

Martin Bentley

COMPUTATIONAL GEOSCIENTIST · GEOPHYSICIST

Summerstrand, Port Elizabeth, Eastern Cape, South Africa

☎ (+27) 073 467 3333 | ✉ mtb@martinb.za.net | ✉ s214382818@mmu.ac.za | 🌐 blog.martinb.za.net | 📱 mtb-za | 🐦 @astonsplat

Education

Nelson Mandela Metropolitan University

Port Elizabeth, South Africa

MSc (GEOLOGY AND COMPUTING SCIENCE)

June, 2014 – PRESENT

- Processing, integration and visualisation of multi-parameter airborne survey data over parts of the Eastern Cape, South Africa
- Included large component of community liaison work to secure permission to fly a survey from landowners
- Created a software package to process and model aeromagnetic survey data

Rhodes University

Grahamstown, South Africa

BSc (GEOLOGY AND COMPUTER SCIENCE)

2006 – 2009

Skills

Programming	Python, LaTeX, R, HTML/CSS
Software	QGIS, Inkscape, GIMP, Meshlab, VisualSFM
UAV Operation	Infotron IT-180 UAV, DJI Phantom 3 UAV
Laboratory	XRF Sample Preparation, Technical Drawing, Mineral and Rock classification (hand sample and microscopy), sample management and collection
Other	Logistical planning for field investigations, project budgeting, labour management, proficiency in technical and report writing
Languages	English, Afrikaans, German

Experience

Nelson Mandela Metropolitan University

Port Elizabeth, South Africa

EXTENDED STUDIES TUTOR

June 2015 - Present

- Provide additional framework and scaffolding to first-year students doing geology
- Part of program to aid students who are doing first year over two years

Nelson Mandela Metropolitan University

Port Elizabeth, South Africa

FIELD ASSISTANT/DEMONSTRATOR

June 2014 - Present

- Help run first year geology practicals
- In charge of first term practicals, 2017
- Assisting with third/fourth year field trips to various parts of the Eastern Cape

Ground Africa Consulting Geotechnical Engineers

Eshowe, South Africa

JUNIOR GEOLOGIST

August 2011 - Present

- Project management for geotechnical investigations, including:
 - Writing proposals for new projects, including budgets, timeframes, determination of deliverables
 - Planning of fieldwork: travel, accommodation, plant hire, &c
 - Field investigations including trial hole logging, collecting of samples for testing
 - Labour management on site
 - Writing reports on findings of investigations
 - Part-time, when required for specific projects, since June 2014, during MSc studies

Rhodes University

Grahamstown, South Africa

TUTOR / DEMONSTRATOR

2009 - 2010

- Helped run first year geology and computer science practicals

Extracurricular Activity

Open Access Button

CORE MEMBER

World-wide

March 2014 - PRESENT

- Gained experience with software development, fundraising and governance of volunteer projects
- Experience in advocacy, specifically for Open Access

Humewood Sea Scout Group

ASSISTANT TROOP SCOUTER

Port Elizabeth, South Africa

2014 - 2015

Eshowe Scout Group

ASSISTANT TROOP SCOUTER

Eshowe, South Africa

2011 - 2014

Presentations

Presentation on airborne geophysical research programme in Jansenville area and importance to groundwater research

Port Elizabeth, South Africa

PRESENTER

May 2017

- Presentation of MSc details to industry professionals
- Presented along with other graduate students to place my research into broader context

FameLab Eastern Cape Heats

Grahamstown (2015)/Port Elizabeth (2017), South Africa

PRESENTER

2015, 2017

- Three minute presentations of some aspect of science for science communication competition

Presentation on geophysical research programme planned in the Karoo

Matjiesfontein, South Africa

CO-PRESENTER

September 2014

- Explained planned approach of MSc research
- Presented along with other graduate students to place my research into broader context

Sasol SciFest

Grahamstown, South Africa

A GEOLOGIST'S VIEW OF EVOLUTION

March 2010

- Workshop/presentation in honour of Charles Darwin's 200th birthday, undertaken for the British Council

Kirkwood Wildsfees

Kirkwood, South Africa

DINOSAURS OF AFRICA

July 2009

- Information stand about African Dinosaurs on behalf of Albany Museum, Grahamstown

Writing

Scientists unearth how to manage the Karoo

Mail & Guardian Newspaper

WRITER

August 2015

- Newspaper article for the Science Voices competition
- Published as part of a special supplement featuring young researchers' work and writing

Short Courses, Workshops & Similar Attended

Groundwater Workshop

Port Elizabeth, South Africa

GSSA GWD, AEON-ESSRI (NMMU)

May 2017

- General discussion on groundwater in the Karoo

Numerical Modelling using Landscape Evolution as an Example

Port Elizabeth, South Africa

ISTerre (Grenoble Alpes), AEON-ESSRI (NMMU)

2 - 5 May 2016

- Developed a model for landscape evolution using Python
- Code, in the form of a Jupyter notebook is available at http://nbviewer.jupyter.org/github/mtb-za/landscape_evolution_short_course/blob/master/notebooks/FastScape.ipynb
- Presented by Prof. Jean Braun of Université Grenoble Alpes

Geophysical Field School

Johannesburg & Parys, South Africa

AFRICA ARRAY/UNIVERSITY OF THE WITWATERSRAND

26 July 2015

- Planning geophysical surveys
- Gained practical field experience with:
 - Proton precession & Caesium vapour magnetometers (Ground-based magnetic survey)
 - EM31 and EM34 Electromagnetic System (Active EM survey)
 - ARES resistivity system
 - Basic active seismic methods
 - CG5 gravimeter (Gravity survey)
- International field school with graduate students from across Africa and from the USA
- Presented by Dr Susan Webb of Wits University and colleagues

Reliability Analysis and Design in Geotechnical Engineering

Midrand, South Africa

SOUTH AFRICAN INSTITUTION OF CIVIL ENGINEERING

26 July 2013

- Introduction and basic principles of reliability analysis
- Presented by Dr K-K Phoon of the University of Singapore

Committee Membership

2007, 2009,

2010

Member, Mountain Club

Rhodes University

2010

Chairperson, Goju-Ryu Karate Club

Rhodes University