



# Graduation Programme

**The Future. Reimagined.**





Dear UJ Graduate

At the University of Johannesburg (UJ), graduation not only signifies an academic milestone but also represents the emergence of a new cohort of leaders. Our objective has been to empower you as leaders who are primed to face the challenges of an ever-changing world defined by a plethora of challenges and opportunities. As you navigate these great societal shifts, we hope that your time at IJJ will serve as a constant source of reference and inspiration. As we have sought to demonstrate, the Fourth Industrial Revolution (4IR) presents the opportunity for the exploration of new and exciting spheres, and you are uniquely poised to navigate this terrain. Our focus at IJJ has been to create graduates who are

agile, curious, and able to be active participants against this backdrop.

Your graduation today serves as a celebration of this momentous achievement! I want to take this opportunity to remind you that you now represent the privileged few in our country. You are uniquely poised to address some of the serious challenges we face and a qualification from IJJ will stand you in good stead!

At U J, you have encountered the finest academic minds from diverse backgrounds, spanning across the world as well as innovative technology-rich approaches to teaching and learning. As a result, UJ's global stature and academic robustness are recognised by the most

prestigious global higher education ranking systems in the world. IJJ has become a competitive player, not only in South Africa but also on the continent. You are an important part of this story.

We welcome you as a new member of our esteemed alumni community, which is making a lasting impact on society. We encourage you to join the IJJ Alumni Network and become an active member of the University Convocation, which affords you an opportunity to make a significant contribution to our academic projects and beyond. Our promise in return to you is that we will continue to build IJJ as an international university of choice, anchored in Africa, dynamically shaping the future.

Congratulations on this significant achievement. We look forward to witnessing you reimagine the future!

**Prof Letlhokwa Mpedi**  
Vice-Chancellor and Principal  
University of Johannesburg

**Welcome to the  
Graduation Ceremony of the  
University of Johannesburg  
15 March 2023 at 09:30**

**Welkom by die  
Gradeplegtigheid van die  
Universiteit van Johannesburg  
15 Maart 2023 om 09:30**

**Le a Amogelwa  
Moletlong wa Dikapešo wa  
Yunibesithi ya Johannesburg  
15 Hlakola 2023 ka 09:30**

**Niyamukelwa  
eMcimbini wokweThweswa kweZiqu  
weNyuvesi yaseJohannesburg  
15 kuNdasa 2023 ngele-09:30**

# **UNIVERSITY OF JOHANNESBURG**

## **CHANCELLOR**

Dr P Mlambo-Ngcuka

BA Ed (Lesotho), MPhil (UCT), DTech Ed (Warwick, England)

## **MEMBERS OF THE MANAGEMENT EXECUTIVE COMMITTEE**

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

Prof T Marwala

*(Until 28 February 2023)*

BS Eng (Case Western Reserve, USA), MEng (UP), PhD (Cambridge,  
UK)

Prof LG Mpedi

*(From 1 March 2023)*

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

**DEPUTY VICE-CHANCELLOR: ACADEMIC**

Prof LG Mpedi

*(Until 28 February 2023)*

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

Prof S Khan

*(From 1 March 2023)*

BSc, BSc Hons, MSc, PhD (UWC)

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

Prof S Sinha

BEng, MEng, PhD (UP)

**REGISTRAR**

Prof IC Burger

*(Until 31 March 2023)*

BA, HEd, BA Hons, MA, PhD (RAU)

Prof B van Vuuren

*(From 1 April 2023)*

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 D Smal (Acting)

NDip, NHDip Clothing (TP), MTech Fashion (TUT), DTech Design  
(CPUT)

## **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 D Meyer

BSc, BSc Hons, MSc (RAU), PhD (California, USA)

## **DEAN**

### **JOHANNESBURG BUSINESS SCHOOL**

Prof R Carolissen

MSc (UWC), MBA (SUN), MCom (NWU), PhD (UWC)

## **MEMBERS OF COUNCIL**

### **CHAIRPERSON**

Ms X Kakana

### **DEPUTY CHAIRPERSON**

Dr Y Ndema

### **MEMBERS**

Prof H Abrahamse

Mr FM Baleni



Ms S Dlamini  
Ms K Gugushe  
Prof D Hildebrandt  
Ms K Khumalo  
Ms B Madikizela  
Mr M Mahlasela  
Mr M Manana  
Prof T Marwala  
Dr A Mokoena  
Ms N Molope  
Prof LG Mpedi  
Mr LM Mpunzi  
Ms NP Mvubu  
Dr WP Rowland  
Ms JA Schreiner  
Prof A Strydom  
Ms 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 SCIENCE

## QUALIFICATIONS

### 1. Diploma (Dip)

**Bulwana**, Andile Romeo (Analytical Chemistry)  
**Cosa**, Kelebogile Colline (Analytical Chemistry)  
**Dingiswayo**, Siphokazi (Analytical Chemistry)  
**Dlamini**, Edward Andile (Analytical Chemistry)  
**Dlamini**, Simo Andile (Analytical Chemistry)  
**Dlamini**, Thembelihle Kenneth (Analytical Chemistry)  
**Dyalivane**, Smangele Nosisa (Analytical Chemistry)  
**Hlathikhulu**, Asithandile (Analytical Chemistry)  
**Khakhhu**, Patrick Mulisa (Analytical Chemistry)  
**Mabaso**, Puleng (Analytical Chemistry)  
**Makola**, Thabang Clement (Analytical Chemistry)  
**Mamabolo**, Lehlohonolo Elsie (Analytical Chemistry)  
**Manzi**, Wendi Nozipho (Analytical Chemistry)  
**Mashigo**, Lorraine Ratilwe (Analytical Chemistry)  
**Mathunya**, Motlapele Rose (Analytical Chemistry)  
**Matula**, Thapelo (Analytical Chemistry)  
**Mbhele**, Nokuthula (Analytical Chemistry)  
**Mdluli**, Nothando Princess (Analytical Chemistry)  
**Mhlongo**, Ntsako (Analytical Chemistry)  
**Mnguni**, Khethelo (Analytical Chemistry)

**Mnyandu**, Nokuzotha Brightness (Analytical Chemistry)  
**Mojela**, Chantal (Analytical Chemistry)  
**Mokaba**, Tlou Mosa (Analytical Chemistry)  
**Mokonyane**, Katlego (Analytical Chemistry)  
**Motiang**, Agnes Kenalemang (Analytical Chemistry)  
**Mtwanambo**, Boitumelo (Analytical Chemistry)  
**Munatsi**, Kutenda Onesimo Tawedzerwa (Analytical Chemistry)  
**Muyambo**, Lennox Tanyaradzwa (Analytical Chemistry)  
**Mzizi**, Noluthando Diploma (Analytical Chemistry)  
**Ndabokutya**, Nyaniso (Analytical Chemistry)  
**Ndima**, Gugulethu Prudence (Analytical Chemistry)  
**Ngandu**, Kisa Olivier (Analytical Chemistry)  
**Ngoepe**, Mpho Machoene (Analytical Chemistry)  
**Raganya**, Lekgowa (Analytical Chemistry)  
**Rakgalakane**, Charles Tlale (Analytical Chemistry)  
**Sekwe**, Thabo (Analytical Chemistry)  
**Silinda**, Patience (Analytical Chemistry)  
**Sombe Beke**, Christilla Aretha (Analytical Chemistry)  
**Xaba**, Mpho (Analytical Chemistry)

## **2. Advanced Diploma (Adv Dip)**

**Birinda**, Joris Thierry (Analytical Chemistry)  
**Diako**, Palesa (Analytical Chemistry)

**Hlaraka**, Mokibelo Joy (Analytical Chemistry)  
**Kungwa**, Mutendu Cynthia (Analytical Chemistry)  
**Mabasa**, Tiyiselani (Analytical Chemistry)  
**Malonga Ntinou**, Sephine Grace Cephoras (Analytical Chemistry)  
**Mapitsing**, Innocent Tsankane (Analytical Chemistry)  
**Mbhombi**, Nsovo Hillarian (Analytical Chemistry)  
**Mogoane**, Lesego (Analytical Chemistry)  
**Tfwala**, Fanelesibonge (Analytical Chemistry)  
**Zungu**, Zoxolo Ayanda (Analytical Chemistry)

### 3. Bachelor of Science (BSc)

**Abrahams**, Zaheer (Environmental Management and Zoology)  
**Balgobind**, Shivaan (Physiology and Psychology)  
**Baloyi**, Tinyiko (Botany and Chemistry)  
**Chetty**, Keshne (Botany and Zoology)  
**Chota**, Grace (Botany and Chemistry)  
**Dakile**, Nosipho Pretty (Geography and Geology)  
**Dikgale**, Tshegofatso (Geology and Environmental Management)  
**Farisani**, Takalani Cynthia (Geography and Environmental Management)  
**Harrypurshad**, Alisha (Biochemistry and Chemistry)

**Hicks**, Rhea-Vera (Botany and Zoology)  
**Hlongwane**, Saneliso Sphumelele (Botany and Zoology)  
**Jonathan**, Bianca Camerice (Physiology and Psychology)  
**Keswa**, Asandiso (Geography and Geology)  
**Khumalo**, Kristina Bakita (Physiology and Psychology)  
**Komane**, Phethego Gad (Biochemistry and Chemistry)  
**Lehasa**, Sylvia Palesa (Geology and Chemistry)  
**Lesito**, Abram Molefi (Human Physiology and Psychology)  
**Letsasa**, Retselisitsoe Judith (Geology and Environmental Management)  
**Macu**, Nonjabulo (Botany and Zoology)  
**Madi**, Mapule (Biochemistry and Botany)  
**Magwaza**, Nkanyiso Nkululeko (Zoology and Physiology)  
**Mahlo**, Centry (Biochemistry and Botany)  
**Majozi**, Londeka Samukelisiwe (Geology and Chemistry)  
**Malele**, Rivalani Rivonia (Biochemistry and Chemistry)  
**Mamadi**, Meshack Alale (Geology and Environmental Management)  
**Mangoale**, Phethego Maredi (Biochemistry and Chemistry)  
**Masanabo**, Simon (Biochemistry and Chemistry)  
**Mashigo**, Phelang Progress (Geography and Environmental Management)  
**Masondo**, Mlungisi (Chemistry and Physics)  
**Matentshi**, Mahlatsi Prudence (Physiology and Psychology)  
**Matladi**, Mmampopeng Success (Chemistry and Mathematics)

**Mbhele**, Melusi Siphephelo (Physiology and Psychology)  
**Mdaka**, Andzani Carren (Biochemistry and Botany)  
**Meje**, Itumeleng Elizabeth (Biochemistry and Botany)  
**Metseeme**, Amogelang Given (Geology and Chemistry)  
**Mira**, Zwelibanzi (Geology and Chemistry)  
**Miya**, Taelo Washington (Geology and Environmental Management)  
**Mkrweqe**, Anathi (Botany and Zoology)  
**Mochaki**, Raesetja Joy Rethabile (Botany and Zoology)  
**Mogale**, Happy Itumeleng (Chemistry and Physics)  
**Mohlamonyane**, Motlatsi Jane (Biochemistry and Botany)  
**Mokotong**, Karabo (Geography and Geology)  
**Moloi**, Mateboho (Physiology and Psychology)  
**Mooketsi**, Katlego (Geography and Environmental Management)  
**Moropa**, Pinky Tefo (Geography and Environmental Management)  
**Morris**, Benjamin Ben-Tzion (Botany and Zoology)  
**Mosome**, Felicia Lebogang (Chemistry and Mathematics)  
**Motaung**, Otshepeng (Geology and Chemistry)  
**Mphilela**, Freedom Njabulo (Biochemistry and Botany)  
**Mpisane**, Kuselwa Unam (Geography Environmental Management)  
**Mpshe**, Lucky Moagi (Botany and Chemistry)  
**Mthembu**, Roberta Teboho (Geology and Chemistry)  
**Mthombeni**, Katlego (Biochemistry and Botany)

**Mtshali**, S'bonelo (Geography and Environmental Management)

**Murray**, Shayleigh Cheyenne (Physiology and Psychology)

**Ndlovu**, Noluthando Cleopatia (Zoology and Environmental Management)

**Ndlovu**, Sicelo Falakhe (Geography and Geology)

**Nkosi**, Lindokuhle (Botany and Chemistry)

**Nkuna**, Tinyiko (Geography and Environmental Management)

**Nqhoaki**, Sekajane (Geology and Environmental Management)

**Ntele**, Maureen Raesetja (Geography and Geology)

**Nthehang**, Tsholofelo (Biochemistry and Chemistry)

**Ntingana**, Onesimo (Biochemistry and Chemistry)

**Pillay**, Temishka Robyn (Physiology and Psychology)

**Qwabe**, Bongumusa Cebolenkosi (Geography and Environmental Management)

**Radebe**, Neo Mbeleja (Botany and Zoology)

**Rathupetsane**, Elizabeth Modjadji (Geography and Environmental Management)

**Rikhotso**, Luckyboy (Geography and Environmental Management)

**Setwaba**, Thabiso Frans (Botany and Zoology)

**Shabalala**, Thuli (Botany and Chemistry)

**Sibanyoni**, Thabiso Wiseman (Geography and Geology)

**Sibuye**, Hector (Physiology and Psychology)

**Tshabalala**, Pricilla Ntokozo (Geography and Geology)



**Tsimo, Nthabiseng** (Geography and Environmental Management)

**Unwarsa, Tayiba Rafik** (Botany and Chemistry)

**Van Rooyen, Andre** (Zoology and Environmental Management)

**Viljoen, Jean-Dre** (Physiology and Psychology)

**Xhallie, Ntombentle** (Physiology and Psychology)

#### **4. Bachelor of Science Hons (BSc Hons)**

**Banda, Welheminah Sphiwe** (Geography)

**Bhengu, Sithembile** (Geography)

**Bhika, Parthi** (Physiology)

**Chabalala, Makhaokane Paulina** (Chemistry)

**Chauke, Carol Amukelani** (Physiology)

**Chirindza, Gloria Franciscar** (Physiology)

**Claassen, Sophie-Leigh** (Zoology)

**Conco, Balungile** (Geology)

**Dube, Xolile Gracious** (Energy Studies)

**Dzanibe, Minentle** (Geography)

**Fonseca, Alessandro** (Zoology)

**Fynn, Kwame** (Geology)

**Gabuza, Nontsikelelo** (Physiology)

**Hlake, Nthabeleng** (Chemistry)

**Kgasago, Mmakgape Thato** (Energy Studies)

**Kgasago**, Lesego (Physiology)  
**Khoza**, Karabo (Chemistry)  
**Khumalo**, Aisha Ayibongwe (Chemistry)  
**Kwinda**, Humbelani (Chemistry)  
**Langford**, Danica (Physiology)  
**Lepedi**, Tsholofelo (Chemistry)  
**Magwagwa**, Sizwe (Chemistry)  
**Mahlangu**, Thando (Chemistry)  
**Makhuyani**, Xongotelo (Chemistry)  
**Maluleke**, Janet (Geography)  
**Mampe**, Amogelang Bellington (Physiology)  
**Manyama**, Diketso (Physiology)  
**Mapheto**, Thebe Diphatja (Energy Studies)  
**Masango**, Michela Kulumeity (Chemistry)  
**Masango**, Nonkcubeko (Zoology)  
**Masena**, Hlonepho Michael (Chemistry)  
**Mashaba**, Justice (Geography)  
**Mashishi**, Lesiba Samuel (Chemistry)  
**Masilela**, Vincent (Chemistry)  
**Masilela**, Ngcebo Ncedo (Geography)  
**Masiza**, Lumphumlo (Geography)  
**Mathebula**, Xiluva (Zoology)  
**Mathibela**, Nondumiso Noluthando Noxolo (Geography)  
**Matsokane**, King (Geography)  
**Mazibuko**, Ntombifuthi Amanda (Energy Studies)  
**Mbokane**, Valetine Lindokuhle (Geography)

**Mdumbe**, Sifiso (Chemistry)  
**Mlangeni**, Khanyisile Brightnes (Chemistry)  
**Mokgadi**, Keabetswe (Chemistry)  
**Mokoena**, Fanikie Shrey (Chemistry)  
**Mokoena**, Rethabile (Zoology)  
**Mokwena**, Hlengane Precious (Chemistry)  
**Moletsane**, Ritshimone Moses (Geography)  
**Molokomme**, Khumo Hope Tsholofelo (Physiology)  
**Motha**, Cicilia Kgathatso (Geology)  
**Mphahlele**, Thabang (Chemistry)  
**Mthombeni**, Dzunani Junior (Physiology)  
**Mudau**, Rinae Nancy (Chemistry)  
**Mxoli**, Siyamthanda (Physiology)  
**Ndhlozi**, Leon (Chemistry)  
**Nelwamondo**, Omphulusa (Chemistry)  
**Ngcobo**, Lindiwe (Energy Studies)  
**Nhlabathi**, Jabulile Clementine (Chemistry)  
**Nhlangulela**, Noluvuyo Blossom (Zoology)  
**Pahla**, Kennedy (Energy Studies)  
**Phoku**, Katlego Tevin (Chemistry)  
**Poonsamy**, Eladia (Physiology)  
**Qavane**, Mandilakhe (Energy Studies)  
**Sekwena**, Oregolele (Physiology)  
**Serame**, Rochelle Palesa Lebogang (Physiology)  
**Simeon**, Loritta Vineta (Energy Studies)  
**Singh**, Sage (Chemistry)

**Subramoney, Melvin** (Geography)

**Swartbooi, Hadassah Naomi** (Geography)

**Tladi, Mphomotseng Bonolo** (Geography)

**Tyanda, Simamkele** (Zoology)

**Walaza, Iviwe** (Geography)

**Zwane, Kgabo** (Chemistry)

## 5. Master of Science (MSc)

**Bussin, Daniel Roland** (Geology) **(with distinction)**

**Dissertation:** A characterization and process mineralogical assessment of the karst-hosted manganese ore deposits at Paling exploration camp in the Postmasburg Manganese Field, Northern Cape Province, South Africa

**Supervisor:** Dr C Vorster

**Co-Supervisor:** Prof B Smith

**Co-Supervisor:** Dr B Kennedy (4 Arrows Mining and Exploration)

**Dintsi, Bennett Sipiwe** (Chemistry) **(with distinction)**

**Dissertation:** Transport and fate of arsenic and chromium species in Mokolo River: Health risk assessment approach

**Supervisor:** Prof AA Ambushe

**Dube, Keith Mluleki** (Zoology) **(with distinction)**

**Dissertation:** Evolutionary diversification within a dwarf chameleon (*Bradypodion*) species complex

**Supervisor:** Prof B van Vuuren

**Co-Supervisor:** Prof K Tolley (SANBI)

**CO-Supervisor:** Dr J Da Silva (SANBI)

**Gihring, Katharina Elisabeth** (Environmental Management)  
**(with distinction)**

**Minor Dissertation:** Life Cycle Sustainability Assessment of Takeaway Food Packaging A Case Study from the University of Johannesburg

**Supervisor:** Prof I Rampedi

**Co-Supervisor:** Prof P Notten (UCT)

**Khunou, Prudence Boitumelo** (Chemistry)

**Dissertation:** Preparation of layered double hydroxide based adsorbents for preconcentration of  $Pb^{2+}$ ,  $Cr^{6+}$ ,  $Cd^{2+}$ ,  $As^{3+}$  and  $As^{5+}$  from wastewater and acid mine drainage water prior to spectrometric determination

**Supervisor:** Dr L Nyaba

**Co-Supervisor:** Prof PN Nomngongo

**Makwela, Innocent** (Zoology)

**Dissertation:** Assessing the role of wetlands in improving the aquatic health of the Braamfontein Spruit catchment in Johannesburg, Gauteng

**Supervisor:** Dr M Bird

**Co-Supervisor:** Prof D Bilton (University of Plymouth, England)

**Mapingere, Brian** (Geology) **(with distinction)**

**Dissertation:** Structural and geochronological constraints on the evolution of the south-eastern Mwanesi Greenstone Belt, Zimbabwe Craton: implications for gold mineralisation

**Supervisor:** Prof J Lehmann

**Co-Supervisor:** Prof KS Viljoen

**Mbanjwa, Ziyanda (Chemistry) (with distinction)**

**Dissertation:** Method development for analysis of non-steroid anti-inflammatory drugs (NSAIDs) in various water systems

**Supervisor:** Prof PN Nomngongo

**Co-Supervisor:** Dr A Mpupa

**Co-Supervisor:** Dr N Mketso (UNISA)

**Co-Supervisor:** Dr Y Tancu (CSIR)

**Mudau, Hulisani Confidence (Environmental Management)**

**Minor Dissertation:** Food waste management challenges within a fruit and vegetable processing plant in Gauteng

**Supervisor:** Dr DC Schoeman

**Mukange, Tsumbedzo (Computer Science) (with distinction)**

**Dissertation:** The alignment between DevOps and Business Outcomes

**Supervisor:** Prof JJ Langerman

**Mukendi, Ntambua Joel (Biotechnology)**

**Dissertation:** A comparative genomics approach to the role of the sil operon in silver resistance and biosynthesis of AgNPs in bacteria: A case study of *Enterobacter xiangfangensis* Pb204

**Supervisor:** Prof K Kondiah

**Moalosi, Alpheus Diale (Aquatic Health) (with distinction)**

**Dissertation:** Evaluation of waste from various industries using the Phytotoxkit

**Supervisor:** Dr A Nel

**Co-Supervisor:** Dr BF Shaddock (Golder Associates Research Laboratory)

**Motebejane, Madire Percy (Aquatic Health)**

**Minor Dissertation:** An integrated approach to assess sediment toxicity within an area of intense mining activity making use of a Phytotoxkit

**Supervisor:** Dr A Nel

**Co-Supervisor:** Dr BF Shaddock (Golder Associates Research Laboratory)

**Musoliwa, Rofhiwa (Biotechnology)**

**Dissertation:** Assessing the effectivity of combining biogenic silver nanoparticles and antibiotics in the treatment of ESKAPE pathogens

**Supervisor:** Prof K Kondiah

**Ncube, Buyile (Food Technology)**

**Dissertation:** Effect of common cooking and drying methods on *Corchorus olitorius*' phenolic compounds, antioxidant activity and mineral profile

**Supervisor:** Dr D Beswa

**Co-Supervisor:** Dr BC Dlamini



**Ngobeni, Mbalenhle (Zoology) (with distinction)**

**Dissertation:** The effects of the antiretroviral, tenofovir disoproxil fumarate (TDF) on the hatching success, survival and histology of the early life stages of *Oreochromis mossambicus*

**Supervisor:** Prof JC Van Dyk

**Nofal, Ashlee Paige (Zoology) (with distinction)**

**Dissertation:** Aspects of the morphology and taxonomy of adult camallanid nematodes infecting *Clarias gariepinus* (Burchell, 1822) from Lake Heritage, Crocodile River

**Supervisor:** Prof A Oldewage

**Co-Supervisor:** Dr QM Dos Santos

**Phela, Manoko Cornelia (MSc Chemistry)**

**Dissertation:** Sulfonated Poly (2,6-dimethyl-1,4-phenylene oxide) attached to Sulfonated graphene oxide as a proton exchange composite membrane for iron-air redox flow battery application

**Supervisor:** Dr P Msomi

**Potgieter, Zianet (Zoology)**

**Dissertation:** Non-lethal sampling techniques in assessing the *Oreochromis mossambicus* fish liver following chronic exposure to sodium selenate

**Supervisor:** Dr L Mokae

**Co-Supervisor:** Prof AN Makanya (University of Nairobi, Kenya)

**Sicwebu, Aphiwe** (MSc Chemistry)

**Dissertation:** Solid-state metal-organic frameworks (MOFs) dynamism upon guest inclusion: probing thermal expansion coefficients, lattice dynamics effects and catalysis

**Supervisor:** Dr B Vatsha

**Co-Supervisor:** Dr L Ngodwana (Sasol)

**Co-Supervisor:** Prof G Hearne

**Xulu, Sanele Siyabonga** (Environmental Management)

**Minor Dissertation:** Assessing South African Banks' Performance on the Integration of Environmental, Social and Governance (ESG) Considerations in their Corporate Strategies and Decision-Making Processes

**Supervisor:** Dr LS Modley

**Co-Supervisor:** Mrs Z Rasool (FNB)

**Co-Supervisor:** Mr Y Lockhat (Banking Association of South Africa)

**Zikhali, Memory** (Chemistry)

**Dissertation:** Studies on the catalytic properties of metal electro-catalysts supported on carbon based nanomaterials towards alcohol electro-oxidation in alkaline medium

**Supervisor:** Prof NW Maxakato

## 6. Philosophiae Doctor (PhD)

**Bisiriyu, Ibraheem Olayiwola (Chemistry)**

**Thesis:** Pyridine based cross-linked chitosan: A green biopolymer adsorbent and metal complexating agent for vinyl acetate polymerization

**Supervisor:** Prof R Meijboom

**Bowden, Laura Leigh (Geology)**

**Thesis:** Source terrains of Southern African Karoo-aged basins as determined from detrital zircon age studies and a comparison with correlative units in Brazil and India in context of Gondwana reconstruction

**Supervisor:** Prof NJ Beukes

**Co-Supervisor:** Dr C Vorster

**Choji, Vincent Dung (Environmental Management)**

**Thesis:** EIA quality review: the case of telecommunications infrastructural projects in Plateau State, Nigeria

**Supervisor:** Prof IT Rampedi

**Coetzee, Helene Johanna (Aquatic Health)**

**Thesis:** The histomorphology and pathological findings in the liver, kidney and testes of the scalloped hammerhead shark (*Sphyrna lewini*) from the coast of Kwa-Zulu Natal, South Africa

**Supervisor:** Prof JC Van Dyk

**Supervisor:** Prof GM Wagenaar (Late)

**Fapojuwo, Dele Peter** (Chemistry)

**Thesis:** Heterogeneous Pd based catalysts for catalytic reaction in Pickering Emulsion system

**Supervisor:** Prof R Meijboom

**Lamola, Lesibana Jairus** (Chemistry)

**Thesis:** *Development of Novel P-bridged biaryl phosphines for palladium-catalysed cross coupling reactions*

**Supervisor:** Prof MC Maumela

**Co-Supervisor:** Prof CW Holzapfel (Late)

**Co-Supervisor:** Dr PT Moshapo

**Makwakwa, Dimakatso Maria** (Chemistry)

**Thesis:** Development of a Thermal Sensitive Smart Material and Strain Activated Shape-Changing Polymer Suitable for 4D Printing

**Supervisor:** Prof S Sinha Ray

**Co-Supervisor:** Dr V Ojijo (CSIR)

**Rajendran, Jose Varghese** (Chemistry)

**Thesis:** CuInS<sub>2</sub> encapsulated mesoporous silica tethered with cyclodextrin for cell imaging and drug delivery

**Supervisor:** Prof SO Oluwafemi

**Co-Supervisor:** Prof S Thomas (Mahatma Gandhi University, India)

## **Bisiriyu, Ibraheem Olayiwola (PhD)**

Mr Bisiriyu was born in Lagos (Nigeria) and holds an MSc in Inorganic Chemistry from Federal University of Agriculture Abeokuta, in Ogun State Nigeria. He enrolled for a PhD at the University of Johannesburg in 2018 and is currently residing in the United Kingdom.

In his doctoral research, a pyridine-based crosslinked chitosan was fabricated and utilized to remove toxic metals from water. Heavy metals, among other pollutants, constitute serious environmental challenges owing to their non-biodegradability and are linked to many symptoms in humans. The fabricated biopolymer is an excellent adsorptive material compared with previously used adsorbents. Also, owing to the vast industrial application of polyvinyl acetate, Mr Bisiriyu studied the catalysis of vinyl acetate (VAc) polymerization using the metal coordination biopolymer. The efficient performance of the coordination biopolymer was a function of the highest occupied molecular orbital to lowest unoccupied molecular orbital (HOMO – LUMO) energy gap obtained from Density Functional Theory (DFT) calculations. Thereby uncovering the possible ways, the VAc polymerization may be improved using the chitosan-based catalyst system. The candidate has presented his work in an international conference and has published two peer-reviewed Journal articles.

**Supervisor:** Prof R Meijboom

**Bowden, Laura Leigh (PhD)**

Ms Laura Bowden holds an MSc in Geology from the University of Johannesburg. Her magister research involved a comparative study of detrital zircon ages from the Karoo Supergroup in the Eastern Cape Province of South Africa to investigate the tectono-sedimentary evolution of Gondwanaland's southern continental margin. Keeping within the context of Gondwana reconstructions, Laura continued her studies at the University of Johannesburg for her PhD. Her research investigated source terrains of Karoo-aged basins in South Africa, and was expanded to include correlative units in Mozambique, South America, the Falkland Islands and India.

In her doctoral study, Mrs. Laura Jeffrey sampled sedimentary strata from various Gondwana-aged basins in South Africa, Mozambique, Brazil, Argentina, the Falkland Islands and India. Detrital zircon grains were extracted from samples and dated. The uranium-lead age data obtained allowed her to determine where all the sediment contained in the various successions, that still cover large parts of a reconstructed Gondwanaland, originated from; and whether the strata were deposited in isolated basins or formed part of a wider regional depositional system. Due to similarities in detrital zircon age population patterns among the various basins sampled, the thesis concluded that the Gondwana basins represent erosional relicts of depositional systems that were originally much larger and most probably interconnected on super-continental scale. Some of her

results were published in Geological Magazine, a peer-reviewed journal of Cambridge University Press.

**Supervisor:** Prof NJ Beukes (Late)

**Co-supervisor:** Dr C Vorster

## **Choji, Vincent Dung (PhD)**

Mr Vincent Choji was born in 1971 in Zawan Village in Plateau State in Nigeria. He obtained a BSc (Geography) degree from the University of Jos in 1995. In the year 2006, he graduated a Masters (Environmental Resource Planning) degree qualification at the University of Jos. In 2017, he enrolled for a PhD (Environmental Management) degree qualification at the University of Johannesburg. Vincent Choji is currently a lecturer in the Department of Geography, Plateau State University.

In his doctoral study, Mr Choji reviewed the quality of environmental impact reports (EIRs) compiled for mobile telecommunications infrastructure in Plateau State (Nigeria). Mr Choji utilized a modified Lee and Colley review package to evaluate such reports, along with an examination of the spatial information used. In addition, the performance of the EIA system was conducted by means of a SWOT analysis. The results revealed unsatisfactory and deficient quality in the majority of reports because important tasks were poorly performed while inaccurate spatial information was used for very important environmental decision-making processes. Furthermore, the SWOT analyses indicated more weaknesses and threats than strengths, thus suggesting the need to tap into the opportunities that can improve current EIA practice in Nigeria. The candidate has published one article in the International Journal of Environmental Research and Public Health based in Switzerland while two manuscripts have been submitted for consideration by relevant journals.

**Supervisor:** Prof IT Rampedi



**Coetzee, Helené Johanna (PhD)**

Helené Johanna Coetzee grew up in the small town of Giyani, situated in the north-east of the Limpopo Province. She completed her matric in 2011 and enrolled for a BSc in Zoology and Microbiology in 2012 and continued with her BSc (Hons) in Aquatic Health at North-West University which she completed in 2015. In 2016 she enrolled for a MSc in Zoology at UJ and subsequently won the Chancellor's Medal for her dissertation in 2018.

Ms. Coetzee's doctoral study focused on aspects related to the health and reproduction of three elasmobranch species off the coast of KwaZulu-Natal; *Carcharhinus brevipinna*, *Aetobatus narinari* and *Sphyrna lewini*, the critically-endangered scalloped hammerhead shark. Her study provides a microscopic description of the reproductive, hepatic and renal tissues of these three species, as well as a description of the ultrastructure of the spermatozoa of *S. lewini*. She further conducted a histological assessment to identify any cellular or tissue alterations in selected target organs as a result of exposure to aquatic pollutants. Data was also obtained on the levels of metals and polychlorinated biphenyls in the muscle and liver tissues of the collected specimens, which will serve as useful baseline data for the future monitoring of bio-accumulated pollutants in these species. A paper has been published in an international journal, one is currently under review, and another is in preparation.

**Supervisor:** Prof JC van Dyk

**Supervisor:** Prof GM Wagenaar (Late)

## **Fapojuwo, Dele Peter (PhD)**

Mr Fapojuwo holds a BSc and MSc degrees in industrial Chemistry (Distinctions) from the University of Ilorin, Nigeria. He enrolled for a PhD in Chemistry at the University of Johannesburg in 2018.

In his doctoral study, Mr Fapojuwo developed novel interfacial active materials which addressed the problem of mass transfer in biphasic catalytic system. The fabricated interfacial catalysts were used as both catalysts and emulsifier for various catalytic reactions such as hydrogenation, oxidation and Knoevenagel reactions. Also, he reported the first efficient application of bimetallic Pd based catalyst for the hydrogenation of aromatic compounds in the Pickering emulsion system. Notably, the novel findings from his research project have been published in various reputable journals.

**Supervisor:** Prof R Meijboom

## **Lamola, Jairus Lesibana (PhD)**

Lesibana Jairus Lamola was born and raised in Sebokeng. He completed his secondary education at Vaal Christiaan School (2011). In 2015, he obtained a BSc. degree in Physical Sciences from the University of Johannesburg. He received the Dean's award for the best final-year BSc student in 2015. He also received the prize for the top third-year student in chemistry and biochemistry (2015). He obtained his BSc Hons degree, with distinction, in 2016 from the same institution and was awarded the prize for the top Chemistry Honours student. In 2018, Jairus obtained the MSc degree and his research involved the development and application of homogeneous catalysis in organic synthesis. In 2019, Jairus enrolled towards a PhD degree in chemistry. He served as a part-time assistant lecturer at UJ for the academic year 2021. Jairus is currently employed at Sasol, Research and Technology (R&T) Division (started on 1<sup>st</sup> July 2022).

Mr Lamola's research focused on the rational design and development of novel ligands for applications in palladium-catalysed cross-coupling reactions. The use of palladium cross-coupling methods represents one of the most *important* reactions *in industrial process development*. This research was motivated by the on-going demand for catalysts that are robust and versatile for Pd-catalysed reactions. The candidate conducted extensive theoretical and empirical studies which resulted in the discovery of novel effective catalysts for Pd-cross coupling reactions. The study provided an in-depth understanding of the key parameters of the ligands that are influential on their observed catalytic performance. The

candidate presented his work at both local and international conferences and has published four papers in prestigious scientific journals. Two more papers are under review. The candidate has received the Royal Society of Chemistry Advances Outstanding Student Paper Award in 2021 for his contribution to the research presented in the RSC Advances journal.

**Supervisor:** Prof MC Maumela

**Co-supervisor:** Prof CW Holzapfel (Late)

**Co-supervisor:** Dr PT Moshapo

**Makwakwa, Dimakatso Maria (PhD)**

Ms Makwakwa holds an MSc in Chemistry (Cum-Laude) from the University of Johannesburg. She registered for a PhD at the University of Johannesburg in 2019, currently she is a candidate Researcher, at the Council for Scientific and Industrial Research Council.

In her doctoral study, Ms Makwakwa developed novel environmentally benign materials suitable for 3D printing, which are amenable to shape change responses when subjected to an external stimulus such as heat. She demonstrated that these biobased composite materials with improved mechanical and thermal properties can be successfully printed, and their shape response properties can be accentuated when printed in combination polyester fabric, to create a smart textile. Such materials could find use in, among others, the fashion industry, where shoes could change shape when one runs for more comfort. The candidate has presented her work at the local conference and has published two peer-reviewed journal articles, two under preparation.

**Supervisor:** Prof S Sinha Ray

**Co-Supervisor:** Dr V Ojijo (CSIR)

## **Rajendran, Jose Varghese (PhD)**

Mr Rajendran was born in Kochi (India) and holds an MSc in Nanoscience and Technology from Karunya-University in India. He enrolled for a PhD at the University of Johannesburg in 2017 and is currently working as Project Associate at Medidee Services IN.

In his doctoral study, Mr Rajendran studied the possibility of enhancing the intrinsic optical and biocompatibility of ternary quantum dots (QDs) using a silica matrix with the aim of fabricating multifunctional materials. Red-emitting QDs composites were synthesized and conjugated with cyclodextrin ( $\beta$ -CD). The material maintained acceptable emission and high photostability after the conjugation and under UV irradiation, which is beneficial for long-term imaging applications. The drug release in PBS buffer exhibited a controlled release profile for camptothecin, in which 70% of the cancer drug was released in 8 h, which can be beneficial for long-term treatment. The improved photostability and acceptable drug release profile present the as-synthesized material as a suitable candidate for imaging and therapeutic applications against cancer. This work has been presented at two conferences, and five peer-reviewed journal articles have emanated from the thesis.

**Supervisor:** Prof S O Oluwafemi

**Co-supervisor:** Prof S Thomas (Mahatma Gandhi University, India)



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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.