

**NELSON MANDELA**  
UNIVERSITY



**December 2020**

**Virtual Summer Graduation**

**Session 3**

**Faculty of Health Sciences**

**Faculty of Science**

18 December 2020 | 09:30



#### VISION

To be a dynamic African university, recognized for its leadership in generating cutting-edge knowledge for a sustainable future

#### MISSION

To offer a diverse range of life-changing education experiences for a better world

#### VALUES

Excellence

Diversity

Ubuntu

Social justice and equality

Integrity

Environmental stewardship

Excellence

Diversity

Ubuntu

Social justice  
and equality

Integrity

Environmental  
stewardship

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## Congratulatory Message



Dr Geraldine Fraser-Moleketi  
Chancellor



Professor Sibongile Muthwa  
Vice-Chancellor

Graduation is a significant milestone in anyone's life. It is the culmination of an academic journey that reflects your commitment, perseverance, hard work, intellect and sacrifice, and particularly so this year. We know the pandemic seriously impacted on your studies. It has not been easy. We also know the sacrifice and hard work is often not yours alone as many have travelled with you – your friends, your lecturers, your supervisors, your mentors and your family. They have invested in you financially, encouraged you to persevere, guided your studies and above all, believed in your ability to succeed and achieve this graduation dream.

Today your joy is our joy too, even though we are celebrating virtually. Such a significant moment – your graduation day – must be celebrated for it not only recognises all that you have achieved but focuses on all the potential and possibilities to come. It offers us great hope for the future – for you are that future.

We salute and applaud your achievement and wish you all the very best for your future endeavours.

Never stop learning. Do not let your curious spark die out, for education is not only your passport to the future – but also to the future hopes of our country, our continent and is indeed a foundation for a better world, as Nelson Mandela so eloquently put it:

**"Education is the most powerful weapon which you can use to change the world."**

Congratulations!

**Umyalezo wokuvuyisana nabo bathweswa isidanga. Ukuthweswa isidanga, yimbilasane kubomi bakhe nabani na. Ngumda wendlela yezemfundo, obonisa ukuzinikela, ukunyamezela, ukusebenza nzima, ukuba krele-krele nokuncama ngenxa yezifundo, ingakumbi kulo nyaka. Siyayazi ukuba lobhubhane sijongene naye uzichaphazele izifundo zenu. Bekungekho lula. Siyazi kanjalo ukuba ukuzidina nokusebenza nzima kumatyeli amaninzi ayondlela eniyihamba ninodwa, koko baninzi**

abahamba nani- izihlobo, abahlohli, abaphathi, abacebisi kwakunye neentsapho zenu. Baninceda ngokwemali, bekwanikhuthaza ukuba ninyamezele, benikhokela kwizifundo, kuba bekholelwa ukuba nizophumelela nifezekise iphupha lokuthweswa isidanga.

Namhlanje uchulumanco lwenu, lukwa luchulumanco lwethu, nangona sivuyisana nani ngobuxhaka xhaka balemihla. Lo mzuzu ubaluleke kangaka- usuku lwenu lokuthweswa izidanga- kumele ubhiyozelwe nanjengoko ungabonisi oko sele ukuphumelele kuphela, ukwa bonisa amandla kwakunye namathuba azakuvela. Oku kusinika ithemba elikhulu ngekamva, nanjengoko nili kamva. Sinothulela umnqwazi sikwaniqhwebela izandla ngempumelelo yenu, sininqwenelela okuhle kodwa kwinzame zekamva lenu.

NIngadinwa kukufunda. Ningayeki ukufuna ulwazi, nanjengoko imfundo ingesostixo sekamva lenu kuphela- koko ilithemba lekamva lesizwe sethu, ilizwekazi liphela, kwaye isisiseko selizwe elingcono, nanjengoko uNelson Mandela esitsho:

**“Imfundo sesona sixhobo sinamandla ongasisebenzisa ukuguqula ilizwe”**

**Sivuyisana nani!**

Boodskap van gelukwensing

Gradeplegtigheid is 'n belangrike mylpaal in enigiemand se lewe. Dit is die hoogtepunt van 'n akademiese reis wat jou toewyding, deursettingsvermoë, harde werk, intellek en

opoffering weerspieël, en veral hierdie jaar. Ons weet dat die pandemie 'n ernstige invloed op jou studie gehad het wat nie maklik was nie. Ons weet ook dat die opoffering en harde werk dikwels nie net joune was nie, aangesien baie mense saam met jou die pad geloop het - jou vriende, jou lektore, jou studieleiers, jou mentors en jou gesin. Hulle het finansieel in jou belê, jou aangemoedig om te volhard, jou studies gelei en bowenal geglo in jou vermoë om te slaag en hierdie droom om te graduateer te bereik.

Vandag is jou vreugde ook ons vreugde, hoewel ons dit virtueel vier. Jou gradedag is so 'n belangrike oomblik en dit moet gevier word – nie net omdat dit erkenning gee aan alles wat jy bereik nie, maar ook fokus op al die potensiaal en moontlikhede in die toekoms. Dit bied ons groot hoop vir die toekoms - want jy is daardie toekoms.

Ons wens jou geluk en is saam met jou verheug oor jou prestasie en ons wens jou net die beste toe vir jou ondernemings in die toekoms.

Moet nooit ophou leer nie. Moenie toelaat dat die ondersoekende vonk in jou geblus word nie, want opvoeding is nie net jou paspoort vir die toekoms nie, maar ook vir ons land se hoop vir die toekoms en ons vasteland en dit is inderdaad 'n grondslag vir 'n beter wêreld, soos Nelson Mandela dit so welsprekend gestel het:

**“Opvoeding is die kragtigste wapen wat jy kan gebruik om die wêreld te verander.”**

Veels geluk!



# About Nelson Mandela University



Nelson Mandela University is the only university in the world to carry the name of Nelson Rolihlahla Mandela.

With this honour comes the responsibilities of leading our university into a new era of transformative innovation, development and change in line with the ethos and values of our namesake.

Living the legacy of Mandela should be reflected in the way we teach, learn, do research, engage with our partners, and work, study and live as staff, students and alumni.

We are on a journey to achieve this and become the learning destination for staff and students who:

- Are pioneering change agents for a better world;
- Are committed to creating jobs in an entrepreneurial economy
- Work together across disciplines in seeking solutions and innovations to achieve quality of life and a health environment for all people, and
- Are instilled with a deep need to serve and give back

## Fast Facts



### CAMPUSES

NORTH, SOUTH, OCEAN SCIENCES, SECOND  
AVENUE (IN SUMMERSTRAND) MISSIONVALE  
(MISSIONVALE), BIRD STREET (CENTRAL),  
GEORGE (GEORGE CAMPUS IN THE GARDEN  
ROUTE

# 474

### PROGRAMMES

(from certificate through to doctoral  
qualifications)

# 29 462

### ENROLLED STUDENTS

# 7 FACULTIES

(Business and Economic Sciences;  
Education; Engineering, the Built  
Environment and Technology; Health  
Sciences; Humanities; Law and  
Science)

# 6 STRATEGIC RESEARCH AREAS

# 7 STRATEGIC PRIORITIES

- Student access and success
- Resource stewardship
- Engaged innovative scholarship
- Transformative institutional culture
- Talented high-performing staff
- Enabling systems, processes and infrastructure

# 3000

### PERMANENT EMPLOYEES



# 4.5%

OF THE STUDENTS  
COME FROM

# 60 DIFFERENT COUNTRIES



# Exciting Prospects



## Ocean Sciences Campus

Our new generation university is set to become the leading “go-to” destination in Africa for all marine and maritime teaching, learning, engagement, innovation and research at postgraduate level.

This follows the launch of the Ocean Science Campus in Summerstrand in September 2017 as part of the University’s strategic drive to unlock the potential of the blue economy in a sustainable manner to benefit all South Africans.

The development and expansion of our academic programmes will offer new opportunities to all South Africans.

## Intentional Design

The new campus at the former CSIR offices has been intentionally designed and revamped to embrace a transdisciplinary way of working. It has also been specifically branded to reflect its purpose – that of a dedicated creative and innovative hub for postgraduate studies, and its physical spaces revamped to allow scientists from all disciplines to

work as teams. Phase two of the infrastructure project is now underway.

## Partnerships

This transdisciplinary research strategy does not stop with the academic project. Instead, it also seeks to embrace a ‘blue commons’ partnership with the metro, local government, big business, civic society and all those who live, work and play at the water’s edge and the oceans. It also includes several international partner universities.

By bringing all players together, all basic, formative and applied professional knowledge competencies in Ocean Sciences are exposed, developed and shared in novel ways. Strategically, this approach offers better options for both discovery research and that of solving real world problems arising from economic need, while always ensuring ecological sustainability.





## New Medical School

The University is confident of accepting its first intake of medical students for 2021 and establishing itself as the country's tenth medical school on Missionvale Campus.

Once the final accreditation from the Council for Higher Education (CHE) and South African Qualification for the new Bachelor of Medicine and Bachelor of Surgery (MBChB) is received, then it will be full steam ahead for the University's first cohort of 50 students in early 2021.

### Innovative Teaching Model

The University will be using an innovative transformative distributive teaching model that will see students come together to study across health science disciplines and leverage the benefits of technology – all towards their service to society, especially within the metro.

The transformative interprofessional education model (IPE) will see doctors work and study alongside nurses, radiographers, psychologists, environmental health practitioner, pharmacists, emergency medical care students and the like, to offer holistic and integrated health care.

### Mandela University healthcare graduates

Mandela University has an underlying philosophy of delivering graduates who are attuned for primary healthcare-oriented practice.

Like today's graduates, the University's Medical School graduates will carry on the legacy of the late, great man the institution is named after.

Which is why the University has paid particular attention to what kind of doctor it would like to develop through its new medical programme.

"We want community-oriented, fit-for-purpose doctors who are skilled to practice medicine that meets the needs of our communities," says Dr Yoshna Kooverjee, who will teach Theory and Practice of Medicine to the first-year students in 2021.

This graduate profile is based on the seven core competencies listed by the Health Professions Council of South Africa for undergraduate students in medical teaching and learning programmes in South Africa.

### Missionvale Campus

The MBChB programme has been intentionally located on Missionvale Campus, not least because of its proximity to several clinical platforms, including Dora Nginza Hospital, but because of the opportunities of the Medical School offers as a catalyst for positive change in terms of urban renewal in an impoverished area and in serving those where healthcare is needed most.



# Office-Bearers of the University

## **Chancellor**

Dr GJ Fraser-Moleketi: MAdmin (UP), DPhil (hc) (Nelson Mandela University)

## **Chairperson of Council**

Ambassador NP January-Bardill: Cert in Ed (UBL), Dip HR Mgt (Damelin), BA (UBL), MA (Essex, UK)

## **Vice-Chancellor**

Professor SW Muthwa: BA (SW) (Fort Hare), BA (SW) Hons (Wits), MSc, PhD (London University, UK)

## **Deputy Vice-Chancellor: Engagement and Transformation**

Prof A Keet: BA, HDE, BEd, MEd (UWC), PhD (Edu Mang, Law and Policy) (UP)

## **Deputy Vice-Chancellor: Learning and Teaching**

Prof CD Foxcroft: BA, BAHons, MA, DPhil (UPE)

## **Deputy Vice-Chancellor: People and Operations**

Mr LE Hashatse: B (Journ & Media Studies), BAHons (RU), MA (Edith Cowan, Australia)

## **Deputy Vice-Chancellor: Research, Innovation and Internationalisation:**

Dr T Mgwebi: BSc, BScHons (Botany) MSc (Aquatic Resource Management), Higher Diploma in Education (Unitra); PhD (Cell & Developmental Biology) (UCT); PGDip (Tertiary Education Management) (University of Melbourne, Australia)

## **Executive Director: Finance**

Mr MR Monaghan: BCom (UPE), BComHons (UNISA), Professional Accountant (SA)

## **Executive Director: Human Resources**

MS N Bam: BSocSc (UCT), PGDip (UFH), MBL (UNISA)

## **Registrar**

Mr E De Koker: BA(Pub Admin) (UCT), BAHons(Pub Admin) (UNISA), M(Pub Admin) (University of Warwick – UK)

## **Dean of Students**

Mr LP Jack: NDip (PMA) (EC Technikon), BTech(PM) (PET), BAPhil (US), MCom (UKZN)

## **President of Alumni Association**

Mr K Blose: BSc (Building Economics), BScHons (QS) (UPE)

# Executive Deans of Faculties

## Business and Economic Sciences

Prof HR Lloyd: BCom, BComHons, MCom, DCom (UPE)

## Education

Dr T Morar (Acting): PTD (Dower College), BA (UPE), BEdHons (RU), MEd (Leeds, UK), BCom (Vista), DEd (Curtin, Australia)

## Engineering, the Built Environment and Technology

Prof Barend van Wyk: NHDip (Technikon Pretoria), NHDip (Technikon Witwatersrand), BTech (Technikon Pretoria), BCom (University of South Africa), MTech (Technikon Pretoria), MSc (University of Southern Mississippi), PhD (University of the Witwatersrand), PrEng, PrTechEng, SMIEEE, MSAIMC.

## Health Sciences

Prof D van Rooyen (Acting): Cert GM, DipIntN, Dip Nurs Ed, BCur (UPE), BACurHons (Unisa), MCur, DCur (UPE)

## Humanities

Prof M Duker (Acting): NDip (FA) (PET), NH Dip (FA) (PET), MTech (FA) (PET)

## Law

Prof A Govindjee: BA, LLB (RU), LLM (UPE), LLD (Nelson Mandela University)

## Science

Prof A Muronga: BSc, UED (UNIVEN), BScHons, MSc (UCT), PhD (University of Minnesota, USA)

## Dean of Learning and Teaching

Dr PP Kota-Nyati (Acting): BA, BAHons, MA Couns Psych (UPE), DPhil (Nelson Mandela University)

# Order of Proceedings

## Academic Procession

### Constitution of Congregation

Dr G Fraser-Moleketi (Chancellor)

### Welcome

Prof S Muthwa (Vice-Chancellor)

### Choral Performance

Nelson Mandela University Choir

### Conferring of an Honorary Doctoral Recipient

Dr G Fraser-Moleketi (Chancellor)

### Awarding of Qualifications

Chancellor

## Cultural Performance

Nelson Mandela University Students and Alumni

### Conferring of Doctoral Degrees

Dr G Fraser-Moleketi (Chancellor)

### Message of Congratulations and Dissolution of Congregation

Dr G Fraser-Moleketi (Chancellor)

### National Anthem

Nelson Mandela University Choir

### Departure of Academic Procession

*The words Cum Laude indicate in the text that the diploma or degree is awarded with distinction to the candidate/s listed.*

## **FACULTY OF HEALTH SCIENCES**

### **ADVANCED CERTIFICATE IN PHARMACY: TECHNICAL SUPPORT**

MBONANI, Siphesihle Arther  
THUSI, Xoliswa Primrose

### **NATIONAL DIPLOMA: SPORT MANAGEMENT**

BARKHUIZEN, Johan Henlo  
DODD, Joshua Deen  
SPECKMAN, Mark

### **BACHELOR OF ARTS IN PSYCHOLOGY**

ALBERTS, Nadia  
BOKWE, Qaqamba  
LIGHTENING, Sebastian  
MGOLOMBANE, Simthandile  
POTGIETER, Janice Jemima  
SHANGE, Nombulelo  
SINGH, Shameer  
TOMMY, Joel Christopher

### **BACHELOR OF HUMAN MOVEMENT SCIENCE**

NGQUMSHE, Mhlali  
QATA, Zipho Ziphhelele

### **BACHELOR OF ENVIRONMENTAL HEALTH**

MABUELA, Molebale Simon  
MJI, Thando Sihle

## **BACHELOR OF NURSING**

ADRIENNE, Tania Jessinta  
ALBRECHT, Alexander Ulrich  
MICHAEL, Yolanda  
NDELA, Lunga Thandikhaya Vusumzi  
NOEMDOE, Justin

### **BACHELOR OF PHARMACY**

BUTT, Shahbinda  
MBOTHU, Sphesihle Zenande  
PAPU, Sopitsho Onkamahala Zilande

### **BACHELOR OF SOCIAL WORK**

GUQULO, Thobelani  
MOSTERT, Jovan  
MPANDE, Thando  
RATEFANE, Mpho Alphonse

### **BACHELOR OF ARTS HONOURS IN PSYCHOLOGY**

BURWANA, Vuyiseka  
SABANE, Ayabonga Jama



## **FACULTY OF SCIENCE**

### **DIPLOMA IN AGRICULTURAL MANAGEMENT**

MCOSELI, Masixole

### **DIPLOMA IN NATURE CONSERVATION**

ADRIAANSE, Abigail Bramdell

KUDAKWASHE, Maoneni

VAN DER WALT, Nicole

VAN TONDER, Ruan

### **NATIONAL DIPLOMA: WOOD TECHNOLOGY**

SENTOO, Sewraj

### **BACHELOR OF SCIENCE**

NGCEFA, Samkele

### **BACHELOR OF SCIENCE (BIOCHEMISTRY, CHEMISTRY AND MICROBIOLOGY)**

D'ASSONVILLE, Danielle

POTGIETER, Anchen

TYHALI, Nandipha

### **BACHELOR OF SCIENCE (COMPUTER SCIENCE)**

DAWSON, Matthew John

MAGAYA, Aphiwe

MATIKA, Saneliso

STRYDOM, Kristen

### **BACHELOR OF SCIENCE (INFORMATION SYSTEMS)**

VOS, Nicholas

### **BACHELOR OF TECHNOLOGY: GAME RANCH MANAGEMENT**

HEYDENRYCH, Brendan Roy

### **BACHELOR OF SCIENCE HONOURS IN COMPUTER SCIENCE AND INFORMATION SYSTEMS**

NTLANGANISO, Anelisa

### **BACHELOR OF SCIENCE HONOURS IN ENVIRONMENTAL GEOGRAPHY**

LAGENGGE, Anita

## MASTER OF SCIENCE (RESEARCH)

COLLINS, Matthew Rhodes

*(Chemical and Physical Oceanography)*

Title of dissertation:

UPWELLING ON THE SOUTHEAST MADAGASCAN SHELF: FREQUENCY, EXTENT AND DRIVING MECHANISMS

Supervisor: Prof MJ Roberts

---

FERREIRA, Regardt Willem

*(Forestry)*

Title of dissertation:

APPLYING HIGH-RESOLUTION REMOTE SENSING TO QUANTIFY BABOON DAMAGE AT A SUB-COMPARTMENT LEVEL  
IN PINE STANDS IN THE MPUMALANGA ESCARPMENT REGION OF SOUTH AFRICA

Supervisor: Prof JH Louw

Co-supervisor: Dr I Germishuizen

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GXAKUMA, Lutho - **Cum Laude**

*(Chemistry)*

Title of dissertation:

ANALYSIS OF THE EFFECTIVENESS OF TULBAGHIA VIOLACEA EXTRACTS AS DEVULCANIZING AGENTS FOR SYNTHETIC  
CIS-1,4-POLYISOPRENE VULCANIZATES

Supervisor: Dr BG Hlangothi

Co-supervisor: Prof CD Woolard

Co-supervisor: Dr SP Hlangothi

---

HO, Brandon

*(Computer Science and Information Systems)*

Title of dissertation:

A SMART HOME ENVIRONMENT SIMULATION TOOL TO SUPPORT RECOGNITION OF ACTIVITIES OF DAILY LIVING

Supervisor: Dr D Vogts

Co-supervisor: Prof JL Wesson

---

KETELO, Sisonke

*(Chemistry)*

Title of dissertation:

THE EFFECT OF WASTE TYRE PYROLYSIS-DERIVED CARBON BLACK ON THE VARIOUS PROPERTIES OF NATURAL  
RUBBER/STYRENE-BUTADIENE RUBBER BLENDS

Supervisor: Dr SP Hlangothi

Co-supervisor: Dr MA Sibeko

Co-supervisor: Dr JAW Carson

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LIDDELL, Duncan Carlyle

(Botany)

Title of dissertation:

IMPACT OF FRACKING FLUID ON KAROO PLANTS BASED ON FIELD AND GREENHOUSE EXPERIMENTS

Supervisor: Prof EE Campbell

Co-supervisor: Prof MJ De Wit

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MAKUZENI, Manyano

(Geology)

Title of dissertation:

LINKING ONSHORE AND OFFSHORE CRUSTAL FEATURES, INTEGRATING SEISMIC AND BOREHOLE DATA IN THE GAMTOOS BASIN

Supervisor: Prof CM Doucouré

---

MAPHOSA, Sean Tafara

(Geography)

Title of dissertation:

THE STATE OF SUSTAINABILITY LITERACY IN A CORPORATE ENVIRONMENT: A CASE STUDY APPROACH FROM THE NELSON MANDELA BAY METRO

Supervisor: Dr AH De Wit

Co-supervisor: Dr N Chanza

---

MOLTENO, Steven Martin - **Cum Laude**

(Botany)

Title of dissertation:

CONTRIBUTIONS TO THE SYSTEMATICS AND ECOLOGY OF TULISTA RAF. (ASPHODELACEAE SUBFAM. ALOOIDEAE)

Supervisor: Prof E Figueiredo

Co-supervisor: Prof GF Smith

---

MOSIA, Lefika Ellen

(Chemistry)

Title of dissertation:

PHYSICAL AND THERMAL PROPERTIES OF BINARY AND TERNARY BLENDS OF POLYPROPYLENE/CRUMB RUBBER/ WOOD FLOUR

Supervisor: Dr SP Hlangothi

Co-supervisor: Dr MJ Phiri

Co-supervisor: Dr K Garde

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MPUPUTLA, Mooketsi  
(Chemistry)

Title of dissertation:

*INVESTIGATION OF WILD GARLIC PLANT EXTRACTS AS POTENTIAL DEVULCANIZING AGENTS*

Supervisor: Dr BG Hlangothi  
Co-supervisor: Prof CD Woolard  
Co-supervisor: Dr SP Hlangothi

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MVAKADE, Monica  
(Forestry)

Title of dissertation:

*UNDERSTANDING THE RELATIONSHIP BETWEEN MANGROVE COMPOSITION, STAND DYNAMICS AND RESOURCE USE IN THE NTAUFU ESTUARY, EASTERN CAPE, AS BASIS FOR SUSTAINABLE RESOURCE USE*

Supervisor: Prof CJ Geldenhuys  
Co-supervisor: Dr A Rajkaran  
Co-supervisor: Dr T Kraaij

---

NFANYANA, Ketshabile - **Cum Laude**  
(Physics)

Title of dissertation:

*COHERENT DETECTION OF DATA AND TIMING SIGNALS OVER OPTICAL FIBER FOR TELESCOPE NETWORKS*

Supervisor: Prof TB Gibbon  
Co-supervisor: Dr S Wassin

---

NJILI, Zamazima  
(Botany)

Title of dissertation:

*EFFICACY OF THE RIND PHYSIOLOGICAL DISORDER OLEOCELLOSIS CONTROL MEASURES IN LEMON FRUIT (CITRUS LIMON) UNDER SHADE NETTING*

Supervisor: Dr DR Du Preez  
Co-supervisor: Prof P Cronje

---

RAMBARAN, Ryan  
(Zoology)

Title of dissertation:

*DEFINING THE POTENTIAL ECOLOGICAL ROLES OF THREE SEA TURTLE SPECIES (CARETTA CARETTA, CHELONIA MYDAS AND ERETMOCHELYS IMBRICATA) ALONG THE EASTERN SEABOARD OF SOUTH AFRICA*

Supervisor: Prof P Nel

---

SAGANDIRA, Mellisa Brenda - **Cum Laude**

(Chemistry)

Title of dissertation:

*SYNTHESIS OF 2,4-XYLIDINE IN CONTINUOUS FLOW SYSTEMS*

Supervisor: Prof P Watts

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SIBHAKABHAKA, Thembisa

(Forestry)

Title of dissertation:

*THE APPLICATION VALUE AND MOST APPROPRIATE MAPPING SCALES FOR SITE CLASSIFICATION AND EVALUATION IN THE SOUTH AFRICAN FOREST INDUSTRY*

Supervisor: Prof JH Louw

Co-supervisor: Dr I Germishuizen

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SMIT, Taryn

(Zoology)

Title of dissertation:

*PLANKTON DYNAMICS IN RESPONSE TO ALGAL BLOOMS IN A HIGHLY EUTROPHIC ESTUARY IN SOUTH AFRICA*

Supervisor: Prof NA Strydom

Co-supervisor: Prof JB Adams

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#### **MASTER OF SCIENCE IN NANOSCIENCE (RESEARCH)**

MGOLOMBANE, Mvano

Title of dissertation:

*PHOTOCATALYTIC REDUCTION OF CO<sub>2</sub> BY COBALT DOPED TiO<sub>2</sub> AND ZNO MICRO/NANOSTRUCTURED MATERIALS*

Supervisor: Dr AS Ogunlaja

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## **FACULTY OF HEALTH SCIENCES**

### **MASTER OF ARTS IN CLINICAL PSYCHOLOGY (COURSEWORK)**

JACOBS, Lance Kevin

Title of treatise:

*THE DEVELOPMENT OF ANTISOCIAL BEHAVIOUR IN JOHN WAYNE GACY JR.*

---

Supervisor: Dr A Sandison

NOGWINA, Mbasu

Title of treatise:

*PERCEPTIONS OF BLACK CLINICAL PSYCHOLOGISTS REGARDING THE CULTURAL COMPETENCE THAT THEY GAINED THROUGH THEIR PSYCHOLOGICAL TRAINING*

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Supervisor: Dr JO August

Co-supervisor: Prof Y Ally

TING CHONG, Ferhana

Title of treatise:

*FIRST RESPONDERS' PERCEPTIONS OF SECONDARY TRAUMATIC STRESS AND THE SCREENING AND REFERRAL OF TRAUMA SURVIVORS AT RISK OF DEVELOPING POSTTRAUMATIC STRESS*

---

Supervisor: Prof DS Elkonin

### **MASTER OF ARTS IN COUNSELLING PSYCHOLOGY (COURSEWORK)**

DUBULA, Nkosinethando Emanuel

Title of treatise:

*CAREER INFLUENCES OF SOUTH AFRICAN XHOSA MALE UNIVERSITY STUDENTS*

---

Supervisor: Dr PP Kota-Nyati

Co-supervisor: Ms LN Currin

FAKUDE, Shuanize Xiluva

Title of treatise:

*AILEEN WUORNOS: A PSYCHOBIOGRAPHICAL STUDY*

---

Supervisor: Dr A Sandison

FAXI, Nasiphi

Title of treatise:

*ATTACHMENT PATTERNS OF ABUSED CHILDREN TO CAREGIVERS IN FOSTER CARE HOMES: A SCOPING REVIEW*

---

Supervisor: Prof MB Ngcobo-Sithole

KELLY, Melissa Elizabeth

Title of treatise:

*PSYCHOLOGICAL PRACTITIONERS PERCEPTIONS OF THE EFFICACY OF ONLINE COUNSELLING AND ITS VIABILITY WITHIN A SOUTH AFRICAN CONTEXT*

Supervisor: Dr T Lambert  
Co-supervisor: Prof JG Howcroft

---

#### **MASTER OF ARTS IN PSYCHOLOGY (RESEARCH)**

TEBEKANA, Aviwe Zuziwe Nomalibongwe

Title of dissertation:

*CULTURAL PERSPECTIVES ON HEALTH DECISION MAKING OF HIV POSITIVE MALES*

Supervisor: Prof DS Elkonin  
Co-supervisor: Dr J Steenkamp

---

#### **MASTER OF HUMAN MOVEMENT SCIENCE (RESEARCH)**

GREYLING, Jacob Johannes

Title of dissertation:

*EFFECTS OF A RESISTANCE TRAINING INTERVENTION ON THE PHYSICAL FITNESS OF YOUTH IN A RURAL SOCCER DEVELOPMENT PROGRAMME*

Supervisor: Prof CM Walter

---

IMPEY, Justin George - **Cum Laude**

Title of dissertation:

*EFFECTS OF NEUROMUSCULAR PERTURBATIONS ON KEY PERFORMANCE INDICATORS IN GOALKEEPERS*

Supervisor: Dr K Bahdur  
Co-supervisor: Dr M Kramer

---

#### **MASTER OF NURSING (RESEARCH)**

STUURMAN, Geraldene Mary-Ann

Title of dissertation:

*THE EXPERIENCES OF PROFESSIONAL NURSES WITH REGARD TO CLINICAL MENTORING AND SUPERVISION OF PUBLIC STUDENT NURSES IN THE NELSON MANDELA BAY HEALTH DISTRICT (NMBHD)*

Supervisor: Dr AH Du Plessis

---

#### **MASTER OF SCIENCE (RESEARCH)**

BEYLEVELD, Janine

(Dietetics)

Title of dissertation:

*A STUNTING PROFILE OF CHILDREN UNDER THE AGE OF FIVE VISITING BHISHO HOSPITAL CLINIC, PART OF THE UMBRELLA PROJECT: A PROFILE OF STUNTING IN CHILDREN UNDER THE AGE OF FIVE IN FOOD INSECURE VILLAGES IN MQANDULI, NGQUSHWA AND BHISHO HOSPITAL, EASTERN CAPE, SOUTH AFRICA*

Supervisor: Prof A Gresse

---

HUTTON, Tracey Ruth - **Cum Laude**  
(Dietetics)

Title of dissertation:

FRONT-OF-PACK LABEL PREFERENCES AND UNDERSTANDING AMONG CONSUMERS IN THE NELSON MANDELA BAY AREA

Supervisor: Prof A Gresse

---

#### **MASTER OF SOCIAL WORK (RESEARCH)**

PHAKANE, Tankiso Maxwell

Title of dissertation:

AFRICAN NARRATIVES OF CUSTOMARY MARRIAGE, MARITAL STRESSORS, STRENGTHS AND THE VALUE OF INDIGENOUS MARITAL COUNSELLING

Supervisor: Prof VM Goliath

---

#### **MASTER OF SOCIAL WORK IN CLINICAL SOCIAL WORK (COURSEWORK)**

NGWENYA, Lungile

Title of treatise:

EXPLORING THE EFFECTS OF THE 'ALTERNATIVES TO VIOLENCE PROJECT' ON THE PERCEPTIONS AND EXPERIENCES OF CONFLICT AND VIOLENCE OF INMATES AT POLLSMOOR SECURITY PRISON IN CAPE TOWN

Supervisor: Ms SM Lamb-Du Plessis

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SITHOLE, Vimbayi

Title of treatise:

ACADEMIC AND SOCIAL ADJUSTMENT EXPERIENCES OF UNIVERSITY STUDENTS WITH VISUAL IMPAIRMENTS

Supervisor: Ms N Mansvelt

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## FACULTY OF SCIENCE

### DOCTOR OF PHILOSOPHY

BAILEY, Dylan Francis

(Oceanography)

Title of thesis:

*OCEAN DYNAMICS OF THE SHELF AND BAYS OF THE EASTERN AGULHAS BANK: A PROCESS-ORIENTED NUMERICAL MODELLING STUDY*

Supervisor: Dr JC Hermes

Co-supervisor: Prof TG Bornman

Co-supervisor: Dr DR Du Preez

Co-supervisor: Dr P Penven

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CARPENTER-KLING, Tegan

(Zoology)

Title of thesis:

*FORAGING IN A DYNAMIC ENVIRONMENT: MOVEMENT AND STABLE ISOTOPE ECOLOGY OF MARINE TOP PREDATORS BREEDING AT THE PRINCE EDWARD ARCHIPELAGO*

Supervisor: Prof PA Pistorius

Co-supervisor: Dr MA Connan

Co-supervisor: Dr RR Reisinger

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DLAMINI, Phumla Patience

(Physics)

Title of thesis:

*DATA TRANSPORT OVER OPTICAL FIBRE FOR SKA USING ADVANCED MODULATION FLEXIBLE SPECTRUM TECHNOLOGY*

Supervisor: Prof TB Gibbon

Co-supervisor: Prof AWR Leitch

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DOBSON, Stephen Robert

(Physics)

Title of thesis:

*DEVELOPMENT OF MOVPE-GROWN  $\text{InAsSb}$  FOR BARRIER DIODE APPLICATIONS*

Supervisor: Prof JR Botha

Co-supervisor: Prof MC Wagener

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JOOSTE, Daniel Victor

(Chemistry)

Title of thesis:

*THE CHARACTERIZATION AND APPLICATION OF NOVEL XANTHENYL-AND THIOXANTHENYL-DERIVED COMPOUNDS AS HOSTS IN THE PRESENCE OF VARIOUS APPLICABLE GUEST MIXTURES*

Supervisor: Prof B Barton

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MAPETO, Tatenda  
(Nature Conservation)

Title of thesis:

WATER BALANCE PROCESSES IN INDIGENOUS AND INTRODUCED SPECIES TREE PRODUCTION SYSTEMS IN THE SOUTHERN CAPE REGION OF SOUTH AFRICA

Supervisor: Prof JH Louw  
Co-supervisor: Dr MB Gush  
Co-supervisor: Dr RDH Dugan

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MAQALIKA, Papali Elizabeth  
(Textile Science)

Title of thesis:

DATABASE AND GUIDE FOR LESOTHO WOOL AND MOHAIR PRODUCTION AND QUALITY

Supervisor: Prof L Hunter  
Co-supervisor: Dr AF Botha

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MASUNUNGURE, Current  
(Nature Conservation)

Title of thesis:

DECISION ANALYSIS TO INFORM INVASIVE ALIEN PLANT MANAGEMENT IN THE GARDEN ROUTE BIOSPHERE RESERVE

Supervisor: Prof C Fabricius  
Co-supervisor: Dr T Kraaij

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NOTAYI, Mzwamadoda  
(Textile Science)

Title of thesis:

THE POTENTIAL OF RAMAN SPECTROSCOPY IN DISTINGUISHING BETWEEN WOOL AND MOHAIR FIBRES

Supervisor: Prof L Hunter  
Co-supervisor: Prof JAA Engelbrecht  
Co-supervisor: Dr AF Botha

---

NYUMBEKA, Dumisani Joshua  
(Computer Science)

Title of thesis:

A SCHEDULING MODEL FOR THE CHARGING OF ELECTRIC VEHICLES IN PHOTOVOLTAIC POWERED SMART MICROGRIDS

Supervisor: Prof JL Wesson  
Co-supervisor: Prof BM Scholtz

---





SMIT, Kaylee Pam  
(Oceanography)

Title of thesis:

*A TRAIT-BASED APPROACH TO IDENTIFY INDICATORS FOR MEASURING ROCKY REEF ECOSYSTEM CONDITION IN SOUTH AFRICA*

Supervisor: Prof AT Lombard  
Co-supervisor: Dr AFT Bernard  
Co-supervisor: Dr KJ Sink

---

SULIALI, Nyasha Joseph  
(Physics)

Title of thesis:

*DEVELOPMENT OF TiO<sub>2</sub> NANOSTRUCTURE ARRAYS FOR PHOTONIC EXTRACTION OF HYDROGEN GAS*

Supervisor: Prof JR Botha

---

## FACULTY OF HEALTH SCIENCES

### DOCTOR OF PHILOSOPHY

APRIL, Heather May

(Psychology)

Title of thesis:

*A PSYCHOBIOGRAPHICAL CASE STUDY: AMELIA DYER IN A SEARCH FOR GLORY*

Supervisor: Prof L-A Stroud

---

GRADIDGE, Dalray Lee

(Psychology)

Title of thesis:

*CROSS-CULTURAL EQUIVALENCE OF THE WELLNESS QUESTIONNAIRE FOR HIGHER EDUCATION (WQHE) AND REVISION GUIDELINES*

Supervisor: Prof CD Foxcroft

Co-supervisor: Prof L-A Stroud

---

KERR, Natalie

(Psychology)

Title of thesis:

*SALVADOR DALI: A PSYCHOBIOGRAPHICAL STUDY*

Supervisor: Prof JG Howcroft

Co-supervisor: Prof L-A Stroud

---

MARAIS, Rivca

(Psychology)

Title of thesis:

*GUIDELINES FOR STORY-LINKED DIGITAL ITEM DESIGN FOR THE COGNITIVE ASSESSMENT OF PRE-SCHOOL CHILDREN*

Supervisor: Prof L-A Stroud

Co-supervisor: Prof CD Foxcroft

Co-supervisor: Dr JH Cronje

---

REGNART, Judith Ann Elizabeth

(General Health Sciences)

Title of thesis:

*CONCURRENT ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND MOOD DISORDERS IN SUBSTANCE USING POPULATIONS: A SOUTH AFRICAN PHARMACOEPIDEMOLOGICAL STUDY*

Supervisor: Prof I Truter

Co-supervisor: Prof JA Meyer

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**DOCTOR OF PHILOSOPHY IN NURSING**

NYARKO, Marian Joyce

Title of thesis:

*STRATEGIES TO ADDRESS MALNUTRITION IN THE FIRST 1000 DAYS OF LIFE IN UNDER-RESOURCED COMMUNITIES  
WITHIN NELSON MANDELA BAY*

Supervisor: Prof RM Van Rooyen  
Co-supervisor: Dr WH Ten Ham-Baloyi

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## DOCTORAL CITATIONS

# THE DEGREE OF DOCTOR OF PHILOSOPHY (OCEANOGRAPHY)

**DYLAN FRANCIS BAILEY**

## **Previous qualifications:**

2002 Bachelor of Science (Natural Science)  
2003 Bachelor of Science (Hons) (Zoology)  
2007 Master of Science (Zoology)

University of Port Elizabeth  
University of Port Elizabeth  
Nelson Mandela Metropolitan University

## **Thesis:**

*OCEAN DYNAMICS OF THE SHELF AND BAYS OF THE EASTERN AGULHAS BANK: A PROCESSORIENTED NUMERICAL MODELLING STUDY*

The Regional Ocean Modelling System (ROMS) was applied with in situ instrument mooring data to investigate how certain oceanographic processes in the bays and the adjacent shelf on the eastern Agulhas Bank are affected by the bathymetry, Agulhas Current, regional winds, and coastal trapped waves. The results of this thesis have exposed the complex shelf and bay ocean processes in broader detail, and highlights areas where further in situ data collection is still needed. The links made between certain features and processes indicate that subtle changes to the ocean state will have far reaching consequences to the regional ocean environment.

Supervisor: Prof JC Hermes  
Co-supervisors: Prof T Bornman  
Dr D Du Preez  
Dr P Penven

# THE DEGREE OF DOCTOR OF PHILOSOPHY (ZOOLOGY)

**TEGAN CARPENTER-KLING**

## **Previous qualifications:**

2012 Bachelor of Science  
2013 Bachelor of Science (Hons)  
2016 Master of Science (Zoology)

University of Pretoria  
University of Pretoria  
Nelson Mandela Metropolitan University

## **Thesis:**

*FORAGING IN A DYNAMIC ENVIRONMENT: MOVEMENT AND STABLE ISOTOPE ECOLOGY OF MARINE TOP PREDATORS BREEDING AT THE PRINCE EDWARD ARCHIPELAGO*

Climate change will influence the prey distribution of marine top predators. This thesis examined the trophic ecology of 12 marine predator species (including albatrosses, penguins, giant petrels and fur seals) breeding on Marion Island, over three years, using tracking and stable isotope data. Furthermore, using these data, the thesis investigated key assumptions in marine predator stable isotope ecology. The thesis highlights the influence of biological interactions and spatio-temporal distribution of prey on the foraging behaviour of marine predators. It develops previous methods and presents a novel method to investigate sources of variance in the stable isotopic composition of animals' tissues.

Supervisor: Prof PA Pistorius  
Co-supervisors: Dr MA Connan  
Dr RR Reisinger



# THE DEGREE OF DOCTOR OF PHILOSOPHY (PHYSICS)

**PHUMLA PATIENCE DLAMINI**

## **Previous qualifications:**

2014 Bachelor of Science (Material Development)

Nelson Mandela Metropolitan University

2015 Bachelor of Science (Hons) (Physics)

Nelson Mandela Metropolitan University

2017 Master of Science (Physics)

Nelson Mandela University

## **Thesis:**

*DATA TRANSPORT OVER OPTICAL FIBRE FOR SKA USING ADVANCED MODULATION FLEXIBLE SPECTRUM TECHNOLOGY*

The thesis reports results on spectral efficient technique for bandwidth variability, wavelength allocation, routing, defragmentation and wavelength selective switches in the nodes of a network, capable of removing the fixed grid spacing using low cost, high bandwidth, power efficient and wavelength tunable VCSEL transmitter directly modulated with 10 Gbps data. The solution proposed is flexible spectrum system that accommodates various formats with spectrally continuous channels, thereby fulfilling bandwidth demands with transmissions beyond 100 Gbps per channel. These findings will be useful in future rational design of novel next-generation technology capable of handling data traffic produced by MeerKAT and SKA telescopes.

Supervisor: Prof TB Gibbon

Co-supervisor: Prof AWR Leitch

# THE DEGREE OF DOCTOR OF PHILOSOPHY (PHYSICS)

**STEPHEN ROBERT DOBSON**

## **Previous qualifications:**

2011 Bachelor of Science (Applied Mathematics and Physics)

Nelson Mandela Metropolitan University

2012 Bachelor of Science (Hons) (Physics)

Nelson Mandela Metropolitan University

2013 Master of Science (Physics) (Cum Laude)

Nelson Mandela Metropolitan University

## **Thesis:**

*DEVELOPMENT OF MOVPE-GROWN InAsSb FOR BARRIER DIODE APPLICATIONS*

This study focused on the development of semiconducting thin films (GaSb, InAsSb and AlAsSb) by metalorganic vapour phase epitaxy (MOVPE). These films can be incorporated into device structures for infrared sensing. The candidate successfully produced two of the three materials required for this application, using a state-of-the-art, industrial scale MOVPE reactor which is unique in South Africa. The properties of the grown materials were fully characterized and, using theoretical simulations, this study confirmed the superior performance of barrier diodes for mid-infrared sensing devices.

Supervisor: Prof JR Botha

Co-supervisor: Prof MC Wagener

# THE DEGREE OF DOCTOR OF PHILOSOPHY (CHEMISTRY)

**DANIEL VICTOR JOOSTE**

## **Previous qualifications:**

2014	Bachelor of Science	Nelson Mandela Metropolitan University
2015	Bachelor of Science (Hons)	Nelson Mandela Metropolitan University
2016	Master of Science	Nelson Mandela Metropolitan University

## **Thesis:**

*THE CHARACTERIZATION AND APPLICATION OF NOVEL XANTHENYL-AND THIOXANTHENYLDERIVED COMPOUNDS AS HOSTS IN THE PRESENCE OF VARIOUS APPLICABLE GUEST MIXTURES*

The study investigated the feasibility of employing host-guest chemistry for the separation of chemical mixtures, with an emphasis placed on mixtures that cannot ordinarily be separated facily through conventional means. Thus, four novel xanthenyl- and thioxanthenyl-type hosts were synthesized and presented with such mixtures. It was revealed that these compounds behaved selectively in such conditions. The study thus demonstrated that host-guest chemistry may find application in the chemical industry for the separation of chemical mixtures. These results were presented at a conference in Australia, and five publications in international peer-reviewed journals have thus far emanated from this work.

Supervisor: Prof B Barton

# THE DEGREE OF DOCTOR OF PHILOSOPHY (NATURE CONSERVATION)

**TATENDA MAPETO**

## **Previous qualifications:**

2010	National Diploma (Forestry)	Zimbabwe College of Forestry
2011	Certificate in Project Management	University of Zimbabwe
2013	Bachelor of Technology (Forestry)	Nelson Mandela Metropolitan University
2015	Master of Technology (Forestry)	Nelson Mandela Metropolitan University

## **Thesis:**

*WATER BALANCE PROCESSES IN INDIGENOUS AND INTRODUCED SPECIES TREE PRODUCTION SYSTEMS IN THE SOUTHERN CAPE REGION OF SOUTH AFRICA*

This thesis contributes to our understanding of eco-hydrological patterns in tree systems. The work is contextualised in the South African water management framework where the best possible use of water for a defined human and ecological need is sought. This study investigated water balance processes in a fractured rock aquifer catchment exhibiting a mosaic of plantation and indigenous forests in the Southern Cape region of South Africa. Using the hydrological cycle approach, the study coupled micrometeorological evapotranspiration measurements with groundwater monitoring. The interdisciplinary work provided insight on the impacts of tree systems on groundwater and surface water interactions.

Supervisor: Prof J Louw  
Co-supervisors: Dr MB Gush  
Dr RH Dugan

# THE DEGREE OF DOCTOR OF PHILOSOPHY (TEXTILE SCIENCE)

## PAPALI MATSEPISO MAQALIKA

### Previous qualifications:

1990	Diploma (Home Economics Education)	Lesotho Agricultural College
2003	BSc (Home Economics Education)	University of Swaziland
2006	Masters (Textile Science)	Northwest University

### Thesis:

*DATABASE AND GUIDE FOR LESOTHO WOOL AND MOHAIR PRODUCTION AND QUALITY*

Natural fibres are valued for their unique qualities. Lesotho produces significant quantities of natural fibres namely: merino apparel wool and mohair, which are relatively competitive on global markets and contribute significantly to Lesotho's economy. Nevertheless, very little production and quality data and trends of these fibres are documented. Therefore, a detailed wool and mohair production and quality database was developed based upon 10 years' data. Prickle and medullation were also evaluated on representative wool and mohair samples using sensory evaluation and an Optical Fibre Diameter Analyser (OFDA), respectively. The findings provide valuable new insights, data and information relating to Lesotho wool and mohair, as well as recommendations for improving the quality and overall global competitiveness of these two fibres.

Supervisor: Prof L Hunter  
Co-Supervisor: Dr AF Botha

# THE DEGREE OF DOCTOR OF PHILOSOPHY (NATURE CONSERVATION)

## CURRENT MASUNUNGURE

### Previous qualifications:

2012	Bachelor of Science (Hons)	University of Science and Technology, Zimbabwe
2017	Master of Science	Rhodes University, South Africa

### Thesis:

*DECISION ANALYSIS TO INFORM INVASIVE ALIEN PLANT MANAGEMENT IN THE GARDEN ROUTE BIOSPHERE RESERVE*

This thesis explores the effectiveness of invasive alien plant (IAP) management and decision-making processes in the Garden Route Biosphere Reserve. Using mixed methods and complex systems approaches, the candidate reviewed literature on available decision support tools, analysed stakeholder perspectives on current decision-making processes and developed a novel decision support model. In order to improve IAP management, stakeholder groups need to consider deep leverage points that can be realistically maintained over the long term and cause fundamental change, rather than focusing on shallow leverage points that are relatively easy to implement but do not result in significant systemic change.

Supervisor: Prof C Fabricius  
Co-supervisor: Dr T Kraaij

# THE DEGREE OF DOCTOR OF PHILOSOPHY (TEXTILE SCIENCE)

**MZWAMADODA NOTAYI**

## **Previous qualifications:**

2010 Bachelor of Science (Chemistry)  
2012 Bachelor of Science (Hons) (Physics)  
2014 Master of Science (Physics)

Walter Sisulu University  
Walter Sisulu University  
Nelson Mandela Metropolitan University

## **Thesis:**

*THE POTENTIAL OF RAMAN SPECTROSCOPY IN DISTINGUISHING BETWEEN WOOL AND MOHAIR FIBRES*

South Africa is the largest producer of mohair worldwide, this takes place within the 300 km radius of Port Elizabeth. The excellent reputation of this mohair is being compromised, however, by the undeclared use of cheaper wools in products labelled as mohair. This study, aimed at investigating the application of Raman spectroscopy in distinguishing between wool and mohair and in their quantitative blend analysis, confirmed that these fibres indeed share similar molecular structural chemistry. Nevertheless, the intensity ratios CH<sub>2</sub> asymmetric stretch/CH<sub>2</sub> & CH<sub>3</sub> bending (12932/11450) and disulphide S-S stretch/CH<sub>2</sub> & CH<sub>3</sub> bending (1508/11450) differed significantly between wool and mohair and the threshold values were identified which could be used to determine whether a product is pure mohair.

Supervisor: Prof L Hunter  
Co-supervisors: Prof JAA Engelbrecht  
Dr AF Botha

# THE DEGREE OF DOCTOR OF PHILOSOPHY (COMPUTER SCIENCE)

**DUMISANI JOSHUA NYUMBEKA**

## **Previous qualifications:**

2012 BCom (Computer Science)  
2013 BCom (Hons) (Computer Science)  
2015 MCom (Computer Science)

Nelson Mandela Metropolitan University  
Nelson Mandela Metropolitan University  
Nelson Mandela Metropolitan University

## **Thesis:**

*A SCHEDULING MODEL FOR THE CHARGING OF ELECTRIC VEHICLES IN PHOTOVOLTAIC POWERED SMART MICROGRIDS*

This study investigated the factors that influence Electric Vehicle (EV) drivers' decisions of when and where to charge their EVs in photovoltaic powered smart microgrids. It also investigated the criteria for selecting scheduling algorithms for EV charging. The study then proposed a Charge Scheduling Model, which considers the factors that influence an EV driver's behaviour when it comes to charging their EV. An evaluation of the Charge Scheduling Model through a prototype was proven as effective. This thesis makes a valued contribution to our ability to understand the issues around solar PV charging of EVs, and route and trip planning, issues which are becoming increasingly relevant world-wide.

Supervisor: Prof JL Wesson  
Co-supervisor: Prof BM Scholtz

# THE DEGREE OF DOCTOR OF PHILOSOPHY (OCEANOGRAPHY)

**KAYLEE PAM SMIT**

## **Previous qualifications:**

2009	Bachelor of Science (Marine Biology)	University of KwaZulu-Natal
2010	Bachelor of Science (Hons) (Marine Biology)	University of KwaZulu-Natal
2014	Master of Science	University of KwaZulu-Natal

## **Thesis:**

*A TRAIT-BASED APPROACH TO IDENTIFY INDICATORS FOR MEASURING ROCKY REEF ECOSYSTEM CONDITION IN SOUTH AFRICA*

The purpose of this research was to collect in-situ ecological data, using baited remote underwater stereo-video systems, from subtropical rocky reef ecosystems to identify indicators that can be used to conduct reliable measurements of ecosystem condition. Data-derived condition assessments are necessary to groundtruth national pressure-based assessments that are based on cumulative impact scores from multiple human pressures. The main objectives of this research were to use a trait-based approach to define baseline conditions of rocky reef ecosystems using fish community data and to identify suitable indicators using fish and benthic communities to conduct an integrated measurement of condition.

Supervisor: Prof AT Lombard  
Co-supervisors: Dr AFT Bernard  
Dr KJ Sink

# THE DEGREE OF DOCTOR OF PHILOSOPHY (PHYSICS)

**NYASHA JOSEPH SULIALI**

## **Previous qualifications:**

2006	Technician Certificate (Telecommunication Systems)	City and Guilds of London Institute, UK
2010	BSc (Hons) (Applied Physics)	National University of Science and Technology, Zimbabwe
2012	Postgraduate Diploma (Higher Education)	National University of Science and Technology, Zimbabwe
2017	Master of Philosophy (Lasers and Applied Optics)	National University of Science and Technology, Zimbabwe

## **Thesis:**

*DEVELOPMENT OF TiO<sub>2</sub> NANOSTRUCTURE ARRAYS FOR PHOTONIC EXTRACTION OF HYDROGEN GAS*

This thesis focused on the development of nanostructured TiO<sub>2</sub>, the most promising semiconductor material for splitting water into hydrogen and oxygen using sunlight. Nanostructured TiO<sub>2</sub> nanotubes with diameters as small as 20 nm and up to 29 µm in length were synthesized by anodic oxidation of Ti foils and films. For the first time, a chemical kinetics-based model predicting the behavior of the Ti anodization current was established. The candidate demonstrated that the TiO<sub>2</sub> films synthesized in this study indeed produced a photocurrent upon illumination, indicating successful light harvesting.

Supervisor: Prof JR Botha

# THE DEGREE OF DOCTOR OF PHILOSOPHY (PSYCHOLOGY)

HEATHER MAY APRIL

## Previous qualifications:

1984	Bachelor of Arts	Rhodes University
1986	Higher Diploma in Education	Rhodes University
1993	Bachelor of Arts (Hons) (Psychology)	University of Port Elizabeth
1997	Master of Arts (Clinical Psychology)	University of Port Elizabeth

## Thesis:

*A PSYCHOBIOGRAPHICAL CASE STUDY: AMELIA DYER IN A SEARCH FOR GLORY*

The study is a psychobiographical case study based on the life of a Victorian baby farmer Amelia Dyer (1837-1896), who was executed for the murder of infants who were placed in her foster care. The present study integrates the psychoanalytic theory of Karen Horney, the life experiences of Amelia Dyer and the culture of Victorian respectability to explore Horney's theoretical perspectives on the development of a neurotic self in culture. The study highlighted the integral role of an empathic researcher and clinician in furthering the development of holistic therapeutic frameworks which aim to address diversity amongst women and enable them to tell their unique life stories.

Supervisor: Prof L-A Stroud

# THE DEGREE OF DOCTOR OF PHILOSOPHY (PSYCHOLOGY)

DALRAY LEE GRADIDGE

## Previous qualifications:

1998	Bachelor of Arts	University of Port Elizabeth
1999	Bachelor of Arts (Hons) (Psychology)	University of Port Elizabeth
2004	Master of Arts (Psychology)	University of Port Elizabeth

## Thesis:

*CROSS-CULTURAL EQUIVALENCE OF THE WELLNESS QUESTIONNAIRE FOR HIGHER EDUCATION (WQHE) AND REVISION GUIDELINES*

The Wellness Questionnaire for Higher Education (WQHE) was developed in South Africa using a Western wellness framework. However, in this study, statistical construct equivalence could not be obtained for the three main language groups of the Eastern Cape. This indicated that the measure needs to be revised. To guide the revision, facet analyses were conducted on focus group data to provide insight into how student participants understand student wellness. Eight main areas of student wellness were identified, namely: academic, emotional/psychological, environmental, financial, intellectual, healthy lifestyle, social, and spiritual wellness. As a result, a new conceptualisation of student wellness that has national and international relevance emerged allowing for detailed recommendations being made for the revision of the WQHE.

Supervisor: Prof CD Foxcroft  
Co-supervisor: Prof L-A Stroud

# THE DEGREE OF DOCTOR OF PHILOSOPHY (PSYCHOLOGY)

**NATALIE KERR**

**Previous qualifications:**

1994 Bachelor of Arts (Sociology and Industrial Psychology)  
1996 Associate Diploma (Marketing)  
2009 Bachelor of Arts (Hons) (Psychology)  
2010 Master of Arts (Clinical Psychology)

University of Port Elizabeth  
Damelin Correspondence College  
Nelson Mandela Metropolitan University  
Nelson Mandela Metropolitan University

**Thesis:**

*SALVADOR DALI: A PSYCHOBIOGRAPHICAL STUDY*

Psychology is concerned with understanding human nature and psychobiography is an effective means for applying psychological theory to real personalities. The candidate synthesised Jungian and Object Relations theory to explicate and analyse the life of the artist, Salvador Dali. The study is significant because the complexity of the artist's life demanded an appropriately complex conceptual framework that gave rise to a contextual re-visioning of significant areas of Jungian and Object Relations theories, as well as the construction of an original analytic model that is convincingly and informatively applicable to Dali and by extension to any long and varied life.

Supervisor: Prof JG Howcroft  
Co-supervisor: Prof L-A Stroud

# THE DEGREE OF DOCTOR OF PHILOSOPHY (PSYCHOLOGY)

**RIVCA MARAIS**

**Previous qualifications:**

2003 Bachelor of Psychology (Counselling)  
2006 Master of Arts (Counselling Psychology)

University of Port Elizabeth  
Nelson Mandela Metropolitan University

**Thesis:**

*GUIDELINES FOR STORY-LINKED DIGITAL ITEM DESIGN FOR THE COGNITIVE ASSESSMENT OF PRE-SCHOOL CHILDREN*

The study is one of the first investigations into developing guidelines for digital item design for tablet-based developmental assessment of three- to five-year old children, focusing on gamification and a story-linked approach. Both qualitative and quantitative data were collected, and the process unfolded over four phases. Guidelines that can be applied during digital item and test development were formulated, tested and refined. These guidelines make a unique contribution to the world of psychological test development and assessment, particularly for young children.

Supervisor: Prof L-A Stroud  
Co-supervisors: Prof CD Foxcroft  
Dr JH Cronje



# THE DEGREE OF DOCTOR OF PHILOSOPHY (GENERAL HEALTH SCIENCES)

**JUDITH ANN ELIZABETH REGNART**

**Previous qualifications:**

2009 Bachelor of Pharmacy  
2011 Master of Pharmacy

Nelson Mandela Metropolitan University  
Nelson Mandela Metropolitan University

**Thesis:**

*CONCURRENT ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND MOOD DISORDERS IN SUBSTANCE USING POPULATIONS: A SOUTH AFRICAN PHARMACOEPIDEMOLOGICAL STUDY*

This study sought to determine clinical considerations for patients within South African substance using populations, also suffering from both Attention-Deficit/Hyperactivity Disorder (ADHD) and mood disorders. Substance Use Disorder (SUD) is a legitimate, highly comorbid, psychiatric condition. Both ADHD and mood disorder commonly co-occur with SUD, but little is known about a tri-condition presentation. Comorbid ADHD and mood disorder were identified in the surveyed SUD sample, with depressive symptoms being significantly worse due to ADHD comorbidity. The study further assessed factors potentially influencing successful pharmacological therapy of such patients and identified linguistic challenges which limit identification of ADHD within a South African setting.

Supervisor: Prof I Truter  
Co-supervisor: Prof JA Meyer

# THE DEGREE OF DOCTOR OF PHILOSOPHY IN NURSING

**MARIAN JOYCE NYARKO**

**Previous qualifications:**

1986 Registered General Nurse  
1988 Registered Midwife  
1992 Registered Public Health Nurse  
2001 Bachelor of Arts (BCur)  
2012 Masters Business Administration  
2015 Masters (Public Health)

Komfo Anokye Teaching Hospital  
Midwifery School, Korle-Bu  
School of Public Health, Korle-Bu  
University of South Africa  
Milpark Business School  
University of South Africa

**Thesis:**

*STRATEGIES TO ADDRESS MALNUTRITION IN THE FIRST 1000 DAYS OF LIFE IN UNDERRESOURCED COMMUNITIES WITHIN NELSON MANDELA BAY*

The time from conception up to two years of age, is labelled the "First 1000 Days of Life". The biophysical environment during this time has an immense impact on the growth and development of the child. This study explored and described the experiences of mothers and family caregivers as well as the perceptions of health professionals regarding malnutrition during the First 1000 Days of Life in under-resourced communities within Nelson Mandela Bay. Mothers and family caregivers were interviewed, and focus group discussions were conducted with health professionals. Findings from the empirical research and that of an integrative literature review conducted on evidence related to malnutrition in the First 1000 Days of Life, were synthesised and utilised to develop a conceptual framework which guided the development of Advocacy, Collaboration, Training and Strengthening community actions (ACTS) strategies to address malnutrition in the First 1000 Days of Life within underresourced communities in Nelson Mandela Bay.

Supervisor: Prof RM Van Rooyen  
Co-supervisor: Dr WH Ten Ham-Baloyi

# Honorary Doctoral Recipient

## Zanele Dlamini Mbeki - Doctor of Philosophy (Honoris Causa)



Zanele Mbeki was born in Alexandra, Gauteng. She studied Social Work at Wits University and postgraduate studies in Social Policy and Administration at the London School of Economics and held a Social Work Fellowship at The London Institute for Social Work Training. She completed her residency for

a doctoral degree at the Brandeis University, Heller School for Social Policy and Management in the USA. She has social work-related field experience in Africa (Zambia, Kenya and Malawi), the UK, Pakistan, India and the USA. Under the employ of the United Nations High Commissioner for Refugees, she has had field experience in Southern and East Africa as well as in India and Pakistan.

Mrs Mbeki is Founder of the WDB Group. The WDBTrust is the sole shareholder in a Women's Investment Company WDB-IH whose role is to promote women business leaders and to create revenue streams in support of the WDBTrust programmes. Trust funds support principally capacity building for development microfinance for women who live in under resourced rural areas as well as link them to development Resources; provides them with socio-economic linkages and Training. It upscales micro enterprises; supports computer-based preschool literacy and adult literacy in own languages. In addition to being founder/patron of the WDB Trust and its investment arm WDBIH, she is also the founder/patron of SAWID (South African Women in Dialogue) which is now an independent public benefit trust pursuing advocacy, healing and dialogue among South African women from all walks of life. She is a retired trustee and patron of the Kagiso Trust as well as the WEF/Hilde and Klaus Schwab Board for Social Entrepreneurship. She is a life-member of the IWFsa - a USA founded organisation that she facilitated to bring to South Africa.

After 25 years of driving women's rural programmes and establishing a successful investment company to finance development activities, she recently set up the Zanele Mbeki Development Trust (ZMDT) which aims to anchor and host annual dialogues of African women in South Africa. The objective is to create a platform for African women of diverse backgrounds to meet and deliberate on common challenges and map out strategies for addressing them, regionally as

well as around the continent. ZMDT also promotes a Young Women's Feminist Fellowship Programme as well as gender research and publications.

Until 2015 WDB delivered services directly as programmes of the Trust. On the realisation that after 25 years of democracy, very few services directed at the rural poor had been created, the WDB trustees decided to elevate the programmes into Trusts so that they could grow into independent institutions to serve under-resourced communities with appropriate services tailored to their levels and needs.

Mrs Mbeki also facilitated the founding of SAMAF (the South African Microfinance Apex Fund) by the Department of Trade and Industry, a facility to fund micro finance institutions, as well as the (AMFISA) Association of Microfinance Institutions of South Africa, a lobbying platform for the not-for-profit microfinance sector (renamed as Development Microfinance Institutions of South Africa) in which she still actively participates.

Outside of the WDB Group Zanele Mbeki founded the Thabo Mbeki Institute for African Leadership, the Thabo Mbeki Foundation and the Thabo Mbeki Presidential Library.

From 2006 to 2011 Mrs Mbeki became Chancellor of CiDA City Campus, a free university catering mainly for students living in under resourced communities. In its short life, the University graduated over 2500 students of which more than 90% found employment before graduating. The University closed after the founder moved on.

In 2014, she was recipient of the International Women's Forum (IWF) 'Women Who Make a Difference' Award; and the University of Johannesburg Ellen Khuzwayo Council Award for her contributions to the social upliftment and development of the poor and the marginalised especially women. In 2016, she received The Kagiso Trust Lifetime Achievement Award as well as the WDB Investment Holdings Lifetime Achievement Award. In 2017 she received the World Economic Forum (WEF) Crystal Award for Social Entrepreneurship. In 2018 she became the Standard Bank Top Woman Lifetime Achiever Awardee and the HSRC Women's Empowerment and Women's Peace and Security Honouree shared with (the late) Mrs Albertina Sisulu and the late Honourable Emma Rene (Rhodes) Gresham of the USA.

For dedicating decades of her life in supporting and participating in initiatives that speak to the upliftment of women and visibility of gender issues and her passionate advocacy for women's rights, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*Honoris Causa*) to **Zanele Dlamini Mbeki**.

# Academic Dress

Special academic attire has been designed for office bearers at Nelson Mandela University to be worn at prestigious academic events like graduation.

Each outfit – from that of the Chancellor and Vice-Chancellor to those of the Executive Deans – has been meticulously selected to signify a particular office; this is a tradition that is consistent with leading universities throughout the world. The gowns, caps and hoods of Nelson Mandela University graduates were similarly inspired and are explained in detail below.

Academic dress for graduates at Nelson Mandela University is as follows:

## Doctoral Degrees

**Gown:** Cardinal red polyester cashmere gown with long pointed sleeves pleated up with blue cord and button and lined with blue satin with 125mm facings and a blue collar.

**Hood:** Full shape hood in cardinal red polyester cashmere lined with faculty colour satin and edged around the cowl with 75mm faculty colour ribbon with 15mm blue ribbon overlaid central. 50mm wide straight neckband in cardinal red polyester cashmere, 25mm faculty colour ribbon in centre of neckband with 15mm blue ribbon overlaid central to faculty ribbon.

**Cap:** Round doctor's bonnet in black velvet with faculty colour cord and tassel.

## Master's degrees

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail is used.

**Hood:** Full shape blue hood lined faculty colour satin and edged around the outside of the cowl with 75mm faculty colour with ribbon. 50mm straight neckband in blue with 25mm faculty colour ribbon centred.

**Cap:** Black mortarboard with blue tassel.

## Postgraduate Diplomas

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined silver grey satin. Straight neckband with 15mm faculty ribbon on top edge of neckband and around cowl. 15mm silver grey ribbon on bottom edge of neckband and around cowl spaced 20mm away from the faculty colour.

**Cap:** Black mortarboard with blue tassel.

## Bachelor Honours Degrees

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined silver grey satin with

50mm wide straight neckband in faculty colour. Cowl edged 75mm faculty colour ribbon on the outside.

15mm silver grey ribbon runs along the outer edge of the cowl, overlaid on faculty ribbon and on top edge of neckband.

**Cap:** Black mortarboard with blue tassel.

## Four-Year Bachelor's Degrees (Including Bachelor of Technology Degrees)

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined silver grey satin with 50mm wide straight neckband in faculty colour. Cowl edged 75mm faculty colour ribbon on the outside. Silver grey cord runs along the outer edge of the cowl, overlaid on faculty ribbon and on top edge of neckband.

**Cap:** Black mortarboard with blue tassel.

## Three-Year Bachelor's Degrees

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined with silver grey satin with 50mm wide straight neckband in faculty colour. Cowl edged 75mm faculty colour ribbon on the outside.

**Cap:** Black mortarboard with blue tassel.

## Advanced Diploma

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined with silver grey satin with 50mm wide straight neckband. 15mm faculty colour ribbon on top and bottom of neckband around cowl.

**Cap:** Black mortarboard with blue tassel.

## Diploma

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood with 50mm wide straight neckband. 25mm faculty colour ribbon on centre of neckband.

**Cap:** Black mortarboard with blue tassel.



# Faculty Colours

**Humanities:**

**Business & Economic Sciences:**

**Health Sciences:**

**Law:**

**Education:**

**Science:**

**Engineering, the Built Environment and Information Technology:**

**Business School:**

Yellow

Plum

Apple green

Grey blue

Orange

Dark green

Light blue

Black and magenta



Messrs T. Birch & Co (Pty) Ltd and its subsidiary, Croft Magill & Watson (Pty) Ltd, have been appointed as official robe maker to the University and as contracted suppliers of choice to students for graduation academic attire. Photos In Seconds has been appointed as the official photographer of the University.

# Congratulatory Message From The Alumni Association

Congratulations on your academic achievement! Welcome to the Nelson Mandela University family. You are now a Nelson Mandela University alumnus.

We would like to take this opportunity to introduce you to the Nelson Mandela University Alumni Association.

Once you have obtained your Nelson Mandela University certificate, diploma or degree you become an alumnus of the University and a member of the Nelson Mandela University Alumni Association. The Association is recognised by the University Council as a structure of the University. The Association supports and enhances the realisation of the University's vision and mission through maintaining and expanding positive relationships with its members.

## The Role of the Alumni Association Office

The Alumni Association Office is a public relations and projects department responsible for the day-to-day management and running of the Alumni Association, the University Shop and all matters related to alumni engagement. Primarily, we build relationships and maintain strong links with graduates, parents, friends and supporters of the University through events, networks, services, communications and community engagement.

## The Role of Nelson Mandela University graduate

We encourage you to attend the alumni engagement events, be an active alumni ambassador, support your alma mater in a variety of ways including sharing news, expertise, skills, and contributions in cash and kind. We encourage a culture

of giving back especially for student bursaries, which can be accessed on our alumni website.

## University Shop

Visit the University Shop situated at the Sanlam Student Village on University Way, Summerstrand, for all Nelson Mandela University branded clothing, corporate gifts, bags and memorabilia!

More info: **T** +27 41 504 4371 **E** [shop@mandela.ac.za](mailto:shop@mandela.ac.za)

Join us: **U** [UniversityShopMandelaUni](#) **W** [Universityshop\\_mandelauni](#)

[www.shop.mandela.ac.za](http://www.shop.mandela.ac.za) **T** [@ShopMandelauni](#)

## Lifetime connection with Nelson Mandela University

We are proud of our alumni and value your connection.

We encourage you to stay in touch by updating your graduate profile. We will keep you informed with University developments and graduate news through our event invitations, project and campaign updates, regular e-newsletters via our website and social media channels.

Your graduate profile link

<https://mandela.devman.co.za/Devman/alumni/findme/>

We welcome your visit to the Alumni Associates Centre on North Campus in Port Elizabeth.

More info: **T** +27 41 504 3935 **E** [alumni@mandela.ac.za](mailto:alumni@mandela.ac.za)

Join us: **U** [Nelson Mandela University Alumni](#) **W** [Nelson Mandela University Alumni](#)

[www.alumni.mandela.ac.za](http://www.alumni.mandela.ac.za) **T** [@MandelaUni](#)

**Stay connected to your alma mater!**



# NATIONAL ANTHEM

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Nkosi Sikelel'i-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 Africa.

South Africa.

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.

# Change the World

[mandela.ac.za](http://mandela.ac.za)

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