:PSS modified chitosan nanosheets

**Supervisor:** Prof J Ramontja

**Magasi, Emmanuel Diutlwetse (Nanoscience) (with distinction)**

**Minor Dissertation:** Magnetic and Photoluminescent Properties of ZnAl<sub>2</sub>O<sub>4</sub> doped with Fe<sup>3+</sup>

**Supervisor:** Prof BM Sondezi

**Co-Supervisor:** Prof OM Ntwaeaborwa (University of Witwatersrand)

**Mahlangu, Promise Ntombifuthi (Geography)**

**Dissertation:** Urban renewal and South African Townships: The case of Kliptown, Soweto

**Supervisor:** Prof G Hoogendoorn

**Co-Supervisor:** Prof G Visser (Stellenbosch University)

**Malati, Majahekupheleni Livileyise (Chemistry) (with distinction)**

**Dissertation:** Biocatalytic degradation of selected antiviral drugs in wastewater using immobilized laccase on mxenes

**Supervisor:** Prof LN Dlamini

**Co-Supervisor:** Dr AM Abrahams

**Co-Supervisor:** Dr VP Chauke (CSIR)

**Malebe, Motumiseng (Biochemistry) (with distinction)**

**Dissertation:** Metabolomics studies of microbial biostimulants and their effects on crop plants under field trial conditions

**Supervisor:** Dr F Tugizimana

**Co-Supervisor:** Dr M Mhlongo

**Malele, James Hloniphani (Applied Mathematics) (with distinction)**

**Dissertation:** Compact finite difference method for solving ordinary differential equations with Robin boundary conditions

**Supervisor:** Dr PG Dlamini

**Co-Supervisor:** Dr SM Simelane

**Maluleke, Brilliant Nfanelo (Nanoscience)**

**Minor Dissertation:** The application of TiO<sub>2</sub>-supported Pd nanomaterial-based catalysts in the reductive aminocarbonylation reactions

**Supervisor:** Dr PT Moshapo

**Mawede, Kabelo Prince (Chemistry) (with distinction)**

**Dissertation:** Synthesis and characterisation of organic fertilizers from biomass waste and wastewater sludge

**Supervisor:** Prof N Mabuba

**Co-Supervisor:** Dr N Faleni (Walter Sisulu University of Technology)

**Mbaz, Gracia It Mwad (Chemistry) (with distinction)**

**Dissertation:** Synthesis of Gelatin-stabilized gold nanorods-antibody conjugate for effective breast cancer photothermal therapy application

**Supervisor:** Prof OS Oluwafemi

**Msiza, Thabo (Physics) (with distinction)**

**Dissertation:** Fitting NOvA and T2K data with the revamped  $A_4$  symmetry model for the poorly constrained neutrino oscillation parameters

**Supervisor:** Prof S Razzaque

**Co-Supervisor:** Dr U Rahaman (University of Valentia, Spain)

**Nethavhani, Elelwani Constance (Environmental Management)**

**Minor Dissertation:** Seasonal variations and trends of nitrates and phosphates concentration along the Boesmanspruit River in Mpumalanga Province

**Supervisor:** Prof I Rampedi

**Co-Supervisor:** Dr F Sengani (University of Limpopo)

**Ngoasheng, Tshegofatso Johnsonia (Aquatic Health)**

**Minor Dissertation:** Aspects of the ecology of leeches from the Westdenespruit

**Supervisor:** Dr LAM Neethling

**Co-Supervisor:** Prof R Greenfield

**Ngwenya, Andile Romeo (Chemistry)**

**Dissertation:** Synthesis of coumarin-azole andazole hybrids as potential antimalarial agents

**Supervisor:** Dr ED Mmutlane

**Co-Supervisor:** Prof DT Ndinteh

**Nhlapho, Samukelisiwe (Chemistry)**

**Dissertation:** Investigating of sugars in honey for authentication and detection using selected analytical techniques

**Supervisor:** Prof AA Ambushe

**Schnelle, Claudia May (Zoology)**

**Dissertation:** DNA barcoding of riverine and estuarine fauna in Mozambique

**Supervisor:** Prof PR Teske

**Co-Supervisor:** Prof S von der Heyden (Stellenbosch University)

**Sebiloane, Kabelo Albina (Botany)**

**Dissertation:** A revision of the genus *Sopubia* Buch.-Ham ex. D. Don in southern Africa and an evaluation of its phylogenetic relationships in the family Orobanchaceae

**Supervisor:** Prof A Moteetee

**Co-Supervisor:** Prof M van der Bank

**Sikhitha, Mulanga** (Environmental Management)

**Minor Dissertation:** Environmental and Social Impact Assessment of illegal sand mining in Matangari and Tshiombo villages in the Limpopo Province, South Africa

**Supervisor:** Prof K Yessoufou

**Zwane, Mbali Innocentia** (Environmental Management)

**Minor Dissertation:** Training evaluation of Gauteng waste pickers in the repair of e-waste

**Supervisor:** Dr T Schoeman

## **17. Doctor of Technology (DTech)**

**Olifant, Goitsione Emily** (Biotechnology)

**Thesis:** Fabrication of carbon nanomaterial solid-state sensors with metal/polymer-based composites for the detection of Ketones, Aldehydes, Chlorobenzenes and Amines and the study of their sensing mechanism at room temperature

**Supervisor:** Prof MA Mamo

**Co-Supervisor:** Prof K Kondiah

## **18. Philosophiae Doctor (PhD)**

**Djournessi Fobasso, Redrisse** (Physics)

**Thesis:** MAGNETIC AND ELECTRONIC PROPERTIES OF RARE-EARTH GEOMETRICALLY FRUSTRATED SYSTEMS

**Supervisor:** Prof AM Strydom

**Domfe, Thulaganyo** (Chemistry)

**Thesis:** Development of a lateral flow device for early diagnosis of the Rift Valley Fever viral disease: A comparative study with Surface-Enhanced Raman Scattering based assays

**Supervisor:** Prof JC Ngila

**Co-Supervisor:** Dr A Skepu (MINTEK)

**Co-Supervisor:** Prof PN Nomngongo

**Masekela, Daniel** (Chemistry)

**Thesis:** Development of self-powered electrocatalytic reactor for simultaneous degradation of organic dyes and bacteria from wastewater

**Supervisor:** Prof N Mabuba

**Co-Supervisor:** Prof NC Hintsho-Mbita (University of Limpopo)

**Mashile, Prudence Phodiso** (Chemistry)

**Thesis:** Biopolymer-based nanocomposite as recyclable adsorbents for removal of pollutants in wastewater treatment

**Supervisor:** Prof PN Nomngongo

**Mhlwatika, Zandile** (Chemistry)

**Thesis:** Synthesis, characterization, and catalytic evaluation of nanocasted  $ABO_3$  perovskites

**Supervisor:** Dr NS Bingwa

**Co-Supervisor:** Prof R Meijboom

**Mpelane, Siyasanga (Chemistry)**

**Thesis:** Synthesis and characterization of nanomaterials for removal of levofloxacin in water

**Supervisor:** Prof PN Nomngongo

**Co-Supervisor:** Dr N Bingwa

**Co-Supervisor:** Dr N Mketi (University of South Africa)

**Nxumalo, Kwanele Andy (Botany)**

**Thesis:** Formulation, characterisation and application of bio-inspired nanocomposites for postharvest preservation of horticultural crops

**Supervisor:** Prof OA Fawole

**Co-Supervisor:** Prof OS Oluwafemi

**Van Niekerk, Chani Stella (Physics)**

**Thesis:** The effect of perturbations and symmetry on quantum states

**Supervisor:** Dr R Warmbier

**Co-Supervisor:** Prof A Quandt (University of Witwatersrand)



# FACULTY OF HEALTH SCIENCES

## CV AND LAUDATIONS

### **Hazell, Lynne Janette (DTech)**

Lynne Hazell is a registered diagnostic radiographer, having obtained a BA (*cum laude*) from UNISA in 1995, and an MTech in Diagnostic Radiography from the University of Johannesburg in 2012. Lynne has worked for the University of Johannesburg since its inception at one of the legacy institutions, the Technikon Witwatersrand, in 1995. During this time, Lynne has served in a number of management and leadership roles, both within the industry and at the University, where she is currently Head of Department of Medical Imaging and Radiation Sciences. Additional contributions of the candidate include the supervision of a number of master's studies, sitting on the National Council for the Society of Radiographers of South Africa as well as international collaborations in the field of inter-professional education through the Universitas 21 health sciences working group.

Through this study the candidate delivered a unique contribution to the field of radiography education in the form a model to facilitate the use of simulation-based learning for diagnostic radiography students to achieve clinical readiness. The candidate conducted a meta synthesis of existing literature to deliver a number of new understandings about simulation-based learning and its application within the context of diagnostic radiography education. The themes developed were then used to derive a central concept linked to the development of a model. Once developed, the model was further refined and piloted. The value of the model was evidenced by feedback from students who reported feeling better prepared for

clinical placement with heightened levels of self-awareness about ways to improve their own clinical competence and related practices. The application of the model was also associated with patient safety benefits through the limiting of unnecessary exposure to radiation. The findings of the study and the developed model have been shared via a number of conference presentations and publications in peer reviewed scientific journals.

**Supervisor:** Dr H Lawrence

**Co-supervisor:** Prof H Friedrich-Nel

**Co-supervisor:** Prof C Vincent-Lambert

## **Sakala, Michael (DHSc)**

Michael Sakala holds a BSc degree in Recreation and Leisure Studies (*cum laude*) from the University of Venda and an MPhil degree in Sport Management from the University of Johannesburg. He served as a part-time lecturer at the University of Venda between 2013 and 2015 and also at the University of Johannesburg in 2021. He formed part of the UNICEF-funded South African University Physical Education Association (SAUPEA) National Study on the state and status of physical education in South Africa (2015-2018). He co-published three articles in accredited journals.

Children's active involvement in physical activities lays the foundation for life-long health and human movement competence. The African continent is endowed with culturally based physical activity expressions in the form of indigenous games. The candidate's doctoral study explored prospects for optimally integrating indigenous games as forms of physical activity and games in rural primary schools within the Limpopo province. Framed within the socio-ecological and systems theories, the study findings showed that indigenous games were a viable mode of physical activity in schools and their optimum integration in physical education, school lessons, recess and extracurricular activities could produce more physically active learners and thus result in holistic health outcomes. The study was acknowledged by examiners as being novel and much needed within the South African context. This study developed and proposed a framework for optimising the mainstreaming of indigenous games in primary schools for holistic health outcomes.

**Supervisor:** Prof CJ Roux

# FACULTY OF SCIENCE

## CV AND LAUDATIONS

**Olifant, Goitsione Emily (DTech)**

Miss Olifant was born in Brits, North West Province (South Africa), and holds an MTech in Biotechnology from the University of Johannesburg. She enrolled in a DTech at the University of Johannesburg in 2018.

In her doctoral study, Miss Olifant fabricated and studied the mechanism of nanomaterial-based solid-state gas sensors to detect various volatile organic compounds (VOCs) at room temperature. The solid-state gas sensors with sensing layers comprise candle soot carbon nanoparticles, semi-conducting metal oxides, and polymer composites. These sensors were able to effectively detect low concentrations of various VOCs at room temperature while exhibiting fast response times. The mechanism was then investigated using *in situ* FTIR combined with an LCR meter. Miss Olifant discovered that during the detection phase, the VOCs undergo decomposition and form CO<sub>2</sub> as a by-product. The composition and the presence of intermediate products were confirmed using Gas chromatography-HRTOF-MS. The sensors fabricated in this study have proven portable, sensitive, easy to fabricate, and stable for a long time. Miss Olifant has presented her work at three local conferences and published one article, and has one article currently under review.

**Supervisor:** Prof MA Mamo

**Co-supervisor:** Prof K Kondiah

## **Djournessi Fobasso, Redrisse (PhD)**

Ms. Redrisse Djournessi Fobasso was born in Yaoundé, Centre province, Cameroon. Ms. Djournessi obtained an MSc degree (with distinction) in Mathematical Sciences at the African Institute for Mathematical Sciences in 2015, and an MSc degree in experimental Condensed Matter Physics at the University of Johannesburg in 2018. She enrolled for a PhD degree at the University of Johannesburg in the same year. Ms. Djournessi won the Frank-Nabarro prize for the most outstanding PhD oral presentation in the field of Condensed Matter Physics and Materials Science at the 2019 Annual South African Institute of Physics (SAIP) Conference. She was also awarded the best poster presentation in the field of Condensed Matter Physics and Materials Science at the Annual 2021 SAIP Conference.

In her doctoral study, Ms. Djournessi synthesized a selected number of geometrically frustrated crystal structure systems at the hand of varying the rare-earth element responsible for magnetism. It has been found that, with a careful selection of rare-earth elements, we can have magnetically ordered ground states in frustrated lattices. Moreover, intuitively, one may expect from first principles that the magnetic ordering in a frustrated lattice should essentially be ferromagnetic. However, it was also found that with a particular selection of the magnetic species in the frustrated lattice, we can anomalously create variable magnetic ground states such as antiferromagnetism, or even double phase transitions, and as an energy solution of the frustrated lattice: a spin glass state. The candidate has presented her PhD work in local and international conferences and has co-authored three papers in international peer-reviewed subject journals. She has co-authored a further three peer-reviewed conference papers.

**Supervisor:** Prof AM Strydom

## **Domfe, Thulaganyo (PhD)**

Mrs. Domfe was born in Klerksdorp in the North-western region of South Africa, and later relocated to Free State. She holds a National Diploma and Baccalaureus Technologiae (BTech) in Biotechnology and MSc Nanoscience (Biotechnology) from University of Johannesburg. She enrolled for a PhD in Chemistry at the University of Johannesburg in 2015 and is currently working in the pharmaceutical industry.

Thulaganyo's doctoral project focused on the development of two prototype diagnostic assays for the determination of Rift Valley fever virus, a zoonotic mosquito-borne viral disease. Rift Valley Fever has been a long-recognized veterinary disease of livestock in Africa and was first reported in Kenya's Rift Valley province in the early 1910s. Thulaganyo carried out assays to test the efficacy of the developed prototypes in detecting the virus in host antibodies attached to one of the structural proteins (nucleocapsid protein, Np) of the virus, in commercial bovine serum samples. She was successful in developing a pilot lateral flow assay and Raman spectroscopy assay for the detection of the virus. Her research findings have potential for commercialization. Her study has produced three manuscripts, one published in *Diagnostics* journal ([doi.org/10.3390/diagnostics12112664](https://doi.org/10.3390/diagnostics12112664)), the second one submitted to *Applied Materials and Interfaces*, and the third one is under preparation.

**Supervisor:** Prof JC Ngila

**Co-supervisor:** Dr A Skepu (MINTEK)

**Co-supervisor:** Prof PN Nomngongo

## **Masekela, Daniel (PhD)**

Mr D Masekela was born in Botlokwa Mphakane in Limpopo Province (Republic South Africa) and holds an MSc in Nanoscience from University of Johannesburg. He enrolled for a PhD at the University of Johannesburg in 2020 and is currently conducting postdoctoral research at University of Johannesburg.

In his doctoral study, Mr Masekela developed self-powered system composed of piezo-electrocatalytic materials towards the degradation of organic pollutants and disinfection of bacteria in freshwater and wastewater. Globally, water pollution instigated by the release of organic contaminants such as dyes, pharmaceuticals and pathogenic bacteria has become a huge threat to our environment and communities. Therefore, he researched into the preparation of unique piezoelectric nanomaterials thin films (Barium titanate, Zinc oxide, Molybdenum disulfide and their composites) that can generate strong oxidants species to remove/degrade stubborn organic pollutants and bacteria in wastewater by harnessing mechanical vibration and light energy. He advanced this field of study, called piezo-electrochemical advanced oxidation processes (PAOPs), by investigating on how the generated strong oxidants interacted with organic pollutants and bacteria (degradation mechanism), and their kinetic properties. The candidate has presented his work at 3 international conferences and has published 5 peer-reviewed articles in recognized international accredited journals.

**Supervisor:** Prof N Mabuba

**Co-supervisor:** Prof NC Hintsho-Mbita (University of Limpopo)

## **Mashile, Prudence Phodiso (PhD)**

Ms Mashile was born in Acornhoek (Bushbuckridge, Mpumalanga) and graduated from the University of Johannesburg with an MSc in Chemistry. In 2019, she enrolled in a PhD program at the University of Johannesburg and is currently working as a Data Team Lead for a clinical research organization.

The global decline in human and animal health over the last few decades has resulted in increased demand for various types of pharmaceuticals, increasing their production. Previous studies indicated that approximately 75% of the world's population keeps unwanted medicines in their homes, even though about 60% of these pharmaceuticals are eventually discarded/wasted. Pharmaceutical drugs in water bodies contribute to recurring drug resistance because they are not effectively removed from wastewater treatment plants before being discharged as reclaimed water. In her doctoral studies, Ms Mashile developed novel, low-cost biopolymer-based nano adsorbents for the adsorptive removal of pharmaceuticals (beta-blockers, anticonvulsants, and sulfonamides) from water bodies. The synthesized nano-adsorbents demonstrated a high affinity towards removing pharmaceuticals in river and wastewater bodies. These findings suggested that the designed nanoadsorbents were suitable candidates for pharmaceutical pollution remediation. The candidate has presented her work at one international conference and published one peer-reviewed journal article.

**Supervisor:** Prof PN Nomngongo



## **Mhlwatika, Zandile (PhD)**

Ms. Mhlwatika was born in Lusikisiki, Eastern Cape, in 1992. She completed her matric in 2009 at Toli Senior Secondary School. Subsequently, she enrolled at Fort Hare University, where she pursued studies in chemistry. In 2018, she obtained a master's degree in chemistry with distinction. Following this accomplishment, she joined the University of Johannesburg in 2019 to embark on her doctoral journey in the field of heterogeneous catalysis.

Ms. Mhlwatika's research involved the design and meticulous characterization of metal oxides containing abundant and cost-effective transition metals. These metal oxides served as crucial heterogeneous catalysts in the conversion of glycerol and other bioderived compounds. Glycerol, a by-product of biodiesel production, is generated in substantial quantities. In response to this abundance, Ms. Mhlwatika has ingeniously developed catalysts to address the challenges associated with glycerol over-production. Her efforts were directed towards transforming glycerol into value-added chemicals, such as fuel additives. As part of a broader project, Ms. Mhlwatika delved into the surface kinetics of these perovskite-form metal oxides. This investigation has led her to propose various mechanistic pathways for the transformation of bioderived compounds. Her significant contributions have culminated in the publication of two articles within reputable accredited international journals, and she is currently preparing two additional manuscripts. Furthermore, her research findings have been shared through presentations at four local conferences.

**Supervisor:** Dr NS Bingwa

**Co-supervisor:** Prof R Meijboom

## **Mpelane, Siyasanga (PhD)**

Siyasanga Mpelane was born in Ngxokweni Village, Nyandeni District (Eastern Cape). He enrolled at Walter Sisulu University to pursue his undergraduate degree, which he completed in 2008. His majors were physics and chemistry. He started working at the CSIR as an intern in 2009 and was eventually hired as a Microscopist until 2011. He began working full-time as a Microscopist for MINTEK in 2012. Later, he took a part-time Honors in Chemistry course at the University of South Africa, finishing in 2014. In 2015, he started working as an Instrument Scientist at the University of Johannesburg. He continued his studies and graduated in 2018 with an MSc in Chemistry (with distinction). In 2019, he enrolled at the University of Johannesburg to pursue a PhD in Chemistry, which he completed in 2023. He is currently employed at UJ as an Instrument Scientist.

In his doctoral study, Mr. Mpelane synthesized, characterized, and applied various magnetic nanomaterials, including mesoporous Fe<sub>2</sub>O<sub>3</sub>, Mn-doped Fe<sub>2</sub>O<sub>3</sub>/GO, and Magnetic zeolite-(β-cyclodextrin) gum arabic, for the effective removal of levofloxacin in water. He also evaluated the photocatalytic capabilities of the synthesized magnetic nanomaterials for the photodegradation removal of LEV under light irradiation. The candidate discovered that materials with the highest adsorption capacity for a problematic antibiotic in our environment, facilitated its removal. Several adsorption pathways were proposed, and these mechanisms were found to be applicable to many antibiotics with similar structural makeup. Furthermore, the performance synthesized materials were validated using real water samples from across South Africa). This study has resulted in three published articles, one submitted book chapter, and one manuscript currently under preparation. This work was also presented at an international conference.

**Supervisor:** Prof PN Nomngongo

**Co-supervisor:** Dr N Bingwa

**Co-supervisor:** Dr N Mketso (University of South Africa)

**Nxumalo, Kwanele Andy (PhD)**

Mr. Nxumalo was born in Siteki (Swaziland, now Eswatini) and holds an MSc. in Horticulture from the University of Eswatini (UNESWA). He enrolled for a PhD at the University of Johannesburg in 2020. He is currently a Lecturer in the Horticulture Department, Faculty of Agriculture, and serves as Faculty Tutor. He worked for the Eswatini Ministry of Agriculture as an Extension Officer and Horticulture Specialist from 2014-2017. Mr. Nxumalo has supervised 25 undergraduate students on their final year research projects, presented 17 papers in seminars and conferences, and published 29 articles in peer-reviewed journals. His interests are postharvest physiology and technology, sustainable agriculture, fruit/vegetable production, hydroponics, horticultural indigenous and medicinal plants, and seed science. In improving the horticultural sector in Eswatini, Mr. Nxumalo has worked with government and non-government organizations as a researcher and consultant. Mr. Nxumalo is married to Mrs. G.S. Nxumalo and has two children, Hlelolwenkosi and Kwandokuhle.

The South African fruit industry relies on the application of postharvest synthetic antifungals to enhance the shelf life of fruits. Nevertheless, these synthetic fungicides have been reported to have health and environmental hazards; thus, natural options are needed. In his doctoral study, Mr. Nxumalo developed green micro- and nano-composite edible films/coatings, characterized them for practical applications as alternatives to synthetic antifungals in postharvest preservation of raspberry, passion fruit, and mandarin, and studied their mode of action. Mr Nxumalo linked indigenous knowledge systems with modern technology in reducing postharvest losses using medicinal plants to improve the functional characteristics of edible coatings. He presented his work at five local and two international conferences and has published four peer-reviewed journal articles. He was awarded the best oral presenter at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition in September 2021 in Ethiopia.

**Supervisor:** Prof OA Fawole

**Co-supervisor:** Prof OS Oluwafemi

**Van Niekerk, Chani Stella (PhD)**

Ms van Niekerk grew up in Johannesburg, South Africa. She studied Physics and Mathematics at the University of Johannesburg and holds a MSc degree in Physics from the University of Johannesburg and enrolled for a PhD in 2019. Her research has been published in the high regarded journal *physica status solidi (b)* and earned her a prize for her presentation at the annual conference of the South African Institute of Physics.

In her doctoral study, Ms van Niekerk studied theoretical models of topological insulators – a class of non-conducting materials which exhibit conducting surface states. Ms van Niekerk investigated the stability and tunability of these conducting states, which is a crucial step before potential usage of these materials in electronics. She found topological states for systems with lower symmetry than previously proposed, extending the range of potentially topological materials. Her research has been published in the highly regarded journal *physica status solidi (b)* and earned her a prize for her presentation at the annual conference of the South African Institute of Physics.

**Supervisor:** Dr R Warmbier

**Co-Supervisor:** Prof A Quandt (University of Witwatersrand)

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## National Anthem of South Africa

Nkosi sikelel' Afrika  
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.