



UNIVERSITY
OF
JOHANNESBURG

**The Future
Reimagined**



**GRADUATION
PROGRAMME**



uj.ac.za/4IR

Dear UJ Graduate

Today represents the start of a new chapter. It has without a doubt been a long and arduous but incredible journey for you. Your graduation is a significant milestone, not only academically, but it represents your emergence as a leader with societal impact. At the University of Johannesburg (UJ), we are acutely aware of the hard work, dedication and perseverance you have displayed in order to reach this point. In a rapidly changing world, undergoing seismic shifts, our goals have been not only to support you in this journey but also to empower you as leaders. We strive for excellence, and we are committed to leading through ideas, actions, and programmes in ways that deliberately seek to positively impact the world around us. We hope that your time at UJ will serve as a source of inspiration and contribute to your mark in the world. Our focus at UJ has been to create graduates who are agile, curious, and able to be active participants committed to societal impact.

Your graduation signifies all of this and more. This is a momentous celebration and an incredible achievement, indeed! As you emerge from our institution, we hope you tap into your power to make a difference.

In your time with us, you have encountered the finest academic minds from diverse backgrounds, you have been exposed to technologically rich approaches to teaching and learning while gaining an enviable understanding of the world around us. UJ's global stature and academic robustness are recognised by the most prestigious global higher education ranking systems in the world and we have emerged as a formidable player globally. You are an important and intrinsic part of this story.

We also welcome you as new members of our esteemed alumni community. We encourage you to join the UJ Alumni Network and become an active member of the University Convocation, both of which afford you an opportunity to transform into collaborators, mentors, and advocates who can significantly contribute to our vision. Our promise in return to you is that we will continue to reimagine the future with societal impact. Congratulations on this achievement – you have done us proud!

Prof Letlhokwa Mpedi
Vice-Chancellor and Principal
University of Johannesburg



**Welcome to the
Graduation Ceremony of the
University of Johannesburg
3 May 2024 at 09:30**

**Welkom by die
Gradeplegtigheid van die
Universiteit van Johannesburg
3 Mei 2024 om 09:30**

**Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
3 Mopitlo 2024 ka 09:30**

**Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
3 kuNhlaba 2024 ngele 09:30**

UNIVERSITY OF JOHANNESBURG

CHANCELLOR

Dr P Mlambo-Ngcuka

BA Ed (NUL, Lesotho), MPhil (UCT), DTech Ed (Warwick, UK)

MEMBERS OF THE MANAGEMENT EXECUTIVE COMMITTEE

VICE-CHANCELLOR AND PRINCIPAL

Prof LG Mpedi

B Juris, LLB (Vista), LLM (RAU), LLD (UJ)

Doctor *Honoris Causa* (CU, Georgia)

DEPUTY VICE-CHANCELLOR: ACADEMIC

Prof S Khan

BSc, BSc Hons, MSc, PhD (UWC)

**DEPUTY VICE-CHANCELLOR: RESEARCH AND
INTERNATIONALISATION**

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

REGISTRAR

Prof B van Vuuren
BSc, BSc Hons, MSc, PhD (UP)

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Ms N Mamorare
BCom (Rhodes), BCom Hons (UKZN), CA (SA)

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COLLEGE OF BUSINESS AND ECONOMICS

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BCom, BCom Hons (NMMU), MPhil (UCT), PhD (SUN)

FACULTY OF ART, DESIGN AND ARCHITECTURE

Prof F Freschi

BAFA (Wits), BA Hons (UCT), PhD (Wits)

FACULTY OF EDUCATION

Prof N Petersen

BA Ed (UNISA), BEd Hons, MEd (RAU), DEd (UJ)

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Prof DJ Mashao

BSc Eng, MSc Eng (UCT), MSc AM, PhD (Brown, USA)

FACULTY OF HEALTH SCIENCES

Prof A Temane (Acting)

BNSc (UNW), BA (Cur) (UNISA), MCur (RAU), PhD (UJ)

FACULTY OF HUMANITIES

Prof K Naidoo

BA, BA Hons, MA (UDW), DTE (UNISA), PhD (Manchester, UK)

FACULTY OF LAW

Prof W Domingo

B SoSc (UCT), LLB (UWC), LLM (Columbia, New York),
SJD (Wisconsin, Madison)

FACULTY OF SCIENCE

Prof A Moteetee

BSc (NUL, Lesotho), MPhil (University of London, UK), PhD (RAU)

DEAN

JOHANNESBURG BUSINESS SCHOOL

Dr R Carolissen

BSc, BSc Hons, MSc (UWC), BBA Hons,
MBA (SUN), MCom (NWU), PhD (UWC)

MEMBERS OF COUNCIL

CHAIRPERSON

Ms X Kakana

DEPUTY CHAIRPERSON

Dr Y Ndema

MEMBERS

Mr FM Baleni

Dr H Coovadia

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Prof S Khan

Ms L Khumalo

Mr B Malotane

Mr N Magoro

Ms L Mateza

Prof TA Meyer

Dr A Mokoena

Mr A Mokua

Ms N Molope

Prof A Moteetee

Prof LG Mpedi

Mr LM Mpunzi

Ms NP Mvubu

Prof A Strydom

PRESIDENT OF CONVOCATION

Mr LM Mpunzi

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!

FACULTY OF SCIENCE

QUALIFICATIONS

1. Diploma (Dip)

Arunachellam, Danelle (Food Technology)
Buthelezi, Nkosinathi David (Food Technology)
Dhlamini, Sifiso (Food Technology)
Dladla, Thembelihle Bongile (Food Technology)
Esterhuizen, Jessica Anne (Food Technology)
Gabisa, Ntombizodwa Veronica (Food Technology)
Goss, Tineal Carlin (Food Technology)
Kekana, Betty Baatseba (Food Technology)
Khubana, Gundo Khuthadzo (Food Technology)
Khumalo, Nosipho (Food Technology)
Komane, Shammah Shalom (Food Technology)
Kwaza, Mhlali (Food Technology)
Lutchman, Tashiana (Food Technology)
Luvhimbi, Omphulusa (Food Technology)
Madladla, Andiswa Precious Samantha (Food Technology)
Mahaye, Slindokuhle Phakamile (Food Technology)
Makgaretsi, Sharon (Food Technology)
Makhubele, Ntshuxeko Malvine (Food Technology)
Mapoma, Obakeng (Food Technology)
Marumo, Given Tshegofatso (Food Technology)
Masana, Athi (Food Technology)
Masela, Lebohang Nkgonye (Food Technology)
Matemane, Andries Thabiso (Food Technology)

Maupa, Evans Sello (Food Technology)
Mngqingo, Siyamcela (Food Technology)
Mofokeng, Falla (Food Technology)
Mogagabe, Refiloe (Food Technology)
Mokgalapa, Maleka Desmond (Food Technology)
Monama, Cathrine Makgale (Food Technology)
Mpulo, Nomvuselelo Busiswa (Food Technology)
Mthimkhulu, Khanyisile (Food Technology)
Mthimkhulu, Sakhile Hendry (Food Technology)
Mtshali, Ndumiso (Food Technology)
Mudau, Precious Livhuwani (Food Technology)
Ndlovu, Lindokuhle Britney (Food Technology)
Ngeleka, Yandisa (Food Technology)
Ngubane, Andiswa (Food Technology)
Nhlabatsi, Sibusiso Lindelwa (Food Technology)
Nkwana, Tshepiso Faith (Food Technology)
Petje, Phakisho (Food Technology)
Rambau, Precious (Food Technology)
Rammekwa, Keabetswe Obedient (Food Technology)
Risimate, Khanyisa (Food Technology) **(with distinction)**
Shilakoe, Letitia Makgoale (Food Technology)
Shishenge, Amukela Reon (Food Technology)
Sibisi, Nonhlanhla Mathanga (Food Technology)
Silaule, Mduduzi Anthony (Food Technology)
Simelane, Themba (Food Technology)
Siphali, Murendeni Debbie (Food Technology)
Tsehla, Tlotliso Khotso (Food Technology)
Tshivhase, Thudzelani Victoria (Food Technology)
Zwane, Sanele Thobeka (Food Technology)

2. National Diploma (N Dip)

Khosa, Rimpfumelo (Food Technology)

3. Advanced Diploma (Adv Dip)

Booi, Lindokuhle (Food Technology) **(with distinction)**

Dithebe, Tshepiso Molehali Motshewa (Food Technology)
(with distinction)

Hlongwane, Simangele (Food Technology) **(with distinction)**

Kaponda, Kyalabikwe Patricia (Food Technology)

Kgomo, Desiree (Food Technology) **(with distinction)**

Maphaha, Vhuhwavho Vanessa (Food Technology)

Masemola, Tshepiso Madira (Food Technology) **(with distinction)**

Mathobela, Madimetja John (Food Technology) **(with distinction)**

Muchemwa, Rumbidzai Michelle (Food Technology) **(with distinction)**

Mulaudzi, Mutshidzi (Food Technology)

Phukubye, Kgoale Prudence (Food Technology)

Siteo, Rose Buhle (Food Technology) **(with distinction)**

Tizayi, Wisdom Anesu (Food Technology)

Tshekanabo, Francine Mampela (Food Technology) **(with distinction)**

4. Bachelor of Science (BSc)

Alli, Mas'ood (Botany and Zoology)

Arnold, Jessica-Ann May (Environmental Management and Zoology) **(with distinction)**

Bohloko, Nthabeleng (Physiology and Psychology)

Chauke, Makhanane Hellen (Zoology and Geography)

Chetty, Prajna (Environmental Management and Zoology)

Chothia, Ziyaad Mohamed (Physiology and Psychology)

Dladla, Bathabile Princess Nombuso (Biochemistry and Botany)

Dzivhani, Olga Tshimangadzo (Geography and Environmental Management)

Fawole, Olayiwola Olukorede (Physiology and Biochemistry)

Gaonakala, Kopano (Physiology and Biochemistry)

Goldman, Christene Lizette (Physiology and Biochemistry)

Goondie, Nawal (Physiology and Psychology)

Gwala, Asive Ongako (Geography and Environmental Management)

Howard, Jessica (Botany and Zoology) **(with distinction)**

Khubana, Lusani (Geography and Environmental Management)

Khumalo, Sizakele (Biochemistry and Botany)

Kubheka, Siphamandla Tyron (Botany and Zoology) **(with distinction)**

Lekgetho, Tshegofatso (Physiology and Biochemistry)

Lekgothwane, Tumelo Lloyd (Botany and Chemistry)

Machubeng, Bervely Mamokhubedu (Geography and Zoology)

Madike, Modjadji Lerato (Geography and Environmental Management)

Mahlatsane, Vuyelwa (Geography and Environmental Management)

Mahomed, Atiyyah (Physiology and Biochemistry)

Maila, Moshilela (Physiology and Biochemistry)

Mainganya, Pinky (Biochemistry and Botany)

Malatsi, Rorisang (Botany and Zoology)

Mamabolo, Tiisetso Ebeneza (Physiology and Psychology)

Manamela, Motseka Religion (Geography and Environmental Management)

Masanabo, Lizbeth Thoko (Biochemistry and Botany)

Mashamba, Boitumelo (Biochemistry and Botany)

Mashinini, Nosipho (Botany and Chemistry)

Menyuka, Sanele (Geography and Environmental Management)

Mogale, Nhlanhla (Zoology and Chemistry)

Mokoetli, Mpho Kgabo (Biochemistry and Botany)

Molatudi, Nelty Ramadimetje (Botany and Zoology)

Moralo, Basetsana Agnesia (Biochemistry and Botany)

Moshidi, Liveo (Biochemistry and Botany)

Mqilingwa, Phumzile Nomvula (Botany and Chemistry)

Mtshali, Siyathokoza (Physiology and Psychology)

Mugeri, Ndidzulafhi (Physiology and Psychology)

Myeko, Zimkhitha Candy (Physiology and Biochemistry)

Ndhlovu, Amanda (Biochemistry and Zoology)

Ngono, Zandile Mamajo (Botany and Zoology)

Nkosana, Wongama (Physiology and Zoology)

Nondaka, Kwathi Mhlali (Physiology and Biochemistry)

Nyambi, Deneo Refilwe (Physiology and Psychology)

Patel, Talisha (Physiology and Psychology)
Phetla, Ephraim Ntsane (Botany and Chemistry)
Radijeje, Boitumelo (Geography and Environmental Management)
Ramushu, Makhuloane Lotanang (Geography and Environmental Management)
Sam, Someleze (Biochemistry and Botany)
Sibiya, Mandy Olisor (Biochemistry and Botany)
Spencer, Calvin Oliver (Biochemistry and Botany)
Tau, Kamogelo (Botany and Zoology)
Tshabalala, Lindiwe Bonani (Botany and Chemistry)
Tshisikhawe, Mukhatshelwa (Physiology and Biochemistry)
Xaba, Loyiso (Physiology and Psychology)
Zulu, Nhlakanipho (Biochemistry and Botany)

5. Bachelor of Science Hons (BSc Hons)

Ahimbisibwe, Michael Nhyk (Computer Science)
Bagdadi, Omar (Information Technology) **(with distinction)**
Baig, Shawal Mohammad (Computer Science) **(with distinction)**
Baloyi, Tinyiko (Chemistry)
Birinda, Joris Thierry (Chemistry)
Botes, Kyle Thomas (Information Technology) **(with distinction)**
Camgno, Wonguem Valerie (Chemistry)
Chichwadia, Aaliya Ebrahim (Computer Science)
Chipwanya, Ryan Kudakwashe (Computer Science with Artificial Intelligence)

Daniels, Xiavyan Chadler Dondre (Information Technology)
Dewa, Vishek Rawjee (Chemistry)
Diako, Palesa (Chemistry)
Dlamini, Brendon Nkosinathi (Computer Science with Artificial Intelligence)
Evans, Sarah Robyn (Computer Science)
Gaborone, Odirile Gaoretelelwe (Chemistry)
Germani, Lorenzo Michele (Information Technology)
Harrypurshad, Alisha (Chemistry)
Hassett, Louis John (Information Technology) **(with distinction)**
Hlaraka, Mokibelo Joy (Chemistry)
Hlungwani, Rhulani George (Computer Science)
Idahosa, Uyi Emmanuel (Computer Science)
Johannessen, Ettiene (Geology)
Khoza, Justice Reply (Computer Science with Cyber Security)
Komane, Phethego Gad (Chemistry)
Kungwa, Mutendu Cynthia (Chemistry)
Lehasa, Sylvia Palesa (Geology)
Machine, Nivonile Angelina (Chemistry)
Majozi, Londeka Samukelisiwe (Chemistry)
Malonga, Ntinou Sephine Grace Cephoras (Chemistry)
Mampoza, Alulutho (Chemistry)
Mangoale, Phethego Maredi (Chemistry)
Manzini, Ngcebo Lizwi (Chemistry)
Mapitsing, Innocent Tsankane (Chemistry)
Mapoti, Tumisang Dijelwang Elsie (Chemistry)
Masakona, Wavhothe (Computer Science with Cyber Security)

Masuku, Siyabonga Alex (Computer Science with Cyber Security)
Mathode, Phumudzo Benedict (Computer Science)
Matika, Ndalama (Computer Science with Cyber Security)
Matsolo, Sokolo David (Computer Science with Artificial Intelligence)
Metseeme, Amogelang Given (Chemistry)
Mistry, Himal Kaushik (Information Technology)
Miya, Taelo Washington (Geology)
Moabi, Mpotane Bernard (Geology)
Mogoane, Lesego (Chemistry)
Mokoena, Busie Samantha (Chemistry)
Mokopanele, Tshegofatso (Chemistry)
Molvi, Husnaa (Information Technology) **(with distinction)**
Mosehle, Zacharia Ngwato (Computer Science with Cyber Security)
Mosetlhe, Tebogo Cornelius (Computer Science)
Motaung, Otshepeng (Geology)
Moyo, Michelle Janice (Chemistry) **(with distinction)**
Moyo, Mncedisi (Computer Science)
Moyo, Solomon (Computer Science with Cyber Security)
Mpshe, Lucky Moagi (Chemistry)
Mulaudzi, Rolivhuwa (Geology)
Ndumo, Nontsikelelo Nonhlanzeko (Computer Science) **(with distinction)**
Netshirungulu, Mufunwa Hollick (Computer Science)
Nkosi, Muzikayise Thato (Computer Science with Cyber Security)
Nkosi, Samketi Wandile (Computer Science)

Nkosi, Siyathokoza Ayandamaswazi (Computer Science with Artificial Intelligence)
Noor, Muaaz (Computer Science with Cyber Security)
Nthehang, Tsholofelo Suzen (Chemistry)
Ntingana, Onesimo (Chemistry)
Onjwaya, Antony Okinyi (Chemistry)
Pathan, Mohamad Abrarkhan Sajidkhan (Information Technology) (**with distinction**)
Phiri, Thandekile Antoinette (Computer Science)
Saayman, Ruan (Geology)
Sajjad, Azan (Information Technology)
Sangweni, Sphamandla Musawenkosi (Computer Science with Cyber Security)
Sibanyoni, Thabiso Wiseman (Geology)
Tfwala, Fanelesibonge (Chemistry)
Thulare, Ntumiseng Beverly (Geology)
Tshuma, Mbalenhle (Computer Science)
Udom, Ekemini Peace (Computer Science with Cyber Security)
Volschenk, Francois (Information Technology) (**with distinction**)
Ximbi, Atavile (Geology)
Yasin, Osman (Information Technology)
Yasin, Muhammad Aman (Information Technology)
Yusuf Omar, Ismail (Computer Science)
Zungu, Zoxolo Ayanda (Chemistry)

6. Master of Art (MA)

Mhlanga, Nomfundo Promise (Geography)

Dissertation: Modelling the occurrence of Marula trees (*Sclerocarya birrea* A. Rich. Hochst) using remote sensing variables and logistic regression in Phalaborwa, Limpopo Province

Supervisor: Dr I Sinthumule

Co-supervisor: Mr K Mahlatse

Co-supervisor: Ms T Mugwena (University of Limpopo)

7. Master of Science (MSc)

Shabane, Skhanyiso Lwazi (Physics) (with distinction)

Dissertation: Chiral and No-chiral Rotation in 195Ti

Supervisor: Dr SNT Majola

Co-supervisor: Dr EA Lawrie (iThemba Labs)

8. Philosophiae Doctor (PhD)

Akinlabi, Funmilade Modupe (Botany)

Thesis: Survey of the Wood Anatomical Diversity of the Fynbos Biome

Supervisor: Prof AA Oskolskii

Chikore, Tichaona (Applied Mathematics)

Thesis: Ecology of crime dynamics

Supervisor: Prof F Nyabadza

Co-Supervisor: Prof AK Jane White (University of Bath, UK)

MacRoberts, Robyn Jean (Geology)

Thesis: Pressure-temperature-time-deformation (P-T-t-d) constraints on the mechanisms of dome formation in the southern Central Zone of the Damara Belt, Namibia

Supervisor: Prof J Lehmann

Co-supervisor: Prof MA Elburg

Co-supervisor: Dr P Hasalová (Czech Geological Survey)

Maeko, Mapula Elisa (Informatics)

Thesis: A model for multimodal biometric selection within the driver licencing centres in South Africa

Supervisor: Prof DT van der Haar

Monsanto, Daniela Marques (Zoology)

Thesis: Spatial-temporal variation in Collembola on sub-Antarctic Marion Island

Supervisor: Prof B Jansen van Vuuren

Murulane, Khuliso (Physics)

Thesis: Multiparticle structures in a geometric framework

Supervisor: Prof S Karataglidis

Von Solms, Johan Sebastiaan (Computer Science)

Thesis: Smart Digital Treasury Model (SDTM): Building a smart Treasury fit for the Fourth Industrial Revolution

Supervisor: Prof JJ Langerman

Co-Supervisor: Prof C Marnewick

Akinlabi, Funmilade Modupe (PhD)

Ms Akinlabi was born in Ibadan (Nigeria). She holds a master's degree in Wood Science from the Federal University of Agriculture, Abeokuta, Nigeria in 2012, and worked afterwards as a Senior Research Officer at the Forestry Research Institute of Nigeria. Ms Akinlabi enrolled for a PhD at the University of Johannesburg in 2019, and successfully defended her PhD thesis in 2023.

In her doctoral study, Ms Akinlabi studied the wood anatomy of shrubs and trees belonging to the southern African Proteoideae (Proteaceae), Diosmeae (Rutaceae) and *Erica* (Ericaceae). She was the first explorer of wood diversity within these three large plant lineages making essential contribution into the species richness of fynbos vegetation, the core of the Cape Floristic Region. Using the anatomical data, she clarified the evolutionary and ecological trends of wood trait variation within these lineages. Ms Akinlabi also assessed the incidences of the wood anatomical traits in the fynbos vegetation and compared them with those based on available published data for the Californian chaparral and Mediterranean maquis. The impact of different environmental factors on the diversification of wood structure in these mediterranean-type biomes has been clarified on that basis. The candidate has presented her work at three local and two international conferences and has published four peer reviewed journal articles.

Supervisor: Prof AA Oskolskii

Chikore, Tichaona (PhD)

Mr Chikore was born in Masvingo (Zimbabwe) and holds a BSc (Hons) and an MSc in Applied Mathematics from the University of Johannesburg, South Africa. He enrolled for a PhD at the University of Johannesburg in 2020 and currently completing a Master of Financial Engineering at the University of Johannesburg School of Economics.

Mr. Chikore's doctoral study explores the growth and decline of crime in society using ordinary differential equations, focusing on conventional and non-conventional crimes, notably in South Africa and the UK. He highlights the global impact of conventional crime and cybercrime. His research, based on data from South Africa and London, suggests that clustered cyber networks face higher cybercrime rates, but there's a saturation point limiting victimization. Furthermore, his work reveals that when there is no feedback between criminal activity and police recruitment, threshold levels of criminal activity are required for the activity to be maintained. When feedback is permitted, criminal activity can be contained for policing efficiency below its threshold level. The candidate has presented his work at two local and international conferences and has published two peer-reviewed journal articles.

Supervisor: Prof F Nyabadza

Co-supervisor: Prof AK Jane White (University of Bath, UK)

MacRoberts, Robyn Jean (PhD)

Mrs MacRoberts was born in Cape Town and holds an MSc in Geology from the University of Johannesburg. She enrolled for a PhD at the University of Johannesburg in 2019 and is currently conducting postdoctoral research at the University of Johannesburg and the Czech Geological Survey in Prague.

In her doctoral study, Mrs MacRoberts studied the formation of structural domes of partially molten rocks in the Damara Mountain belt in Namibia. The Damara Belt is part of an eroded network of mountain ranges that gave rise to the African continent some 500 Myr ago. Mrs MacRoberts used a combined remote sensing, structural, geochronological and metamorphic approach to discover that the domes formed by four deformation phases at a temperature of 750°C and pressures of 5 kbar, over 80 Myr. The results have implications for the mechanism of construction of the African continent and the general behaviour of continental crust deformed under remarkably high temperature over anomalously long periods of time. The candidate has presented her work at two local and three international conferences and published one peer-reviewed international journal article from her Master's work and a second one from her PhD.

Supervisor: Prof J Lehmann

Co-supervisor: Prof MA Elburg

Co-supervisor: Dr P Hasalová (Czech Geological Survey)

Maeko, Mapula Elisa (PhD)

Ms Maeko obtained an MSc in Informatics (with distinction) from the University of Johannesburg, where she was awarded Top Masters student at the Academy of Computer Science and Software Engineering. She is a registered member of the Golden Key International Honour Society. She enrolled for a PhD at the University of Johannesburg in 2019.

In her doctoral study, Ms Maeko delved into multimodal biometric selection, driven by the critical need for robust authentication measures in response to the escalating threats and vulnerabilities concerning information security. She formalised a comprehensive framework for selecting appropriate biometric authentication systems. Her work aimed to prevent the pitfalls of deploying ill-suited technologies, which can lead to financial burdens and ineffective system implementations. Ms Maeko meticulously analysed and evaluated her proposed model using a quantitative research design rooted in an interpretive research paradigm, through the application of complex statistical techniques such as factor analysis, chi-square for goodness of fit, Mardia's coefficient, multivariate kurtosis, and path model analysis. Ms Maeko's research expounded the theoretical underpinnings of biometric selection and presented real-world implementations with demonstrable efficacy. The candidate has presented her work at one local and two international conferences, alongside the publication of three peer-reviewed journal articles. Notably, the candidate also received the best presentation award for one of her papers, focusing on the application of Artificial Intelligence

(AI) in multimodal biometric systems. at an international conference in 2023.

Supervisor: Prof DT van der Haar

Monsanto, Daniela Marques (PhD)

Daniela Monsanto obtained her MSc in Zoology *cum laude* from the University of Johannesburg. She is currently employed in the Department of Zoology as a technical assistant while conducting her postdoctoral research.

In her doctoral study, the candidate focused on springtails, a taxonomic group that dominates terrestrial fauna on all sub-Antarctic islands. Despite their small size, these animals play critical roles in soil ecosystems and ecosystem health. The candidate characterised the genomic architecture of a springtail, *Cryptopygus antarcticus travei*, which is endemic to sub-Antarctic Marion Island. She used these data to assess signatures of selection linked to unique habitat stratification preference and highlighted the importance of nuclear-mitochondrial interactions in the evolution of habitat preferences. She also explored the fine-scale genetic patterns of this species in correlation with the geological history of the island, which revealed that geodiversity and landscape barriers play an important role in shaping biodiversity patterns. The knowledge generated through this work will provide new information on the metabolic and biochemical pathways that may be under selection, and could be extrapolated to all sub-Antarctic Islands, providing the baseline for similar studies on other taxa.

The candidate has presented her work at three local and two international conferences, and has published two peer reviewed journal articles, with one currently under review.

Supervisor: Prof B Jansen van Vuuren

Murulane, Khuliso (PhD)

Mr Murulane was born in Louis Trichardt (now Makhado), Venda. He enrolled as a first-year student in Physics in 2011 at the University of Johannesburg, receiving his Bachelor of Science (Honours) in 2016, in Theoretical Nuclear Physics. Mr Murulane continued with Theoretical Nuclear Physics in his Master's of Science degree, which he obtained in 2019. He received the Chancellor's Medal for his Master's dissertation. He enrolled for his PhD, again in Theoretical Nuclear Physics, in 2019 at the University of Johannesburg.

The Nuclear Shell Model, which was developed in 1948, is the most successful model used to describe the structure of the atomic nucleus. In that model, the protons and neutrons (the "nucleons") which make up the nucleus arrange themselves in shells. This is suggested only by the magic numbers highlighting the binding energies of nuclei as one proceeds through the Periodic Table of the elements. Yet the arrangement in terms of shells is ultimately an assumption: there is no actual physical reason for such structures. The research of Mr Murulane has determined, by appealing to the classical limit of the quantum mechanics of a many-body system, that the reason for such shell structures within the nucleus is the underlying interactions between the nucleons themselves, as given by the two-body nucleon-nucleon interaction. The work has been published in the International Journal of Modern Physics E.

Supervisor: Prof S Karataglidis

Von Solms, Johan Sebastiaan (PhD)

Johan von Solms was born in Johannesburg South Africa and holds an MSc in Computer Science from RAU as well as a MSc. in International Securities, Investment & Banking from the ICMA Centre at the Henley Business School, part of the University of Reading. He enrolled for a PhD at the University of Johannesburg in 2020. He has many years of experience in the global financial markets, most recently focussing on the Fintech industry. Johan is married to Rene (also an alumnus of RAU / UJ) and has two sons Rohan and Stefan, who are both studying Engineering at the Universities of Portsmouth and Nottingham respectively.

In his doctoral study, Mr von Solms studied the adoption of next generation technologies that underpins the Fourth Industrial Revolution (4IR), in a Treasury environment. A Treasury department forms the nerve center in most commercial banks and acts as the custodian of the balance sheet and the firm's financial resources. After the 2008 financial crisis, the department's role and responsibility has grown significantly in terms of scope and strategic importance. However, many Treasuries are not yet comprehensively leveraging digital technologies of the 4IR to their full potential - to meet these increasing demands. The contribution of the doctoral study to the academic field was designing a Smart Digital Treasury Model (SDTM) that delivered a well researched process-orientated roadmap to guide a Treasury in its digitalisation journey. The candidate has presented his work at local and international

conferences and has published four peer reviewed journal articles.

Supervisor: Prof JJ Langerman

Co-supervisor: Prof C Marnewick



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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