



Graduation Programme

The Future. Reimagined.



**Welcome to the
Graduation Ceremony
of the
University of Johannesburg
16 May 2019**

**Welkom by die
Gradeplegtigheid
van die
Universiteit van Johannesburg
16 Mei 2019**

**Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
16 Mopitlo 2019**

**Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
16 kuNhlaba 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)

CHIEF PEOPLE OFFICER

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
BAFA (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
Prof A Parekh
Dr WP Rowland
Prof A Strydom
Dr M Tom

Programme

Thursday, 16 May 2019 at 13:00

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

Labone, 16 Mopitlo 2019 ka 13:00

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

Donderdag, 16 Mei 2019 om 13:00

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 proses 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 proses die Ouditorium.

Uhlelo

uLwesine, 16 kuNhlaba 2019 ngelo-13:00

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

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/iploma/isitifiketi.

Kukulwa 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. National Diploma

Dhlamini, Lungile Patricia (Transportation Management)
Goje, Ziphozihle (Logistics)
Hlathi, Tshepang (Transportation Management)
Jabane, Siyasanga (Transportation Management)
Jiba, Mongezi (Logistics)
Kalan, Samukelisiwe Anastasia (Transportation Management)
Kemp, Kgalalelo Collin (Transportation Management)
Kgatitsoe, Phillippine Katlego (Logistics)
Makhubela, Basani (Transportation Management)
Maloka, Katleho (Transportation Management)
Mandindi, Mbulelo (Transportation Management)
Masemola, Keneilwe (Transportation Management)
Mashavhathanga, Thina Justice (Logistics)
Matanda, Andrew (Transportation Management)
Mathebula, Zwelethu Theophyl (Logistics)
Mosenye, Tshegofatso Charmaine Kim (Logistics)
Motaung, Mamohlobodi Euphonia (Transportation Management)
Motha, Prudence Zinhle (Logistics)
Mphephu, Maanda Innocent (Transportation Management)
Msakatya, Lerato (Transportation Management)
Mthombeni, Nolwandle Zinhle (Transportation Management)
Mulaudzi, Sabelo Seth (Transportation Management)
Musandiwa, Innocent (Transportation Management)
Ntlangane, Azole (Transportation Management)
Ntuli, Siwelele (Logistics)
Phasha, Dimakatjo Carleton (Transportation Management)
Phogole, Resoketswe Mogau Molobe (Logistics)
Rathelele, Tshegofatso Pulana (Transportation Management)
Sebego, Amogelang Motshela (Logistics)
Setshedi, Itumeleng Sello Isaac (Logistics)
Shabalala, Bantwabahle (Transportation Management)
Shiburi, Mmonwa Audra (Transportation Management)
Singonzo, Nwabisa (Transportation Management)
Thamang, Bongani (Transportation Management)
Thusi, Nokuthula Berlindah (Logistics)
Vilakazi, Njabulo Blessing Nkosingiphile (Transportation Management)

2. Baccalaureus Technologiae (Logistics)

Gumbi, Kimberly (Transportation Management)
Maila, Mpumelelo Mapitsi Nestor (Logistics)
Meso, Nakedi Rabby (Transportation Management)
Ndlovu, Ronnie Senzokuhle (Transportation Management)
Ngwevu, Nonhlanhla Mirriam (Logistics)
Panavanhu, Samantha (Logistics)
Sithole, Tumelo Thamsanqa (Logistics)
Tlokwe, Sharon (Logistics)

3. Bachelor of Commerce

Adam, Mohammed (Logistics Management)
Bapela, Lebogang Leago Ngwanamadila (Logistics Management)
Chauke, Tiharihani Progress (Logistics Management)
Desmukh, Aatif (Logistics Management)
Dlamini, Londiwe Zesipho (Logistics Management)
Earl, Lauren Courtney (Logistics Management)
Gumede, Simphiwe Senamile (Logistics Management)
Mahlatji, Thapelo (Logistics Management)
Matambuye, Hangwani Latoya (Logistics Management)
Mathe, Dineo Valencia (Logistics Management)
Miya, Tshepo Kgabane (Transport Economics)
Mohlabeng, Phomolo (Logistics Management)
Monamodi, Zanele Victoria (Logistics Management)
Ndwandwe, Ntokozo Shannon (Transport Economics)
Nkachela, Tsholofelo Hope (Logistics Management)
Nkosi, Mbali (Logistics Management)
Phiri, Douglas Ambali (Logistics Management)
Rahube, Amanda (Transport Economics)
Rajpal, Mikisha (Logistics Management)
Ramala, Thato Caroline (Logistics Management)
Rangwato, Mohale George (Logistics Management)
Seloane, Thetsoane Katlego (Logistics Management)
Shabalala, Nonhlanhla Fortunate (Logistics Management)
Soko, Lerato Doris (Logistics Management)
Thabethe, Bontle Precenter (Logistics Management)
Ziqubu, Sakhile Ginious (Logistics Management)

4. Bachelor of Commerce Honours

Apolinario, Angel Emanuel Ernesto (Logistics Management)

Choma, Tshireletso Eve (Transport Economics)
Goxo, Bonolo Luyanda (Logistics Management)
Holmes, Kim Roche (Transport Economics)
Kubuzie, Sekati Selaelo (Logistics Management)
Lerebolo, John Oabile (Logistics Management)
Letlhogile, Nomathemba Resego (Transport Economics)
Mabaleha, Sebatatso Cornelia (Logistics Management)
Mabuza, Sinqobile (Logistics Management)
Madiwana, Thato Theo (Transport Economics)
Mahashe, Nolitha (Logistics Management)
Mahiwa, Dipuo Allela (Logistics Management)
Mahlangu, Gugulethu Hilda (Logistics Management)
Makhubela, Letta Tshepiso (Logistics Management)
Matlala, Palesa (Transport Economics)
Mavhungu, Thendo Valecia (Transport Economics)
Mavuma, Thobile Njabulo (Logistics Management)
Mkhabela, Nelisiwe Glender (Transport Economics)
Mkhize, S'phamandla Joseph (Logistics Management)
Moloko, Lesego Tshegofatso (Logistics Management)
Moloko, Masego Katlego (Logistics Management)
Mosia, Itumeleng Faith (Transport Economics)
Nemaheni, Khuliso (Logistics Management)
Sibanyoni, Chelsea Ntokozo (Logistics Management)
Tshabalala, Clever Ricky (Logistics Management)
Van Dyk, Phoebe Anna (Transport Economics)

5. Master of Commerce

Brink, Beatrix Sarette (Logistics Management)
Dissertation: Challenges faced in last mile e-grocery delivery: A consumer's perspective
Supervisor: Mr GJ Heyns
Co-Supervisor: Dr PJ Kilbourn

6. Bachelor of Science (BSc)

Bah, Gassimu (Computer Science and Informatics)
Bokaba, Zeubilon Ranti (Mathematics and Economics with financial orientation)
De Lange, Samantha Diandr  (Chemistry and Physics)
Dlamini, Siphon (Mathematics and Economics with financial orientation)
Dube, Divine (Information Technology)
Essof, Riyaadh Mahomed (Information Technology)
Gasparet, Danilo Michele (Computer Science and Informatics)

Gundwana, Siyabonga (Computer Science and Informatics)
Hlapa, Phillip Motlau (Computer Science and Informatics)
Hove, Kudzai Michelle (Mathematics and Economics with financial orientation)
Jannasch, Ian (Information Technology) **(with distinction)**
Khalaki, Luyanda Reneiloe (Computer Science and Informatics)
Khosa, Savelo (Applied Mathematics and Computer Science)
Khwanda, Thusani (Applied Mathematics and Mathematics)
Kobela, Joseph (Computer Science and Informatics)
Legrand, Joseph Promise (Computer Science and Informatics)
Lekoloane, Sephamandla (Mathematics and Computer Science)
Lekometsa, Lehlohonolo (Computer Science and Informatics)
Mabiletsa, Oageng (Computer Science and Informatics)
Mabina, Maropeng (Computer Science and Informatics)
Mabuza, Bright Sfiso (Computer Science and Informatics)
Majola, Joel (Information Technology)
Malomane, Nomzamo Sharlote (Biochemistry and Chemistry)
Marebane, Thabo David (Applied Mathematics and Mathematics)
Masina, Alex Msimisi (Applied Mathematics and Mathematics)
Mathobela, Matshuene Rose (Geology and Mathematics)
Matodzi, Andy Kgotatso (Computer Science and Informatics)
Mfune, Crayton (Computer Science and Informatics)
Mkhonazi, Blessing Danisile (Biochemistry and Chemistry)
Mnisi, Uram (Computer Science and Informatics)
Moate, David Pleasure Titus (Geology and Applied Geology)
Mogagabe, Osego Rebonethebe (Computer Science and Informatics)
Mokgawa, Madimetja Phineas (Computer Science and Informatics)
Mommsen, Michael (Computer Science and Informatics)
Mphahlele, Mogale (Computer Science and Informatics)
Mustapha, Nadiera (Physics and Mathematics)
Muzondiona, Tatenda Tikhonov (Computer Science and Informatics)
Muzvidzwa, Boddington Anesu (Physics and Applied Mathematics)
Nakhooda, Faaizah (Information Technology)
Ndovela, Siyabonga Gift (Computer Science and Informatics)
Nduli, Xolani Benjamin (Computer Science and Informatics)
Ngobeni, Theodore Hlulani (Computer Science and Informatics)
Ngobeni, Mahlori (Computer Science and Informatics)
Ngwenya, Siyabonga Simon (Geology and Applied Geology)
Phemba, Sambu (Computer Science and Informatics)
Pilusa, Clement Moeng (Computer Science and Informatics)
Polinyane, Leboea Mikiea (Applied Mathematics and Mathematics)
Ramodike, Kabelo Tiro (Information Technology)
Shitlhelani, Tsunduka Vuxaka (Mathematics and Psychology)
Sinon, Mohavia Ben Amid (Applied Mathematics and Computer Science)
Siobo, Musiwa (Applied Mathematics and Mathematics)
Sithole, Wendy Zinhle (Applied Mathematics and Mathematics)

Swafu, Mafori Johannes (Mathematics and Economics with financial orientation)
Thamaga, Ramadimetje Poeletso (Applied Mathematics and Mathematics)
Theron, Morné (Information Technology)
Tshabangu, Cindy Rhulani (Mathematics and Mathematical Statistics)
Tshwete, Nangamso (Computer Science and Informatics)

7. Bachelor of Science Honours (BSc Hons)

Chikore, Tichaona (Applied Mathematics)
Confait, Troy Dalton (Mathematics)
Hokonya, Delegate Tungamirai (Mathematical Statistics)
Joseph, Tasneem Rasool (Mathematics)
Ledwaba, Malesela Edwin (Mathematics)
Litshokhotha, Rudzani (Applied Mathematics)
Ma, Jackie Ka Kui (Mathematics)
Mabale, Faith Gomolemo (Computer Science)
Makombe, Michael (Computer Science)
Mohlala, Katlego Baaganang Ntlatsi (Informatics)
Molope, Reneiloe Ruth Nikiwe (Applied Mathematics)
Mthimkhulu, Mbuso Blessing (Mathematics)
Muthuphei, Gundo (Applied Mathematics)
Ngubane, Sethabile Khethiwe (Applied Mathematics)
Ntsoane, Pelane Kgomotso (Applied Mathematics)
Phora, Mahlatse Fortunate (Applied Mathematics)
Rakau, Kgaugelo Ezekiel Matthews (Applied Mathematics)
Sathekge, Morutla Faith (Applied Mathematics)
Tseki, Naledi Mamosa (Chemistry)
Wessels, Francois Jacobus (Mathematics)

8. Master of Technology (M Tech)

Dube, Sakhile Thokozani (Chemistry) **(with distinction)**
Dissertation: Hyperbranched polyethyleneimine-multi-walled carbon nanotubes (HPEI/MWCNTs) polyethersulfone (PES) membrane incorporated with Fe-Cu bimetallic nanoparticles for water treatment.
Supervisor: Dr SP Malinga
Co-supervisor: Prof R Moutloali

Mojela, Segopotse Happiness (Chemistry)

Dissertation: Natural Organic Matter (NOM) fractionation, identification and quantification of surface water supplied to Eskom power stations using Liquid Chromatography-Organic Carbon Detection (LC-OCD).

Supervisor: Dr SP Malinga

Co-supervisor: Dr H Madhav (Eskom)

Co-supervisor: Mr G Gericke (Eskom)

9. Master of Science (MSc)

Akanji, Seyi Philemon (Chemistry) (with distinction)

Dissertation: Characterisation, identification and electrochemical application of an unknown clay for detection of Pb(II).

Supervisor: Dr D Nkosi

Co-supervisor: Prof OA Arotiba

Batchelor, Kyle Fraser (Chemistry) (with distinction)

Dissertation: Co(III) amine complexes investigated as amide bond cleavage agents with urea: selected amino acids and simple peptides.

Supervisor: Dr C Arderne

Dauids, Bianca Leigh (Chemistry) (with distinction)

Dissertation: Synthesis and Characterization of Rh(I) Organometallic Complexes and their Evaluation as (Pre)catalysts for the Aqueous Biphasic Hydroformylation of 1-Octene.

Supervisor: Dr BCE Makhubela

Co-supervisor: Dr E Mmutlane

Mashile, Prudence Phodiso (Chemistry)

Dissertation: Occurrence of Cyanobacteria toxins viz Microcystins, Nodularis and Cylindrospermopsin in conventional water treatments plants characterized by condition of treatment plant.

Supervisor: Prof PN Nomngongo

Mekgoe, Nokuthula (Chemistry) (with distinction)

Dissertation: High Fluoride-concentration in groundwater, related health issues and remediation using Rooibos tea waste loaded with Ce/Zr oxides.

Supervisor: Prof K Pillay

Co-supervisor: Prof H Mouri

Motingoe, Mahlomola (Informatics)

Dissertation: New organisational models that break silos in organizations to enable software delivery flow.

Supervisor: Prof JJ Langerman

Moyo, Pamela Suzzana (Chemistry) **(with distinction)**

Dissertation: Selective hydrogenation of furfural to furfural alcohol and aqueous phase Mizoroki-Heck cross-coupling catalyzed by new water-soluble Pd(II) and Pt(II) tridentate O^NO complexes.

Supervisor: Dr BCE Makhubela

Muzenda, Charles (Chemistry)

Dissertation: Diphenylphosphino-N,N-Diisobutylamine as a Co-catalyst in Pd(II)-Catalyzed Mitsunobu-Coupling of Aryl Chlorides.

Supervisor: Dr E Mmutlane

Co-supervisor: Prof CM Maumela

Ramike, Matshidiso Patricia (Chemistry)

Dissertation: Synthesis, characterization and application of graphene-TiO₂-SnO₂-Fe₃O₄ ternary nano-composite as electrodes in sodium-ion batteries.

Supervisor: Prof PG Ndungu

Co-supervisor: Dr NW Maxakato

Sihlahla, Masixole (Chemistry) **(with distinction)**

Dissertation: Assessment of extraction, bioavailability, distribution, contamination and health impact of some potential harmful elements in environmental matrices collected from selected areas in Eastern Cape Provinces.

Supervisor: Prof PN Nomngongo

Co-supervisor: Prof H Mouri

Sikeyi, Ludwe Luther (Chemistry)

Dissertation: Electro-catalytic properties of Palladium alloy Carbon Nanofiber composite materials as electrodes in Direct Alcohol Fuel Cells.

Supervisor: Dr NW Maxakato

Co-supervisor: Dr AS Adekunle (Obafemi Awolowo University, Nigeria)

Van Niekerk, Chani Stella (Physics)

Dissertation: Influence of sample purity on the electronic structure of TiSe₂.

Supervisor: Dr E Carleschi

10. Doctor Commercii (DCom)

Van der Walt, Tersia (Informatics)

Thesis: A Model of Political Corporate Governance of Information and Communication Technology in the South African Government.

Supervisor: Prof SH von Solms

11. Philosophiae Doctor (PhD)

Davila, Randy Ryan (Mathematics)

Thesis: Total and zero forcing in graphs.

Supervisor: Prof MA Henning

Du Toit, Jaco Louis (Computer Science)

Thesis: An innovative model for the mobile computing.

Supervisor: Dr ID Ellefsen

Idris, Azeez Olayiwola (Chemistry)

Thesis: Development of Electrochemical and Photoelectrochemical Biosensors Based on Carbon Nanoparticles-dendrimer Derivatives for Carcino-embryonic antigen and Alpha fetoprotein Cancer biomarkers.

Supervisor: Prof OA Arotiba

Co-supervisor: Dr N Mabuba

Ngigi, Eric Mwangi (Chemistry)

Thesis: Photocatalytic degradation of parabens in water with modified tungsten oxide nanoparticles.

Supervisor: Prof JC Ngila

Co-supervisor: Prof PN Nomngongo

Opoku, Francis (Chemistry)

Thesis: Origin of enhanced visible-light photocatalytic activity of elemental-doped semiconductors with varying nanocomposites: A First-Principle study.

Supervisor: Prof PP Govender

Co-supervisor: Dr KK Govender (Meraka Institute)

Co-supervisor: Prof CGCE van Sittert (North-West University)

Xaba, Morena Samuel (Chemistry)

Thesis: Catalytic Applications of Mesoporous Transition Metal Oxides and Supported Au and Pt Nanoparticles for Oxidation and Hydroformylation Reactions.

Supervisor: Prof R Meijboom



Van der Walt, Tersia (DCom)

Tersia van der Walt was born in Pretoria. She matriculated at Erasmus High School in Bronkhorstspuit in 1972. She obtained a BCom degree, majoring in Industrial Psychology and Business Economics in 1995, followed by Masters in Business Leadership from UNISA in 2007. She achieved a distinction for her Research Report and the group, of which she was the group leader, received the special CSIR award for the best company analysis on executive project management. She enrolled for a DCom degree at the University of Johannesburg in 2012.

This DCom project investigated the Political Corporate Governance of Information and Communications Technology in the South African Government and identifies how the lack of such political governance and accountability for ICT is core to the problems with service delivery, fraud and corruption in SA. The identified weaknesses of the present system of Political Corporate Governance of ICT and the relation with bad service delivery was informed by several strategic reports and audits, amongst others by the Auditor-General of SA. In this doctoral study, a model was developed to address the identified weaknesses, suggesting that the political responsibility for the Corporate Governance of ICT should come from the highest level namely Parliament and Cabinet. The model also proposed a dedicated Government Department for Information and Communications Technology, headed by a Minister for Information and Communications Technology.

Supervisor: Prof SH von Solms



Davila, Randy Ryan (PhD)

Randy Davila was born in Houston Texas in the United States. He received his BSc degree majoring in Applied Mathematics, with a minor in Applied Statistics, from the University of Houston-Downtown in 2012. In 2015 he obtained a MA degree in Computational and Applied Mathematics from Rice University. Following his MA degree, he enrolled for a PhD degree at the University of Johannesburg in 2016. Mr Davila is currently employed as a lecturer at the University of Houston-Downtown and will begin a tenure-track assistant professor position beginning Fall 2019.

The thesis provides a series of results on the dynamic graph colouring known as zero forcing and total forcing in graphs. Tight upper and lower bounds are provided, as well as approximation algorithms, on the computationally expensive zero forcing and total forcing numbers of graphs. Results relating this dynamic graph colouring to well-studied graph theoretic notions are established. Notably, this study is the first which intimately relates zero forcing and total forcing to both the independence number and domination related parameters in graphs. The thesis resulted in eight manuscripts, seven of which have to date been peer reviewed and accepted for publication in highly ranking scientific journals in combinatorics with the remaining manuscript currently in the reviewing process. These journals include Discrete Applied Mathematics, Graphs and Combinatorics, and the prestigious Applied Mathematics and Computation.

Supervisor: Prof MA Henning



Du Toit, Jaco Louis (PhD)

Jaco du Toit was born in Ladysmith. He matriculated at Hoërskool Kempton Park in 1991. He obtained his BSc (Earth Sciences) degree at the Rand Afrikaans University in 1994 and his honours degree in Computer Science in 2001. In 2013 he obtained his MSc in Computer Science (Cum Laude) at the University of Johannesburg. He enrolled for his PhD degree at the University of Johannesburg in 2014. He is currently employed as a lecturer at the Academy for Computer Science and Software Engineering. He is married and has two daughters.

Very often users use mobile devices for both business and personal purposes, resulting in the user's device containing both business and personal data. This situation causes a major cyber security risk. In his thesis, Jaco du Toit creates a unique model, called the Neo model addressing precisely this problem. The Neo model supports a special mobile device, called the Neo device. The Neo device enables a user to use the device for both personal and business purposes. Through the Neo model's Isolation Property, the Neo device enforces strict separation and isolation between business and personal data stored on the Neo device. The study has international importance since the Neo model enforces data isolation and separation in a single device, addressing the very real 'Bring your Own Device' risks in present data governance. The thesis resulted in three international peer-reviewed conference proceedings and one international peer-reviewed journal publication.

Supervisor: Dr ID Ellefsen



Idris, Azeez Olayiwola (PhD)

Azeez Olayiwola Idris was born in Lagos, Nigeria. He matriculated at Reservation Secondary School in 2002, followed by a BSc degree (cum laude) in Industrial Chemistry from the University of Ado-Ekiti, Nigeria in 2008. Mr Idris obtained a Master's degree in Chemistry from the University of Johannesburg (UJ) in 2016 and enrolled for a PhD degree at the same institution in the same year. He is currently a research assistant in the Electrochemistry Laboratory in the Department of Chemical Sciences (DFC).

The success of cancer therapy largely depends on early detection or diagnosis. Thus, research in the area of cancer diagnostics or screening tools are of great importance globally. Mr Idris, through his doctoral work, has contributed to the field of cancer detection by developing biosensors for the detection of selected cancer biomarkers such as alpha-feto protein and carcinoembryonic antigen. He contributed to the advancement of the field of electrochemical immunosensors by contributing novel nanomaterial composites as platforms, which improved the electrochemical signals obtained from the interaction between antibody and antigen (biomarkers) on the electrode surface. Some of the materials used as biosensor platforms include gold nanoparticles, carbon nanoparticles, carbon nanodots, manganese (IV) oxide nanorods and poly (propyleneimine) dendrimers. The South Africa Chemical Institute and South Africa Nanotechnology initiatives supported the work. Four articles in international journals have been published from this work and some of the results have been presented at local and international conferences

Supervisor: Prof OA Arotiba

Co-supervisor: Dr N Mabuba



Ngigi, Eric Mwangi (PhD)

Eric Mwangi Ngigi was born in Nairobi. He completed his secondary education at Ruiru High School in 1996. In 2006, he obtained a Diploma in Analytical Chemistry from Murang'a College of Technology. He obtained his BSc Honours degree in Chemistry from Catholic University of Eastern Africa in 2010. In 2012 he obtained an MSc degree in Analytical Chemistry from the University of Huddersfield in the United Kingdom. He enrolled for a PhD degree at the University of Johannesburg in 2015.

Mr. Ngigi's project investigated nano-engineered materials for the degradation of parabens in aqueous solutions, using modified tungsten trioxide. Metal ions and semiconductors were used as dopants to improve the effectiveness of tungsten trioxide nanophotocatalysts for water treatment, as photocatalysis has great potential in utilizing green and sustainable solar energy for removing organic pollutants and harmful bacteria in polluted water. He investigated three types of nanophotocatalysts namely Fe-doped WO_3 ; Z-scheme $\text{CdS}-\text{WO}_3$ and Z-scheme $\text{Co}_3\text{O}_4/\text{WO}_3$ for degradation of parabens and methyl blue. The study achieved 99.9% removal of methylparabens in wastewater. The candidate demonstrated that the developed novel nanoengineered materials are effective in environmental remediation of parabens and other emerging organic pollutants in water. Mr. Ngigi has published two articles in international peer-reviewed journals and three other manuscripts are currently under review. He has also presented his research findings at four local and international conferences.

Supervisor: Prof JC Ngila

Co-supervisor: Prof PN Nomngongo



Opoku, Francis (PhD)

Francis Opoku was born in the Ashanti Region of Ghana. He obtained his BSc (First Class Honours) and MPhil Degrees in Chemistry and Inorganic Chemistry, respectively, at the Kwame Nkrumah University of Science and Technology, Kumasi–Ghana. He enrolled for a PhD degree at the University of Johannesburg in 2016 and was awarded a Global Excellence and Statue (GES) Doctoral Scholarship in 21017. As he awaits his graduation, Mr Opoku is working on three collaborative projects with the Departments of Biochemistry and Mechanical Engineering Science at UJ and the Technische Universität Berlin.

Mr Opoku's doctoral research focused on predicting hybrid hetero-structure-based photocatalyst material, with efficient stability and activity in environmental remediation and energy applications, using first-principle calculations. The electronic structures, synergistic effect, optical property, underlying mechanism, effects of interfacial composition and the role that the hetero-structure interface plays in the visible light performance of clean water and hydrogen production, were systematically investigated. The theoretical exploration of these hybrid heterostructures will not only widen our fundamental knowledge of solar energy conversion and environmental remediation applications, but also offer a practical route towards several technological applications. The candidate has produced ten peer-reviewed journal articles, two book chapters and one chemical review based on his doctoral work. In addition, published four peer-reviewed journal articles from collaborative research work. All of this work has been presented at local and international conferences.

Supervisor: Prof PP Govender

Co-supervisor: Dr KK Govender (Meraka Institute)

Co-supervisor: Prof CGCE van Sittert (North-West University)



Xaba, Morena Samuel (PhD)

Morena Xaba was born in Free State in 1983. He matriculated at Thamsanqa Secondary School in 2001. He obtained a BSc degree majoring in Chemistry and Mathematics, followed by an honors degree in Chemistry from North-West University in 2007. In 2011 he obtained an MSc degree in Chemistry from the same university. During mid-2011 to 2015 he worked as a Forensic analyst and R&D Chemist at the South African Police Services and Kansai Plascon, respectively. He enrolled for a PhD degree in chemistry at the University of Johannesburg in 2016 and is currently a postdoctoral fellow at the University of South Africa.

Among many advanced materials synthesised since the mid-1980's, quantum dots, fullerenes, carbon nanotubes, nano-fibres and shaped nanoparticles, have all been applied in many academic and industrial applications. In industry, advanced materials are used in batteries, capacitors, fuel cells, composites and catalyst support. Mr Xaba's PhD focused on principles of building blocks for the design of novel porous nano-materials from transition metal oxides, such as MnO_2 , Co_3O_4 , NiO , Fe_2O_3 , CeO_2 and CuO . The synergistic effect displayed by immobilising noble metals such as platinum and gold in the pores of these transition metal oxides was observed in catalytic oxidation, reduction and hydroformylation processes. It was found that environmental toxic dye pollutants such as rhodamine B, methylene blue, morin and 4-nitrophenol can easily be degraded to less harmful substances. Mesoporous metal oxides prepared from this PhD study can find applications in medicine, cosmetics, and petrochemical products. Five articles based on this work were accepted in international peer-reviewed journals.

Supervisor: Prof R Meijboom





Special Awards



Faculty of Science

Faculty Prize for the best Bachelor of Science Honours Student

Mabate, Tafadzwa Precious (with distinction)

Bachelor of Science Honours (BSc Hons): (Chemistry)

Chancellor's Medal for the Most Meritorious Master's Study in 2018

Murulane, Khuliso (with distinction)

Master of Science (MSc): Physics



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



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