VAAL UNIVERSITY OF TECHNOLOGY
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WEBSITE PROFILE

Division / Department / Faculty / Unit	Electrical Engineering
Job Designation	Senior Lecturer
Title (Mr, Ms, Mrs, Dr, Prof)	Dr
Initials	H.M
Preferred Name	Dr Langa
Surname	Langa
Roles & Responsibilities **(Max 5 lines)**	Research & Administration
Professional Registration	MIEEE SMSAIEE
High resolution photo – link provided	Yes
Highest Qualification	DPhil. Eng., MPhil Eng., BTech Elec Eng., BSc Comp Sc.& Information Systems
Institution obtained	University of Johannesburg
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Modules	Engineering Research Methods 4A – EPREM4A, AIRES4A, EIREM4A, EEREM4A
Brief Bio	Dr Langa is a Senior Lecturer and member of the Electrical Engineering department at the Vaal University of Technology which is large and complex department with a compliment of over 65 staff members. This department was formed by merging 4 different disciplines i.e., Power Engineering, Electronic Engineering, Computer Systems Engineering and Process Control Engineering. As an academic, He has published 10 papers in national and international

	conferences. He has published 4 articles in international journals. He has 25 years of experience in the higher education environment. He currently supervises 1 doctoral student and co-supervise 3 doctoral students. He also supervises 5 masters students and co-supervise 1 master's student. He is also involved in several committees, such as the Senate committee, Social Justice &Transformation Forum, Engineering Council of South Africa - ECSA committees in the Electrical Engineering Department, Centre for Academic Development - CAD Academic Advising Committee, Bid Specification Committee - BSC and others. I have conducted several seminars and delivered many speeches in various platforms such as university graduation ceremonies, opening ceremonies and other special functions.

SECTION: B

Research Fields	Power Electronics Artificial Intelligence Renewable Energy Computing Mobile App Development Power Systems
Journal Publications	**Langa, HM** and Twala B. (2018) *Modeling the Student Success in Engineering at VUT using the Date Band Algorithm.* Research in Computing Science Journal, Advances in Artificial Intelligence, Volume 147, Issue 4, pp 37 – 47, 15 August 2018, ISSN 1870-4069. **Langa, HM** and Twala B. (2018) *Modeling the Student Success in Engineering at VUT using the Date Band Algorithm.* Invention Journal of Research Technology in Engineering Management, Volume 2, Issue 4, pp 47 – 54, April 2018, ISSN 2455 3689. **Langa, HM** and Twala B. (2018) *Identifying Top Performers in the Electrician Training Programme at FSASEC Using Regression Analysis: Who are the Stars.* International Journal of Modern Research in Engineering and Management (IJMREM), Volume 1, Issue 4, pp 35 – 40, April 2018, ISSN 2581-4540. **Langa, HM** and Twala B. (2017) *Development of the Academic Model to Predict Student Success at VUT – FSASEC Using Decision Trees.* International Journal of Computer and Information Engineering Vol 4, No: 11, pp 1170 – 1173. 2017, ISSN 2522 3631
Conference (International & National)	Moloi K and **Langa, HM**. (2023) High Impedance Fault Detection Scheme with the Penetration of Distributed Generation. (*IEEE International Conference on Science, Engineering and Business for Driving Sustainable Development Goals) – (IEEE SEB4SDG2023),* 05 – 08 January 2023, Omu-Aran, Nigeria.

	Moloi K and **Langa, HM**. (2023) Power Quality Classification Scheme for a Grid-Integrated Power Distribution System. (*19th South African Power Engineering Conference – (SAUPEC 2023),* 24 – 26 January 2023, Johannesburg, South Africa. Sebueng S and **Langa, HM**. (2023) Evaluation and Recommended Improvement of Transient Behaviour of Single Wire Earth Return under 22-kW Motor Starting Conditions. *(IEEE AFRICON 2023),* 20 – 22 September 2023, Nairobi, Kenya. Moloi K and **Langa, HM**. (2023) Electricity Cost Minimization for A Low-Income Household: A South African Case Study. *(IEEE AFRICON 2023),* 20 – 22 September 2023, Nairobi, Kenya. Moloi K and **Langa, HM**. (2022) Towards Determining the Optimal Application of Distributed Generation for Grid Integration. (*2022 9th International Conference on Soft Computing & Machine Intelligence (ISCMI 2022),* 26 – 27 November 2022, Toronto, Canada. **Langa, HM** and Twala, B. (2017) Development of the Academic Model to Predict Student Success at VUT-FSASEC Using Decision Trees. (*19th International Conference on Agents and Artificial Intelligence - ICAAI 2017*), 02 – 03 November 2017, Cape Town, South Africa.urn: dai:10.1999/1307-6892/77040 **Langa, HM** and Twala, B. (2017) Identifying Top Performers in the Electrician Training Programme at FSASEC-VUT Using Regression Analysis. (*South Africa International Conference on Education – SAICED 2017*), 18 – 20 September 2017, Pretoria, South Africa. **Langa, HM** and Twala, B. (2017) Modelling the Student Success or Failure in Engineering at VUT using the Date Band Algorithm. (*16th Mexican International Conference on Artificial Intelligence*), 23 to 28 October 2017, Ensenada, Baja California, Mexico **Langa, HM** and Twala, B. (2017) The Implementation of the Unity Displacement Factor Frequency Converter: Tackling short circuit current and over voltage problems. (*International Conference on Power and Embedded Drive Control – ICPEDC 2017*) Chennai, India **DOI:** 10.1109/ICPEDC.2017.8081128 **Langa, HM** and Twala, B. (2016) The Implementation of the Unity Displacement Factor Frequency Converter: Tackling short circuit current and over voltage problems. (*8th International Conference on Electronics, Computers and Artificial Intelligence – ECAI 2016*) Bucharest, Romania.**DOI:** 10.1109/ICPEDC.2017.8081128 **Langa, HM** and Case, MJ (2007) Taking advantage of communication technology in engineering tuition (*South African Universities' Power Engineering Conference*) [Conference Proceedings] Cape Town, South Africa. **Langa, HM** and Case, MJ (2004) A fundamental approach to matrix converter theory (SAUPEC 2002) Vanderbijlpark, South Africa. **Langa, HM** (2004) Design and Implementation of a Laboratory Practical Management Tool (*IEEE African International Conference 2004*) Gaborone, Botswana. **DOI:** 10.1109/AFRICON.2004.1406829

	Langa, HM and Case, MJ (2003) Commutation in the unrestricted frequency changer (*South African Universities' Power Engineering Conference*) [Conference Proceedings] Pretoria, South Africa. **Langa, HM** and Case, MJ (2002) A novel and fundamental approach to matrix converter theory (*10th International power electronics and motion control conference),* Dubrovnik, Croatia.
Books & Book Chapters	**Book Chapter** Book Title : The Legacy of Apostle MS Khateane, Through the Lens of His Disciples Years : Sons and Daughters ISBN : 978 06397 28513 Book Chapter : Vaal Council of Elders Acknoledgement Author : Dr Hendrick Musawenkosi Langa Date : 2022