

**Welcome to the
Graduation Ceremony
of the
University of Johannesburg
29 October 2018**

**Welkom by die
Gradeplegtigheid
van die
Universiteit van Johannesburg
29 Oktober 2018**

**Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
29 Diphlane 2018**

**Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
29 kuMfumfu 2018**

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 Nalla (Acting)
BSc (Wits), BSc Hons (Wits), Certificate ELLD (UJ), PhD (Wits)

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

Ms Z Matlala (Acting)

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
Ms BJ Memela-Khambula
Prof A Parekh
Mr C Phetla
Dr WP Rowland
Prof A Strydom
Dr M Tom

Programme

Monday, 29 October 2018 at 09:00

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, 29 Diphlane 2018 ka 09:00

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, 29 Oktober 2018 om 09:00

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, 29 kuMfumu 2018 ngele-09:00

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. **Baccalaureus Artium (BA): Law**

Mothami, Katlego
Tswai, Maria Matipa

2. **Baccalaureus Commercii (BCom): Law**

Gwangwa, Khutjo Mary
Naidoo, Anastashia Pearl

3. **Baccalaureus Legum (LLB):**

Amigo, Prince
Bharosa, Karen Ann
Buysse, Isabela Macarena
Fakir, Noor Jehan
Gumede, Sthembile Zamile
Makgaila, Ramahlodi Katlego
Mashele, Nyeleti Michelle
Matiwane, Minky Florence
Mnisi, Tumiso Sam
Mondlane, Shantell
Mophulane, Kegomoditswe
Mtonjana, Molefi Gift
Ngubo, Sifo Innocent
Nhlapo, Isaac
Nkuna, Ntsako Mcmillan
Shongwe, Nkosinathi Paul
Sibanda, Obakeng Emmanuel
Teffo, Mmashela
Thamaga, TlouMaria
Thema, Malebati Ruth

4. Magister Legum (LLM)

Cele, Mazwenkosi Ndabezinhle (Banking Law)

Minor Dissertation: Demand guarantees: a comparative study relating to certain fundamental aspects of the law of South Africa and the law of the People's Republic of China

Supervisor: Prof CF Hugo

Cuthbertson, Grethele (Commercial Law)

Minor Dissertation: The validity of exemption clauses in contracts before and after the introduction of the Consumer Protection Act

Supervisor: Prof D Millard

Jongani, Ntsika (Labour Law)

Minor Dissertation: The right of appearance of legal practitioners at the CCMA: an analysis of Rule 25 of the CCMA

Supervisor: Dr A Dekker

Kali, Kanya (Drafting and Interpretation of Contracts)

Minor Dissertation: On demand performance guarantees in the construction industry

Supervisor: Prof CF Hugo

Lalumbe, Edward Bishop Semakaleng (Labour Law)

Minor Dissertation: The "new" employment relationship created to protect vulnerable temporary employees: a legal analysis of case law

Supervisor: Dr A Dekker

Marweshe, Mabulenyana Whitty (Labour Law)

Minor Dissertation: A critical analysis of the jurisdictional overlap between labour and civil courts

Supervisor: Ms ES Fourie

Molelekeng, Tshepang Portia (Banking Law)

Minor Dissertation: Finality of payment in modern methods of payment in South Africa law

Supervisor: Prof CF Hugo

Mudau, Tshifhiwa (Corporate Law)

Minor Dissertation: Interpretation of "liquidation proceedings": a discussion of *Richter v ABSA Bank Limited*

Supervisor: Prof JC Calitz

Roux, Keegan (International Commercial Law)

Minor Dissertation: The interconnection between choice of forum and tacit choice of law – a comparative analysis of common-law and civil-law jurisdictions

Supervisor: Mr GJ Bouwers

Sekabate, Ntebaleng Portia (Tax Law)

Minor Dissertation: Tax and estate planning: is the end nigh?

Supervisor: Prof T Legwaila

Van der Westhuizen, Marissa Danita (Commercial Law) **(with distinction)**

Minor Dissertation: Risks associated with autopilot cars: a South African perspective

Supervisor: Prof D Millard

5. National Diploma (NDip)

Alembong, Hyacinth Adzueha (Engineering: Electrical: Instrumentation Technology)

Asiranye, Itumeleng Andrew (Engineering: Metallurgy)

Baloyi, Mduduzi (Engineering: Computer Systems)

Bristow, Gary Peter (Engineering: Electrical)

Chauke, Cassius (Engineering: Electrical)

Diale, Alec Karabo (Engineering: Electrical)

Dibetso, Keatlaletse Zelna (Engineering: Metallurgy)

Fidesi, Macfesson (Engineering: Metallurgy)

Katete, Kinaopendwa (Extraction Metallurgy)

Kganakga, Donald Motatjo (Engineering: Electrical: Instrumentation Technology)

Khalishwayo, Paulos (Engineering: Electrical: Electronic)

Khuduga, Kealeboga (Mining Engineering)

Leboho, Ngako Matthews (Mining Engineering)

Ledwaba, Tebalelo Devyn (Engineering: Electrical)

Lekaka, Ragedi (Mining Engineering)

Letoaba, Mmamarutla Elizabeth (Engineering: Electrical: Power)

Mabaso, Nonkanyiso Silindokuhle (Engineering: Metallurgy)

Madia, Kabelo Dawie (Engineering: Metallurgy)

Magagula, Siphon Martin (Engineering: Metallurgy)

Mahlalela, Thapelo Aly (Mining Engineering)

Mahlangu, Nomusa Christinah (Engineering: Electrical: Instrumentation Technology)

Makhalimela, Mpho (Engineering: Computer Systems)

Manamela, Pheagane Mitchell (Engineering: Electrical: Electronic)

Manyuha, Oluga Wisdom (Extraction Metallurgy)

Maraga, Fhatuwani (Engineering: Metallurgy)

Masedi, Hendrick Katlego (Engineering: Metallurgy)

Mashabela, Seanego Motlatsi (Engineering: Metallurgy)
Masilela, Nomfundo Patience (Engineering: Metallurgy)
Matumba, Dakalo Ashere (Engineering: Metallurgy)
Moela, Thushego Kokomane (Mining Engineering)
Mofokeng, Tebogo (Extraction Metallurgy)
Moloto, Amogelang Gabriel (Mining Engineering)
Moraka, Katlego Clement (Engineering: Electrical: Power)
Motsumi, Motlapele Griffith (Engineering: Electrical)
Mudau, Ndamulelo (Engineering: Electrical)
Mukhola, Kamoelo Wise (Engineering: Metallurgy)
Mulaudzi, Charmaine Zwivhuya (Extraction Metallurgy)
Ndou, Phathutshedzo (Engineering: Metallurgy)
Nemasetoni, Livhuwani (Engineering: Metallurgy)
Ngomane, Perceverance Sakhile (Engineering: Electrical: Instrumentation Technology)
Ngoveni, Martin (Engineering: Electrical)
Nsabwa, Mushiya Bernice (Engineering: Metallurgy)
Ntuli, Zanele Brilentine (Engineering: Metallurgy)
Ogbonnaya, Uzochukwu Thompson (Engineering: Electrical: Power)
Phiri, Curtis (Engineering: Electrical)
Rabukana, Sithembele (Engineering: Metallurgy)
Rankhododo, Ndamulelo Benedict (Mining Engineering)
Rasiwela, Livhuwani (Engineering: Metallurgy)
Ratsiu, Phakiso (Engineering: Electrical: Electronic)
Seepe, Tshepo (Engineering: Metallurgy)
Shirinda, Nhlanhla Johannes (Engineering: Electrical: Electronic)
Thabede, Simphiwe Nonhlanhla (Engineering: Metallurgy)
Ubisse, Bongani (Mining Engineering)
Zulu, Innocent Mbongeleni (Engineering: Metallurgy)

6. Baccalaureus Technologiae (BTech)

Dlamini, Ntombizodwa Kate (Engineering: Electrical)
Doboro, Tshifhiwa Valetia (Engineering: Electrical)
Dube, Simiso Sinothile (Mining Engineering)
George, Siphamandla (Engineering: Electrical)
Jele, Masonda Jaluka (Engineering: Electrical)
Jele, Nkululeko Shaquil (Extraction Metallurgy)
Khawula, Ayanda Leonard (Engineering: Electrical)
Kibambe, Ngeleshi Michel (Extraction Metallurgy)
Komako, Tebello Peter (Extraction Metallurgy)
Lukhele, Constance (Mining Engineering)
Machitje, Teboho Kuu (Engineering: Electrical)
Madikgetla, Thabiso Sophia (Engineering: Electrical)

Mashiloane, Harold Mpho (Engineering: Electrical)
Masinga, Muzi Emmanuel (Mining Engineering)
Mathabatha, Molato Abram (Engineering: Electrical)
Mathebula, Collence (Engineering: Electrical)
Mathebula, Fumi Bridget (Extraction Metallurgy)
Matlakala, Mokgolokgohla Douglas (Mining Engineering)
Matodzi, Khathutshelo (Mining Engineering)
Matshaba, Loago Sebata (Mining Engineering)
Mawela, Nombi (Mining Engineering)
Mazibuko, Noluthando Sinethemba (Engineering: Electrical)
Mkhize, Mboneni (Engineering: Electrical)
Mmola, Magase Daryl (Engineering: Electrical)
Mndawe, Sibusiso Theophilus (Engineering: Electrical)
Mogudi, Shuping David (Engineering: Electrical)
Mokoena, Teboho Paulos (Engineering: Electrical)
Mokoena, Tumelo Daniel (Engineering: Electrical)
Motshologane, Tshepang Joseph (Mining Engineering)
Mthimunye, Patrick Gegana (Engineering: Electrical)
Munene, Rosin Makungu (Engineering: Electrical)
Munzhelele, Vhuthuhawe (Extraction Metallurgy)
Ncube, Msindisi (Mining Engineering)
Nkabinde, Senzo (Mining Engineering)
Nkosi, Thuli Constance (Extraction Metallurgy)
Nkuna, Rhangelani Zania (Extraction Metallurgy)
Raphala, Lebogang Abbyson (Mining Engineering)
Salzwedel, Trevor Dean (Engineering: Electrical)
Sekati, Mpho (Engineering: Electrical)
Seleka, Tshegofatso (Mining Engineering)
Shabangu, Thuthukani Mcebiseni (Engineering: Electrical)
Shakwane, Decide Kagiso (Engineering: Electrical)
Udeh, Eziokwu Johnson (Engineering: Electrical)

7. **Baccalaureus Ingeneriae (BIng)**

Gamede, Jenet Nompumelelo (Electrical and Electronic Engineering)
Grobler, Joost Heystek (Electrical and Electronic Engineering with endorsement Information Technology)
Hassen, Mohamed (Electrical and Electronic Engineering)
Khoza, Judas (Electrical and Electronic Engineering)
Khule, Ipeleng David Andrew (Electrical and Electronic Engineering)
Lee, Naeun Paul (Electrical and Electronic Engineering)
Makweya, Kgotso (Electrical and Electronic Engineering)
Mamba, Mxolisi Siyabonga (Electrical and Electronic Engineering)
Maseko, Mfundo (Electrical and Electronic Engineering)

Mathage, Refentse Masego (Electrical and Electronic Engineering)
Mhaka, Sibusiso Gilbert (Electrical and Electronic Engineering)
Mojapelo, Tebogo Ramakanyane (Electrical and Electronic Engineering)
Mokgatlhe, Karabo Brian (Electrical and Electronic Engineering)
Mtshali, Majawonke Samuel (Electrical and Electronic Engineering)
Mudau, Tshimangadzo Crestinah (Electrical and Electronic Engineering)
Nzima, Bongani (Electrical and Electronic Engineering)
Sithole, Sam (Electrical and Electronic Engineering)
Theza, Thando Alex (Electrical and Electronic Engineering)

8. **Magister Technologiae (MTech)**

Adetunji, Kayode Emmanuel (Engineering: Electrical)

Dissertation: Cloud computing for monitoring renewable energy system in rural areas

Supervisor: Prof M Joseph

Ewembe Yuka, Fontama (Extraction Metallurgy)

Dissertation: Mining concepts in artisanal mining and small scale processing of sandstones in Qwaqwa (Free State)

Supervisor: Prof AF Mulaba-Bafubiandi

Co-Supervisor: Prof S Rupprecht

Holland, Ishan Timir (Engineering: Electrical)

Dissertation: An investigation of risk assessment and lighting protection requirements for small-scale rooftop photovoltaic systems

Supervisor: Dr W Doorsamy

Co-Supervisor: Prof K Nixon

Hoosain, Mohamed Sameer (Engineering: Electrical)

Dissertation: Energy efficiency in smart homes based on demand side management

Supervisor: Prof SP Babu

Co-Supervisor: Dr S Rimer

Louw, Quentin Elliott (Engineering: Electrical)

Dissertation: Zero-sequence current-based detection of electricity theft in informal settlements

Supervisor: Dr P Bokoro

Megne Tiegoum, Adeline (Engineering: Metallurgy) **(with distinction)**

Dissertation: Mineralogy, microbial characterisation and microwave processing of selected geophagic clays

Supervisor: Prof AF Mulaba-Bafubiandi

Monatshebe, Tshiyoyo (Engineering: Metallurgy)

Dissertation: Artisanal processing of clayey soils for foundry, geophagic and brickmaking applications

Supervisor: Prof AF Mulaba-Bafubiandi

Co-Supervisor: Prof KD Nyembwe

Muremi, Lutendo (Engineering: Electrical)

Dissertation: Modelling of metal oxide varistor's response to thermally-induced stress using linear regression techniques

Supervisor: Dr P Bokoro

Mzayidume, Tulani Sijabulile (Engineering: Electrical)

Dissertation: Verifying a terrain mapping platform for military vehicle mobility

Supervisor: Prof B Twala

Co-Supervisor: Dr D Reinecke

Ngabibiga Epiga, Stacy (Extraction Metallurgy)

Dissertation: Planning and design of a stable stope for an Open Pit Hard Rock Mine

Supervisor: Dr SM Rupprecht

Ntita, Kanjinga Joelle (Extraction Metallurgy)

Dissertation: Leaching of vanadium from a vanadium bearing slag using organic acids

Supervisor: Dr W Nheta

Co-Supervisor: Mr P van Staden

Pieters, Edward James (Extraction Metallurgy)

Dissertation: Re opening of old mines for small scale mining in South Africa

Supervisor: Prof SM Rupprecht

Rasmeni, Zenzile Zelda (Engineering: Metallurgy)

Dissertation: Application of M & V methods to improve energy efficiency in AD steel foundry

Supervisor: Dr X Pan

Co-Supervisor: Mr F Varachina

9. Magister Ingenieriae (MIng) - Master of Engineering (MEng)

Adedayo, Adebayo Oluwaseun (Electrical and Electronic Engineering) **(with distinction)**

Dissertation: Testing the functionality and effectiveness of software defined networks

Supervisor: Prof N Nwulu

Co-Supervisor: Prof B Twala

Adepoju, Webster Oluwafemi (Electrical and Electronic Engineering) **(with distinction)**

Dissertation: High output gain modified DC-DC CUK Converters for renewable energy applications

Supervisor: Prof S Padmanaban

Co-Supervisor: Dr E Ozsoyo

Bolaji, Gugulethu Abiola (Electrical and Electronic Engineering) **(with distinction)**

Dissertation: Combating impulsive noise and narrowband Interference as a mixture in the power line communications channel

Supervisor: Dr T Shongwe

Du Plooy, Dennis Matthew (Electrical and Electronic Engineering)

Dissertation: Investigating the contributing factors towards proton exchange membrane fuel cell dormancy

Supervisor: Prof J Meyer

Khan, Naweed Aghmad (Electrical and Electronic Engineering)

Dissertation: A performance analysis of dense stereo correspondence algorithms and error reduction techniques

Supervisor: Dr PE Robinson

Co-Supervisor: Prof AL Nel

Moti, Nilesh (Electrical and Electronic Engineering)

Dissertation: Effects of different manipulations on images and audio with embedded watermarks

Supervisor: Prof TG Swart

Mthukwane, Clarence Modise (Electrical and Electronic Engineering)

Dissertation: Stabilised C-band dual wavelength erbium doped fibre ring laser

Supervisor: Mr MF Grobler

Co-Supervisor: Prof J Meyer

Muranda, Charles (Electrical and Electronic Engineering) **(with distinction)**
Dissertation: Modified SEPIC DC-to-DC Boost Converters with High Output-Gain configuration for renewable applications
Supervisor: Prof S Padmanaban
Co-Supervisor: Dr E Ozsoyo

Naidoo, Rene (Electrical and Electronic Engineering)
Dissertation: Developing a Systems Engineering framework for small scale community engagement engineering projects
Supervisor: Prof J Meyer
Co-Supervisor: Mrs N Janse van Rensburg

Taodzera, Tatenda Thomas (Electrical and Electronic Engineering)
Dissertation: Implementing machine learning algorithms to predict student performance
Supervisor: Prof B Twala
Co-Supervisor: Prof JR Carroll

Tshubwana, Rembuluwani Phillip (Electrical and Electronic Engineering)
Dissertation: Investigation on Fulgurites formation, their chemical composition and their contribution to network failures in Swaziland
Supervisor: Dr T Shongwe
Co-Supervisor: Prof C Gomes
Co-Supervisor: Dr M Hove

Tsourekis, Alexandros (Electrical and Electronic Engineering)
Dissertation: A strategy for improving the light-load efficiency of multi-phase fly-back converters
Supervisor: Dr DC Pentz
Co-Supervisor: Dr DG Sabatta

10. Doctor Legum (LLD):

Huneberg, Samantha (Mercantile Law)
Thesis: The fairness of forfeiture clauses in short-term insurance contracts
Supervisor: Prof D Millard

11. Doctor Ingeniariae (DIng)

Bayode, Abiodun (Mechanical Engineering)

Thesis: Advanced material development: functionally graded stainless steel alloy composites

Supervisor: Prof ET Akinlabi

Co-Supervisor: Prof S Pityana

Chaturvedi, Saurabh (Electrical and Electronic Engineering)

Thesis: BiCMOS Millimetre-wave Active Bandpass Filter

Supervisor: Prof S Sinha

Co-Supervisor: Dr M Božanić

Djonon Tsague, Hippolyte (Electrical and Electronic Engineering)

Thesis: Smart card byte code identification using power electromagnetic radiations analysis and machine learning

Supervisor: Prof B Twala

Emleh, Ashraf (Electrical and Electronic Engineering)

Thesis: Impact of modern lighting technology on the power line communications channel

Supervisor: Prof HC Ferreira

Co-Supervisor: Dr AS De Beer

12. Doctor Philosophiae (DPhil)

Akinlabi, Olaniyi Akindeji (Electrical and Electronic Engineering)

Thesis: Constrained optimisation of femtocell deployment in cellular networks

Supervisor: Prof MK Joseph

Mabunda, Nkateko Eshias (Electrical and Electronic Engineering)

Thesis: Design of a photovoltaic based energy systems using data acquisition and cloud computing

Supervisor: Prof MK Joseph

Mabuza Hocquet, Gugulethu Phumzile (Electrical and Electronic Engineering)

Thesis: Reconnaissance and assessment of Iris features towards Human Iris classification

Supervisor: Prof F Nelwamondo

Co-Supervisor: Prof T Marwala

Monga, Kaboko Jean Jacques (Electrical and Electronic Engineering)
Thesis: Development, characterization and analysis of an Active Q-switched Fibre Laser based on modulation of a Fibre Fabry-Perot Tunable Filter
Supervisor: Prof RM Manuel
Co-Supervisor: Prof J Meyer

Ochonogor, Franklin Onyeka (Mechanical Engineering)
Thesis: Development of titanium based metal matrix hybrid composites for ultra-high temperature applications
Supervisor: Prof ET Akinlabi
Co-Supervisor: Prof KD Nyembwe

Ranjan, Abhishek (Electrical and Electronic Engineering)
Thesis: Malicious attack detection in wireless AD-HOC network
Supervisor: Prof T Marwala



Huneberg, Samantha (LLD) Mercantile Law

Samantha Huneberg was born on 18 January 1989 in Welkom, Free State, and is the younger of two daughters. Her family relocated to Johannesburg and Samantha matriculated from Trinity House in 2006. She commenced her studies at UJ in 2007 with a BCom Law, followed by an LLB and an LLM in Commercial Law. Ms Huneberg was appointed as assistant lecturer at the University of Johannesburg in January 2016 where she distinguished herself as an upcoming young researcher and a committed lecturer who teaches mainly commercial law to non-law students.

Ms Huneberg's thesis explores the fairness of forfeiture clauses in insurance contracts. These clauses generally stipulate that policyholders who submit fraudulent claims forfeit the entire claim. Ms Huneberg investigates the prevalence of fraudulent insurance claims and rules pertaining to forfeiture clauses in South Africa, England, Australia and New Zealand and specifically considers the fairness of forfeiture clauses in light of pro-consumerist legislation.

The thesis concludes that forfeiture clauses form an indispensable part of short-term insurance contracts in South Africa and abroad and are indeed justifiable and therefore lawful. Insurance companies do, however, have a duty to disclose the nature and extent of forfeiture clauses at the inception of the policy *and* should have a similar duty towards the policyholder at claim stage. So-called "staggered disclosure" has the potential to reduce fraud and rules pertaining thereto should be incorporated into the 2018 Policyholder Protection Rules, together with a statutory definition of insurance fraud. Ms Huneberg has submitted two articles from her thesis to peer-reviewed journals.

Supervisor: Prof D Millard



Bayode, Abiodun (DIng) Mechanical Engineering

Abiodun Bayode obtained a BEng in Agricultural Engineering from the Federal University of Technology, Akure, Nigeria in 2005 and a BSc Honours in Technology Management from the University of Pretoria in 2010. He received an MEng in Engineering Management from the University of Johannesburg in 2014, after which he registered for a doctorate degree in the same year. He has produced a number of publication outputs from his thesis – three peer-reviewed conference papers, both international and local, and one book chapter. He received a merit award at the 2016 International Conference of Mechanical Engineering in the United Kingdom.

His research study focused on the fabrication of functionally graded 17-4 Ph/316L stainless steel composites using laser metal deposition additive manufacturing technology. With great benefits from a combination of these two stainless steel materials, the existing method in the literature used in the production and consolidation of these two stainless steel alloys is laborious and unsuitable for manufacturing components with complex geometries. He successfully optimised and manufactured the functionally graded composites of both materials and characterised their evolving properties using different characterisation techniques, such as X-Ray Diffraction (XRD), Scanning Electron Microscopy (SEM) and Vickers microhardness test, to mention a few. His research suggests and confirms that laser metal deposition technology is an alternate processing method and a process to improve the integrity of the component by applying the functional grading concept of varying compositions.

Supervisor: Prof ET Akinlabi

Co-Supervisor: Prof S Pityana



Chaturvedi, Saurabh (Ding) Electrical and Electronic Engineering

Saurabh Chaturvedi obtained his BTech degree in Electronics and Communication Engineering (ECE) from the IIIT University, NOIDA, India, in 2005 and his MTech degree in VLSI Design from the Guru Gobind Singh Indraprastha University, Delhi, in 2008. He worked with Essel Shyam Technologies, NOIDA (2005-2006) and Cadence Design Systems, NOIDA (2008-2009) before joining the Department of ECE at IIIT, where he stayed until the commencement of his doctoral studies at the University of Johannesburg. His research resulted in over 19 peer-reviewed journals and conference publications. Specifically from his doctorate work, eight peer-reviewed articles were published.

In his doctoral thesis, entitled *BiCMOS Millimetre-wave Active Bandpass Filter*, the promovendus has demonstrated, for the first time, that it is possible to develop millimetre-wave active bandpass filters (BPFs) using the BiCMOS technology. The research findings include at least two different 60 GHz active BPFs with low loss, low noise and low power dissipation using the GlobalFoundries 0.13 μm silicon germanium BiCMOS8HP process technology. The research also proposed the use of microelectromechanical systems (MEMS) and switches for BPF tunability. As a proof of concept, a radio frequency MEMS shunt cantilever switch, functioning up to 65 GHz, was prototyped and measured.

Supervisor: Prof Saurabh Sinha

Co-Supervisor: Dr Mladen Božanić



Djonon Tsague, Hippolyte (DIng) Electrical and Electronic Engineering

Hippolyte Djonon Tsague obtained his Bachelor of Science in Electrical/Electronic Engineering from the University of the Witwatersrand in 2003 and a Master of Science in Engineering (computational Intelligence) from the same university in 2006. He worked with iSolv Technologies as an embedded engineer from 2005 to 2008, then as a senior researcher at the Council of Scientific and Industrial Research where he stayed until the commencement of his doctoral studies at the University of Johannesburg. His research resulted in over 16 peer-reviewed journals and conference publications. Specifically, from his doctorate work, eight peer-reviewed articles were published.

In his work entitled Smart Card Byte Code Identification using Power Electromagnetic Radiations Analysis and Machine Learning, he showed that side-channel analysis can be used to detect and identify the presence of malware in micro-controller devices and other cryptographic devices. He proved the claim on a case study consisting of detecting the presence of the Sykipot malware on smart card environments. It has been demonstrated that it takes approximately 229 days to detect a malware attack. His implementation goes a long way towards improving such statistics. To date, this is the only study presenting a full smart card instruction set identification using electromagnetic analysis with a practical relevant recognition rate above 90% on test data and about 90% on real program.

Supervisor: Prof B Twala



Emleh, Allan Ashraf Fares (DIng) Electrical and Electronic Engineering

Allan Ashraf Fares Emleh obtained his BEng degree in Electrical Engineering from the University of Politehnica in Timisoara, Romania, and completed his technical training for his MEng degree at Siemens in Munich, Germany, in 2000 and 2001, respectively. He is currently employed as a technical manager in the Department of Electrical and Electronic Engineering Science at the University of Johannesburg, South Africa. His research interests are in the fields of power line communications and lighting technologies. The findings of this research were published in over 10 IEEE conference proceedings.

In his doctoral thesis, the candidate worked in the field of Telecommunications. The main contribution of his work was to emphasise the serious and “risky” impact of modern lighting technologies on power lines when used as a communications medium. He investigated the characteristics of most low-power and high-power lighting technologies currently in use indoors and outdoors. He studied LED lighting technology, including the disadvantages of this technology, as it is becoming one of the main light sources in many parts of the world. The model developed is aimed at making a contribution to the future manufacturing industry.

Supervisor: Prof HC Ferreira

Co-Supervisor: Dr AS de Beer



Akinlabi, Olaniyi Akindeji (DPhil) Electrical and Electronic Engineering

Olaniyi Akindeji Akinlabi had his former education in Nigeria. He obtained both the ordinary and Higher National Diploma in Electrical and Electronic Engineering, from Bori Polytechnic, Rivers State, Nigeria, in 2005 and 2007, respectively. He obtained his MTech in Electrical Engineering from the University of Johannesburg in 2015 and proceeded to enrol for a doctoral degree in the same year. Mr Akinlabi is a registered member of the South African Institute of Electrical Engineers. He has contributed to UJ in his role as a tutor during his doctoral studies. The candidate published his research findings in an ISI-listed journal and in 11 peer-reviewed conference papers. The majority of his work was presented internationally.

His research focuses on the constrained optimisation of femtocell deployment in cellular network. The candidate's research focused on the development of a positioning algorithm for the deployment of a femtocell network in a mobile network. His research is unique, as it determines ways to optimise femtocell deployment under the constraint of interference. The utility function was used to achieve an optimal network coverage for the deployment of femtocell base stations. His research ensures the point of resource fairness that improves the cellular network for optimal deployment of the femtocells. His research work is significant and has potential industrial applications.

Supervisor: Prof Meera Joseph



Mabunda, Nkateko Eshias (DPhil) Electrical and Electronic Engineering

Nkateko Eshias Mabunda completed a BTech degree at NMMU in 1998. In the same year, he joined Telkom as a technician for Operations. In 2001, he was appointed as a manager to oversee the site until end of 2002, and thereafter he joined NMMU as a lecturer. In 2006, he joined UJ as a lecturer in the Department of Electrical and Electronic Engineering Technology. He obtained his MTech Electrical Engineering degree from UJ in 2015. He is a registered Professional Engineering Technologist and is professionally registered with the Engineering Council of South Africa. The candidate has published three international conference papers related to his doctoral work and finalised one journal paper.

His doctoral research focuses on the design of Photovoltaic (PV) based energy systems by using Data Acquisition System (DAS) and cloud computing. Two DAS based tools were designed to aid with collection of solar site and load analysis data. The DAS acquired data were later transferred to the cloud for storage and sharing. The final design was simplified to the level where non-experts will be able to check feasibility of PV systems, list the required PV system equipment and possibly set it up so that all users will be able to create their own solar irradiance records.

Supervisor: Prof Meera Joseph



Mabuza-Hocquet, Gugulethu Phumzile (DPhil) Electrical and Electronic Engineering

Gugulethu holds a Master's degree in Telecommunications (*cum laude*) from TUT, and an MSc in Electrical and Electronic systems from ESIEE Paris, in France. She has published and presented her research work both locally and internationally. She is a qualified Secondary School Teacher in Mathematics and Physical Science. Her academic work won her the TATA South African Women in Science Award in 2011, first runner-up of the science communication competition Famelab South Africa in 2014, and currently the brand ambassador of the "Ideas that work" campaign for the CSIR where she is employed as an iris biometrics specialist.

The research conducted by the candidate investigated and assessed the human eye, and in particular, the iris features to either revoke or confirm the long-standing argument in iris biometrics that states that "the human iris is not related to genetics". The conducted research contributed as the first of its kind to develop a robust method that categorises human irises into classes of gender and ethnicity from African individuals. The results demonstrated that through the fusion of image processing, computer vision, machine learning and artificial intelligence techniques, the iris features can determine both gender and ethnicity. The research proves that the human iris contains genetic information that can reveal some of the demographic information of an individual. The thesis developed engineering tools, integrated into an existing iris recognition technological system, to enhance identity authentication, thereby improving on both logical and physical security brought by biometrics systems.

Supervisor: Prof F Nelwamondo

Co-Supervisor: Prof T Marwala



Monga, Kaboko Jean-Jacques (DPhil) Electrical and Electronic Engineering

Kaboko Jean-Jacques Monga was born in Likasi, DR Congo, in 1979. He completed a BSc Honours in Electronics at the Institut Supérieur Pédagogique et Technique (ISPT) of Likasi, Democratic Republic of Congo, in 2007. In 2009, he enrolled for the MPhil degree in Electrical and Electronic Engineering Sciences at the University of Johannesburg, graduating cum laude in 2012. He was awarded the Chancellor medal for most outstanding master's student in Engineering as well as the QS Maple Scholarship. He subsequently enrolled for a PhD in Electrical and Electronic Engineering Sciences at the University of Johannesburg, specialising in Photonics.

His research interests focus on Rare Earth Doped Active Q-switched Fiber Lasers, specifically improving their output power and line width. He currently works at Huawei Technologies Africa as optical transmission engineer. Since 2014, he has been involved in the following projects: CellC MBT network project, PRASA GSMR project, Gauteng Broadband Network and Telkom E2E project (POTN).

The field of fibre lasers and fibre optic devices has experienced a sustained rapid growth. Q-switched lasers offer inherent advantages of relatively low cost, compact design, light weight, low maintenance, and increased robustness and simplicity over other fibre laser systems. Mr Kaboko successfully demonstrated the design of a new Q-switching approach in an all-fibre based laser. Using this Q-switching technique, the experimental construction of an all-fibre active Q-switched Erbium-doped fibre lasers was successfully demonstrated in both ring cavity and linear cavity fibre laser configurations. A novel theoretical model was derived to validate the Q-switching approach introduced. The developed fibre laser systems provided a simple and cost-effective approach to realise a stable, high extinction ratio, narrow line width fibre laser system suitable for application in the field of optical fibre sensors and communication.

Supervisor: Prof RM Manual

Co-Supervisor: Prof J Meyer



Ochonogor, Onyeka Franklin (DPhil) Mechanical Engineering

Onyeka Ochonogor matriculated from Ngala Primary School, Boji, Boji Owa, Delta State, Nigeria in 1995. He completed his secondary education in the College of Education, Agbor, Delta State, Nigeria, in 2000. He received a BEng Honours in Metallurgical and Material Engineering from Enugu State University of Science and Technology, Nigeria, in 2006. He completed his MTech degree at Tshwane University of Technology, Pretoria, in 2013 and proceeded onto a doctorate degree at the University of Johannesburg. His doctoral work has led to the publication of five peer-reviewed conference papers, while two ISI-listed journal articles are under review.

High demand for improved properties of Titanium metal matrix composites has led to the fabrication of a hybrid composite of grade five Titanium alloy (Ti6Al4V) - Boron Nitride (BN) and Boron Carbide (B₄C) system with good metallurgical properties, including hardness, resistance to matrix cracking and, most importantly, excellent wear resistant properties. This hybrid composite finds application in high temperature systems for wear applications like diesel engine pistons. However, the combination of Ti6Al4V - BN - B₄C hybrid system is a complex process due to the individual extreme hardness property that often affects the homogenisation and bonding mechanism. While compatibility with matrix and ceramic powders composition is very important, this was optimised and successfully achieved with the aid of an Nd: YAG laser system. The wear resistance behaviour of the fabricated composite material was found to improve considerably, signifying a good distribution of the ceramic particles formed. The composites were analysed using Scanning Electron Microscopy, hardness profiling and X-Ray Diffraction Spectrum.

Supervisor: Prof ET Akinlabi

Co- Supervisor: Prof KD Nyembwe



Ranjan, Abhishek (DPhil) Electrical and Electronic Engineering

Abhishek Ranjan obtained his Bachelor of Engineering in Information Technology and Master of Technology in Computer Science and Engineering degrees from Biju Patnaik University of Technology, Odisha, India, in 2006 and 2008, respectively. He worked in various positions such as senior lecturer, module leader, manager internal quality assurance and Dean of the Faculty of Computing at Botho University from July 2009 to March 2016. Abhishek is currently working as an Assistant Dean and Head of Maseru Campus of the Botho University, Lesotho. He enrolled for his DPhil in the Department of Electrical and Electronic Engineering at the University of Johannesburg in 2012.

Ranjan's thesis is oriented towards analysis of malicious attack detection in wireless ad hoc networks. Ranjan's research work was on identifying malicious attacks in ad hoc networks to create an intelligent node based, secure environment for effective communication. He introduced the Simple Neighbor Discovery Protocol (SNDP) to find the intruders and restrict the behaviour of malicious stealthy attackers. The framework of SNDP protocol monitors all neighbor nodes to detect malicious nodes and avoid dropping the packet. These make the entire neighborhood appropriate for effective communication. He also introduced swarm based design for guarding over stealthy attacks in mobile ad hoc network (MANET) to choose an efficient observing node that effortlessly identifies the misbehaviour attacks. To build the precision using swarm based design, he used Depmster-Shafer theory. The SNDP protocol and the swarm-based design for guarding over stealthy attacks provide higher efficiency by increasing the accuracy of detecting malicious node, thereby making the communication over ad hoc networks efficient and effective. This work was presented at three peer-reviewed international conferences, published in one journal article, and one book chapter; another manuscript has been accepted with minor corrections.

Supervisor: Prof T Marwala



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



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