

**Welcome to the
Graduation Ceremony
of the
University of Johannesburg
26 September 2016 at 17:00**

**Welkom by die
Gradeplegtigheid
van die
Universiteit van Johannesburg
26 September 2016 om 17:00**

**Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
26 Lewedi 2016 ka 17:00**

**Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
26 kuMandulo 2016 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, INTERNATIONALISATION AND THE 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: FINANCE

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

DEPUTY VICE-CHANCELLOR: EMPLOYEES AND STUDENT AFFAIRS

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

GENERAL COUNSEL

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

ADVISOR TO THE VICE-CHANCELLOR: SPECIAL PROJECTS

Mr DM Manganye
NDip, BTech (UJ)

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 (Cambridge UK)

FACULTY OF LAW

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

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 (California USA)

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 S Dlamini
Mr TJ Dikgole
Mr CR Gebhardt
Prof D Hildebrandt
Mr G Khosa
Prof C Landsberg
Dr DSS Lushaba
Dr J Manyaka
Ms BJ Memela-Khambula
Dr P Mjwara
Mr RM Mkhonto
Mr M Mnyele
Prof A Mohammadali-Haji
Mr MJN Njeke
Prof A Parekh
Prof IL Rensburg
Dr WP Rowland
Mr KB Sibiya
Mr K Thomas
Mr J van Schoor
Mr M White

PRESIDENT OF CONVOCATION

Mr RM Mkhonto

Programme

Monday, 26 September 2016 at 17:00

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

The academic procession enters the venue 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 venue while those present remain standing.

Lenaneo

Mošupologo, 26 Lewedi 2016 ka 17:00

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

Sehlopha sa dirutegi se tsena ka lefelong la 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 lefelong la kopano mola bao ba lego gona ba tšwela pele go ema.

Program

Maandag, 26 September 2016 om 17:00

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

Die akademiese proses kom die lokaal 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 lokaal.

Uhlelo

uMsombuluko, 26 kuMandulo 2016 ngele-17:00

Ukuze kuqinisekiswa ukuthi konke kuhamba kahle ngesikhathi somcimbi, bonke
abakhona bacelwa ukuba baphume kuphela endaweni yomcimbi uma umcimbi
usuphelile.

Udwendwe lwezifundiswa lungena endaweni yomcimbi bese luyohlala esiteji.

Ikhwaya icula i-Gaudeamus Igitur (noma kudlalwa i-CD) ngenkathi abakhona besamile.

USekela-Shansela uhlanganisa ibandla.

Ikhwaya.

Ukwamukelwa.

Izinhloko Eziyiziphathimandla ezithintekayo zethula abafundi kuSekela-Shansela
weNyuvesi ukuze bathole iziqu zabo: idigri/idiploma/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:

Leya, Cynthia Bonbwe (Building)
Malabela, Adelaide Thulisile (Building)
Mampuru, Getrude (Building)

2. Baccalaureus Technologiae (BTech):

Naidoo, Mogambery (Quantity Surveying)

3. Baccalaureus Ingenieriae (BIng):

Dhladhla, Mafika Thomas (Electrical and Electronic Engineering)
Fellinger, Graeme Peter (Civil Engineering)
Gaunt, Peter Graeme (Civil Engineering)
Govender, Shane Sumandran (Civil Engineering)
Ho, Trevor Geoffrey (Electrical and Electronic Engineering with endorsement Information Technology)
Jantjies, Oupa (Electrical and Electronic Engineering)
Jewell, Jason Keith (Civil Engineering)
Jivan, Krishna Prakash (Electrical and Electronic Engineering)
Kagimbangabo, Kanuma Emmanuel (Electrical and Electronic Engineering)
Kgowe, Kagiso Roseline (Electrical and Electronic Engineering)
Maboa, Dikeledi Tumelo (Civil Engineering)
Manana, Yandile (Civil Engineering)
Marokane, Malebo Pritchett (Electrical and Electronic Engineering with endorsement Information Technology)
Masango, Saya Sanakhe (Civil Engineering)
Mbambo, Ziphozonke Sibongakonke (Electrical and Electronic Engineering)
Mgijima, Theo (Civil Engineering)
Mkhabela, Nomthandazo (Electrical and Electronic Engineering)
Moloi, Mpho Innocent Popane (Electrical and Electronic Engineering)
Motong, Mmutejana Clifford (Electrical and Electronic Engineering)
Mtsweni, Mohlalifi Oupa (Civil Engineering)
Mulondo, Rendani Errol (Electrical and Electronic Engineering)
Nana, Umar Ahmed (Civil Engineering)
Neo, Lebohang Zacharia (Electrical and Electronic Engineering)
Nkantingi, Nhlamulo Cyril (Civil Engineering)

Ntsoane, Seruwe Ngwato (Electrical and Electronic Engineering)
Nxumalo, Lunghisani Kevin (Civil Engineering)
Nyandeni, Dan Bafana (Electrical and Electronic Engineering)
Reddy, Joel Kerwin (Mechanical Engineering)
Russell, Byron John (Civil Engineering)
Sambo, Abel (Civil Engineering)
Sekgoka, Morakeng (Electrical and Electronic Engineering)
Stols, Pieter Andries Smith (Civil Engineering)
Thomas, Shalaka Suzanne (Electrical and Electronic Engineering with endorsement Information Technology)
Tsemame, Neo Frank (Civil Engineering)
Van Eeden, Lenchen (Civil Engineering)
Vilakazi, Zibuyile Timothy (Mechanical Engineering)
Xhobiso, Makhosazana Charlotte (Civil Engineering)
Zililo, Khwezi (Civil Engineering)
Zwane, Mbalenhle (Mechanical Engineering)

4. Magister Technologiae (MTech):

Aladesanmi, Victor Ifetayo (Engineering: Civil)
Dissertation: Material and wear characterisation of steel rail on curved railway track
Supervisor: Mr JJ de Koker
Co-Supervisor: Dr D Nyembwe

Khabisi, Lisebo Jerminah (Quantity Surveying) **(with distinction)**
Dissertation: Cost overruns in public sector construction projects in South Africa
Supervisor: Prof CO Aigbavboa
Co-Supervisor: Prof WD Thwala

Khangale, Phathutshedzo Rodney (Chemical Engineering)
Dissertation: Fischer-Tropsch reaction over cobalt alumina catalyst: activation using hydrogen and carbon monoxide
Supervisor: Prof K Jalama
Co-Supervisor: Prof R Meijboom

Masemeni, Neo Malose (Construction Management) **(with distinction)**
Dissertation: The use of collaborative models to improve the performance of construction supply chains in South Africa
Supervisor: Prof CO Aigbavboa
Co-Supervisor: Prof WD Thwala

Mashwama, Xolile Nokulunga (Construction Management) **(with distinction)**
Dissertation: Assessment of disputes causes in Swaziland construction projects
Supervisor: Prof CO Aigbavboa
Co-supervisor: Prof WD Thwala

Matheri, Anthony Njuguna (Chemical Engineering)

Dissertation: Mathematical modelling in Biogas production (renewable energy)

Supervisor: Mr M Belaid

Co-Supervisor: Dr TG Seodigeng

Moreroa, Mabatho Sophy (Chemical Engineering)

Dissertation: Removal of sulphates from acid mine drainage using barium and organically modified clays

Supervisor: Prof F Ntuli

Motebele, Makhala (Operations Management)

Dissertation: Impact of manufacturing strategy on competitiveness, Capability and Performance at ArcelorMittal

Supervisor: Prof C Mbohwa

Nemtajela, Ndivhuwo (Operations Management) **(with distinction)**

Dissertation: Inventory management under demand uncertainty in the fast moving consumer goods organisation in Gauteng

Supervisor: Prof C Mbohwa

Ntlhane, Makibane Daniel (Operations Management)

Dissertation: Comparative study of infrastructure quality in Sweden and South Africa

Supervisor: Prof C Mbohwa

Co-Supervisor: Mr S Akinlabi

Nyembwe, Kolela (Extraction Metallurgy)

Dissertation: Waste foundry sand characteristics

Supervisor: Dr ME Makhatha

Co-Supervisor: Mr T Madzivhandila

Paepae, Thulane (Chemical Engineering)

Dissertation: Attainable regions for optimal reaction networks: application of ΔH - ΔG plot to direct synthesis of dimethyl ether from syngas

Supervisor: Dr TG Seodigeng

Co-Supervisor: Prof F Ntuli

Shiba, Nothando Cynthia (Chemical Engineering)

Dissertation: Extraction and precipitation of phosphorus from sewage sludge

Supervisor: Prof F Ntuli

Tshibola Kalombo, Vanessa (Operations Management)

Dissertation: Effective operations strategies and competitive priorities at electronics companies

Supervisor: Dr A Vermeulen

Tshikhudo, Livhuwani Murendeni (Construction Management)

Dissertation: Development of small, medium and micro enterprises in the South African construction industry

Supervisor: Prof CO Aigbavboa

Co-Supervisor: Prof WD Thwala

5. Magister Ingenieriae (MIng) Master of Engineering (MEng):

Abegunde, Olayinka Oluwatosin (Mechanical Engineering) **(with distinction)**

Dissertation: Characterisation of Al-TiC metal matrix composites produced via friction stir welding

Supervisor: Prof ET Akinlabi

Co-Supervisor: Mr DM Madyira

Beetge, Willem Gerhardus (Engineering Management) **(with distinction)**

Minor Dissertation: Managing the design and development of high performance buildings through integrated design

Supervisor: Prof JHC Pretorius

Co-Supervisor: Mr D De Canha

De Brito, Claudio Michael Novais (Electrical and Electronic Engineering)

Dissertation: The use of power quality standards to establish equivalent transformer capability under harmonic loading

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr P van Rhyn

Ditsele, Samuel Steward Mogomotsi (Engineering Management)

Minor Dissertation: Reliability project optimisation: A South African rail case

Supervisor: Dr. A Telukdarie

Dos Santos, Ayrton Augusto Correia (Engineering Management) **(with distinction)**

Minor Dissertation: The Influence of communication within organizations

Supervisor: Prof JHC Pretorius

Du Plessis, Haydn Dean (Engineering Management) **(with distinction)**

Minor Dissertation: A roadmap for smart city services to address small business challenges

Supervisor: Dr A Marnewick

Esakjee, Abdul Razak (Mechanical Engineering)

Dissertation: The effect of heat treatment on the mechanical properties and machinability of AAR Grade E steel

Supervisor: Prof RF Laubscher

Gevers, Richard Heinrich (Electrical and Electronic Engineering) **(with distinction)**
Dissertation: Harvesting solar radiation in hybrid transparent photovoltaic façade's in Southern Africa
Supervisor: Prof JHC Pretorius
Co-Supervisor: Dr P van Rhyn

Hurter, Warren Stanley (Mechanical Engineering)
Dissertation: Evaluating a technology readiness assessment framework through the development of a composite prototype vehicle suspension system
Supervisor: Ms. N Janse van Rensburg
Co-Supervisor: Mr DM Madyira

Kawayongo, Jojo Mbumba (Engineering Management)
Minor Dissertation: Requirements elicitation techniques for overcoming lack of domain knowledge
Supervisor: Dr A Marnewick

Madhav, Rushil Baravand (Engineering Management)
Minor Dissertation: Managing changeover waste in manufacturing plants when using single minute exchange of dies
Supervisor: Dr A Marnewick

Manyapetsa, Kgomotso Peter (Engineering Management)
Minor Dissertation: Trade-off study of a new build versus upgraded existing undersea optic cable system
Supervisor: Dr A Wessels

Marazani, Tawanda (Mechanical Engineering)
Dissertation: Laser additive manufacturing technology for crack repairs in titanium alloy components
Supervisor: Mr DM Madyira
Co-Supervisor: Prof ET Akinlabi

Mathebula, Dolphina Dolly (Engineering Management)
Minor Dissertation: Reliability strategy for feed pumps at Kriel power station
Supervisor: Prof JHC Pretorius
Co-Supervisor: Mr A Rooney

Mayoyo, Aobakwe Reginald (Engineering Management)
Minor Dissertation: Factors that cause failure on diesel locomotives (39 200 class)
Supervisor: Dr A Wessels

Mbundu, Thandeka Lerato (Engineering Management)
Minor Dissertation: Exploring procedures to fast track projects in Eskom Gauteng operating unit
Supervisor: Mr D Kruger

Molloy, Steven James (Engineering Management)

Minor Dissertation: A review of facilities management at two higher education institutions in Gauteng: A comparative case study

Supervisor: Prof JHC Pretorius

Mulongo, Ndala Yves (Engineering Management) **(with distinction)**

Minor Dissertation: Cost analysis: power generation plants versus demand side management programmes

Supervisor: Dr A Marnewick

Co-Supervisor: Mr D De Canha

Musarurwa, Dadiso Florence (Electrical and Electronic Engineering) **(with distinction)**

Dissertation: Design of balanced q-ary interleaved sequences

Supervisor: Prof K Ouahada

Co-Supervisor: Prof H Ferreira

Nala, Nkosinathi Levy (Engineering Management)

Minor Dissertation: An investigation into hazardous pipeline failure causes as linear predictors of consequential damage costs: A case study

Supervisor: Dr A Maneschijn

Co-Supervisor: Prof JHC Pretorius

Newby, Jared Paul (Engineering Management)

Minor Dissertation Risk management techniques and practices for Southern African construction projects

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Telukdarie

Ntumba, Eric Muipatay (Mechanical Engineering)

Dissertation: Characterising laser metal deposition of titanium and molybdenum on titanium alloy for surface engineering applications

Supervisor: Prof ET Akinlabi

Co-Supervisor: Mr DM Madyira

Ogunlana, Musibau Olalekan (Mechanical Engineering) **(with distinction)**

Dissertation: Characterisation of titanium alloy and boron carbide Metal Matrix Composites for surface engineering applications

Supervisor: Prof ET Akinlabi

Ratilal, Preyanka (Mechanical Engineering) **(with distinction)**

Dissertation: Fracture toughness characterisation of functionally graded titanium alloy and titanium carbide

Supervisor: Mr DM Madyira

Co-Supervisor: Prof ET Akinlabi

Reddy, Randall Dwain (Mechanical Engineering)

Dissertation: Effect of tool geometries on butt dissimilar friction stir welds of 5754 aluminium alloy and C11000 copper

Supervisor: Prof ET Akinlabi

Co-Supervisor: Mr DM Madyira

Rogers, Rowan Mark (Mechanical Engineering) **(with distinction)**

Dissertation: Surface texture assessment of commercially pure titanium dental implants

Supervisor: Prof RF Laubscher

Co-Supervisor: Ms. N Janse van Rensburg

Smith, Kegan Bryce (Electrical and Electronic Engineering)

Dissertation: Hybrid vehicle design considerations for endurance competitions

Supervisor: Prof J Meyer

Co-Supervisor: Mr J Carroll

Sutherland, Harriet Elizabeth (Electrical and Electronic Engineering)

Dissertation: A distributed sensing based on optical frequency domain reflectometry implementing ultra-low reflectivity points

Supervisor: Dr RM Martinez

Co-Supervisor: Mr MG Grobler

Thakur, Priyanka (Electrical and Electronic Engineering)

Dissertation: An analysis of robust fuzzy-PID control for Automatic Generation Control systems

Supervisor: Prof B Twala

Co-Supervisor: Dr C Boesack

Thomas, Ponny (Engineering Management)

Minor Dissertation: Evaluating an empirical relationship between recloser placement and reliability improvement in distribution networks

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Wessels

Tshabuse, Fulufhelo (Engineering Management)

Minor Dissertation: Applying preventive and predictive best practice on plant maintenance

Supervisor: Prof JHC Pretorius

6. **Magister Philosophiae (MPhil):**

Choshi, Frans Madimetja (Engineering Management)

Minor Dissertation: The significance of facilitation skills for business process

Supervisor: Dr A Maneschijn

Co-Supervisor: Prof JHC Pretorius

Ewuola, Oluwatoyin Olabisi (Mechanical Engineering)

Dissertation: Characterisation of tool geometries for friction stir lap welds of aluminium and copper

Supervisor: Prof EL Akinlabi

Co-Supervisor: Mr DM Madyira

Makabate, Choeu Tshepisho (Engineering Management)

Minor Dissertation: Critical success factors influencing project success in infrastructure projects: A comparative case study

Supervisor: Dr A Wessels

Melato, Popi Elizabeth (Electrical and Electronic Engineering) (with distinction)

Dissertation: Tabu search-based optimal choice of lines for voltage derating in lightly loaded-high voltage constrained networks

Supervisor: Dr N Mbuli

Co-Supervisor: Prof JHC Pretorius

Mokwana, Brandon (Engineering Management)

Minor Dissertation: The impact of policy on broadband development: A South African case study

Supervisor: Dr A Marnewick

Neuhaus, Taryn Antonia (Engineering Management) (with distinction)

Dissertation: Game theoretic modelling of project management resulting in litigation

Supervisor: Prof AL Nel

Nkonyana, Thembinkosi Nelson (Electrical and Electronic Engineering) (with distinction)

Dissertation: Image classification using machine learning techniques

Supervisor: Prof B Twala

Stadler, Charel Richter (Engineering Management)

Minor Dissertation: Reliability Engineering Management in the Petrochemical environment: The air separation unit

Supervisor: Dr A Telukdarie

Tlomatsana, Lehlabiwa Ezekiel (Engineering Management)

Minor Dissertation: Optimisation of public procurement system supporting the SA construction industry

Supervisor: Dr A Telukdarie

Tshuma, Brighton (Civil Engineering)

Dissertation: Eaves connections of double-bay portal frames

Supervisor: Prof M Dundu

Uys, Johannes Wilhelm (Engineering Management)

Minor Dissertation: Open design as sustainable competitive advantage

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr GA Oosthuizen

Zulu, Innocent (Engineering Management)

Minor Dissertation: The Impact on public transportation by the growth of informal Settlement in South African cities

Supervisor: Prof JHC Pretorius

Co-Supervisor: Mr LLSL Kruger

7. Doctor Ingenieriae (DIng)

Jura, Dudley (Engineering Management)

Thesis: Quality management framework for incubation clusters

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr GA Oosthuizen

8. Doctor Philosophiae (DPhil):

Mubiayi, Mukuna Patrick (Mechanical Engineering)

Thesis: Characterisation of the evolving properties of friction stir spot aluminium and copper welds

Supervisor: Prof ET Akinlabi

Sithebe, Thembelani (Mechanical Engineering)

Thesis: Systems integration of an automated assembly

Supervisor: Prof AL Nel

Skeepers, Natalie Carol (Engineering Management)

Thesis: Safety leadership and safety management within the construction industry in Gauteng province

Supervisor: Prof C Mbohwa

Sukdeo, Nita (Engineering Management)

Thesis: The role of Total Quality Management (TQM) practices on improving organisational performance in manufacturing and service organisations

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Vermeulen

Jura, Dudley (DIng)

Dudley Jura completed his Bachelor of Science honours degree in Metallurgical Engineering at the University of Zimbabwe in 1993. He then obtained a master's degree in Business Administration at the University of Zimbabwe in 2003. In 2010, Dudley graduated with a Master of Engineering degree in Manufacturing Systems and Operations Management from the National University of Science and Technology in Zimbabwe. He is a registered member of the Coaches and Mentors Association of South Africa.

Dudley is an experienced metallurgist who has worked in base metals extraction, coal mining, conveyor belt design and manufacturing and coke making industries for most of his career spanning over 23 years. He is currently employed by ArcelorMittal South Africa as an Operations Manager. He has presented nine peer-reviewed conference papers and one journal article on quality management systems.

Quality management systems can be used as a vehicle to lead businesses undergoing incubation through the various stages of growth. In his thesis, the promovendus presents an investigation into how quality management systems can be used for success by small businesses undergoing incubation in the technology and manufacturing sectors. The candidate reviewed case studies and did comprehensive site visits to various clusters. The sample population comprised incubators in the economic sectors of the South African economy that include construction, mining and mineral processing, jewellers, information technology, floriculture, the motor industry, agriculture, biofuels and furniture. He developed a quality management framework based on the venture life-cycle model and he established key success elements for business incubation.

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr GA Oosthuizen



Mubiayi, Mukuna Patrick (DPhil)

Mukuna Patrick Mubiayi obtained his Bachelor of Engineering degree in Electromechanical Engineering from the University of Lubumbashi, Democratic Republic of Congo in 2004. He then proceeded to obtain a master's degree in Mechanical Engineering at the University of Johannesburg (UJ) in 2012. In 2012, he registered for his doctoral degree at the University of Johannesburg. He worked as a technical assistant in the Extraction Metallurgy laboratory for over two years and he is currently a research fellow in the Department of Mechanical Engineering Science at the University of Johannesburg. He is also a writing consultant in the Academic Development Centre (ADS) at UJ.

Many emerging applications in power generation, chemical, aerospace and manufacturing industries have led to the development of Friction Stir Welding (FSW) technology for similar and dissimilar materials. In his thesis, the candidate successfully used the Friction Stir Spot Welding (FSSW) technique, which is a variant of the FSW process, to produce spot welds on 1060 aluminium alloy and C11000 commercially pure copper sheets. The spot welds produced were characterised and optimised in order to fill the gap in the literature in this field of study. His research work is significant and has led to the expansion of the use of the FSSW process in the manufacturing sector. The process developed is a solid state welding process with better and improved qualities in the welds and it is an alternative solution to the Resistance Spot Welding (RSW) technique and riveting. Some of his research findings have been published in two book chapters, one ISI-listed journal article and five peer-reviewed conference papers.

Supervisor: Prof ET Akinlabi



Sithebe, Thembelani (DPhil)

Thembelani Sithebe was born on 25 December 1966. He completed his “A” levels in 1987 at Mzilikazi High School and obtained his BTech (Hons) (Mechanical) and MSc (Mechanical) degrees at the University of Zimbabwe University, in 1994 and 2001 respectively, since 2006 he has been working at the University of South Africa as a lecturer in the Department of Mechanical and Industrial Engineering.

The candidate’s research focused on systems integration and the generation of a generic simulation code/program of an automated assembly system that can be used to simulate a given family of assembly. The aim is to establish a generic simulation process, based on the generic algorithm and generic assumptions, to be used to simulate a given family of automated assembly processes. The validation of the generic simulation program was done by simulating six given scenarios through Arena and Simio Standard programs of an automated assembly processes. These results further validate the effectiveness of the Arena and Simio Simulation programs as useful tools for this family of products and assembly processes. This work has been disseminated internationally through a number of conference proceedings and journal articles.

Supervisor: Prof AL Nel



Skeepers, Natalie (DPhil)

Natalie Skeepers was born in Boksburg in 1972 and started her career as a Health Inspector in 1993. She has two master's degrees, one from the University of Queensland, Australia and a second one from Stellenbosch University. She has experience in governance, risk and compliance systems and has a wide range of industry experience. She has held various senior and executive positions over the last 20 years in both the private and public sector. She serves as non-executive director on the boards of the Rail Safety Regulator, Film and Publication Board and the Construction Industry Development Board. She is presently consulting in risk management.

The candidate's research has contributed to the body of knowledge in the construction industry, addressing the relationship between safety leadership and safety management in South Africa. Although there has been considerable interest in safety leadership, relatively little attention has been paid to the factors that determine safety leadership in the construction industry. This study focused on the variables that influence the leadership competencies required to improve safety performance in the construction industry strategically. This thesis makes a unique contribution in that it discusses the notion of leadership in construction from a psychological perspective. The research further proposed that safety, just like health, must be considered a personal issue through motivation, consciousness and change of mindset.

The thesis provides new and insightful characterisation of safety leadership and safety management and the relationship between them. It provides a rich source of ideas that can be applied in safety management in the construction industry. The work has resulted in three articles in Scopus-indexed international journals.

Supervisor: Prof C Mbohwa



Sukdeo, Nita (DPhil)

Nita Sukdeo completed her National Diploma in Marketing Management and BTech in Operations Management, in 2001 and 2004 respectively at the former ML Sultan Technikon (which is now the Durban University of Technology). She was then employed in the Department of Operations and Quality Management, at the Durban University of Technology in 2005, as a part-time junior lecturer, and continued on to her MTech in the field of Quality, which she successfully completed in 2009. She then progressed to permanent employment as a lecturer at the University of Johannesburg in 2010 in the Department of Quality and Operations Management.

The findings of this study indicate that the seven Total Quality Management (TQM) elements have a positive influence on five organisational performance measures. The results of this study provides valuable information for manufacturing and service organisations on improving quality and enhancing organisational performance. These findings are also relevant to quality management theory as they show the importance of TQM practices for operational quality management implementation that leads to effective Organisational Performance. The implementation of these TQM practices in local South African industries needs to be critically addressed even though many organisations have adopted and implemented TQM in their business operations.

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Vermeulen



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



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