Graduation Programme

The Future. Reimagined.

UNIVERSITY OF JOHANNESBURG

Welcome to the
Graduation Ceremony of the
University of Johannesburg
7 May 2020 at 17:00

Welkom by die
Gradeplegtigheid van die
Universiteit van Johannesburg
7 Mei 2020 om 17:00

Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
7 Mopitlo 2020 ka 17:00

Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
7 kuNhlaba 2020 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 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

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BA, HEd, BA Hons, MA, PhD (RAU)

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BCom (Rhodes), BCom Hons (UKZN), CA (SA)

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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

Ms A Breytenbach (Acting)
BArch (Pret), MBA (UJ)

FACULTY OF EDUCATION

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

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Prof DJ Mashao
BSc Eng (UCT), MSc Eng (UCT), MSc AM (Brown, USA), PhD (Brown, USA)

FACULTY OF HEALTH SCIENCES

Prof S Khan
BSc, BSc Hons, MSc, PhD (UWC)

FACULTY OF HUMANITIES

Prof K Naidoo (Acting)
BA, BA Hons, MA, PhD (University of Manchester, 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

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Dr Y Ndema

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Mr FM Baleni
Ms S Dlamini
Ms K Gugushe
Prof D Hildebrandt
Ms X Kakana
Mr G Khosa
Mr M Khoza
Ms K Khumalo
Ms B Madikizela
Mr M Mahlasela
Prof T Marwala
Ms Z Matlala
Prof A Parekh
Dr WP Rowland
Prof A Strydom
Ms C Tshilande

PRESIDENT OF CONVOCATION

Prof BM Diale

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 (NDip)

Baloyi, Kulani Anita (Town and Regional Planning)
Ditshego, Kabelo (Town and Regional Planning)
Lebisi, Fiddle Bongani (Town and Regional Planning)
Madisha, Ditaba Makgahlela (Town and Regional Planning)
Maluleke, Tshimbisa Andy (Town and Regional Planning)
Matlakale, Letlhogonolo (Town and Regional Planning)
Mkhaba, Simphiwe Keith (Town and Regional Planning)
Mkhonto, Bhekifa Cleavant (Town and Regional Planning)
Mngomezulu, Zanele (Town and Regional Planning)
Motha, Caleb Harald (Town and Regional Planning)
Ncoca, Thabile (Town and Regional Planning)
Nkanini, Sandile (Town and Regional Planning)
Nkwanyana, Mxolisi Innocent (Town and Regional Planning)
Ntshabela, Faith Boitumelo (Town and Regional Planning)
Phoffu, Jappie Thabang (Town and Regional Planning)
Shibambu, Boitumelo Joy (Town and Regional Planning)
Stuurman, Thabang (Town and Regional Planning)
Zulu, Suprise Titos (Town and Regional Planning)

2. Baccalaureus Technologiae (BTech)

Balintulo, Avela Mandisi (Town and Regional Planning)
Bapela, Motsere Lekwetje (Town and Regional Planning)
Bursee, Janet Melissa (Town and Regional Planning)
Chauke, Nhlamulo Hans (Town and Regional Planning)
Chauke, Samuel (Town and Regional Planning)

Chauke, Senzekile (Town and Regional Planning)
Chauke, Vutomi (Town and Regional Planning)
Cindi, Motlatse Shadrack (Town and Regional Planning)
Daracube, Angelinah (Town and Regional Planning)
Dibakwane, William Mpapane (Town and Regional Planning)
Giwueze, Mini (Town and Regional Planning)
Gxashe, Ludwe Sizinzo (Town and Regional Planning)
Hlungwani, Khanyisa Geraldine (Town and Regional Planning)
Khalishwayo, Micheal Bonginkosi (Town and Regional Planning)
Khumalo, Nonhlanhla (Town and Regional Planning)
Kunene, Bukiwe Nyankwabe (Town and Regional Planning)
Lehong, Tlou Comfort (Town and Regional Planning)
Lembethe, Sikhumbuzo Mbongeni (Town and Regional Planning)
Mabasa, Rhulani Bruce (Town and Regional Planning)
Mabaso, Sibahle Phiwokuhle (Town and Regional Planning)
Mabine, Nthabiseng Lucia (Town and Regional Planning)
Mabunda, Aubrey (Town and Regional Planning)
Mabuza, Mzwandile Mlungisi Grifton (Town and Regional Planning)
Madinane, Makaziwe Nosihle (Town and Regional Planning)
Magewu, Simnikiwe (Town and Regional Planning)
Mahlatjie, Matsedi Samuel (Town and Regional Planning)
Mahlauli, Gerry (Town and Regional Planning)
Mahlulo, Amos Mbongeni (Town and Regional Planning)
Majoro, Seithati (Town and Regional Planning)
Makhoba, Njabulo (Town and Regional Planning)
Makhongela, Mabalane Harmony (Town and Regional Planning)
Malatji, Dikgwari Lerato Pearl (Town and Regional Planning)
Maluleke, Jocobeth Nhlamulo (Town and Regional Planning)
Mamba, Xoli (Town and Regional Planning)
Maponya, Kagiso Mckoy (Town and Regional Planning)
Maseko, Bafana John (Town and Regional Planning)
Maseko, Sithembiso (Town and Regional Planning)
Mashau, Tendani (Town and Regional Planning)
Mashego, Mpho (Town and Regional Planning)
Mashele, Jan Mkhulu (Town and Regional Planning)

Masombuka, Tenith Siphesihle (Town and Regional Planning)
Masombuka, Thabo Benneth (Town and Regional Planning)
Matelakengisa, Matimu (Town and Regional Planning)
Mathebula, Fumani Nkateko (Town and Regional Planning)
Mathebula, Nyiko (Town and Regional Planning)
Mauda, Emmanuel (Town and Regional Planning)
Mbahuma, Mbeujama (Town and Regional Planning)
Mbarane, Andile (Town and Regional Planning)
Mbatha, Xolani Jetro (Town and Regional Planning)
Mbedzi, Sedzani (Town and Regional Planning)
Mboniswa, Amanda Bulelwa (Town and Regional Planning)
Mchunu, Sethabile (Town and Regional Planning)
Mdladla, Thandazile Charity (Town and Regional Planning)
Misgna, Lwam (Town and Regional Planning)
Miya, Nomfundo Zipho (Town and Regional Planning)
Mkhwanazi, Thabisile Precious (Town and Regional Planning)
Mlotshwa, Mongezi Lwazi (Town and Regional Planning)
Mncina, Betile Sylvia (Town and Regional Planning)
Mohlala, Kagiso Advice (Town and Regional Planning) **(with distinction)**
Mohlala, Lekolokoto Adonia Quiet (Town and Regional Planning)
Molefe, Teboho Caesar (Town and Regional Planning)
Molepo, Tebogo Willy (Town and Regional Planning)
Mongatane, Raisibe Valentine (Town and Regional Planning)
Mosikili, Reitumetse Kingsley (Town and Regional Planning)
Mothibi, Boitumelo (Town and Regional Planning)
Mpai, Phuti Fridah (Town and Regional Planning)
Mulongoni, Collen Khangwelo (Town and Regional Planning)
Murulana, Ritshidze Phundululo (Town and Regional Planning)
Naidoo, Devashnee (Town and Regional Planning)
Ndaba, Nolwazi (Town and Regional Planning)
Ndlovu, Bonolo Nokulunga (Town and Regional Planning)
Ndukwe, Emmanuel Chima (Town and Regional Planning)
Nene, Sibongile (Town and Regional Planning)
Ngobeni, Vicky (Town and Regional Planning)

Ngobeni, Zenzele Joseph (Town and Regional Planning)
Ngwezi, Bonginkosi (Town and Regional Planning)
Ngxesha, Nonhlanhla (Town and Regional Planning)
Nkosi, Basanda Sarah (Town and Regional Planning)
Nkqoyi, Nikiwe (Town and Regional Planning)
Nogcinisa, Bonga Ongeziwe (Town and Regional Planning)
Ntlebi, Kwandiwe (Town and Regional Planning)
Ntshingila, Phelelani Wandile (Town and Regional Planning)
Ntuli, Nkululeko Yeyena (Town and Regional Planning)
Nxele, Siphesihle Sithokozisiwe (Town and Regional Planning)
Nzimande, Sibongumusa Sibusiso (Town and Regional Planning)
Pamla, Mahlubi Makhosandile (Town and Regional Planning)
Phahlamohlaka, Benjamin Makelepeng (Town and Regional Planning)
Phasha, Gabriel Sooka (Town and Regional Planning)
Pokola, Motlagale Martha Kabelo (Town and Regional Planning)
Quvile, Sipakamise (Town and Regional Planning)
Rakoma, Noko Prodence (Town and Regional Planning)
Ramutla, Odirile Gordon (Town and Regional Planning)
Ratsheku, Phuti Theodora (Town and Regional Planning)
Sefako, Adelaide Mankatudi (Town and Regional Planning)
Shongwe, Nondumiso Thuthukile (Town and Regional Planning)
Sibiya, Zandile Constance (Town and Regional Planning)
Sithole, Adrian (Town and Regional Planning)
Teffo, Gift Tlou (Town and Regional Planning)
Themba, Bonginkosi Abednigo (Town and Regional Planning)
Thusi, Bhekumuzi Collen (Town and Regional Planning)
Tshikunde, Sedzani Gracious (Town and Regional Planning)
Tsile, Gofaone Imelda (Town and Regional Planning)
Ziqubu, Philani (Town and Regional Planning)
Zondi, Sthembile Letty (Town and Regional Planning)
Zondo, Bongiwe Innocentia (Town and Regional Planning)
Zulu, Nobubele Sithembele (Town and Regional Planning)
Zulu, Shadreck (Town and Regional Planning)

3. Bachelor of Urban and Regional Planning

Chiburre, Ntombi Lucia (Urban and Regional Planning)
Madondo, Jabulile Madhena (Urban and Regional Planning)
Magagula, Doctor Darks (Urban and Regional Planning)
Malinga, Fiswa Shadwence (Urban and Regional Planning)
Maluleke, Muhluri Terence (Urban and Regional Planning)
Maphosa, Rethabile Mitchell (Urban and Regional Planning)
Mngomezulu, Sfiso (Urban and Regional Planning)
Mogoane, Osenotswe (Urban and Regional Planning)
Mtsweni, Nkosinathi Piet (Urban and Regional Planning)
Nyathi, Sarah (Urban and Regional Planning)
Phosho, Mueletshedzi Helen (Urban and Regional Planning)
Ramasobane, Mahlatsi Marwin (Urban and Regional Planning)
Tapa, Sandile (Urban and Regional Planning)
Tiro, Keotlotlile (Urban and Regional Planning)

4. Magister Technologiae (MTech)

Adeitan, Ayodeji Dennis (Operations Management) **(with distinction)**
Dissertation: Effect of globalisation on logistic management: A case study of multinational companies in Nigeria
Supervisor: Dr EE Agbenyeku
Co-Supervisor: Prof CO Aigbavboa

Akinradewo, Opeoluwa Israel (Quantity Surveying) **(with distinction)**
Dissertation: Development of a cost profile for road projects in the Ghananian construction industry
Supervisor: Prof CO Aigbavboa
Co-Supervisor: Dr. AE Oke/Dr H Coffie

Akinshipe, Olushola Tosin (Construction Management) **(with distinction)**

Dissertation: An assessment of Sino-African relations to the growth of the construction industry: A case study of Nigeri*a*

Supervisor: Prof CO Aigbavboa

Co-Supervisor: Prof WD Thwala

Baloyi, Nomsa Precilla (Extraction Metallurgy)

Dissertation: Corrosion inhibition for mild steel in 1 M Hydrochloric acid using synthesized environmental friendly polymer composites

Supervisor: Prof ME Makhatha

Co-Supervisor: Mr GA Combrink

Bamidele, Emmanuel Anuoluwa (Engineering: Metallurgy)

Dissertation: Adsorption of Arsenic on Lanthanum and Cerium nanoparticles adsorbents during hydrometallurgical extraction of copper

Supervisor: Prof ME Makhatha

Co-Supervisor: Prof W Nheta

Camuto, Carisa De Jesus Guimar (Operations Management) **(with distinction)**

Dissertation: Factors affecting sustainable water supply in the Western Cape Province

Supervisor: Dr NY Mulongo

Co-Supervisor: Prof CO Aigbavboa

Gove, Sabina Valentina De (Operations Management) **(with distinction)**

Dissertation: An assessment of the indicator of sustainable development in the South African airline industry

Supervisor: Dr NY Mulongo

Co-Supervisor: Prof CO Aigbavboa

Jobson, Sean Godfrey (Engineering Metallurgy)

Dissertation: Synthesis and Characterisation of Graphene on Titanium based alloys

Supervisor: Prof PA Olubambi

Co-Supervisor: Miss TS Tshephe

Lottering, Lloyd Eustace (Chemical Engineering)

Dissertation: Optimisation and feasibility study of a Biogas to Bio-Methane Plant

Supervisor: Prof M Belaid

Co-Supervisor: Dr AN Matheri

Mabunda, Kgomotso Aphas (Engineering: Mechanical)

Dissertation: Investigation of material wear on centrifugal fan impellers

Supervisor: Dr PM Mashinini

Mabunda, Mpiyakhe Robin Dudley (Engineering: Industrial)

Dissertation: Evaluating lean Implementation success in small and medium manufacturing Enterprises

Supervisor: Dr G Muyengwa

Magoro, Nakedi Macdonald (Operations Management)

Dissertation: Increasing warehouse performance by effective order picking system; case study of South African steel manufacturing sector

Supervisor: Dr EI Edoun

Co-Supervisor: Dr K Sobiyi

Maoeng, Malingaka Pascalina (Operations Management)

Dissertation: Analysing issues affecting the implementation of sustainable development practices in the South African construction sector

Supervisor: Dr EI Edoun

Co-Supervisor: Prof P Kholopane

Mapokgole, Johannes Bekane (Operations Management):

Dissertation: Development of a robust and resilient supply chain system for selected companies in Gauteng

Supervisor: Prof C Mbohwa

Co-Supervisor: Dr S Aribo

Mavuso, Nokulunga Siphiwe Mathabo (Construction Management)

Dissertation: Evaluating the relationship of communication management practices and project success in the Eswatini construction industry

Supervisor: Prof I Musonda

Co-Supervisor: Dr. JN Agumba

Mhlanga, Judith (Operations Management)

Dissertation: Dissatisfaction in the workplace and its correlation to high staff turnover

Supervisor: Dr. OA Olanrewaju

Co-Supervisor: Dr. A Pradhan

Mkhondo, Eric Mxolisi (Engineering: Mechanical)

Dissertation: The design and analysis of an ultrasonic linear actuator mechanism for zoom lens control on aircraft mounted cameras

Supervisor: Dr A Mashamba

Molala, Malesela Benny (Chemical Engineering)

Dissertation: Performance of varying PTFE coated fabric cloth on electricity production.

Supervisor: Dr SC du Plessis

Co-Supervisor: Dr R Huberts

Mushatu, Shonisani Winnie (Construction Management) **(with distinction)**

Dissertation: Assessment of the performance of roads infrastructure in the Gauteng province of South Africa-participant's perspective

Supervisor: Prof CO Aigbavboa

Co-Supervisor: Prof WD Thwala/ Ms N Mashwama

Mutenda, Kanakan Ernest (Operations Management)

Dissertation: An assessment of the implementation of green public procurement in the city of Johannesburg Metropolitan Municipality

Supervisor: Dr A Pradhan

Ndlala, Phindile Sphiwe (Operations Management):

Dissertation: The impact of inventory in service operations management in a South African warehouse

Supervisor: Dr. K Sobiyi

Co-Supervisor: Ms. Nwobodo-Anyadiegwu

Odubiyi, Tawakalitu Bisola (Construction Management) **(with distinction)**

Dissertation: Review of information and communication technology in the South African construction industry

Supervisor: Prof CO Aigbavboa

Co-Supervisor: Prof WD Thwala

Ramokhothoane, Lehlohonolo Moses (Engineering: Metallurgy)

Dissertation: Is the coal mining industry ready for woman?

Supervisor: Prof SM Rupprecht

Co-Supervisor: Prof H Grobler

Seshweni, Mantsha Hennie Erna (Chemical Engineering) **(with distinction)**

Dissertation: Erosion-corrosion behavior of duplex stainless steel in mine water

Supervisor: Prof PA Olubambi

Co-Supervisor: Dr S Aribo

Siaga, Ipfi (Operations Management)

Dissertation: The role of leadership and management on employee productivity and sustainability at packaging company in South Africa

Supervisor: Dr EI Edoum

Co-Supervisor: Prof C Mbohwa

5. Doctor Ingeneriae (DIng)

Baruwa, Akinsanya Damilare (Mechanical Engineering)

Thesis: Surface engineering: advanced protective coating and characterisation of functionalised hydrophobic organic nanocoating

Supervisor: Prof ET Akinlabi

Co-Supervisor: Dr OP Oladijo

Kruger, Louis Lodewyk Schalk Jacobus (Engineering Management)
Thesis: Systematic innovation: A comprehensive model for business and management with treatment on a South African case
Supervisor: Prof JHC Pretorius
Co-Supervisor: Dr LD Erasmus

6. Doctor of Philosophy (PhD)

Adetunla, Adedotun Olanrewaju (Mechanical Engineering)

Thesis: Friction stir processing: simulation and experimental characterisations of aluminium metal matrix composites

Supervisor: Prof ET Akinlabi

Makhanya, Bhekabantu Stanley (Engineering Management)

Thesis: Exploring the relationship between cost of quality and quality management in the South African manufacturing industry

Supervisor: Dr H Nel

Co-Supervisor: Prof JHC Pretorius

Medoh, Chuks Nnamdi (Engineering Management)

Thesis: Cyber physical business systems modeling: Advancing industry 4.0

Supervisor: Prof A Telukdarie

7. Doctor Philosophiae (DPhil)

Adjei, Kofi Owusu (Engineering Management)

Thesis: A model for predicting cost control practices in the Ghanaian construction industry

Supervisor: Prof WD Thwala

Co-Supervisor: Prof CO Aigbavboa

Agwa Ejon, John Francis (Engineering Management)

Thesis: Hierarchical decision modelling applied to emerging technology used in the artisanal mining and small scale processing

Supervisor: Prof AF Mulaba-Bafubiandi

Co-Supervisor: Prof JHC Pretorius

Ansah, Samuel Kwame (Engineering Management)

Thesis: An integrated total quality management model for the Ghanaian construction industry

Supervisor: Prof WD Thwala

Co-Supervisor: Prof CO Aigbavboa

Madonsela, Nelson Sizwe (Engineering Management)

Thesis: The application of a business intelligence tool for service delivery improvement: The case of South Africa

Supervisor: Prof B Twala

Co-Supervisor: Prof JHC Pretorius

Mushavhanamadi, Khathutshelo (Engineering Management)

Thesis: Developing an integrated enterprise resources planning framework for South African clothing and textile industries

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Vermeulen

Nemarumane, Takalani Musundwa (Engineering Management)

Thesis: A novel environmental framework of the industrial parks in the South Western Township, Gauteng: A Study on cleaner production

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Vermeulen

Baruwa, Akinsanya Damilare (DIng)

Akinsanya Damilare Baruwa was born in Iwo, Osun State, Nigeria. He received his Bachelor's degree in Mechanical Engineering from the University of Ilorin, Nigeria in 2007. He then worked briefly before he enrolled for a Master's degree in Energy Technology and Management at the University of Ibadan, which he obtained in 2014. He joined the University of Johannesburg in 2016 for his doctoral degree. He is a registered graduate member of the Nigerian Society of Engineers.

Due to the carcinogenic nature of chromium-based coatings, alternative organic-based coating was required. Although, some organic compounds were developed in the past, a lack of combined chemical and mechanical properties has limited their applications. The candidate's thesis focused on the development of three new hydrophobic organic silane compounds: (a) [Tris (trimethylsiloxy)silyethyl]dimethylchlorosilane(Alkyl), (b) Henicosyl-1,1,2,2-tetrahydrododecyltrichlorosilane (FDDTS), (c) Tridecafluoro-1,1,2,2-tetrahydrooctyltrichlorosilane (FOTS)). The surface of the substrates (AISI 304 Stainless Steel) was functionalised by plasma oxide before the deposition of the organic compounds via an advanced coating method − Atomic Layer Deposition (ALD). The composites were characterised for structural stability, chemical reliability, mechanical enhancement and electrochemical resistance. The study indicated that all the newly developed compounds showed superior properties when compared to the base material and many other compounds. This study proves that a silane organic compound that combines both chemical and mechanical enhanced properties has been developed for the first time.

Supervisor: Prof ET Akinlabi
Co-Supervisor: Dr OP Oladijo

Kruger, Louis Lodewyk Schalk Jacobus (DIng)

Louis holds a BIng (Elektron) degree (1987) and an MBA (2000) from the University of Pretoria. He lectured at UP, UJ and TUT on a part-time basis. Before that he worked in ICT and electronic systems for Transnet, Armscor, ABSA and other entities. He is currently the director of a start-up company, Kruger Innovation (Pty.) Ltd. that specialises in Innovation for Business and Management and also provides specialised engineering products and services. He presented papers at three conferences and published an article in the *African Research Journal*. Another paper is being developed to present at a conference.

This research applied Design Science Research to published systematic innovation models for business and management to identify shortcomings and the possibility to provide an integrated systematic innovation process. During the research a part of the National Development Plan of South Africa was analysed to see how it could be used as a point of departure for further innovation. The one set of models was found to be generalised and mostly based on associative approaches. This leads to a ring-fenced approach to innovation. The other set was found to be a projection of a systematic innovation model from the physical world that does not cover all business areas equally. The result of the research was to propose a high-level systematic innovation model for business and management that converges towards an Ideal Final Result, while using information from the application of the results of each cycle to improve the output.

Supervisor: Prof JHC Pretorius
Co-Supervisor: Dr LD Erasmus

Adetunla, Adedotun Olanrewaju (PhD)

Adedotun Olanrewaju Adetunla was born in Ekiti State, Nigeria. He received his Bachelor's degree in Mechanical Engineering from the Ekiti State University, Nigeria in 2011 and Master's degree (distinction) at Eastern Mediterranean University, North Cyprus. He then registered for a PhD degree at the University of Johannesburg in January 2017. Adedotun Adetunla is a registered engineer at the Council for the Regulation of Engineering in Nigeria (COREN).

The reinforcement of aluminium and its alloys with ceramic particles has engineered a new type of material marketed under the trade name metal matrix composites. However, these composites suffer from a great loss in ductility and toughness due to the incorporation of non-deformable ceramic reinforcements as a result of inappropriate fabrication processes and process parameters. The candidate's doctoral study focused on the simulation and experimental characterisations of aluminium alloy reinforced with titanium powder. The experiments were conducted using multi-pass friction stir processing technology, at various processing parameters, with the aim to examine the optimum combination of parameters offering higher tensile property, good wear performance, finer grains and excellent corrosion resistance behaviour. The simulation of the fabricated composite was done via the finite element method using ABAQUS software. The simulated results were validated with the experimentally measured results and good correlations were achieved. The candidate demonstrated that the newly formed alloy (Ti-6Al-4V / 1100 Al) is an excellent material with potential application in the biomedical field where corrosion resistance behaviour is of great importance, also for automotive and the aerospace industries. The candidate has published ten research articles from his doctoral study.

Supervisor: Prof ET Akinlabi

Makhanya, Bhekabantu Stanley (PhD)

Bheki Bhekabantu Stanley Makhanya obtained his National Diploma in Mechanical Engineering from the Mangosuthu University of Technology in 2009. He also obtained a BTech degree in Operations Management in 2014 and a Master's Degree (MPhil) in Engineering Management (with distinction) in 2016 from the University of Johannesburg. In 2017, he enrolled for the PhD in engineering management while working for Transnet Freight Rail as a technical fleet maintenance manager. He has more than 10 years of experience in both asset management and project management within the railway industry.

The candidate's research explores the relationship between quality management and cost of quality in the South African manufacturing sector. The contribution of this research is twofold, firstly the development of the quality management and cost of quality framework and identification of best practice between South African and global manufacturing companies. Secondly, the research contributes to the body of knowledge in the manufacturing sector by addressing the relationship between the cost of quality and quality management factors. Finally, the research also provides the framework that shows how companies can use the cost of quality to advance the quality management effort based on empirical results. The empirical data were collected through online surveys and analysed using exploratory factor analysis, confirmatory factor analysis and multiple linear regression models.

Supervisor: Dr H Nel

Co-Supervisor: Prof JHC Pretorius

Medoh, Chuks Nnamdi (DPhil)

Medoh completed his BEng degree in Mechanical Engineering. He then graduated cum laude with an MEng degree in Engineering Management. He is a registered Professional Engineer with the South African Institution of Mechanical Engineering (SAIMechE). Medoh is a skilled researcher specialising in applications of the Fourth Industrial Revolution (4IR) with versed knowledge in business case modelling, simulation, sustainability, new business developments and optimisation.

Contemporary multinationals focusing on delivering world-class business solutions with the use of advanced technologies are encountering significant challenges. The Fourth Industrial Revolution (4IR) offers significant technological advancements with insightful opportunities. Cyber-Physical Systems (CPS), an underlying technology of the 4IR, deliver sustainable prospects required to model a business effectively. This research developed a model (CPS) suitable to self-predict and determine ideal operational practice for comprehensive business evaluation and optimisation. The baseline model was tested and validated mathematically with simulation, and a factorial experimental protocol via two business cases. The resultant output is a multivariable equation representing the impact of each of the change variables on the business for current and future business demand. The contribution of this study is that any modern business without prepositioning process steps can substitute associated experimental values into the model (CPS) to predict business demand. The model (CPS) is a viable alternative and a shift from conventional business analysis tools incapable of self-predicting in real-time.

Supervisor: Prof A Telukdarie

Adjei, Kofi Owusu (DPhil)

Kofi Owusu Adjei holds a Higher National Diploma (HND) and Bachelor of Technology (BTech degree) in Building Technology, both from the Kumasi Technical University, Kumasi, Ghana, and obtained a Master's degree (MSc) in Construction Project Management from HAN University of Applied Sciences, The Netherlands in 2009. He is currently a lecturer at Kumasi Technical University. Kofi has published one peer-reviewed book chapter, five papers in peer-reviewed conference proceedings, and two journal manuscripts are currently under review based on his doctoral studies.

The candidate's research focused on a model for predicting construction cost control practices in the Ghanaian construction industry. The candidate employed the mixed-method approach for the study. The study revealed that cost control practices are eight-factor constructs, which are project cost estimation, project cost budgeting, project cost reporting, project cost monitoring, project cost analysis, decision-making, change management and project cost communication. The contribution of the findings to the body of knowledge is significant in the development of a new project cost control model. The findings have the potential to improve the delivery of construction project cost in the Ghanaian construction industry.

Supervisor: Prof WD Thwala
Co-Supervisor: Prof CO Aigbavboa

Agwa Ejon, John Francis (DPhil)

John Francis Agwa-Ejon obtained his HND in Mechanical Engineering from the University of Nairobi, Kenya; a BTech degree in Industrial Engineering and an MBA from the University of Strathclyde in the UK; a BScHons degree in Production Management from the University of Wales in the UK; as well as a Bachelor's degree in Education from Wits University before embarking on a PhD in Engineering Management at the University of Johannesburg. Currently he is working as a Senior Lecturer at the University of Johannesburg Doornfontein Campus, for the Department of Quality and Operations Management, which is housed in the Faculty of Engineering and the Built Environment. For his doctorate, John wrote a thesis titled "Multiple perspectives and hierarchical decision modelling applied to emerging technology used in the artisanal mining and small-scale processing of sandstones in QwaQwa".

This research study uses the multi-criteria decision analysis tool to rank the possible artisanal mining alternatives for sandstone based on five attributes (STEEP). The unique contribution of this study to the existing body of knowledge is the application of the above decision-making tool to artisanal mining of a local commodity. Additionally, this study also discusses the benefits of using renewable energy in the artisanal mining of sandstone compared to the traditional mining practices, as well as the possible impact of the artisanal mining on the environment and its competition for the tourism activity in the area.

Supervisor: Prof AF Mulaba- Bafubiandi
Co-Supervisor: Prof JHC Pretorius

Ansah, Samuel Kwame (DPhil)

Samuel Kwame Ansah is currently a lecturer in the Department of Building Technology at the Cape Coast Technical University. He completed his undergraduate studies in Building Technology at Cape Coast Polytechnic now known as Cape Coast Technical University in Ghana. He obtained his Master's degree in Construction Project Management from the London South Bank University, London, United Kingdom in 2007. He enrolled for his doctoral studies at the University of Johannesburg, South Africa in 2015. He has published four peer-reviewed conference papers and has prepared and submitted five journal manuscripts currently under review.

In his research study, the candidate developed and validated an integrated total quality management model for the Ghanaian construction industry. The candidate employed Structural Equation Modelling with EQations (EQS) software version 6.2 to analyse the collected primary data. The results were validated using confirmatory factor analysis. The study advances that an integrated total quality management model for the Ghanaian construction industry is a nine-factor construct. The results revealed the theory that leadership/top management; company supplier quality management; client focus and involvement; construction process management and improvement; and construction employees' involvement and motivation significantly determine total quality management outcomes in the construction industry. By introducing four new constructs (company vision and plan statement; product selection management; product design management; and company quality system evaluation) to the constructs adopted by existing total quality management models, the study provided a valuable contribution to the subject of total quality management in the construction industry.

Supervisor: Prof WD Thwala
Co-supervisor: Prof CO Aigbavboa

Madonsela, Nelson Sizwe (DPhil)

Nelson Sizwe Madonsela is currently a lecturer in the Department of Quality and Operations Management at the University of Johannesburg. He holds a Master of Technology degree in Operations Management from the University of Johannesburg and a Bachelor of Technology degree in Quality from the University of South Africa. He also holds a National Diploma in Information Technology (Software Development) from the Tshwane University of Technology. For his cutting-edge research work, he was awarded a doctoral scholarship by the MerSETA organisation. He has presented 12 peer-reviewed conference papers locally and internationally on information systems.

The candidate focused on the application of a business intelligence (BI) tool for service delivery improvement in South Africa, with the aim of determining whether a BI tool can enhance decision making in support of service delivery interventions. A computer simulation prototype was developed with the use of a BI tool and validated for usability with data mining. The analysis of social media responses has been used to support the conceptually mapped findings. The study demonstrates how using a BI tool can enable government departments and agencies to enhance public participation, gather feedback and use sentiment analysis through social media to improve service delivery. The specific contributions of this study to the body of knowledge are the BI Model for Service Delivery Intervention Practices and the scientometric analysis of BI as a field, which traced the progression of the field over the past 40 years (from 1975 to 2015).

Supervisor: Prof B Twala

Co-Supervisor: Prof JHC Pretorius

Mushavhanamadi, Khathutshelo (DPhil)

Khathutshelo obtained a Certificate in Operations Management (2000) and a National Diploma in Production Management (2003) from Technikon Witwatersrand. She also obtained both her Bachelor of Technology degree in Operations Management (2005) and Master of Technology degree in Operations Management (2013) from the University of Johannesburg. She is an Enterprise Resource Planning expert and Operations Management lecturer in the Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg. She has published several peer-reviewed academic conference papers over the past decade.

The candidate contributes in the field of Enterprise Resource Planning by developing a novel integrated Enterprise Resource Planning framework for the Small and Medium Clothing and Textile Enterprises, using South Africa as a case study. The framework was developed from defined ERP strategy-based nine Critical Success Factors in ERP Implementation. This included defined ERP objectives, excellent project management principles in terms of both a work plan and a resource plan, and careful tracking of project progress. The developed framework can therefore to be used as a successful implementation roadmap of Enterprise Resource Planning implementation strategy for small and Medium Clothing and Textile industries, enabling business owners to cope in the current highly competitive markets.

Supervisor: Prof JHC Pretorius

Co-Supervisor: Dr A Vermeulen

Nemarumane, Takalani Musundwa (DPhil)

Takalani passed her matric with distinction in 2005 from the Nirvana Secondary School. In 2009 she obtained her BTech degree in Management Services at the University of Johannesburg, while also working as a research assistant. In 2010 she started working as a temporary lecturer at the University of Johannesburg, in the Department of Quality and Operations Management. She then obtained her MTech degree in Operations Management in 2013. She has worked on various government research projects, including the Gauteng Climate Change Adaptation Strategy and Action Plan, and was a project manager for the industrial development zones analysis in industrial parks.

The purpose of the research was to develop an integrated environmental plan and framework that focused on industrial parks in Soweto. The objective of the framework was to contribute positively to an eco-friendly environment, and thus in turn improve the quality of life for residents, workers and decision makers impacted by the industrial parks. The literature review found that there are various frameworks that exist internationally, but none of them are customised to South Africa or Soweto. The study analysed the raw materials that the industrial parks in Soweto use and their waste production. The study found that there are negative environmental impacts caused by industrial parks, and that there that there is an appetite for developing an EIP in Soweto. The study developed a framework for eco-industrial parks based on four principles, namely the Organisational principle, Development principle, Sustainability principle and Waste Monitoring and Control principle.

Supervisor: Prof JHC Pretorius
Co-Supervisor: Dr A Vermeulen

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

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National Anthem of South Africa

Nkosi sikelel' Afrika
Maluphakanyisw' uphondo lwayo,

Yizwa imithandazo yethu,
Nkosi sikelela, thina lusapho lwayo.

Morena boloka setjhaba sa heso,
O fedise dintwa le matshwenyeho,
O se boloke, O se boloke setjhaba sa heso,
Setjhaba sa South Afrika - South Afrika.

Uit die blou van onse hemel,
Uit die diepte van ons see,
Oor ons ewige gebergtes,
Waar die kranse antwoord gee,

Sounds the call to come together,
And united we shall stand,
Let us live and strive for freedom,
In South Africa our land.