

**FACULTY OF SCIENCE**

DEAN: PROFESSOR N CHETTY BSc Hons (Natal) MS PhD (Urbana-Champaign) MSAIP MASSAf

**Master of Science**

**AXELROD**, Guy Ross (*with Distinction*) *Mathematics*  
*DISSERTATION*: Tableaux and decision procedures for many-valued modal logics

**BIELDERMAN**, Sebastian Christopher *Archaeology*  
*DISSERTATION*: SBLs lithic technology and its behavioural implications

**BUTLER**, Kirsten Ann *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: Biodiversity stewardship in South Africa - an assessment of the Klipkraal biodiversity stewardship programme and its potential for conservation

**CHIKOMO**, Nontobeko Natasha *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: Seasonal abundance and diversity of mites in *Coffea arabica* L. at Beaver Creek Coffee Estate, South Africa

**DE JAGER**, Vasti *Geography, Archaeology and Environmental Studies*  
*DISSERTATION*: Assessment of disposal methods of construction and demolition waste: a case study of south-eastern industrial and residential areas in Johannesburg, South Africa

**DUNN**, Benjamin Graham *Environmental Sciences*  
*RESEARCH REPORT*: Commercial maize farmers' adaptations to climate change in Sannieshof, North West Province, South Africa

**DU PLESSIS**, Thea-Leonie *Molecular and Cell Biology*  
*DISSERTATION*: Establishing and characterising organoid cultures from colon tissue of South African individuals

**ESWARAN**, Nithya *Geography, Archaeology and Environmental Studies*  
*DISSERTATION*: Pandemics and Heritage: understanding the impact of the Covid-19 pandemic on Archaeotourism in South Africa

**FREIMOND**, Joseph Scott (*with Distinction*) *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: Quantifying and mapping urban ecosystem services in Johannesburg, South Africa

**GILBERT**, Nikhil (*with Distinction*) *Computer Science*  
*DISSERTATION*: An assessment of the performance of contrastive learning methods incorporated into policy gradient algorithms

**GILFILLAN**, John Edward Malan *Geography, Archaeology and Environmental Studies*  
*DISSERTATION*: Does public participation facilitate the development of a comprehensive social impact assessment process in South Africa? A study of the Carolina town community in Mpumalanga

**HARRIS**, Wade (*with Distinction*) *Palaeontology*  
*DISSERTATION*: The relationship between dental complexity and mandibular shape: implications for dietary inference in stem mammals

- HASROD**, Taskeen (*with Distinction*) *Chemistry*  
*DISSERTATION*: Imputation of missing values and the application of transfer machine learning to predict water quality in acid mine drainage treatment plants
- HECHTER**, Ernst Heznz *Chemistry*  
*DISSERTATION*: Magnetic enhancement of a high entropy spinel oxide electrocatalyst for rechargeable zinc-air batteries
- HOWARD**, Jodi Anne *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: Hold your horses: the effect of play behaviour in horses (*Equus caballus*) under imposed stress
- JAXA**, Busisiwe *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: The supply of ecosystem services along an urban-rural gradient, in Johannesburg, South Africa
- KHOZA**, Jabulile *Mathematics*  
*DISSERTATION*: On the geometry of lightlike hypersurfaces
- KLINKERT**, Celine Megan *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: Water quality monitoring of biological and chemical pollutants into the Wakkerstroom Wetland
- KRISTENSEN**, Daniella (*with Distinction*) *Geography, Archaeology and Environmental Studies*  
*DISSERTATION*: The holiday climate index: applicability and suitability for the South African context
- KUNENE**, Thembinkosi Eezy (*with Distinction*) *Mathematics*  
*DISSERTATION*: Analysis of some convergence results for inertial variational inequalities problem and its application
- KWINDA**, Fhatani *Molecular and Cell Biology*  
*DISSERTATION*: Isolation and characterisation of entomopathogenic fungi
- LEBANG**, Kagiso Brian Moses *Medical Physics*  
*RESEARCH REPORT*: A quantitative analysis of EPID images for medical physics quality assurance using Pylinaq
- LEPOTA**, Thabo James *Physics*  
*DISSERTATION*: The development of a burn-in test station for the ATLAS tile calorimeter low voltage power supplies for phase II upgrades.
- MABOYA**, Josephine Tshegofatso *Chemistry*  
*DISSERTATION*: Use of transaminases for the biosynthesis of enantiopure building blocks of two essential medicines: Ethambutol and Dolutegravir
- MAKDA**, Javeria *Physics*  
*DISSERTATION*: The culprit for the termination of Mars' magnetic field: Dark Matter
- MAKOBÉ**, Benjamin *Geographical Information Systems and Remote Sensing*  
*RESEARCH REPORT*: An integrated approach for detecting and monitoring the *Campuloclinium macrocephalum* (Less) DC using the MaxEnt and machine learning models in the Cradle Nature Reserve, South Africa
- MAPHALLA**, Retsebile Maruruele *Statistics*  
*DISSERTATION*: Clustering and classification techniques in the presence of outliers: an application to the Johannesburg Stock Exchange stocks
- MBATHA**, Cebolenkosi *Environmental Sciences*  
*RESEARCH REPORT*: Assessment of the impact of load shedding on the households of Alexandra, Johannesburg, South Africa
- MCINNES**, Keiran George (*with Distinction*) *Molecular and Cell Biology*  
*DISSERTATION*: A clot to uncover: FDXP3 and SARS-CoV-2 nucleocapsid interactions and their effect on DNA binding

- MEYER, Charné Amy** *Geography, Archaeology and Environmental Studies*  
*DISSERTATION:* The extent of the inclusion and consideration of extreme climate events and health in South African policies; the case of eThekweni
- MOKHETHI, Ntswaki Marry** *Geography, Archaeology and Environmental Studies*  
*DISSERTATION:* An assessment of beauty waste management practices: a case study of Rustenburg beauty salons
- MUNATSI, Wendy Tsitsi** *Chemistry*  
*DISSERTATION:* Design and synthesis of triazine derivatives as non-nucleoside reverse transcriptase inhibitors
- NAIDOO, Shiven** *Molecular and Cell Biology*  
*DISSERTATION:* Using ChIP-seq and Gene Expression Microarray data to explore transcriptional dysregulation of *PXDN* and *PXDNL* in cardiovascular diseases
- NEFALE, Mpho Mendy (with Distinction)** *Computational and Applied Mathematics*  
*DISSERTATION:* Overlapping multidomain paired quasilinearisation methods for solving boundary layer flow problems
- NWAKPA, Chidi Elijah (with Distinction)** *Mathematics*  
*DISSERTATION:* Relaxed inertial algorithm for solving equilibrium problems
- OKORIE, Kalu Okam (with Distinction)** *Mathematics*  
*DISSERTATION:* Convergence results for inertial regularised bilevel variational inequality problems
- ORNELAS, Pedro Dinis (with Distinction)** *Physics*  
*DISSERTATION:* Skyrmions and vectorial wavefunctions
- OTTEN, Joseph Johannes** *Medical Physics*  
*RESEARCH REPORT:* Feasibility and the facilitation of off-site treatment planning services at Charlotte Maxeke Johannesburg Academic Hospital
- PETERS, Cade Ribeiro (with Distinction)** *Physics*  
*DISSERTATION:* The Eigenmodes of complex media
- RAMPFUMEDZI, Tshilidzi Michael (with Distinction)** *Chemistry*  
*DISSERTATION:* Characterisation, quantification and recovery of rare earth elements (REES) in South African coal fly ash samples
- RILEY, Bradley Douglas (with Distinction)** *Animal, Plant and Environmental Sciences*  
*DISSERTATION:* Heat-related health impacts: the responses of local governments to current and emerging heat extremes in the Gauteng Province
- ROOPLAL, Samista Kim** *Animal, Plant and Environmental Sciences*  
*DISSERTATION:* Modelling current and future distributions of *Warburgia* species at continental (Africa) and local (South Africa) scales
- SANGWENI, Siyabonga Patrick** *Animal, Plant and Environmental Sciences*  
*DISSERTATION:* The function of 'plant biltong' collected by bush Karoo rats (*Otomys unisulcatus*)
- SOROOR, Wendy Loryn (with Distinction)** *Geographical Information Systems and Remote Sensing*  
*RESEARCH REPORT:* Determining the spatial variations of evapotranspiration rates in a semiarid region
- TSHABALALA, Khanyisile Agnes** *Interdisciplinary Global Change Studies*  
*RESEARCH REPORT:* Characterisation of drought using hydrological and meteorological indices: a case study of Bethlehem, South Africa

**TSHIVHASE**, Funani *Geographical Information Systems and Remote Sensing*  
*RESEARCH REPORT*: Monitoring and evaluating urban land use land cover change using machine learning classification techniques: a case study of Polokwane municipality

**WALKER**, Stephen Tom *Actuarial Science*  
*DISSERTATION*: Lessons for South Africa's proposed social security retirement reforms from the experience of other sub-Saharan African countries

**XU**, Yi Fan (*with Distinction*) *Molecular and Cell Biology*  
*DISSERTATION*: Chromatin accessibility changes during early monocyte-to-macrophage differentiation

**XUBA**, Ntsika (*with Distinction*) *Animal, Plant and Environmental Sciences*  
*DISSERTATION*: The relationship between climate variability, household food security, and child nutrition in a rural social-ecological system

**ZARANYIKA**, Zororo Emmanuel *Computer Science*  
*RESEARCH REPORT*: Evaluating pre-training mechanisms in deep learning enabled tuberculosis diagnosis

**ZDRAVKOVIC**, Milica (*with Distinction*) *Physics*  
*DISSERTATION*: Solar cell simulation using Ab Initio methods

**ZVIUYA**, Patience *Molecular and Cell Biology*  
*DISSERTATION*: Comparison of *Saccharomyces cerevisiae* and the novel wild yeast used in beer fermentation and their future in industrial biotechnology

## **Bachelor of Science Honours**

**BANDA**, Khanyisile *Chemistry*

**DEBEILA**, Neo *Animal, Plant and Environmental Sciences*

**DE BRUIN**, Jorenthia Fiona *Animal, Plant and Environmental Sciences*

**DLAMINI**, Lindani Nqoba (*with Distinction*) *Big Data Analytics*

**DLAMINI**, Sinethemba Yenzokuhle *Microbiology and Biotechnology*

**FATYELA**, Mihlali *Chemistry*

**GAETSOSIWE**, Bokamoso Lynden *Geology*

**GOVENDER**, Makaila *Biochemistry and Cell Biology*

**GOVENDER**, Megan (*with Distinction*) *Animal, Plant and Environmental Sciences*

**HLATSHWAYO**, Zamangwane *Chemistry*

**HLOPHE**, Lindani Melusi *Computational and Applied Mathematics*

**KADZOMBE**, Tatenda *Animal, Plant and Environmental Sciences*

**KEKANA**, Tokollo (*with Distinction*) *Geology*

**KELI**, Zizopho *Geography*

<b>KHOZA</b> , Keneilwe	<i>Chemistry</i>
<b>KHUMALO</b> , Chris Thabo	<i>Animal, Plant and Environmental Sciences</i>
<b>KUBEKA</b> , Mpendulo Kwanda	<i>Chemistry</i>
<b>KUNENE</b> , Thembinkosi Eezy	<i>Mathematics</i>
<b>LUQHIDE</b> , Sibabalo	<i>Computer Science</i>
<b>MAFRIKA</b> , Okuhle	<i>Mathematical Sciences</i>
<b>MAGAGULA</b> , Siphokazi Makhosazana ( <i>with Distinction</i> )	<i>Computational and Applied Mathematics</i>
<b>MAKOLA</b> , Khotso Emmanuel	<i>Mathematical Sciences</i>
<b>MALESA</b> , Nthabiseng Presel	<i>Geology</i>
<b>MASHISHI</b> , Elijah Kotloano Elias	<i>Physics</i>
<b>MATHABE</b> , Tshegofatso Freyciuos	<i>Animal, Plant and Environmental Sciences</i>
<b>MAZIBUKO</b> , Mthenjwa Ndumiso	<i>Applied Bioinformatics</i>
<b>MBAYELA</b> , Madie Tshimangadzo	<i>Animal, Plant and Environmental Sciences</i>
<b>MIDZUK</b> , Adam Jay	<i>Palaeontology</i>
<b>MKHONDO</b> , Bradley	<i>Physics</i>
<b>MOGOTSI</b> , Makgoshi Omphemetse	<i>Animal, Plant and Environmental Sciences</i>
<b>MOKOTEDI</b> , Amogelang	<i>Geology</i>
<b>MORENA</b> , Mahlogonolo	<i>Physics</i>
<b>MOTOTO</b> , Dintle Jason	<i>Biochemistry and Cell Biology</i>
<b>MUDAU</b> , Moshahlama Grany	<i>Animal, Plant and Environmental Sciences</i>
<b>MZOBE</b> , Sphesihle Nomfundo	<i>Chemistry</i>
<b>NELUFULE</b> , Rofhiwa Reinhard	<i>Chemistry</i>
<b>NTHOKE</b> , Mokgadi Gabriel	<i>Animal, Plant and Environmental Sciences</i>
<b>RASETHETHO</b> , Oamogetswe Prudence	<i>Geographic Information System and Remote Sensing</i>
<b>REDDY</b> , Saieshnie	<i>Microbiology and Biotechnology</i>
<b>SANGWENI</b> , Nkosenhle	<i>Mathematical Sciences</i>
<b>SEEISO</b> , Kutloano Luyanda	<i>Animal, Plant and Environmental Sciences</i>

<b>SEGANA</b> , Pamela Amantle	<i>Big Data Analytics</i>
<b>THOBEJANE</b> , Mante Rhyder	<i>Microbiology and Biotechnology</i>
<b>VAN NIEKERK</b> , Carla	<i>Genetics and Developmental Biology</i>
<b>VAN ZYL</b> , Albertus Stephanus	<i>Mathematics</i>
<b>VILAKAZI</b> , Precious	<i>Animal, Plant and Environmental Sciences</i>

## **Bachelor of Science**

<b>BANDA</b> , Khanyisile
<b>BOWDLER</b> , Ruth
<b>CHAUKE</b> , Shiluva Balerina
<b>CHAUKE</b> , Shiseke Victor Vutivi
<b>DADOO</b> , Amaani
<b>FEBRUARY</b> , Zinzi Georgia
<b>GALA</b> , Hlulani Nqobile Israel
<b>HLUNGWANE</b> , Nicholas Tlhandluko
<b>KGANYAGO</b> , Malosi Madikoto
<b>KHATI</b> , Naledi
<b>KHESWA</b> , Sinethemba Goodness
<b>KHULU</b> , Nobuhle S'busisiwe
<b>LEHONG</b> , Biancha Refentse
<b>MABIDI</b> , Tshilidzi Robert
<b>MABUSELA</b> , Matlanato Matthews
<b>MAHLOKO</b> , Itumeleng Victor <i>(with Distinction)</i>
<b>MAHOLOBELA</b> , Mitchell Thakgafatso
<b>MALELE</b> , Risuna Clementine
<b>MALULEKE</b> , Ondlani Jennifar
<b>MAMATHUNTSHA</b> , Khangwelo
<b>MANTSHI</b> , Nhlakanipho Wiseman

**MAPHOSA**, Msindisi Carlet  
**MARABA**, Kabelo Theophilus  
**MARABA**, Omphile Thato  
**MARIPANE**, Nerrisa Segodi  
**MATHABE**, Tshegofatso Freyciuos  
**MATODZI**, Mahlatse Given  
**MAWHAYI**, Senia  
**MAZWI**, Zenande  
**MDLULI**, Siyabonga Hopewell  
**MHLONGO**, Siyabonga  
**MICHAEL**, Kereshlin  
**MOALUSI**, Itumeleng Felicity  
**MOATSHE**, Nokuphila Princess  
**MODISHA**, Kagiso Gift  
**MOLEFE**, Lesego Palesa  
**MOLELE**, Mahlatse Mollen  
**MOLISE**, Teboho Canny  
**MOLOI**, Lehlohonolo Lawrence  
**MOSIMA**, Paul Kutumela  
**MOSOTHO**, Samukelo  
**MTSHAISE**, Andile Mxolisi Innocent  
**MUHLALA**, Kamogelo Shaun  
**MULEBA**, Arinaho  
**MUNYAMA**, Unamaanda  
**NAGEL**, Kayla Miranda  
**NDJIBU**, Rebecca Kapamba Kilolo  
**NDLOVU**, Patience

**NGCOBO**, Siyabonga  
**NGOBENI**, Andzani  
**NGWENYA**, Zanele Omphile  
**NKOSI**, Neo Thabang  
**NQINDI**, Olwethu  
**OKOROAFOR**, Chisom Alexis  
**PILUSA**, Ripfumelo Lusilly  
**QOBOLO**, Lethabo Shahista  
**RADEBE**, Obakeng  
**RADEBE**, S'phamandla Mlungisi  
**RATSHIKUNI**, Pfunzo Gift  
**SEKGUBE**, Sphiwe  
**SELAPE**, Neo  
**SEMAUSHU**, Remofilwe Pearl  
**SHONGWE**, Ntokozo Saint  
**SIKOE**, Precious Didintle Dineo  
**SITHOLE**, Milisa Enathi  
**SONJICA**, Lihle  
**THWALA**, Ayanda Blessing  
**TJIANA**, Thato  
**TSHABALALA**, Sifiso  
**ZIKHALI**, Nosimilo  
**ZITHA**, Vuyani  
**ZWANE**, Thabo

## **Postgraduate Diploma in Science**

**SEMAUSHU**, Remofilwe Pearl (*with Distinction*)

*Data Science*