

**Welcome to the
Graduation Ceremony
of the
University of Johannesburg
12 October 2015 at 17:00**

**Welkom by die
Gradeplegtigheid
van die
Universiteit van Johannesburg
12 Oktober 2015 om 17:00**

**Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
12 Diphlane 2015 ka 17:00**

**Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
12 kuMfumfu 2015 ngele-17:00**

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 IL Rensburg
BPharm (Rhodes), MA, PhD (Stanford USA)

DEPUTY VICE-CHANCELLOR: ACADEMIC

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

DEPUTY VICE-CHANCELLOR: RESEARCH, POSTGRADUATE STUDIES AND LIBRARY

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

REGISTRAR

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

DEPUTY VICE-CHANCELLOR: STRATEGIC SERVICES

Mrs ME Letlape
BSc (UFH)

DEPUTY VICE-CHANCELLOR: FINANCE

Mr J van Schoor
BCom, BCom Hons (RAU), CA (SA)

DEPUTY VICE-CHANCELLOR: INTERNATIONALISATION, ADVANCEMENT AND STUDENT AFFAIRS

(vacant)

CHIEF OF STAFF AND EXECUTIVE DIRECTOR: VICE-CHANCELLOR'S OFFICE

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

EXECUTIVE DEANS

FACULTY OF ART, DESIGN AND ARCHITECTURE

Prof F Freschi
BA (Wits), BA Hons (UCT), PhD (Wits)

FACULTY OF ECONOMIC AND FINANCIAL SCIENCES

Prof A Dempsey
BCom, BCom Hons, MCom (RAU), CA (SA)

FACULTY OF EDUCATION

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

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Prof S Sinha
BEng, MEng, PhD (UP)

FACULTY OF HEALTH SCIENCES

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

FACULTY OF HUMANITIES

Prof AB Broadbent
BA, BA Hons, MPhil, PhD (Cantab)

FACULTY OF LAW

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

FACULTY OF MANAGEMENT

Prof D van Lill
BSc, BSc Hons, MSc, PhD (US)

FACULTY OF SCIENCE

Prof D Meyer
BSc, BSc Hons, MSc (RAU), PhD (University of California, Davis)

MEMBERS OF COUNCIL

CHAIRPERSON

Prof RD Marcus

DEPUTY CHAIRPERSON

Mr MS Teke

MEMBERS

Prof H Abrahamse

Mr FM Baleni

Prof IC Burger

Mr JP Burger

Mr D Bvuma

Ms TA Chaka

Ms S Dlamini

Mr TJ Dikgole

Mr CR Gebhardt

Prof D Hildebrandt

Mr G Khosa

Prof C Landsberg

Dr DSS Lushaba

Mr DM Manganye

Dr J Manyaka

Ms K Maroga (invitee)

Ms BJ Memela-Khambula

Dr P Mjwara

Mr M Mkhonta

Prof A Mohammadali-Haji

Mr MJN Njeke

Prof A Parekh

Mr K Rammutla

Prof IL Rensburg

Dr WP Rowland

Mr KB Sibiya

Mr K Thomas

Mr J van Schoor

Mr M White

PRESIDENT OF CONVOCATION

Mr M Mkhonto

Programme

Monday, 12 October 2015 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

Mošupologo, 12 Diphlane 2015 ka 17:00

Go kgonthiša gore dilo di sepela ka tshwanelo nakong ya moletlo, bohle bao ba tilego 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

Maandag, 12 Oktober 2015 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 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

uMsombuluko, 12 kuMfumu 2015 ngele-17:00

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.

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. National Diploma (N Dip):

Madiba, Balentine (Sport Management)
Mogapi, Tebogo Ben (Sport Management)
Mokwena, Mpho Gift (Biomedical Technology)
Mteto, Bridget Thandokazi (Biomedical Technology)
Sambo, Priscilla Rivalani (Biomedical Technology)
Sithole, Ruth (Somatology)
Thebe, Keitseng (Somatology)
Tsoke, Matshabo (Biomedical Technology)
Yende, Tshepiso Paul (Sport Management)

2. Baccalaureus Technologiae (BTech):

Erlank, Tarryn Marshane (Emergency Medical Care)
Human, Willene (Somatology)
Lubisi, Patric Ozial (Emergency Medical Care)
Olsen, Dayne Wesley (Emergency Medical Care)
Slatter, Jo-Ann Stephanie (Radiography: Diagnostic)
Swart, Giliam Andries (Emergency Medical Care)
Van Der Westhuizen, Brandon Lee (Emergency Medical Care)
Van Rooyen, Ljuba-Ruth (Emergency Medical Care)

3. Baccalaureus Artium (BA)

Lehomo, Itumeleng (Sport Development)

4. Baccalaureus Commercii (BCom):

Chen, Huang Chun (Sport Management)
Morojele, Hlalefo (Sport Management)
Sekwati, Given Lebato (Sport Management)
Suliman, Muhammad Zubair (Sport Management)

5. Further National Higher Diploma in Nursing (FNHD):

Mdaka, Dolly Theresa (Medical and Surgical Nursing Science: Critical Care Nursing: General)

6. Baccalaureus Curationis(Educationis Et Administrationis) (BCur Ed et Admin):

Garach, Brenda Lorraine (Occupational Health Nursing Science)

Lengwati, Christinah Motlatsi (Neonatal Nursing Science)

Mngomezulu, Tumisang Cynthia (Neonatal Nursing Science)

Molefe, Elizabeth (Primary Health Care: Clinical Nursing, Diagnosis, Treatment and Care)

Ngwasheng, Annah Shirley (Occupational Health Nursing Science)

7. Magister Curationis (MCur):

Koneshe, Mamokgadi Gloria (Maternal and Child Nursing Science: Neonatal)

Dissertation: Experiences of Midwives Caring for Immigrant Pregnant Women in a Public Hospital

Supervisor: Prof AGW Nolte

8. Magister Philosophiae (MPhil):

Botes, Rene Antoinette (Sport Science)

Dissertation: Predicting Backstroke Performance in Junior Swimmers

Supervisor: Prof L Lategan

Evans, Tanya (Optometry) **(with distinction)**

Dissertation: Chromatic Dependence of First-Order Optical Properties of the Eye

Supervisor: Prof WF Harris

Gouveia, Charlene Pereira (Biokinetics)

Dissertation: The Prevention of Hamstring Injuries in Sport

Supervisor: Prof L Lategan

Co-supervisor: Mr AJJ Lombard

9. Magister Technologiae (MTech):

Anley, Kirsten (Chiropractic)

Minor Dissertation: The Experiences of Pregnant Chiropractors in South Africa

Supervisor: Dr CM Bester

Blumberg, Daniel Seth (Chiropractic)

Minor Dissertation: The Effects of Cervical Spine Adjustments on Sensorimotor Synchronisation

Supervisor: Dr CM Bester

Modimola, Margaret Selina (Biomedical Technology)

Dissertation: Investigating the Effect that Changes in pH of the Stomach have on the Survival of Pathogenic *Escherichia coli* Using Simulated Gastric Fluid.

Supervisor: Dr TG Barnard

Co-supervisor: Mr SIK Mieta

Co-supervisor: Ms CA Robertson

Mokoena, Padidi Louisa (Radiography)

Dissertation: Guidelines for the Introduction of Portal Image Review by Radiation Therapists

Supervisor: Dr HA Lawrence

Co-supervisor: Mr S Mdletshe

Naude, Clarissa (Chiropractic)

Minor Dissertation: Ischaemic Compression of the Sub-Occipital Muscles in Conjunction with Chiropractic Spinal Manipulative Therapy on Cervicogenic Headaches

Supervisor: Dr M Moodley

Swan, Charissa-Swané (Chiropractic)

Minor Dissertation: A Correlation Study between Quadratus Lumborum Trigger Points and Leg Length Inequality

Supervisor: Dr CJ Yelverton

Vermeulen, Marion (Biomedical Technology)

Dissertation: Observational Descriptive Study to Determine the HIV-RNA Concentration in Window Period Samples with a Viral Load Below the Detectable Limit of Conventional Assays and Comparison of Blood Screening Assays in Reducing Transfusion Transmitted HIV Infection Risk

Supervisor: Mr WJ Maule

Co-supervisor: Dr N Leslie

10. National Diploma (N Dip)

Banda, Lorraine Nyaki (Analytical Chemistry)

Buthelezi, Pretty Nontobeko (Food Technology)

Chuene, Makgoro Raesibe (Biotechnology)

Hatlane, Nyiketani Thule (Biotechnology)

Kubheka, Nompumelelo Sharol Mbali (Analytical Chemistry)

Maake, Thuso Nape (Analytical Chemistry)

Mabaso, Sindisiwe Rhea (Biotechnology)

Mabeleng, Matiisetso (Biotechnology)
Madyibi, Siposetu Sibusiso (Analytical Chemistry)
Mahlangu, Noluthando (Analytical Chemistry)
Majola, Lupita Lungiswa (Analytical Chemistry)
Makhunga, Treasure Silo (Analytical Chemistry)
Malatji, Cathrine Lebogang (Analytical Chemistry)
Masina, Mazimela Ntokozo (Analytical Chemistry)
Mekgoe, Nokuthula (Analytical Chemistry)
Mofokeng, Thapelo Dion (Analytical Chemistry)
Mokua, Moses Phemelo (Biotechnology)
Motshegwe, Amogelang Venolia (Biotechnology)
Motsheku, Potlako Cathrine (Biotechnology)
Ndlovu, Lerato Loveness (Biotechnology)
Ndluzele, Lungiswa Wendy (Analytical Chemistry)
Sebei, Rethabile (Biotechnology)
Serepo, Mamaotseng Kgethisho (Biotechnology)
Sibiya, Thembisile Nomfundo (Analytical Chemistry)
Sikhosana, Nonhlanhla Glorius (Biotechnology)
Tladi, Maria Mmampane (Biotechnology)
Tsotetsi, Esther Nkotulleng (Analytical Chemistry)
Yengwa, Sindiswa Whitney (Biotechnology)

11. Bachelor of Science (BSc)

Brown, Jason Nigel (Applied Mathematics and Mathematics)
Chatikobo, Tafadzwa George (Information Technology)
Chauke, James (Information Technology)
Chuene, Mmathabo Mildred (Biochemistry and Chemistry)
Condon, Joseph Francis (Computer Science and Informatics)
Hattingh, Lizelle (Human Physiology and Biochemistry)
Haq, Ata Ur Rasool (Information Technology)
Hatangimana, Colin (Applied Mathematics and Mathematics)
Ho, Trevor Geoffrey (Information Technology)
Jele, Sizwe Muzi (Information Technology)
Kapfunde, Tsitsi Adelaide (Biochemistry and Chemistry)
Keikelame, Monde Brian (Information Technology)
Kekana, Katlego Katane (Human Physiology and Biochemistry)
Lechekoane, Tshepiso (Human Physiology and Biochemistry)
Mabasa, Tommy Fredrick (Botany and Chemistry)
Maboko, Mpariseni (Computer Science and Informatics)
Mabuza, Surprise Olpert (Information Technology)
Madaba, Phyllis Tarisai (Mathematics and Computer Science)
Maluleka, Ndzalama (Information Technology)
Manale, Boitumelo (Applied Mathematics and Mathematics)
Manthe, Modisaemang (Information Technology)
Mashaba, Benedict (Information Technology)

Masiavhula, Fulufhelo Allen (Computer Science and Informatics)
Mawila, Naphtaly (Biochemistry and Chemistry)
Mkheme, Asiphe (Botany and Zoology)
Moshokoa, Moloko Fridah (Biochemistry and Chemistry)
Munzhelele, Tahulela (Geography and Environmental Management)
Nalla, Tasneem (Human Physiology and Psychology)
Ndou, Julia Fallon (Zoology and Biochemistry)
Nkosi, Thabile (Human Physiology and Biochemistry)
Ntshaba, Hlulukwenza (Applied Mathematics and Computer Science)
Putter, Christopher (Sport Science)
Ratshisuka, Rabelani (Human Physiology and Psychology)
Sardinha, Shane Michael (Information Technology)
Shabangu, Khanyisile (Botany and Biochemistry)
Shongwe, Oltania Khanyisile (Human Physiology and Psychology)
Shuping, Tshiliso Simon (Information Technology)
Sukazi, Banele Lungile (Human Physiology and Biochemistry)
Urquhart, Bronwyn (Human Physiology and Biochemistry)

12. Bachelor of Commerce Honours (BCom Hons)

Machesa, Nthati Lebohang Melita (Informatics)

13. Bachelor of Science Honours (BSc Hons)

Baloyi, Hluke Earlrige (Geology)
Lekala, George Thabang (Information Technology)
Magakula, Thabo David (Computer Science)
Malongete, Thato Theodore (Information Technology)
Marks, Jonty Terance (Informatics)
Masondo, Ntuthuko Zamanyambose (Informatics)
Masuku, Gomezga Themba Kasambara (Informatics)
Mugwena, Valelwa Rhonda (Computer Science)
Shavhani, Ranwedzi (Geology)
Vogel, Nicholas Jeremy (Computer Science)

14. Master of Technology (M Tech)

Mabhena, Bhekisipho (Biotechnology)
Dissertation: Monitoring of selected contaminants (physico-chemical and bacteriological parameters) in wetland filters: A case study of a 10- year old Johannesburg zoo constructed wetland
Supervisor: Prof JC Ngila
Co-supervisor: Mr E van Zyl

15. Master of Arts (MA)

Cooper, Belinda Anne (Environmental Management)

Minor Dissertation: A spatial prioritization of threats to biodiversity and cultural heritage in the Magaliesberg biosphere

Supervisor: Dr C Kelso

Co-supervisor: Prof F Ahmed

16. Master of Commerce (MCom)

Jaquire, Victor John (Informatics)

Dissertation: A Best Practice Strategy Framework for Developing Countries to Secure Cyberspace

Supervisor: Prof SH von Solms

17. Master of Philosophy (MPhil)

Chifamba, Saymore (Energy Studies) **(with distinction)**

Dissertation: A Study of the Performance of a Sparse Grid Cross Section Representation Methodology as Applied to MOX Fuel

Supervisor: Prof A Muronga

Co-supervisor: Ms D Botes (NECSA)

Co-supervisor: Dr P Bokov (NECSA)

Khumalo, Ncamiso Thokozani (Energy Studies)

Dissertation: The Accurate Extraction of Photopeak Intensities in the Gamma-ray Spectroscopy of Naturally Occurring Radioactive Materials

Supervisor: Prof SH Connell

Co-supervisor: Prof JIW Watterson (iThemba Labs, University of the Witwatersrand)

Moipolai, Tshegofatso Bridgette (Energy Studies)

Dissertation: Characterisation by X-ray Diffraction of Naturally Occurring Polycrystalline Diamond Samples from Different Origins.

Supervisor: Prof SH Connell

Co-supervisor: Dr A Venter (NECSA)

18. Master of Science (MSc)

Amenuvor, Gershon (Chemistry)

Dissertation: Pyrazolyl phosphite and phosphinite ruthenium(II) complexes as catalysts for hydrogenation reactions of benzaldehyde, acetophenone and styrene

Supervisor: Prof J Darkwa

Co-supervisor: Prof E Nordlander (Lund University, Sweden)

Bruton, Ilana (Zoology)

Dissertation: Gerbil systematics and phylogeography of the Bushveld gerbil (*Gerbilliscus leucogaster*)

Supervisor: Prof B Jansen van Vuuren

Co-Supervisor: Dr C Montgelard (University of Montpellier, France)

De Jager, Rudolf (Environmental Management)

Minor Dissertation: Assessing the grazing capacity and herbivore stocking rates in Klipriviersberg Nature Reserve, near Johannesburg, South Africa.

Supervisor: Dr IT Rampedi

Fraser, Allan William (Geology)

Dissertation: Minimising uncertainty in measurement and improving limit of detection in gold-bearing materials from concentrations predicted by linear regression in atomic absorption spectrometry

Supervisor: Prof KS Viljoen

Co-supervisor: Prof B Cairncross

Ishimwe, Roselyne (Geography)

Dissertation: The Potential of Using Landsat 8 Operational Land Imager (OLI) and Thermal Infrared Sensor (TIR) for Crop Discrimination and Mapping

Supervisor: Prof F Ahmed

Lawton, Michelle Claire (Environmental Management)

Minor Dissertation: Historical Land Planning, Transport Poverty and Sustainable Cities: The Case of Johannesburg

Supervisor: Ms TJM McKay

Loonat, Ziyaad (Mathematical Statistics)

Dissertation: Quantile regression methods for censored survival data

Supervisor: Prof F Lombard

Maganlal, Atish (Information Technology) **(with distinction)**

Dissertation: Photo Imaging: A Rasterization approach to Progressive Global Illumination

Supervisor: Dr A Hardy

Maiga, Deogratus Titus (Chemistry)

Dissertation: Synthesis and characterization of organic-inorganic hybrid mesoporous silica materials for use as stationary phases for solid phase extraction (SPE) and HPLC columns

Supervisor: Prof TAM Msagati

Co-supervisor: Prof BB Mamba

Mamba, Hlukaphi S'thando (Applied Mathematics)

Dissertation: Numerical solutions for a class of nonlinear Volterra integral equation

Supervisor: Dr M Khumalo

McLoughlin, Andrew Craig (Geology)

Dissertation: A Geometallurgical Examination of Gold, Uranium and Thorium in the Black Reef Quartzite Formation, Gold One International LTD, Springs

Supervisor: Prof KS Viljoen

Co-supervisor: Mrs L Blignaut

Mhlongo, Msizi Innocent (Biochemistry) (with distinction)

Dissertation: Metabolomic analysis of the effect of priming agents on plant cells

Supervisor: Prof IA Dubery

Co-supervisor: Dr LA Piater

Molatji, Thulaganyn (Nanoscience)

Minor Dissertation: A multi-walled carbon nanotube screen printed electrode modified with recombinant protein PbrR for detection of lead

Supervisor: Dr K Kondiah (WITS)

Co-supervisor: Prof JC Ngila

Co-supervisor: Mr L Alagiozoglou

Mouton, Jean (Information Technology)

Dissertation: A system to support community-orientated critical information infrastructure protection.

Supervisor: Dr ID Ellefsen

Munyangane, Livhuwani Portia (Geology)

Dissertation: Potentially Harmful Trace Elements (PHTEs) in groundwater of Greater Giyani, Limpopo Province, South Africa: possible health implications

Supervisor: Prof H Mouri

Co-supervisor: Prof JD Kramers

Pretorius, Donovan (Geology)

Dissertation: Characterisation and beneficiation of coal from the New Vaal colliery, Sasolburg-Vereeniging Coalfield, South Africa, through the application of automated mineralogy

Supervisor: Prof KS Viljoen

Co-supervisor: Prof B Cairncross

Qhaji, Yolanda (Zoology)

Dissertation: A comparison of genetic patterns in two low- dispersal crabs from the Wild Coast, South Africa

Supervisor: Prof P Teske

Co-supervisor: Prof B Jansen van Vuuren

Roussel, Jonathan Pierre Esperance (Information Technology)

Dissertation: A solution to aid in the protection of home end users from cyber attack

Supervisor: Prof SH von Solms

Vilakazi, Cornelius Sipho (Biochemistry)

Dissertation: Identification of lipopolysaccharide-responsive plasma membrane proteins in *Arabidopsis thaliana*.

Supervisor: Dr LA Piater

Co-supervisor: Prof IA Dubery



19. Doctor Curationis (DCur):

Makhene, Agnes (Professional Nursing Science: Nursing Education)

Thesis: Development, Implementation and Evaluation of a Programme to Facilitate Critical Thinking in Nursing Education

Supervisor: Prof MM Chabeli

20. Philosophiae Doctor (PhD)

Cele, Hastings Mthobisi (Chemistry)

Thesis: Fabrication and characterization of a polymer nano-composite microcantilever.

Supervisor: Prof S Sinha Ray

De Kock, Luéta-Ann (Chemistry)

Thesis: Hybrid ion exchanger supported metal hydroxides for the removal of phosphate from wastewater.

Supervisor: Prof BB Mamba

Co-supervisor: Prof B Jefferson (Cranfield University, United Kingdom)

Gerber, Ruan Jan-Izak Lodewyk (Zoology)

Thesis: The use of tigerfish, *Hydrocynus vittatus*, as indicator of metal and organic contaminant exposure in the Kruger National Park.

Supervisor: Prof V Wepener

Co-supervisor: Prof NJ Smit (North-West University)

Makonese, Tafadzwa (Energy Studies)

Thesis: Systematic investigation of smoke emissions from packed-bed residential coal combustion devices.

Supervisor: Prof HJ Annegarn

Co-supervisor: Dr P Forbes (University of Pretoria)

Mamba, Gcina (Chemistry)

Thesis: Rare Earth doped Titania/Carbon Nanomaterials Composite Photocatalysts for Water Treatment.

Supervisor: Prof AK Mishra

Co-supervisor: Prof XY Mbianda

Mhlanga, Nikiwe Queeneth (Chemistry)

Thesis: Synthesis and Characterization of Functional Polyactide-Metal Oxide Nanocomposites for Medical Application.

Supervisor: Prof S Sinha Ray

Noh, Ji-Hyang (Chemistry)

Thesis: Template synthesis of Pd and Pt nanoparticles by dendrimer and reverse microemulsions for the catalytic evaluation on various reactions.

Supervisor: Prof R Meijboom

Co-supervisor: Prof AJ Muller

Nyoni, Hlengilizwe (Chemistry)

Thesis: Development of a passive, *in situ*, integrative sampler for monitoring biotoxins in aquatic environments.

Supervisor: Prof TAM Msagati

Co-supervisor: Prof BB Mamba

Thwala, Melusi (Zoology)

Thesis: The behaviour of silver and zinc oxide nanoparticles in aqueous environments and their interaction with aquatic higher plants.

Supervisor: Prof V Wepener

Co-supervisor: Prof N Musee (University of Pretoria)



Makhene, Agnes (D Cur)

Agnes Makhene completed the Diploma in General Nursing at Bonalesedi Nursing College in 1985, and obtained the Baccalaureas Curationis (Ed et Admin) in 2000 and a Masters' in Nursing Education (2003), both from the former Rand Afrikaans University. Agnes is married to Bafana and has two daughters. She is currently a lecturer in the Department of Nursing Science at the University of Johannesburg and has published in an international accredited journal and presented at national and international conferences.

This research focused on the development, implementation and evaluation of a programme to facilitate critical thinking. A qualitative, explorative, descriptive and contextual research design served as the basis for the development of the programme to facilitate critical thinking of learner nurses. The research was guided by a post-modern constructivist philosophical approach. The themes that emerged from the perceptions of nurse educators with regard to how critical thinking of learners could be facilitated were reflection, socratic questioning, argumentation, dialectic dialogic reasoning and cooperative/collaborative methods of teaching and assessment. A programme was developed using an integrated curriculum framework derived from Beyer (1988), Bevis (1989) and Caffarella (2002) including the context, the philosophical foundation, the programme learning outcomes, the identified methods of teaching and assessments as well as the programme outcomes. Learning outcomes were formulated based on the identified methods for the implementation of the programme to first year learners using curriculum content prescribed by the South African Nursing Council. The programme was evaluated by learners after implementation, and the original contribution towards nursing education is the conceptualisation and development of the programme to facilitate critical thinking of learner nurses.

Supervisor: Prof MM Chabeli



Cele, Hastings Mthobisi (PhD)

Hastings Mthobisi Cele matriculated in 2001 after which he enrolled at the University of Zululand where he obtained a BSc degree in Physics and Electronics in 2005, a BSc Honours degree in Physics in 2007 and an MSc degree in Physics and Engineering in 2010. He enrolled for a PhD in Chemistry at the University of Johannesburg in 2011.

Commercially available micro-cantilevers are fabricated from Si based material. Si is extremely expensive to manufacture and cannot detect small analytes. Mr Cele's research focussed on the optimization of the fabrication conditions and characterization of PLA/nanoclay composite micro-cantilevers. Inorganic polymeric materials are now commonly used for manufacturing micro-cantilevers. To solve the problem of Si based micro-cantilevers, he used several different approaches to take advantage of the mechanical properties associated with inorganic polymeric materials. Micro-injection moulding was utilised as the main fabrication process of micro-cantilevers. The deflection of the cantilever beams were measured by laser Doppler vibrometry and atomic force microscopy. The results indicated that the deflection of the cantilever beams depend on the stiffness and geometric dimensions of the material. The candidate's work has been published in an international peer-reviewed journal and has been presented at both local and international conferences.

Supervisor: Prof S Sinha Ray



De Kock, Lueta-Ann (PhD)

Lueta-Ann de Kock matriculated in 1984. She enrolled at the University of the Witwatersrand where she obtained a BSc degree in 1988, a BSc Honours degree in 1989 and an MSc degree in Chemistry in 1993. After completing her Masters studies she worked in the pharmaceutical industry before joining the Technikon Witwatersrand in 1998. She enrolled for a PhD in Chemistry in October 2009. She is currently employed as an academic at the University of Johannesburg.

Mrs de Kock's research focussed on the synthesis of polymer supported metal oxide and binary metal oxides and the application of the hybrid materials for the adsorption of phosphate from wastewater. In the aquatic environment phosphate causes eutrophication of standing water bodies. Phosphate is a non-renewable resource and phosphate based fertilizers are vital to food production. The hybrid materials developed in this work remove phosphate to very low levels, are reusable and allow the recovery of the phosphate for use as slow release fertilizers.

The candidate's work has been published in an international peer-reviewed journal and other research papers have also been submitted for publication.

Supervisor: Prof BB Mamba

Co-supervisor: Prof B Jefferson (Cranfield University, United Kingdom)



Gerber, Ruan Jan-Izak Lodewyk (PhD)

Ruan Gerber matriculated from Roosevelt High School in 2002. He enrolled at the University of Johannesburg in 2003 and obtained a BSc degree in Biological Sciences in 2006, a BSc Honours degree in Biodiversity and Conservation in 2007 and an MSc degree in Zoology, *cum laude*, in 2010. Ruan was awarded the NRF-DST Innovation scholarship for his PhD studies in 2011. He is currently pursuing a Postdoctoral Research Fellowship at the University of Johannesburg for which he has been awarded the Global Excellence and Stature Scholarship.

The candidate's research focussed on eco-toxicological aspects of rivers flowing through the Kruger National Park (KNP). The candidate studied both abiotic and biotic compartments of the aquatic ecosystems by employing a multi-metric approach to ascertain whether Tigerfish can be used as biological indicators of impacts and changes to the aquatic ecosystems of the KNP. Using Tigerfish as biological indicators, the study found that this premier conservation area contains the highest levels of globally banned pesticides ever recorded in South African freshwater systems. The research contributed significantly to the knowledge base on the ecology and toxicology of these systems and was the first study to document significant aquatic food web disturbances due to human influences. The candidate's work has been published in peer-reviewed journals and has been presented at both national and international conferences.

Supervisor: Prof V Wepener

Co-supervisor: Prof NJ Smit (North-West University)



Makonese, Tafadzwa (PhD)

Tafadzwa Makonese obtained a BSc Honours degree (*cum laude*) in Environmental Microbiology at the Midlands State University, Zimbabwe in 2004. In 2011 he completed an MPhil degree in Energy Studies at the University of Johannesburg. He was an active participant in the establishment of the Sustainable Energy Technologies and Research (SeTAR) Centre. In 2012 he registered for a PhD in Energy Studies partly funded by the Global Alliance for Clean Cookstoves.

Mr Makonese presented a thesis addressing the smoke emissions from packed-bed residential coal stoves (including informal braziers – *imbaulas*). The thesis aimed to develop an improved understanding of the complex processes of combustion in small domestic devices, by carrying out a systematic investigation of condensed matter (smoke) emissions. A robust dilution sampling system was developed and applied. The thesis investigated multi-channel silicone rubber traps for monitoring polycyclic aromatic hydrocarbon (PAH) compounds. These results present the first comprehensive, systematic study of smoke emissions and emission factors from coal stoves in use in South Africa. An original contribution separates the combustion into two stages, presenting evidence on how the different combustion conditions during these two stages affect the morphology of smoke particles. Three refereed conference proceedings and one journal article have been published.

Supervisor: Prof HJ Annegarn

Co-supervisor: Dr P Forbes (University of Pretoria)



Mamba, Gcina (PhD)

Gcina Mamba completed his secondary school education at Duze High School in Swaziland. He obtained a BSc degree in Biology and Chemistry from the University of Swaziland in 2006 and completed a Postgraduate Certificate in Education in 2007 at the same institution. In 2010 he obtained his MSc degree in Chemistry at the University of Johannesburg and in 2012 registered for his PhD degree.

Mr Mamba's research entailed tailoring visible light active photocatalysts based on doped titania and carbon nanomaterials such as carbon nanotubes (single and multiwalled) and reduced graphene oxide. Photocatalysts with enhanced visible light activity towards dye degradation were fabricated through decoration of multiwalled carbon nanotubes with gadolinium oxide nanoparticles and subsequent incorporation into a titania matrix. Incorporation of small amounts of the carbon nanomaterials (0.5%) into rare earth metal ion, nitrogen and sulphur tridoped titania (RE,N,S-TiO₂) yielded composite photocatalyst with enhanced visible light absorption and photocatalytic activity towards various model dye molecules. This work provided a framework for a new generation of visible light active photocatalysts based on tridoped titania and carbon nanomaterials for organic pollution mitigation. To date the candidate has published a book chapter and four research articles in international peer-reviewed journals. His work has also been presented at both local and international conferences.

Supervisor: Prof AK Mishra

Co-supervisor: Prof XY Mbianda



Mhlanga, Nikiwe Queeneth (PhD)

Nikiwe Queeneth Mhlanga completed her high school education in 2001 at the Our Lady of Sorrows High School in Swaziland. In 2006 she obtained a BSc degree from the University of Swaziland. She enrolled at the University of Johannesburg in 2008, obtained an MSc degree in Chemistry in 2010 and in 2011 enrolled for a PhD in Chemistry at the same institution.

Ms Mhlanga's research focussed on the synthesis of biodegradable and biocompatible polylactide acid core/shell spheres loaded with doxorubicin for targeted and sustained drug delivery. Photosensitizer vectors titanium dioxide/zinc oxide nanoparticles were dispersed on the spheres for photodynamic therapy. Selectivity is achieved by localising UV-irradiation on the tumour site. In addition magnetic nanoparticles were encapsulated on the shell for magnetic targeting of carriers to the site of preference. The PLA/metal oxide based hybrids showed a sustained, prolonged drug release pattern. The cytotoxicity of the spheres was tested *in vitro* on Human cervix epithelial carcinoma cell lines which led to pronounced biocompatibility. The candidate's work has been published in international peer-reviewed journals and has been presented at both local and international conferences and workshops.

Supervisor: Prof S Sinha Ray



Noh, Ji-Hyang (PhD)

Ms Ji-Hyang Noh obtained her BSc degree in Chemistry at Pusan National University, Korea. In 2005 she obtained her MSc degree in Chemistry, *cum laude*, from the University of Johannesburg. The research for her MSc degree produced two peer-reviewed publications.

The thesis of the candidate describes the synthesis and characterization of platinum and palladium nanoparticles using both dendrimers and microemulsions as a template. These nanoparticles were subsequently utilized as catalysts for several model reactions as well as industrially important reactions. As a model reaction, the reduction of nitrophenol was investigated and it was concluded that this follows Langmuir-Hinshelwood type kinetics. In addition, the industrially important Heck C-C coupling reaction was evaluated, as well as the oxidation of styrene by peroxides. This work has resulted in three peer-reviewed publications and a book chapter.

Supervisor: Prof R Meijboom

Co-supervisor: Prof A Muller



Nyoni, Hlengilizwe (PhD)

Hlengilizwe Nyoni completed his secondary education at the Cyrene Secondary School in Bulawayo in 2000. In 2005 he obtained a BSc Honours degree in Chemistry from the Midlands State University in Zimbabwe. In 2010 he obtained an MSc degree in Chemistry from the University of the Witwatersrand. He enrolled for a PhD in Chemistry at the University of Johannesburg in 2012.

Mr Nyoni's PhD research focussed on the development of a novel passive sampling device for measuring time-weighted average concentrations of hazardous tumour promoting toxins, produced by the natural cyanobacterial water blooms of the Hartbeespoort dam. The novel passive sampler comprised a silicone membrane filled with a suspension of iron(III) oxide nanoparticles which has a high sorption capacity for cyanobacterial toxins. The findings reported in this study suggest an efficient, green and less costly instrument useful in estimating the cyanotoxin concentrations in South African waters and the world at large. The candidate's work has been published in an international peer-reviewed journal and has been presented at several international conferences. Two more papers have been submitted for publication.

Supervisor: Prof TAM Msagati

Co-supervisor: Prof BB Mamba



Thwala, Melusi (PhD)

Melusi Thwala obtained a BSc degree in Biological Sciences from the University of Zululand in 2002, a BSc Honours degree in Aquatic Ecology in 2003 and an MSc degree in Aquatic Ecotoxicology in 2006. In 2007 he was appointed as a Senior Freshwater Scientist at the then Department of Water Affairs and Forestry. He joined the CSIR in 2009 where he works as a Senior Research Scientist. In 2010 he enrolled for a PhD in Zoology at the University of Johannesburg. In 2014 he was awarded the UNESCO Keizo Obuchi Fellowship for his PhD research.

Mr Thwala investigated the behaviour of silver and zinc oxide engineered nanoparticles (ENPs) in aqueous environments and their interactions with higher aquatic plants. The research revealed that, in aqueous environments, ENPs undergo physico-chemical transformations that are primarily, interactively, driven by the characteristics and water chemistry of the ENPs. The accumulation of ENPs by aquatic higher plants and the resultant toxicity are interlinked to water chemistry and ENP characteristics. The observed bioaccumulation dynamics of the ENPs suggested potential phytoextraction application as a green tool in the remediation of nano-pollutants in contaminated waters. The generated data will enable discrimination and ranking of drivers of nano-toxicity and can influence safer-by-design, approaches. The candidate's work has been published in local and international peer-reviewed journals.

Supervisor: Prof V Wepener

Co-supervisor: Prof N Musee (University of Pretoria)



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



A word of thanks to the UJ Alumni Association for sponsoring the flower arrangements at the University of Johannesburg graduation ceremonies.

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