

FINAL GRADUATION LIST

GRADUATION DATE: 09 DECEMBER 2024
TIME: 14:30

FACULTY OF SCIENCE

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

Master of Science

ASANTE-MANTEAW, Theophilus *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: GIS-based dynamic flood modelling along Jukskei River, Johannesburg, South Africa

ATITA, Obehi Chapet *Geophysics*
DISSERTATION: Machine learning algorithms-based classification of lithology using geophysical logs: ICDP DSeis project boreholes, South Africa

BAU, Nandi *Computer Science*
DISSERTATION: 3D human pose estimation: using geometric self-supervision with temporal methods

BELGER, Carl Warner *Animal, Plant and Environmental Sciences*
DISSERTATION: The gene catalogue and functional analysis of the gut microbiome of lions in Etosha National Park

BESTER, Tristan (*with Distinction*) *Computer Science*
DISSERTATION: Counting reward automata: exploiting structure in reward functions expressible in decidable formal languages

BILA, Laercia Rose (*with Distinction*) *Chemistry*
DISSERTATION: Synthesis of platinum-based electrocatalysts using nitrogen doped onion-like carbon and WS₂ composite as the support for electrooxidation of ethanol in direct alcohol fuel cells

BOBO, Christine *Animal, Plant and Environmental Sciences*
DISSERTATION: An initial estimation and characterisation of methane (CH₄) from the Wakkerstroom wetland and the Majuba Power Station in Mpumalanga Province, South Africa

BOLTON, Andrew Desmond (*with Distinction*) *Palaeontology*
DISSERTATION: Finite element analysis of dinocephalian skulls to address head-butting behaviour in early therapsids

BREYTENBACH, Andrea (*with Distinction*) *Molecular and Cell Biology*
DISSERTATION: The effect of cholesterol depletion on TGF- β --induced epithelial-mesenchymal transition in pancreatic cancer cells

BUTHELEZI, Nontobeko Lynda Valerie *Interdisciplinary Global Change Studies*
RESEARCH REPORT: Higher education sustainability: investigating the barriers and opportunities to sustainable infrastructural development in tertiary education institutions

CHALOM, Jason Max *Computer Science*
DISSERTATION: The application of attribution methods to explain an end-to-end model for self-driving cars

CHIRINDZA, Jonas *Computer Science*
DISSERTATION: Flood susceptibility modeling in the uMhlatuzana river catchment using computer vision-based deep learning techniques

- COETZER, Dewald** *Animal, Plant and Environmental Sciences*
DISSERTATION: Investigating hybridisation among high altitude *Rhodohypoxis* species in the Drakensberg Alpine Centre
- CORDEIRO, Jeanne (with Distinction)** *Archaeology*
DISSERTATION: The “Roots” of early *Homo*’s survival: the role of geophyte underground storage organs in the diet of *Homo ergaster* occupying the Cradle of Humankind during the middle Pleistocene
- CWAYI, Herbert Qaqambile** *Chemistry*
DISSERTATION: Synthesis and characterisation of onion-like carbons for adsorption of tartrazine dye in water
- GIBSON, Matthew Leo (with Distinction)** *Molecular and Cell Biology*
DISSERTATION: Identifying markers of differentiation in monocyte derived macrophages
- GOVENDER, Yashila** *Animal, Plant and Environmental Sciences*
DISSERTATION: The potential of regenerative agriculture in creating climate adaptive and gender inclusive food systems: a study of rural communities in Mpumalanga, South Africa
- HAUPT, Rachel Xenia** *Geography, Archaeology and Environmental Studies*
DISSERTATION: Optically stimulated luminescence dating of Kalundu and Urewe tradition ceramics
- HAYASHI, Kentaro** *eScience*
RESEARCH REPORT: Applications of recurrent neural networks in modeling the COVID-19 pandemic
- HLOPHE, Busisiwe (with Distinction)** *Palaeontology*
DISSERTATION: Palaeoclimate reconstruction using charcoal from a mid-Holocene stratum 4b, Wonderwerk Cave, South Africa
- KAEMBA, Robert Ntokwa (with Distinction)** *Economic Geology*
RESEARCH REPORT: The nature and characteristics of sulphide mineralisation at the Kamoia - Kakula copper deposit of the Katanga basin, Central African Copperbelt, Lualaba, Democratic Republic of Congo
- KATANE, Malebogo Dimpho (with Distinction)** *Molecular and Cell Biology*
DISSERTATION: Metagenome sequencing of the lichen species *Flavopunctelia flaventior* and *Parmotrema tinctorum* from Gauteng, South Africa
- KEIZAN, Yaron Yakov** *Animal, Plant and Environmental Sciences*
DISSERTATION: Assessing the climatic suitability and environmental responses of *Anthonomus morticinus* Clark (Coleoptera: Curculionidae), a potential biological control agent of *Solanum mauritianum* Scopoli (Solanaceae) in South Africa
- KONAITE, Tumelo Tshana** *Computational and Applied Mathematics*
DISSERTATION: Pricing interest rate derivatives using the forward market model
- KOOVERJEE, Neha** *Animal, Plant and Environmental Sciences*
DISSERTATION: Landscape-scale carbon stocks in the subtropical thicket of the Baviaanskloof, South Africa
- KUDOMA, Bongayi** *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Assessing the spatiotemporal variability of urban heat island and thermal comfort in Greater Francistown city
- LANGA, Kelly Kiba (with Distinction)** *eScience*
RESEARCH REPORT: Parameter-efficient fine-tuning of pre-trained large language models for financial text analysis
- LUQMAN, Muhammad** *Geography, Archaeology and Environmental Studies*
DISSERTATION: Development of a GIS system for mining data management and integration for proactive decision making

- MABELE**, Nondumiso *Geophysics*
DISSERTATION: Integrated geophysical methods to delineate R21 sinkholes near Olifantsfontein, Gauteng, South Africa
- MABILANE**, Tshegofatso *Chemistry*
DISSERTATION: Photodegradation of synthetic organic dyes in water using tungsten disulfide and bismuth-based metal halide perovskite composite materials
- MAHAMUZA**, Phemelo Hope *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Assessing and comparing the performance of different machine learning regression algorithms in predicting Chlorophyll-a concentration in the Vaal Dam, Gauteng
- MAHOMED**, Aaliyah *Geography, Archaeology and Environmental Studies*
DISSERTATION: The influence of climate change on the speed of movement of tropical cyclones in the South Indian Ocean
- MAKARINGE**, Precious Nkhensani *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Modelling for rainwater harvesting structures using geospatial techniques
- MAKHEMA**, Relebohile Edward *Economic Geology*
RESEARCH REPORT: Accessory REE mineralisation of the Nokeng fluorite deposit as distal facies of the adjacent Vergenoeg pipe, Bushveld Complex, South Africa
- MALIVHADZA**, Takalani *Environmental Sciences*
RESEARCH REPORT: The perceptions of Moretele residents of small-scale agriculture: the case of Ga-Moeka village in the North-West Province
- MANUEL**, Agex Cordeiro Ferreira *Geology*
DISSERTATION: Assessing the magmatic Ni-Cu-(Co-PGE) sulphide potential of the Kunene AMCG Complex
- MASEKO**, Sambulisiwe *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Watershed delineation and runoff estimation using GIS and HEC-HMS model in the Gwayi Catchment, Zimbabwe
- MATHUNYANE**, Alfred Ntobeng *Computational and Applied Mathematics*
DISSERTATION: Double- diffusive convection in rotating fluids under gravity modulation
- MBEDZI**, Mary Emma *Animal, Plant and Environmental Sciences*
DISSERTATION: Natural resource use and environmental perceptions in different types of rural villages in Bushbuckridge, South Africa
- MISTRY**, Nikhil Jayant *Hydrogeology*
RESEARCH REPORT: Nutrient and salinity loading based on the temporal and spatial water quality data in the upper Crocodile River Basin, Johannesburg
- MMANGOEDI**, Molebogeng Precious *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Investigating the impact of the land reform policy on land use and land cover changes, in Ngaka Modiri Molema district of the North West Province
- MNGADI**, Nomfundo Persevearance *Environmental Sciences*
RESEARCH REPORT: The impact of the uMsunduzi River Catchment on eutrophication in the Inanda Dam
- MNGUNI**, Zandizoloyiso Asanda (*with Distinction*) *Geography, Archaeology and Environmental Studies*
DISSERTATION: Assessing the validity of the exclusion of night-time thermal comfort in tourism climate indices
- MOFOKENG**, Puseletso Samuel *Geography, Archaeology and Environmental Studies*
DISSERTATION: Study of the influence of gust fronts and topographical features in the development of severe thunderstorms across South Africa

- MOGADINGOANE**, Keitumetse Neo *Molecular and Cell Biology*
DISSERTATION: Comparison of different bioassay methods for the assessment of dose-response relationships of entomopathogens and toxins against *Helicoverpa armigera* (Hübner, 1809) (Lepidoptera: Noctuidae)
- MOLEFE**, Kebarileng Christinah *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: GIS - based location-allocation modelling of school accessibility in the Bojanala Platinum District Municipality, South Africa
- MOLEFE**, Molefe Reabetsoe-phenyo (*with Distinction*) *Computer Science*
DISSERTATION: Envisioning the future of fashion: the creation and application of diverse body pose datasets for Real-World Virtual Try-On
- MONGWE**, Agnes Monosi (*with Distinction*) *Chemistry*
DISSERTATION: High entropy spinel oxides and iron-cobalt based electrocatalysts for rechargeable zinc-air batteries
- MONOKE**, Kwena Martha *Interdisciplinary Global Change Studies*
RESEARCH REPORT: Mining company governance and the spectre of environmental prosecutions: Is there any deterrent effect?
- MONYAI**, Mokgaetji Anelina *Chemistry*
DISSERTATION: Evaluating the impact of land use activities in and around Lake Kariba on the presence and levels of anions and cations in the water body
- MONYANE**, Napo Shadrack (*with Distinction*) *Hydrogeology*
RESEARCH REPORT: Baseline hydrogeology of Dolerite Dykes in Lesotho, Mafeteng District as a case study
- MOONSAMY**, Sasha Sarasvathee Keshnee *Molecular and Cell Biology*
DISSERTATION: Knockdown of long non-coding RNA PANDA improves the cytotoxic effects of cisplatin in oesophageal squamous cell carcinoma cell lines
- MORRIS**, Tania Mari (*with Distinction*) *Computational and Applied Mathematics*
DISSERTATION: Magnetic field strength estimations for the main phases of solar cycles 13-24 using magnetohydrodynamic Rossby waves in the lower tachocline
- MOTHOBEKHI**, Lorraine Masoko *Economic Geology*
RESEARCH REPORT: Characterisation of the Platinum Group Minerals in the Ombuku North intrusion peripheral to the Kunene Complex: insights into its PGE potential
- MUKWEVHO**, Lutendo (*with Distinction*) *Palaeontology*
DISSERTATION: Taphonomy and palaeoecology of a monospecific microvertebrate bonebed: behavioural implications for the late Permian (Lopingian) parareptiles
- MULANDULI**, Omphulusa (*with Distinction*) *Geophysics*
DISSERTATION: Physical property studies, tunnel numerical simulations and in-mine seismic experiments to image the gold orebody at South Deep Gold Mine
- MULAUDZI**, Anza-tshilidzi *Physics*
DISSERTATION: Exploring the parameter space of 2HDM+S model in colliders
- MULENGA**, Thabelo *Molecular and Cell Biology*
DISSERTATION: Exploring the structure, function and stability of glutathione transferases engineered from intra- and inter-class consensus sequences: How forgiving is nature?
- MUNTSWU**, Zwivhuya *Chemistry*
DISSERTATION: A systematic study on the use of the sol-gel synthetic method for lithium manganese oxide based cathode materials

- MURIVA-MAKOMBE**, Cathrine *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Integrating Landsat and Sentinel-2 for the assessment of rangelands vegetation dynamics
- MUTHIVHI**, Mufhumudzi (*with Distinction*) *Computer Science*
DISSERTATION: BiCoRec: bias - mitigated context-aware sequential recommendation model
- NAGY**, Marcell Douglas (*with Distinction*) *Robotics*
RESEARCH REPORT: Ball tracking by object detection using deep neural network aided Kalman filtering in a real-time simulated RoboCup Soccer environment
- NAIDOO**, Ashton *Robotics*
RESEARCH REPORT: High-speed obstacle avoidance in unstructured environments
- NAIDOO**, Riyanta *Animal, Plant and Environmental Sciences*
DISSERTATION: The implications of mandible morphology and dental structure on the feeding ecology and predatory behaviour in Hyaenidae (hyaenas) using geometric morphometric analyses
- NDUNI**, Mercy Njeri (*with Distinction*) *Chemistry*
DISSERTATION: Manganese-based cathode materials for zinc-ion and lithium-sulfur batteries
- NEKHUMBE**, Humbulani Colbert *Robotics*
RESEARCH REPORT: Optimisation of Kick Latency for enhanced performance of Robots in the Robocup Three-Dimensional League through Proximal Policy Optimisation (PPO)
- NETSHITUNGULU**, Ndikhwine *Computer Science*
DISSERTATION: Information and knowledge discovery from undergraduate STEM datasets: educational data mining at a South African University
- NGUBANE**, Samukelisiwe *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Modelling and analysis of COVID-19 outspread at micro-levels using spatial autocorrelation: Case of eThekweni
- NJUPOUN**, Abdel Mfougouon (*with Distinction*) *Robotics*
RESEARCH REPORT: Formation strategy optimisation using multi-agent reinforcement learning
- PADAYACHY**, Janiel (*with Distinction*) *Animal, Plant and Environmental Sciences*
DISSERTATION: Surface water dependencies and activity patterns of mammalian herbivores in South Africa
- PEPLOUW**, Muchelene Tiara *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Spatiotemporal characteristics of surface water in Sua Pan, Botswana, using Earth observation data: 1992 - 2022
- PERUMAL**, Leerin Michaela (*with Distinction*) *Physics*
DISSERTATION: Broadband beam shaping
- RABOYA**, Christopher *Chemistry*
DISSERTATION: Biocatalytic oxidative conversion of valencene to nootkatone mediated by lipoxygenase and cytochrome P450
- RAINE**, Keith Ian *Environmental Sciences*
RESEARCH REPORT: Critiquing existing criteria for financial provisioning for rehabilitation and closure of coal mines in South Africa
- RAJAB**, Jenalea Norma *Computer Science*
RESEARCH REPORT: Addressing ambiguity in human robot interaction using compositional reinforcement learning and user preference

RAMAANO, Thabo Victor *Computer Science*
DISSERTATION: Developing a bayesian network model to predict students' performance based on the analysis of their higher education trajectory

RIKHOTSO, Hlawulekani *Chemistry*
DISSERTATION: Cu₂ZnSnS₄ nanoparticles and Cu₂ZnSnS₄/carbon sphere composites as counter electrode catalysts for DSSCs

SEBASTIAN, Mistral *Molecular and Cell Biology*
DISSERTATION: Investigating the DNA methylation status of the PXDN and PXDNL promoter regions in OSCC cell lines

SEKGOBELA, Pusang King *Molecular and Cell Biology*
DISSERTATION: Genomic characterisation of possible symbiotic pathogenic bacteria species isolated from undescribed Cruznema nematodes bacterivore

SIBIYA, Zoleka Evidence Nokwazi (*with Distinction*) *Palaeontology*
DISSERTATION: The taxonomy and phylogeny of varanopidae from the middle permian of South Africa

SMITH, Roshay *Molecular and Cell Biology*
DISSERTATION: Diversity and abundance of arthropods on conventional sugarcane under field conditions in South Africa

STYLIANOU, Nicholas *Geography, Archaeology and Environmental Studies*
DISSERTATION: Bayesian belief networks and score-based network construction for nitrate and nitrite level prediction in water quality testing of the Vaal River in South Africa

TOORAY, Shweta *Molecular and Cell Biology*
DISSERTATION: Unveiling the biochemical pathway between Type 2 diabetes Mellitus and early Alzheimer's disease

VAN WYNGAARD, Zahn *Environmental Sciences*
RESEARCH REPORT: The effects of land use change on water quality in the Upper Berg - and Breede River catchments, Western Cape, South Africa

WOOLFSON, Logan Stefan (*with Distinction*) *Geographical Information Systems and Remote Sensing*
RESEARCH REPORT: Detecting disease in citrus trees using multispectral UAV data and deep learning algorithm

ZONDI, Nomvula Beryl *Interdisciplinary Global Change Studies*
RESEARCH REPORT: The impact of the just energy transition on job creation in South Africa: a case of the wind energy sector

ZONDO, Michel *Palaeontology*
DISSERTATION: The stratigraphy of the new Tuli Basin fossil sites in Zimbabwe

Bachelor of Science Honours

BALASSIS, Socrati *Computer Science*

COKA, Siyabonga Julius *Mathematical Sciences*

DLAMINI, Lindelani Delisa *Computer Science*

DLAMINI, Mongezi Mpumelelo *Computer Science*

GIJANA, Abongile *Geography, Archaeology and Environmental Studies*

GROSSBERG , Aharon Mordechai	<i>Computer Science</i>
LAFFERTY , Tristen Ray	<i>Palaeontology</i>
LAMOLA , Koena Dadley	<i>Mathematics</i>
MAHLANGU , Dumisani Theophilus (<i>with Distinction</i>)	<i>Mathematical Sciences</i>
MAKHADO , Phophi Murendeni Unarine	<i>Chemistry</i>
MAKWELA , Naledi Palesa	<i>Geographic Information System and Remote Sensing</i>
MARAVHA , Takalani	<i>Animal, Plant and Environmental Sciences</i>
MARUMOLOE , Pheletso	<i>Chemistry</i>
MASHABELA , Mampse Thabo	<i>Computer Science</i>
MASHILO , Neo	<i>Science Education</i>
MATLHAKOLA , Ofentse Octovia	<i>Physics</i>
MBATHA , Cebolenkosi	<i>Geography</i>
MHLANGA , Thandeka	<i>Geography, Archaeology and Environmental Studies</i>
MOTSIELOA , Pholoso Gilbert	<i>Big Data Analytics</i>
MVELASE , Siyabonga Ntokozo	<i>Computational and Applied Mathematics</i>
NGQULUNGA , Samukelo Innocent	<i>Mathematical Statistics</i>
NKOSI , Ntombizonke	<i>Geology</i>
OMOSUWA , Mercy Tintswalo	<i>Chemistry</i>
PAPOLA , Mokgethoa	<i>Computer Science</i>
RIBA , Mojakgomo Evidence	<i>Geology</i>
SGUDLA , Hlengiwe Johanna	<i>Geology</i>
SIBIYA , Swelihle Sinothile	<i>Environmental Studies</i>
SITHOLE , Zenzele Sihle	<i>Chemistry</i>

Bachelor of Science

MACHWEU, Mavis Thato

NDLOVU, Thato

PHIRI, Miriam

TSUNYANE, Khotsofalang Paulus