Graduation Programme

The Future. Reimagined.

UNIVERSITY OF JOHANNESBURG

Welcome to the
Graduation Ceremony
of the
University of Johannesburg
02 April 2019

Welkom by die
Gradeplegtigheid
van die
Universiteit van Johannesburg
02 April 2019

Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
02 Moranang 2019

Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
02 kuMbaso 2019

UNIVERSITY OF JOHANNESBURG

CHANCELLOR

Prof NS Ndebele
BA (Lesotho), MA (Cambridge UK), PhD (Denver USA)

SENIOR OFFICE-BEARERS OF THE UNIVERSITY

VICE-CHANCELLOR AND PRINCIPAL

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

DEPUTY VICE-CHANCELLOR ACADEMIC

Prof A Parekh
BA, BA Hons, MA (UDW), MA (Kansas USA), DPhil (UDW)

DEPUTY VICE-CHANCELLOR: RESEARCH AND INTERNATIONALISATION

Prof S Sinha
BEng, MEng, PhD (UP)

REGISTRAR

Prof IC Burger
BA, HEd, BA Hons, MA, PhD (RAU)

CHIEF FINANCIAL OFFICER

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

DEPUTY VICE-CHANCELLOR: EMPLOYEES AND STUDENT AFFAIRS

Ms KC Mketi
BA (Bophut), BA Hons (RAU), MBL (Unisa)

CHIEF OPERATING OFFICER

Prof A Swart
NDip, NHDip (TWR), BEd, MEd (RAU), DTech (TWR)

GENERAL COUNSEL

Prof PH O'Brien
BCom, LLB, LLM, LLD (RAU)

SENIOR EXECUTIVE DIRECTOR IN THE VICE-CHANCELLOR'S OFFICE

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

EXECUTIVE DEANS

COLLEGE OF BUSINESS AND ECONOMICS
Prof D van Lill
BSc, BSc Hons, MSc, PhD (US)

FACULTY OF ART, DESIGN AND ARCHITECTURE
Prof F Freschi
BA (Wits), BA Hons (UCT), PhD (Wits)

FACULTY OF EDUCATION
Prof SJ Gravett
BA, HEd (PU for CHE), BEd, MEd, DEd (RAU)

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT
Prof DJ Mashao
BSc Eng (UCT), MSc Eng (UCT), MSc AM (Brown, USA), PhD (Brown, USA)

FACULTY OF HEALTH SCIENCES
Prof S Khan
BSc, BSc Hons, MSc, PhD (UWC)

FACULTY OF HUMANITIES
Prof AB Broadbent
BA, BA Hons, MPhil, PhD (Cambridge UK)

FACULTY OF LAW
Prof LG Mpedi
B Juris, LLB (Vista), LLM (RAU), LLD (UJ)

FACULTY OF SCIENCE
Prof D Meyer
BSc, BSc Hons, MSc (RAU), PhD (California USA)

MEMBERS OF COUNCIL

CHAIRPERSON
Mr MS Teke

DEPUTY CHAIRPERSON
Dr Y Ndema

MEMBERS
Prof H Abrahamse
Mr FM Baleni
Ms S Dlamini
Ms K Gugushe
Prof D Hildebrandt
Ms X Kakana
Mr G Khosa
Ms B Madikizela
Mr M Mahlasela
Prof T Marwala
Mr T Mati
Ms Z Matlala
Ms BJ Memela-Khambula
Mr K Mophutha
Prof A Parekh
Dr WP Rowland
Prof A Strydom
Dr M Tom

Programme

Tuesday, 02 April 2019 at 17:00

To ensure good order during the ceremony all those present are requested to leave the Auditorium only after the ceremony has been concluded.

The academic procession enters the Auditorium and the members of the procession take their seats on the stage.

The choir sings Gaudeamus Igitur (or a CD is played) while those present remain standing.

The Chancellor constitutes the congregation.

Choir.

Welcome.

The relevant Executive Dean presents the candidates to the Chancellor for the conferment of a degree/diploma/certificate.

Singing of the National Anthem.

The Chancellor dissolves the congregation.

The academic procession leaves the Auditorium while those present remain standing.

Lenaneo

Labobedi, 02 Moranang 2019 ka 17:00

Go kgonthiša gore dilo di sepela ka tshwanelo nakong ya moletlo, bohle bao ba tlilego moletlong ba kgopelwa go tšwa ka Holong ya kopano feela ka morago ga ge moletlo o phethilwe.

Sehlopha sa dirutegi se tsena ka Holong ya kopano gomme maloko a sehlopha se a dula ditulong tša ona sefaleng.

Khwaere e opela Gaudeamus Igitur (goba CD e tlo bapalwa) mola bao ba lego gona ba tšwela pele go ema.

Mokhanseliri o kopanya phuthego.

Khwaere.

Dikamogelo.

Hlogophethiši ya maleba ya lefapha e hlagiša dialoga go Mokhanseliri gore di newe tikrii/diploma/setifikeiti.

Go opelwa ga Koša ya Setšhaba.

Mokhanseliri o phatlalatša phuthego.

Sehlopha sa dirutegi se tšwa ka Holong ya kopano mola bao ba lego gona ba tšwela pele go ema.

Program

Dinsdag, 02 April 2019 om 17:00

Ter wille van die ordelike verloop van die plegtigheid
word alle aanwesiges vriendelik versoek
om die Ouditorium nie voor die einde van die plegtigheid te verlaat nie.

Die akademiese prosessie kom die Ouditorium binne en neem op die verhoog plaas.

Die koor sing Gaudeamus Igitur (of ‘n CD word gespeel) terwyl die aanwesiges staan.

Die Kanselier stel die kongregasie saam.

Koor.

Verwelkoming.

Die betrokke uitvoerende dekaan stel die kandidate aan die Kanselier voor vir die toekenning van ‘n graad/diploma/sertifikaat.

Sing van die volkslied.

Die Kanselier ontbind die kongregasie.

Terwyl die aanwesiges bly staan, verlaat die akademiese prosessie die Ouditorium.

Uhlelo

uLwesibili, 02 kuMbaso 2019 ngele-17:00

Ukuze kuqinisekwe ukuthi konke kuhamba kahle ngesikhathi somcimbi, bonke abakhona bacelwa ukuba baphume eHholweni kuphela lapho umcimbi usuphothuliwe.

Udwendwe lezifundiswa lungena ehholweni bese amalungu odwendwe ahlala phansi esiteji.

Ikwaya icula i-Gaudeamus Igitur (noma kudlalwa iCD) ngalenkathi labo abakhona besamile.

UShansela uhlanganisa ibandla.

Ikwaya.

Ukwamukelwa.

Izinhloko Eziyiziphathimandla ezithintekayo zethula abafundi kuShansela weNyuvesi ukuze bathole idigiri/idiploma/isitifiketi.

Kuculwa iHubo Lesizwe.

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!

QUALIFICATIONS

1. Bachelor of Science (BSc)

Baloyi, Nonhlanhla (Biochemistry and Chemistry)
Bekebeke, Lebohang Benedick (Physics and Mathematics)
Berry, Rogan Aron (Chemistry and Physics)
Bisse, Sindisiwe Nteyas (Mathematics and Economics with financial orientation)
Bussin, Daniel (Geology and Applied Geology) **(with distinction)**
Buthelezi, Xolisile (Mathematics and Mathematical Statistics)
De Beer, Dewald (Applied Mathematics and Mathematical Statistics)
De Wet, Ruan Willem (Geology and Applied Geology)
Dintsi, Bennett Siphiwe (Biochemistry and Chemistry)
Durieux, Dylan John (Physics and Mathematics)
Gambu, Bongiwe Fisiwe (Biochemistry and Chemistry)
Ground, Mason Garth (Mathematics and Mathematical Statistics with financial orientation)
Hansragh, Thishand (Mathematical Statistics and Computer Science) **(with distinction)**
Jwara, Thabiso (Applied Mathematics and Mathematics)
Khomola, Vusani Percy (Physics and Applied Mathematics)
Khoza, Caswell Salani (Applied Mathematics and Mathematical Statistics)
Khumalo, Nqakiso (Mathematics and Economics with financial orientation)
Ledwaba, Mofatlhosi (Mathematics and Economics with financial orientation)
Lekhetho, Pontsho Elizabeth (Chemistry and Physics)
Liebenberg, Keziah Elizabeth (Biochemistry and Chemistry)
Madiga, Kabelo Hebbert (Mathematics and Economics with financial orientation)
Mahomed, Raees Ahmad (Biochemistry and Chemistry)
Makgae, Orapeleng Theophilos Tshegofatso (Applied Mathematics and Mathematics)
Makgetha, Kabelo Brian (Applied Mathematics and Mathematics)
Makhaya, Keamogetswe Jane (Biochemistry and Chemistry)
Makola, Oageng Lenkwe (Biochemistry and Chemistry) **(with distinction)**
Mallu, Sufiyan Arif (Applied Mathematics and Mathematics)
Malope, Nick Tsepo (Applied Mathematics and Mathematics)
Manyisi, Malwandla Gerald (Mathematics and Psychology)
Mapoto, Shawn Thato (Applied Mathematics and Mathematical Statistics)
Marques, Michelle Carvalho (Mathematics and Economics with financial orientation)
Mashaphu, Kgopotso Moshohli (Biochemistry and Chemistry) **(with distinction)**
Masombuka, Mandla (Applied Mathematics and Computer Science)
Mathebula, Basetsana Nyeko (Applied Mathematics and Mathematical Statistics)

Mathunjwa, Thembela Puma (Geology and Physics)
Mbuli, Gugu Patience (Applied Mathematics and Mathematics)
Mhlongo, Jessica Tsakani (Biochemistry and Chemistry)
Mnisi, Lunga Frederick (Chemistry and Mathematics)
Moeng, Amogelang Malebo Antoinnete (Chemistry and Physics)
Mogale, Francis Basy (Applied Mathematics and Mathematics)
Molaudzi, Ntsieni Romani (Biochemistry and Chemistry)
Molefe, Wellcome Tiiseto (Chemistry and Physics)
Moyo, Thandolwenkosi Valery (Mathematics and Computer Science)
Mpetshwa, Vuyolwethu Princess (Biochemistry and Chemistry)
Mpinga, Nontsikelelo Daphne (Mathematics and Psychology)
Muller, Christoffel Marthinus (Mathematics and Economics with financial orientation)
Mwelase, Phindile (Applied Mathematics and Computer Science)
Myeni, Nkululeko (Mathematics and Economics with financial orientation)
Nakafu, Kyeswa Evelyn (Applied Mathematics and Computer Science)
Ngema, Khanyisile (Biochemistry and Chemistry)
Ngwenya, Andile Romeo (Geology and Chemistry)
Nyembe, Mbalenhle Clementine (Biochemistry and Chemistry)
Phakoe, Mpho (Chemistry and Physics)
Pickering, Timothy Lawrence (Biochemistry and Chemistry)
Pillay, David Pevashan (Biochemistry and Chemistry)
Qobisa, Thamsanqa (Applied Mathematics and Mathematical Statistics)
Retief, André (Geology and Chemistry)
Richards, Patrick Kyle (Geology and Applied Geology) **(with distinction)**
Sekgotlaboraga, Kamogelo (Mathematics and Computer Science)
Sibeko, Boitumelo Nationality (Physics and Mathematics)
Sikhakhane, Phumla Portia (Chemistry and Mathematics)
Simelane, Samson (Physics and Mathematics)
Sjula, Siphuxolo (Applied Mathematics and Mathematics)
Thipe, Orapeleng Phillip (Physics and Applied Mathematics)

2. Bachelor of Arts (BA Hons)

Gaeatlholwe, Vusumuzi Tshepang (Geography)
Makhoabenyane, Teboho Daniel (Geography)
Moroke, Tshepang Sheryl (Geography)
Teffo, Kamogelo Elsie (Geography)

3. Bachelor of Science Honours (BSc Hons)

Baloyi, Nsovo Happiness (Botany)
Bapela, Mmamafa Wendy (Geology)
Chele, Kekeletso Hlompho (Biochemistry) **(with distinction)**
Diallo, Fatima Binta (Geography)

Dikgale, Abia Mosebo (Energy Studies)
Dlamini, Njabulo Mqondisi (Chemistry)
Du Preez, Andrea (Chemistry)
Dube, Sifelani (Chemistry) **(with distinction)**
Fanteso, Buntu (Geography)
Fitton, Dillan (Geology)
Gamede, Noluthando Vuyelwa (Chemistry)
Gumbi, Simbongile (Chemistry)
Kubaye, Kamogelo Jerry (Geology)
Lelaka, Kgomotso Elsie (Chemistry)
Lephatsi, Motseoa Mariam (Biochemistry) **(with distinction)**
Letsatsi, Nthabiseng Patricia (Geography)
Livhalani, Daphney Lufuno (Energy Studies)
Lobeko, Marvin Karabo (Geography)
Mabasa, Jackie Lesetja (Chemistry)
Mabate, Tafadzwa Precious (Chemistry) **(with distinction)**
Mabu, Dance (Chemistry)
Machetele, Dimakatso (Geography)
Madiba, Siphiwe (Biochemistry)
Magwai, Moses (Biochemistry)
Maitin, Ida Mamolemo (Chemistry)
Makhubo, Roslinah Nompumelelo (Botany)
Makola, Lebohang Joel (Geography)
Malatji, Khukhwane Phomelelo (Botany)
Malleka, Thabisile Seipati Charity (Geography)
Mamathaba, Mashudu Patience (Geography)
Manganyi, Rapelang Happiness (Geography)
Mapapiro, Tariro Talent (Biochemistry)
Maqunga, Nomathamsanqa Prudence (Chemistry)
Marengwa, Duduzile Thabitha (Botany)
Mareya, Tatenda (Geology)
Mashazi, Thandeka Privillage (Geography)
Midzi, Nyasha (Chemistry) **(with distinction)**
Mncwabe, Khwezi Sibonginhlanhla Celiwe (Geography)
Mofulatsi, Moshidi Welheminah (Chemistry)
Mohabir, Viaksha (Energy Studies) **(with distinction)**
Mohapi, Moohlo (Energy Studies)
Moila, Amogelang (Geology)
Mokwena, Tshegofatso Maoni (Chemistry)
Molia, Reabetsoe Christine (Botany)
Morulane, Lebogang (Chemistry)
Mulaudzi, Precious Earldom (Biochemistry)
Naidoo, Zoe Anne (Biochemistry)
Netsianda, Musandiwa Rienie (Geography)
Ngobeni, Happy Tinyiko (Chemistry)
Ntshingila, Bongumusa Zami (Biochemistry)
Nyathi, Nesisa Analisa (Geography)

Peta, Makaepea Mitchelle (Energy Studies) **(with distinction)**
Petersen, Camy (Biochemistry)
Phogole, Bopaki Testimonies (Geography)
Pretorius, Chanel Joey (Biochemistry)
Sadire, Mogomotsi Joseph (Chemistry)
Santos, Marina Daniela Baptista Dos (Chemistry) **(with distinction)**
Sekgobela, Naledi Palesa Brilliantine (Biochemistry)
Selokela, Bikkie Raymond (Energy Studies)
Sepeng, Baatseba Mosebotse (Energy Studies)
Sereme, Busisiwe Viola (Energy Studies)
Shilaluke, Kolwane Calphonia (Botany)
Sikhakhane, Masilakhe (Botany)
Simelane, Siyabonga Precept (Geography)
Sitoe, Eunezia (Botany)
Siviya, Lebogang Edith (Botany)
Skosana, Sibusiso Lucky (Chemistry)
Slooten, Nicola (Biochemistry)
Steyn, Carla (Botany)
Tachiona, Tawanda (Chemistry)
Tau, Gobona Lizzie (Geology) **(with distinction)**
Tito, Ginny Sasha (Chemistry)
Tshilande, Unarine (Energy Studies)
Tshinavhe, Ronewa (Chemistry)
Van der Meer, Juliette Danielle (Energy Studies)
Wabatagore, Vushe (Biochemistry)
Watson, Keihlan Robert (Geography)
Zondi, Malibongwe (Chemistry)
Zwane, Samkelo Sypriel (Geography)

4. Master of Technology (M Tech)

May, Mbesi Bambesiwe Memento (Chemistry)
Dissertation: Green synthesis of near infrared emitting AgInSe2/ZnS and AgInSe2/ZnSe core/shell quantum dots for bioimaging.
Supervisor: Prof SO Oluwafemi

5. Master of Arts (MA)

Fortune, Su-Marie (Geography)
Dissertation: The role of climatic factors in determining tourist satisfaction: the case of five Indian Ocean Islands
Supervisor: Prof G Hoogendoorn
Co-supervisor: Dr JM Fitchett (University of the Witwatersrand)

Jones, Soleil Helen (Environmental Management)
Minor dissertation: Municipal organic waste re-imagined: A resource for resilience. A case study of the City of Cape Town.
Supervisor: Ms M Rabumbulu

6. Master of Science (MSc)

Abraham, Rowen Caleb (Geology)
Dissertation: Carbon Dioxide Adsorption Behaviour of Geological Samples from the Karoo Basin, South Africa.
Supervisor: Prof NJ Wagner

Akinseye, Samuel Akintayo (Environmental Management)
Minor dissertation: An assessment of soil erosion potential in the Klipriviersberg Nature Reserve using GIS and Remote Sensing techniques.
Supervisor: Prof F Ahmed
Co-supervisor: Dr M Abd Elbasit (Agricultural Research Council)

Brink, Raugme (Chemistry) **(with distinction)**
Dissertation: The in-situ fabrication of a high-performance of a metal polymer-nanocomposite having the potential as an electrochemical sensor for the detection of neurotransmitters.
Supervisor: Prof K Mallick

Ceronio, Willem Abraham Foord (Environmental Management) **(with distinction)**
Minor dissertation: A critical evaluation of EIA quality in the hazardous waste management sector: A case study of EIA reports in the Gauteng province of South Africa.
Supervisor: Prof IT Rampedi

Ferreira, Mizan (Biochemistry) **(with distinction)**
Dissertation: Comparative analysis of PDT with parent and metal coordinated THPP complexes on oesophageal cancer cells.
Supervisor: Prof MJ Cronjé

Fiebor, Alphonse (Chemistry) **(with distinction)**
Dissertation: Water-soluble SNS cationic palladium pincer complexes and their applications in cross-coupling reactions.
Supervisor: Prof HH Kinfe
Co-supervisor: Dr BCE Makhubela

Gonsalves, Maruschka (Environmental Management) **(with distinction)**
Minor dissertation: The establishment, Development and Organization of the Gauteng Climate Innovation Centre.
Supervisor: Prof J Rogerson

Gugushe, Aphiwe Siyasanga (Chemistry)
Dissertation: Application of magnetic nanocomposite for removal and preconcentration of trace metals in Water.
Supervisor: Prof P Nomngongo

Khumalo, Gugulethu Philadelphia (Botany) **(with distinction)**
Dissertation: An inventory of the most popular medicinal barks sold on Johannesburg muthi markets and the antimicrobial activity of selected extracts and isolated chemical compounds.
Supervisor: Prof B-E van Wyk
Co-supervisor: Dr N Sadgrove
Co-supervisor: Prof S van Vuuren (University of the Witwatersrand)

Mabasa, Tommy Fredrick (Chemistry) **(with distinction)**
Dissertation: Synthesis of sulfoximines and sulfoximines-triazole hybrids and evaluation of their antiplasmodial activity.
Supervisor: Prof HH Kinfe

Makhoba, Sizwe (Chemistry)
Dissertation: Coordination chemistry of functionalized triazole lanthanide complexes and their catalytic application.
Supervisor: Prof AJ Muller
Co-supervisor: Prof DBG Williams

Makukule, Xitshembiso Mumsy (Geology)
Dissertation: Using petrography, image analysis and tomography to validate coal washability in selected southern African coals.
Supervisor: Dr HC Dorland
Co-supervisor: Prof NJ Wagner

Mathabatha, Kabelo (Environmental Management)
Minor dissertation: A critical assessment of the quality of environmental impact assessment reports (EIARs) involving the environmental authorization of linear development activities in the Limpopo Province, South Africa.
Supervisor: Prof IT Rampedi

Moeta, Pheeha Joseph (Chemistry) **(with distinction)**
Dissertation: Source identification and exposure assessment of nanopollutants for water resources: a case study of South Africa.
Supervisor: Prof A Maity
Co-supervisor: Dr M Thwala
Co-supervisor: Dr J Wesley-Smith (Sefako Makgatho Health Sciences University)

Mogale, Mahlatse Moromo Paul (Botany)
Dissertation: The Ethnobotany of Central Sekhukhuneland, South Africa.
Supervisor: Prof B-E van Wyk
Co-supervisor: Mrs DC Raimondo (SANBI)

Moima, Johannes Thapelo (Nanoscience)
Minor dissertation: Fabrication, characterisation and assessment of ultrafiltration membranes incorporating catalytic Metal Organic Frameworks (MOFs) for water treatment process.
Supervisor: Prof RM Moutloali

Mushiana, Talifhani (Chemistry) **(with distinction)**
Dissertation: Development of an electrochemical nano-biosensors for arsenic detection.
Supervisor: Dr N Mabuba
Co-supervisor: Prof OA Arotiba

Ndhlovu, Mzwandile Brian (Geology)
Dissertation: A mineralogical and geochemical study of platinum-group minerals and base-metal sulphides in the P1 and P2 units of the Platreef at the Akanani project area, Lonmin PLC.
Supervisor: Prof KS Viljoen
Co-supervisor: Mr M Knoper

Nthwane, Yvonne Boitumelo (Chemistry)
Dissertation: Risk assessment of nano-pollutants released from select nano-enabled products in fresh and waste water.
Supervisor: Prof A Maity
Co-supervisor: Dr M Thwala

Ramotse, Morwesi Silvia (Environmental Management)
Minor dissertation: Factors influencing the generation, management and minimization of food waste in selected neighbourhoods in the City of Tshwane Metropolitan Municipality in South Africa.
Supervisor: Prof IT Rampedi

Selahle, Shirley Kholofelo (Chemistry) **(with distinction)**
Dissertation: Development of liquid phase microextraction techniques for analysis of engineered nanoparticles and selected emerging pollutants in wastewater.
Supervisor: Prof P Nomngongo

Sithole, Kagiso (Chemistry)
Dissertation: Synthesis of Novel Isochromanes as Potential Antibacterial Agents.
Supervisor: Dr EM Mmutlane

7. Philosophiae Doctor (PhD)

Chigondo, Marko (Chemistry)
Thesis: Mixed-Metal oxide conducting polymer nanocomposites for the removal of fluoride and Cr(VI) from aqueous solution.
Supervisor: Prof K Pillay
Co-supervisor: Prof A Maity

Kortidis, Ioannis (Chemistry)
Thesis: Indium-Zinc Oxide Nanostructure Materials Based Sensors for the Detection of Volatile Organic Compounds and Carbon Monoxide.
Supervisor: Prof S Sinha Ray
Co-supervisor: Prof D Motaung (CSIR)

Magwede, Khathutshelo (Botany)
Thesis: A quantitative survey of traditional plant use of the *Vhavenḓa*, Limpopo Province, South Africa.
Supervisor: Prof B-E van Wyk
Co-supervisor: Prof AE van Wyk (University of Pretoria)

Moloto, Kgantjie Walter (Biochemistry)
Thesis: A proteomics approach to identify protein biomarkers associated with meat tenderness in Nguni, Bonsmara, Brahman and Charolais breeds.
Supervisor: Dr G Koorsen
Co-supervisor: Dr L Frylinck (Agricultural Research Council)

Vafeas, Nicholas Andrew (Geology)
Thesis: Mineralogical and geochemical modification of manganese ore in response to fluid flow through the Hotazel Formation of the Kalahari Manganese Field, Northern Cape Province, South Africa.
Supervisor: Prof KS Viljoen
Co-supervisor: Dr LC Blignaut

8. Philosophiae Doctor *(honoris causa)* (PhD *(hc)*)

Feringa, Bernard Lucas

Chigondo, Marko (PhD)

Marko Chigondo was born in Chivhu, Zimbabwe in 1971. He completed his Advanced Level at Mzlikazi High School, in Bulawayo in 1990. He obtained a BSc Honours degree in Applied Chemistry from the National University of Science and Technology, in Bulawayo Zimbabwe in 1994. In 2012 he obtained an MSc degree in Materials Chemistry from the Midlands State University in Gweru, Zimbabwe. He enrolled for a PhD degree at the University of Johannesburg in 2016.

Mr Chigondo conducted a study on three types of mixed-metal oxide –conducting polymer nanocomposites for the removal of fluoride and Cr(VI) from aqueous solution. In his first study on fluoride removal he found that a hydrous cerium-magnesium bimetal oxide composite with polypyrrole had adsorption capacities ranging from 66.23−80.00 mg/g at a pH of 5.5. In the second study on fluoride removal he decorated polyaniline nanofibers with hydrous CeO_2 and Fe_3O_4 nanometal oxides and this adsorbent had adsorption efficiencies of 93.46-117.64 mg/g over a pH range of 3-10. In his third and final study he developed a magnetic arginine-functionalized polypyrrole (Fe_3O_4@Arg-PPy) nanocomposite and used this material for the removal of Cr(VI). This adsorbent had a maximum adsorption capacity of 322.58 mg/g at pH 2 and experimental evidence that this adsorbent was able to reduce Cr(VI) to Cr(III) was obtained. All three studies have been published in internationally accredited peer-reviewed journals.

Supervisor: Prof K Pillay
Co-supervisor: Prof A Maity (CSIR)

Kortidis, Ioannis (PhD)

Ioannis Kortidis was born in Athens-Greece in 1978. He matriculated high school in 1996. He obtained an honours degree from the Technological Educational Institute of Heraklion-Crete-Greece, majoring in Medical Systems Technology. In 2011 he obtained an MSc degree in Chemistry from the University of Crete (Greece). He enrolled for a PhD degree at the University of Johannesburg in 2017. Mr Kortidis is currently involved as a Materials Scientist in the establishment of a Nano-Micro Fabrication Devices Facility at Council for Scientific and Industrial Research (CSIR).

The mandate for detection and monitoring of various toxic and volatile gases in various countries, more specifically in South Africa is high. This is justified by several deaths reported in the country due to exposure to these gases. To address these issues, Mr Kortidis's project focused on a strategy for the synthesis of semiconductor metal oxide nanostructure based sensors. These sensors function at low operating temperature such as room temperature with higher sensitivity and selectivity, which enables projections towards low cost, low power consumption, and portable gas sensors, which will be valuable for domestic and industrial applications. This work has great potential for applications that link the scientific laboratory to everyday-life. The thesis has resulted in 2 international peer-reviewed publications with another under review.

Supervisor: Prof S Sinha Ray
Co-supervisor: Prof DE Motaung (CSIR)

Magwede, Khathutshelo (PhD)

Khathushelo Magwede was born in Vuvha village, Vhembe District, Limpopo Province in 1973, and matriculated at the Shayandima Secondary School in 1992. He obtained a BA degree (1995), a Higher Education Diploma (1996), a BSc honours degree (2000) and an MSc degree in Botany (2012), all from the University of Venda. In 2014, he enrolled at the University of Johannesburg for a PhD degree in Botany. He is currently employed by the University of Venda.

A unique approach was followed in this study that combined field surveys with non-structured interviews in four villages, supplemented by visual cues and conducted in the vernacular 'Tshivenḓa'. The information was subjected to quantification by the matrix method, and have expanded our knowledge on the ethnobotany of the Vhavenḓa. A comprehensive inventory of 121 families, 355 genera and 575 species of useful plants was compiled, of which 145 species (25%) were recorded for the first time as having ethnobotanical relevance. From the total of 897 *Tshivenḓa* plant names, 238 were recorded for the first time. The data represent a baseline from which future cultural changes in *Vhavenḓa* ethnobotany can be studied and quantified. It allows for fascinating and rigorous comparisons between different regions, cultures and language groups. The data will also serve to maximize the potential long term cultural, scientific and commercial benefits that can be derived from the rich local flora. The main findings of the thesis have been presented at national and international conferences and two international peer-reviewed publications are currently in press.

Supervisor: Prof B-E van Wyk
Co-supervisor: Prof AE van Wyk (University of Pretoria)

Moloto, Kgantjie Walter (PhD)

Kgantjie Walter Moloto was born in Tembisa Township in 1985. He is the third born of the late Thomas and Maria Moloto. He matriculated at Karabi Senior Secondary School in 2002. He obtained a B.Sc. degree majoring in Chemistry and Biochemistry in 2006, followed by a B.Sc. (Hons.) degree in Biochemistry from the University of Limpopo in 2007. In 2012, he obtained an MSc degree in Biochemistry and registered for a PhD at the University of Johannesburg in 2013. He is currently employed as a junior researcher at the Agricultural Research Council (ARC).

The imprecise judgement of meat tenderness based on the slaughter age of an animal negatively affects the meat industry and there is a need to develop new ways of judging meat tenderness irrespective of animal age. The objective of this study was to identify meat tenderness protein biomarkers that are differentially expressed during meat aging in four beef-producing breeds. Carcasses were chilled and meat tenderness evaluated by employing a number of mechanical and biochemical assays. Protein levels were determined by 2D-PAGE and mass spectrometry. Several proteins involved in energy metabolism, signalling and regulatory processes were identified as potential meat tenderness biomarkers. Apart from illuminating *post mortem* changes in muscle metabolism, the findings of this study can now be employed to develop an accurate method of meat tenderness irrespective of the slaughter age of the animal. The study has resulted in three international peer-reviewed publications and three international conference presentations.

Supervisor: Dr G Koorsen
Co-supervisor: Dr L Frylinck (Agricultural Research Council)

Vafeas, Nicholas Andrew (PhD)

Nicholas Vafeas was born in the mining town of Odendaalsrus in 1988 and matriculated from Welkom Gimnasium High School in 2007. He obtained a BSc degree majoring in Geology and Environmental Science, followed by an honours degree in Geology from the University of Johannesburg. His MSc, which was based on the geochemical and petrographic characterisation of the manganese ore of the Hotazel Formation, was awarded with a distinction in 2016, from the University of Johannesburg. Nicholas enrolled for a PhD degree at the same university in 2016. He will be taking up a post-doctoral position at University College Dublin, where he will be conducting research on Pb-Zn deposits in Ireland.

In his doctoral study the candidate assessed the geochemical and isotopic signatures of manganese ore of the Kalahari Manganese Field, as a result of hydrothermal and supergene fluid infiltration. This analysis allowed for detailed insight into the processes related to the deposition and diagenesis of the primary manganese-rich sediment, and the subsequent upgrading thereof to ore grade. His work has resulted in a full characterisation of manganese ore above the Blackridge thrust fault. He identified a previously unrecognised supergene event which enabled him to redefine the currently accepted age of erosion along the Kalahari unconformity. This work resulted in three articles published in international accredited journals

Supervisor: Prof KS Viljoen
Co-supervisor: Dr LC Blignaut

Feringa, Bernard Lucas **(PhD *(hc)*)**

Professor Bernard Lucas Feringa obtained his PhD degree from the University of Groningen in the Netherlands under the guidance of Prof Hans Wynberg. After working as a research scientist at Shell in the Netherlands and at the Shell Biosciences Centre in the UK, he was appointed in an academic position and in 1988 as full professor at the University of Groningen and named the Jacobus H. van't Hoff Distinguished Professor of Molecular Sciences in 2004. He was elected Foreign Honorary member of the American Academy of Arts and Sciences and is a member and vice-president of the Royal Netherlands Academy of Sciences. In 2008, he was knighted by Her Majesty the Queen of the Netherlands.

Prof Feringa has been awarded numerous prizes, including the 2004 Spinoza Prize, the highest Dutch prize in science which is awarded by the Netherlands Organisation for Scientific Research (NWO). In 2008, the Royal Netherlands Academy of Arts and Sciences (KNAW) appointed Prof Feringa as the Academy Professor, giving him the opportunity to concentrate on his areas of interest in the field of innovative teaching and research for five years. In 2011, he received the Van't Hoff medal, which is awarded once every ten years by the University of Amsterdam for work in the field of chemistry.

In 2013, Prof Feringa was awarded the Lilly European Distinguished Science Award, followed by the Marie Curie Medal, the highest honour awarded annually by the Polish Chemical Society for Chemists working outside of Poland. Also in 2013, he was awarded two important Japanese prizes followed by the prestigious Cope Scholar Award of the American Chemical Society in 2014. In November 2015, he received the Chemistry for the Future Solvay Prize.

Prof Feringa won the 2016 Nobel Prize in Chemistry, together with Jean-Pierre Sauvage (France) and Sir James Fraser Stoddart (UK) for their work on the development of molecular machines. His research interest includes stereochemistry, organic synthesis, asymmetric catalysis, optopharma, molecular switches and motors, self-assembly and molecular nanosystems.

As a chemist, Prof Feringa is interested in molecular construction. "I am a molecule builder trying to construct smart molecules", he says. "Building a moving molecule is not that difficult in itself, but being able to steer it, have control over it, is a different matter". In 1999, Prof Feringa presented the first molecular motor, consisting of a molecule, part of which performed a full rotation under the influence of light and heat. He has designed many different engines since, even including a molecular '4-wheel drive' car by fixating the molecular engine molecules to a surface. Prof Feringa developed a nano 'mill park' in which the mills rotate when exposed to light. Recently, he described the world's first symmetrical molecular engine. He also succeeded in putting these molecular engines to work, having them turn a glass cylinder 10 000 times their size.

See the back cover for the words of the National Anthem.