

Curriculum Vitae

Sifiso Busisa Gambahaya

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1. Objective:

This CV is being submitted in the hope that it will help in my selection as an Electronic Development Engineer in RF and Microwave engineering with an antenna design specialization if offered.

2. Date Available for Employment: 2 to 4 weeks notice at current job.

3 Date of birth: 04/12/77

4 Gender: Male

5 Marital Status: Single

6 Nationality: Zimbabwean with a South Africa permanent residence status.

Passport no: ZE472353, permanent residence number: A1801007

7 Education History:

University of Cape Town, Cape Town
Master of Science (Electrical Engineering)
Date of graduation: 15 June 2006

University of Cape Town, Cape Town
Bachelor of Science (Electrical Engineering)
Date of graduation: 15 June 2004

Speciss College, Harare, Zimbabwe
“A” Levels Senior GCSE Certificate
Graduation date: June 1997.

The British School, New Delhi, India
“O” Levels IGCSE certificate
Graduation date: June 1994.

8 Extramural Activities:

Member of Zimbabwean Society at UCT, 1999-2007
Member of UCT (first team) soccer squad, 1999-2000
Member of UCT super league, soccer club (Flamingo FC), 1999-2000

9 Researches and Microwave Engineering Professional Experience:

2008: RF/Electronic Development Engineer, Reutech Precision Products PTY LTD, Development, testing and implementation of RF products for Electronic Fuze.

2006: PhD Candidate, University of Cape Town, thesis proposal was research into improving the SNR (Signal to Noise ratio) and QoS (Quality of Service) of a Wireless Communications System using Antenna Diversity Techniques, the techniques to be used included Space diversity in the form of MIMO. These

techniques where to be implemented in receive mode on a cellular base station consisting of two or more receive antennas to check effectiveness in combating fading on a wireless channel.

2004-2006: Masters in Electrical Engineering. I was responsible for the designing and Implementation of an antenna system for an Airborne Radar as part of the SASARII Project. SASARII is an on going initiative to demonstrate the capability of SASAR to implement high quality imagery using (SAR) Synthetic Aperture Radar techniques.

Also see URL: http://rrsg.uct.ac.za/theses/msc_theses/sgambahaya_thesis.pdf

Courses Completed at Masters Level:

- 1) Satellite Technology.
- 2) Wireless Data Networks and Systems.
- 3) Convergent Telecommunications and Data Networks.
- 4) Research Methods and Ethics.
- 5) Neural Networks and Data Optimization.

Projects

- System design of a satellite based fire detection and auto alert system for the RSA. My responsibilities involved the design optimization of the communication subsystem. In essence I was involved in the design of the system's antenna/ transponder/ amplifier/ modulating and demodulating equipment according to specifications. The outcome was an infra-red based system with QPSK multiplexing and using an X-band signal for the Tracking Telemetry and Command (TTC).
- Wrote a paper on the "QoS enhancement for Wireless Sensor Networks". To achieve this goal, the network is required to analyze the application requirements and deploy various network QoS mechanisms Potential applications of WSN (Wireless Sensor Networks) include environmental monitoring, industrial control, battlefield surveillance and reconnaissance, home automation and security, health monitoring, and asset tracking.
- I carried out a project and wrote a paper on disease identifications using kernel regression, clustering and predictive mechanisms methods based on a Data Optimization course that I undertook during my masters studies.

10 Work History:

2008 –Present Antenna Development Engineer at Fuchs Electronics, Reunert PTY LTD

- RF circuit design, analysis and implementation (RF IC development board-level).
- PCB Antenna design and implementation.
- Oscillator, Mixer, Amplifier and Filter Design.
- Computer simulations of RF circuits using LTSPICE, MATLAB, FILTERLAB, CST MICROWAVE STUDIO.
- Testing & fault finding of developed products.

2007- 2007 Quotes and Bookings Controller Exports Department, Safmarine PTY LTD, AP - Moller Group of Companies responsible for the accounts of up to 20 multinationals.

- Responsibilities included running transshipments for the entire Export team. Running the Terminal Departure Report for the Safmarine Exports Team. Quoting contractual and individual customers on freight rates to Europe, Africa, Middle East and Australasia.
- Creating Bookings, pricing and following up on the bookings on the Global Customer Services System (GCSS) and other specialized business software solutions. Liaising with various departments including operations, South African Port Authorities (SAPO) to ensure successful shipments from port of loading to destination.

2006 University of Cape Town, Department of Electrical Engineering, Teaching Assistant/Tutor

- Teaching Assistant to EEE230F an undergraduate course at UCT in Electronics and Power Engineering.
- Tutor, EEE 232F, second year undergraduate course in Logic and computer fundamentals. Responsibilities were the supervision of Laboratories and marking tutorials.
- Tutor, EEE357F, a third year undergraduate course at UCT in Power engineering.
- Tutor, EEE 486F, a final year undergraduate course at UCT in RF and Microwave Engineering. Responsibilities include supervising practical, setting and marking tutorials. Subjects taught include filter design, connectors, duplexers, amplifiers, oscillators and splitters.

2003 McIntyre enterprises, New Hampshire, USA.

- Worked as a cashier and bookkeeper at the Mobil Mart in Laconia, New Hampshire

2001 Levis' Strauss & co, Cavendish Cape Town

- Worked as a Sales assistant and also modeled for new Levis' merchandise.

11 Exceptional Awards and Achievements to date:

- 2007 One of my clients was highly satisfied with level of service delivery provided to them and this was reflected in the annual customer service survey report conducted by Safmarine.
- 2005 Employment with UCT as a Technical Assistant/Teaching assistant in the Department of Electrical Engineering.
- 2004 Awarded UCT Electrical Engineering Departmental scholarship to pursue MSc in Engineering.
- 2002 Tutor of the year, third year Power engineering at UCT.
- 2000 Employee of the season Levis' Strauss & Co.
- 1999 Won the UCT Standard Bank Katango cup with Flamingo FC.

12 Skills and Abilities Acquired:

- Strong foundations in Electromagnetic and Antenna Theory.
- Perform evaluations on RF and electromagnetic modeling software.
- SystemView package for RF system Design and Simulations.
- Computer simulations of RF circuits using LTSPICE, MATLAB, FILTERLAB
- PIC Micro-controller programming using PROMATE 3 & other MICROCHIP hardware.
- Specialist RF, EMF and Antenna measurements.

- Testing and fault finding using Digital multimeters, Digital oscilloscopes signal Generators, Network and Spectrum Analyzers.
- Network Traffic Theory, 3G, 4G Technology
- MATLAB, MATHCAD, C++ and JAVA.
- UNIX/LINUX applications ,
- Electronic Test equipment: Network and Spectrum Analyzer, Oscilloscopes, Digital multi-meters, AC (Function Generators) and DC power supplies.
- Able to set up test apparatus or devise test equipment and circuitry to conduct functional, operational and environmental tests to evaluate performance and reliability.
- RF Analogue and Digital circuitry design.
- Excellent communication and interpersonal skills,
- Technical presentation and Writing skills.
- Self responsibility and conceptual thinking.
- Ability to manage multiple projects concurrently.
- Organizing and structuring
- Research methodology.
- Sales and Customer care

13 Career Objectives and interests:

My interests are varied and involve the design, assembly and testing of RF and Microwave components (splitters, diplexers, amplifiers, oscillators, mixers, filters) Electromagnetics, Antenna design, Wireless & Convergent Data Networks & RF electronics. I also have a keen interest in Sales and Customer Services and would like to develop business acumen in the technical positions I get placed in.

14 Referees:

Prof. Michael Inggs, Masters project supervisor, UCT
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