



RESEARCH PRODUCTIVITY 2018

2018 List of Research Publications

Book and Book Chapter

- [1] Chiemela Onunka and Evans Eshiemogie Ojo. "High Voltage Transmission Line Vibration: Using MATLAB to Implement the Finite Element Model of a Wind-Induced Power-Line Conductor Vibration", in Book: "MATLAB Ali Saghafinia, IntechOpen", pp.1 – 40, Chapter 4. 19th September 2018. DOI: 10.5772/intechopen.75186.

Keynote and Invited Presentations

- [1] Innocent Davidson, "Energizing Africa's Emerging Economy – Through A Smart Integrated Electric Power Super-Grid", Durban University of Technology, Mansfield Hall, Ritson Campus, 25th October 2018. *Durban University of Technology Inaugural Lecture Series*, DOI: 10.13140/RG.2.2.23245.28640
- [2] Innocent Davidson, "Quality Engineering Education Through University-Industry Partnerships", Professional Development Workshop II, Department of Mechanical and Manufacturing Engineering, University of Nairobi (UoN), Utalii Hotel, Thika Road, P O Box 31067-00600, Nairobi, Kenya, 11-12th October, 2018. [Royal Academy of Engineering RAE-UNIP Project on Higher Education Partnerships in Sub Saharan Africa, HEPSSA].
- [3] Innocent Davidson, "Research Focus Area - *Energy Systems for Smart & Intelligent Cities Research*", Durban University of Technology Annual Research, Innovation & Engagement Forum, Hotel School Conference Centre, Ritson Campus, DUT, 21 August 2018.
- [4] Innocent Davidson, "Operationalisation of Pan-African University on Space Sciences Institute (PAUSSI) Meeting", Department of Science and Technology (DST), Pretoria, 15th August 2018.
- [5] Innocent Davidson, "Quality Engineering Education Through University-Industry Partnerships", Professional Development Workshop I, University of Namibia, Ongwediva, Namibia, 4-5th April 2018. [Royal Academy of Engineering RAE-UNIP Project on Higher Education Partnerships in Sub Saharan Africa, HEPSSA].
- [6] Innocent Davidson, "*Quality Engineering Education Through University-Industry Partnerships in Eastern and Southern Africa*", Durban University of Technology Creating Local and Regional Innovation & Entrepreneurial Eco-Systems, Botanic Gardens Conference Centre, Durban, 15th March 2018.

DHET Accredited Journal Papers

- [1] Dayahalen Chetty, Mobolaji Bello and Innocent E Davidson, "Performance Evaluation of Traction and Utility Network Interface: Fault Location and Protection Coordination". *Electric Power Systems Research Journal.*, Vol 156, pp.44-53, 2018.
- [2] Kabeya Musasa, and Nnamdi I. Nwulu, "A novel concept for offshore wind-power plant with DC collection system based on radial-connected converter topology, *IEEE Access*, Print ISSN: 2169-3536, Online ISSN: 2169-3536. Digital Object Identifier: 10.1109/ACCESS.2018.2879347, 2018
- [3] Gulshan Sharma, Ibraheem Nasiruddin, K. R. Niazi and R. C. Bansal, "Automatic Generation Control (AGC) of Wind Power System: An Least Squares-Support Vector Machine (LS-SVM) Radial Basis Function (RBF) Kernel Approach", *Electric Power Component and System Journal*, 2018, Taylor & Francis, (SCI Journal), DOI: 10.1080/15325008.2018.1511003
- [4] P. T Ogunboyo, R. Tiako, I. E. Davidson, "Effectiveness of Dynamic Voltage Restorer for Unbalanced Voltage Mitigation and Voltage Profile Improvement in Secondary Distribution System," in *Canadian Journal of Electrical and Computer Engineering*, vol.42, no. 2, pp. 105-115, Spring 2018. doi: 10.1109/CJECE.2018.2858841.
- [5] E Buraimoh, F. K. Ariyo, M. O. Omoigui and I.E. Davidson, " Investigation of Combined SVC and TCSC versus IPFC in Enhancing Power System Static Security", *International Journal of Engineering Research in Africa*, Vol. 40, pp. 119-135, 2018. doi: <https://doi.org/10.4028/www.scientific.net/JERA.40>
- [6] C. G. Monyei, S. Viriri, A. O. Adewumi, I. E. Davidson and D. Akinyele, "A Smart Grid Framework for Optimally Integrating Supply-side, Demand-side and Transmission Line Management Systems". *Energies* 2018, 11, 1038; doi:10.3390/en11051038.
- [7] P. T Ogunboyo, R. Tiako, I. E. Davidson, "Voltage Unbalance Mitigation and Voltage Profile Enhancement in Secondary Distribution System Using Dynamic Voltage Restorer", *International Journal of Engineering Research in Africa*, Vol. 34, pp. 88-101, 2018.
- [8] Gulshan Sharma, "Performance enhancement of a hydro-power system using RFB and TCPS", *International Journal of Sustainable Energy*, Taylor & Francis (Scopus Index), <https://doi.org/10.1080/14786451.2018.1553883>, 2018.
- [9] P. T. Ogunboyo, R. Tiako, I.E Davidson, "Investigation of Voltage Unbalance Profile in Low Voltage Electrical Distribution Network with Normal Mode Operation Using MATLAB", *International Journal of Engineering Research in Africa*, Vol. 35, pp. 60-76, 2018.

Non-DHET Accredited Journal Paper

- [1] Kabeya Musasa, Musole Innocent Muheme, Nnamdi Ikechi Nwulu, "A Simplified Control Scheme for Electric Vehicle-Power Grid Circuit with DC Distribution and Battery Storage Systems", *African Journal of Science, Technology, Innovation and Development* 1527888 (AJSTID 1527888), 2018.

Refereed Conference Proceedings

- [1] A.A. Adebisi, I. Lazarus, A.K Saha and E.E Ojo: "Performance Analysis of PV Panels connected in various orientation under different climatic conditions". *Proceedings of the South Africa Solar Energy Conference*, Durban, South Africa, 25 – 28 June, 2018, ISBN number: 978-0-7972-1765-2.
- [2] T.K. Magenuka, P.A. Owolawi and K.T Akindeji, "Kernel Estimation Modelling of Hybrid Green Power Systems for A Typical South African Rural Areas". *Proceedings of the 13th Southern African Energy Efficiency Confederation (SAEEEC) Conference*, Ekurhuleni, Gauteng, South Africa, 13 -14 November 2018.
- [3] S.T Leholo, P.A Owolawi and K.T Akindeji, "Performance Analysis of a Hybrid Micro-Energy System for SA Data Centers". *Proceedings of the 3rd International Conference on Power and Renewable energy (ICPRE 2018)*, Berlin, Germany, 21 -24 September 2018.
- [4] A.A. Adebisi, I. Lazarus, A.K Saha, E.E Ojo and F. Tadeo: "Experimental Analysis of the performance of various photovoltaic panels: A case study of Durban South Africa". *Proceedings of 5th Green Energy Conference*, Toronto, Canada, 29 – 30 August, 2018.
- [5] A.O. Aluko and K.T. Akindeji, "Mitigation of Low Voltage Contingency of Doubly Fed Induction Generator Wind Farm using Static Synchronous Compensator". *Proceedings in IEEE PES-IAS PowerAfrica Conference*, Capetown, South Africa, 26-29 June 2018, pp 75 - 80. ISBN: 978-1-5386-4163-8/6.
- [6] A.O. Aluko and K.T. Akindeji, "Performance Analysis of Grid Connected SCIG and DFIG based wind farm". *Proceedings of the 26th Southern Africa Universities Power Engineering Conference (SAUPEC)*, Johannesburg, South Africa, 24-27 January 2018, pp 20 – 25.
- [7] A.K. Onaolapo, K. T Akindeji and E. Adetiba: "Faults Recognition, Identification and Localization In Smart Distribution Networks – A Review". Paper presented at *Protection, Automation and Control (PAC) World Conference*, Raleigh, North Carolina, USA, 29 – 31 August 2017.
- [8] S.T. Leholo, P.A Owolawi and K.T Akindeji, "Modelling and Optimization of Hybrid RE for Powering Remote GSM Base Station". *Proceedings of the IEEE PES IAS Power Africa Conference*, Cape Town, South Africa, 26 -29 June 2018, pp. 463 – 468.

- [9] Leonard Mukwekwe, Rudiren Pillay Carpanen and Innocent Davidson, "Analysis of Optimal PV Penetrations Levels with Time-variant Loads in Power Distribution Networks". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 630-635.
- [10] Shaibu Mludi and Innocent Davidson, "Power Market and Impact of Tariff in Malawi". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 586-591.
- [11] Sindi Malanda, Innocent Davidson, Elutunji Buraimoh and Eddie Singh, "Analysis of Soil Resistivity and its Impact on Grounding Systems Design". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 522-527.
- [12] Eluntunji Buraimoh, F. K Ariyo and Innocent Davidson, "Power System Static Security Enhancement Through Interline Power Flow Controller". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 208-213.
- [13] Ester Hamatwi and Innocent Davidson, "Cost Optimization and Design of a Hybrid Distributed Generation System for a DC Microgrid". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 321-326.
- [14] Zama Goqo and Innocent Davidson, "A Review of Grid Tied PV Generation on LV Distribution Networks". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 310-315.
- [15] Charles Odeh and Innocent E Davidson, "A Configuration for Output Voltage Boost off a Three-phase, 3-Level Multi-level Inverter". *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 709-714.
- [16] Charles Odeh and Innocent E Davidson, "A Three-Phase, 5-Level Multi-Level Inverter with Output Voltage Boost", *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 715-720.
- [17] B Madonsela, Innocent Davidson and C Mulangu, "Advances in Telecontrol and Remote Terminal Units (RTU) for Power Substations", *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa, pp. 504-509.
- [18] Kabeya Musasa and Nnamdi I. Nwulu, "Interfacing a Battery Storage System (BSS) with a Wind Farm with DC Collector System via a Flyback DC-DC Converter: Modelling, Control Strategy, and Performance Analysis", *International Conference on Advances in Computational Techniques, Electronics and Mechanical Systems-CTEMS'18*, 2018.
- [19] M.S Chagwe, Nnamdi Nwulu and Kabeya Musasa, "Design of a Wind Mobile Phone Charger", *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Washington DC, USA, September 27-29, 2018, pp. 2415- 2424.
- [20] J.Y. Lokamba, Nnamdi Nwulu and Kabeya Musasa, "Design and Implementation of a Small Scale Linear Switched Reluctance Motor", *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Washington DC, USA, September 27-29, 2018, pp. 896- 907.
- [21] Judas Khoza, Nnamdi Nwulu and Kabeya Musasa, "Automatic Solar Street Light Design", *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Washington DC, USA, September 27-29, 2018, pp. 908-913.
- [22] Sanjeeth Sewchurran, Innocent Davidson and Olorunfemi Ojo, "The Changing South African Generation Sector", *Proceedings of the IEEE Power Africa Conference*, 26 – 29 June, 2018, Cape Town, South Africa. (Presented but unpublished in the proceedings.)

Other Research Output – Non-Refereed Conference Proceedings

- [1] A. Maharaj, B. Wiksch, I.E. Davidson and G. Melik, "Cost effective EMC/EMI management for transmission and distribution substation control buildings". Paper Accepted for presentation at *CIGRE France 2018*.
- [2] Ntombela, S. G. and Davidson, I. E., "Smart Inverter Operation in Distribution Networks with High Penetration of Photo-Voltaic Systems". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.
- [3] Sthembiso, N. and Davidson, I. E., "Hybrid Renewable Energy Design (Solar and Wind Energy)". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.
- [4] Tshikomba, S. C. and Davidson, I. E., "Technical Analysis and Mitigation of Electricity Theft for Domestic and Commercial Users". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.
- [5] Gwatidzo, N. and Davidson, I. E., "Modelling, Testing and Evaluation of HVDC Equipment and Components – DC Breakers, DC Transformers and Insulation Coordination in HVDC Systems". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.
- [6] Govender, T. P. and Davidson, I. E. A., "Innovative Training Methods to Improve the Trade Test Results of the Apprenticeship, Learnership and Artisan Recognition of Prior Learning (ARPL) Candidates at Tek-Mation Training Institute". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.

- [7] Lafleni, F. and Davidson, I. E., "Induction Motor Performance Fed from Photovoltaic Technology". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.
- [8] Buraimoh, E. and Davidson, I. E., "Comparative Analysis of the Fault Ride-Through Capabilities of the VSG Methods of Microgrid Inverter Control under Faults using MATLAB". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.
- [9] Malanda, S. C. and Davidson, I. E., "Transient Fault Analysis of a VSC-Based Multi-Terminal HVDC Scheme". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation* Durban, South Africa, 18 – 20 September 2018.
- [10] Mazibuko, N. and Davidson, I., "Modelling and Performance Analysis of a Universal Motor Fed from a Renewable Energy Nano-Grid". Paper presented at *DUT Sustaining Interdisciplinary Trends in Research and Innovation*, Durban, South Africa, 18 – 20 September 2018.

Higher Degrees Graduated Master of Engineering

Aluko, O.A., *BEng (Hons), Electrical Engineering*

Dissertation: Modelling and performance analysis of doubly fed induction generator wind farm

Supervisor: Mr. Timothy Akindeji, Prof D Dorrell and Dr Sanjeeth Sewchurran

Higher Degrees Graduated in other Institutions (UKZN) Doctor of Philosophy (2018)

Iruansi, Usiholo *BScEng, MScEng* *Electrical Engineering*

Dissertation: Power line Defect Detection and Classification

Supervisors: Professor Jules-Tapamo and **Professor IE Davidson**

Tefera, Getahun Aklilu, *BScEng, MScEng* *Mechanical Engineering*

Dissertation: Design and Testing of a Composite Material for Modelling Wind Turbine Blade Structures in Tropical Region

Supervisors: Professor Sarp Adali, Professor Glen Bright and **Professor IE Davidson**

Ogunboyo, Patrick, *BScEng, MScEng* *Electrical Engineering*

Dissertation: Power Quality Evaluation in Low Voltage Smart Grid Distribution Networks

Supervisors: Dr Remy Tiako and **Professor IE Davidson**

Master of Science in Engineering (2018)

Chamane, Mbalenhle Nokwanda, *BScEng (UKZN)*..... *Electrical Engineering*

Dissertation: Design of Protection Scheme for a Voltage Source Converter-based HVDC Systems

Supervisor: Prof DG Dorrell, **Prof IE Davidson** and Prof MN Gitau

Lasabi, Olarewaju, *BScEng* *Electrical Engineering*

Dissertation: Performance of Insulators under HVDC Stress

Supervisor: Dr AG Swanson and **Prof IE Davidson**

Kangwa, Nsofwa Mwilwa, *BScEng* *Electrical Engineering*

Dissertation: Performance Analysis of Meshed VSC Based HVDC System for Onshore WindPower Generation

Supervisor: Prof DG Dorrell and **Prof IE Davidson**

Higher Degrees Under Examination

Master of Engineering

Onaolapo, A.K., *BEng (Hons) Electrical and Electronics Engineering, MBA*

Dissertation: Modelling and Recognition of Faults in Smart Distribution Network Using Machine Intelligent Technique

Supervisor(s): Mr. K. T. Akindeji and Prof E. Adetiba

Higher Degrees Under Supervision

Doctor of Engineering

Gumede, Makhosonke, *BTech, MEng, Electrical Engineering*

Dissertation: The extraction of power and fresh water from the ocean off the coast of KZN utilizing ocean thermal energy conversion (OTEC) techniques (2015)

Supervisor: Dr P Naidoo and Prof M Walker

Adebisi, Ayo, *BEng (Hons), MEng, Electrical Engineering*

Dissertation: Investigation of the Impart Photovoltaic System on the Distribution Grid (2017)

Supervisor(s): Assoc. Professor Ian Lazarus, Assoc. Professor Ashkay Saha and **Dr Evans Ojo**

Buraimoh, Elutunji, *BTech (LAUTECH), MScEng (OAU), Electrical Engineering*

Dissertation: Development of D-Facts Based Microgrid System Using Supervisory Control (2018)

Supervisor: **Professor IE Davidson**

Master of Engineering

Nkonyane, Mfanabili Stanley, *BTech Electrical Engineering*

Dissertation: The impact of poor power quality and harmonics on the performance of an electrical network. Case Study: DP3 Drillship (2013)

Supervisor: **Dr E E Ojo** and **Dr B Rigby**

Thakoardeen, R.R., *BTech, Electrical Engineering*

Dissertation: An Investigation into the Alternative Energy Solutions to Power Desalination Plants and the Storage of Energy using Graphene Supercapacitors Generated from Renewable Sources. (2016)

Supervisor: **Dr. Evans Ojo**

Sewnarain, Shikhar, *BTech, Electrical Engineering*

Dissertation: Harnessing Tidal Energy for Electrical Power Generation in South Africa. (2017)

Supervisor: Dr C. Onunka and **Mr. K T Akindeji**

Ndimeni, P, *BTech, Electrical Engineering*

Dissertation: Analysis of the reliability of the 11kV distribution network in Margate Area. (2017)

Supervisor: **Dr. Evans Ojo**

Loji, Nomhle, *BTech, Electrical Engineering*

Dissertation: Evaluation of grid-scale battery energy storage system as an enabler of large-scale renewable energy integration (2017)

Supervisor: **Prof IE Davidson** and **Mr. Timothy Akindeji**

Tshikomba, Salome Busisiwe Jiyane, *BTech BSc (Hons), Electrical Engineering*

Dissertation: Technical Analysis and Mitigation Measures for Illegal Electricity Theft for Domestic and Commercial End Users (2017)

Supervisor: **Prof IE Davidson**

Madonsela, Bhokinkosi, *BTech, Electrical Engineering*

Dissertation: Integrating Power Transformer Protection scheme and Telecontrol RTU (2018)

Supervisor: **Prof IE Davidson** and Dr C. Mulangu.

Gwatidzo, Ngoni, *BTech, Electrical Engineering*

Dissertation: Modelling, Testing and Evaluation of HVDC Equipment and components – DC Breaker, DC Transformers and Insulation Coordination in HVDC Systems. (2018)

Supervisor: **Prof IE Davidson**

Khoza, Nkosinathi S E, *BTech, Electrical Engineering*

Dissertation: Design and Implementation of a Renewable Energy-Based Power Supply System for a Mini Grid. (2018)

Supervisor: **Prof IE Davidson**

Nsibande, Minenhle Errol, *BTech, Electrical Engineering*

Dissertation: Techno-economic and financial analysis of the Pan African Hybrid Super-Grid in 2050. (2018)

Supervisor: **Prof IE Davidson**

Mazibuko, Ntombenhle, *BTech, Electrical Engineering*

Dissertation: Modeling and Performance Analysis of a Universal Motor fed from a Renewable Energy Nano-Grid. (2018)

Supervisor: **Prof IE Davidson** and **Dr G Sharma**

Khumalo, Nkosinathi Emmanuel, *BTech, Electrical Engineering*

Dissertation: Optimal sizing and control of lithium-ion battery energy storage system to be used for maximum demand peak shaving, peak energy utilisation and peak energy export. (2018)

Supervisor: **Prof IE Davidson**

Ndlovu, Ntobeko, *BTech, Electrical Engineering*

Dissertation: Evaluation of Circuit Breakers: Conventional AC CB, Solid-State CB and DC Breaker for HVDC Transmission and Distribution Systems. (2018)

Supervisor: **Prof IE Davidson**

Reddy, Rodney, *BTech, Electrical Engineering*

Dissertation: Network Optimization with High Penetration of Roof-top Solar-PV. (2018)

Supervisor: **Prof IE Davidson** and Dayahamlen Chetty.

Dube, Lizwe, *BTech, Electrical Engineering*

Dissertation: An Investigation to determine the Effectiveness of Impressed Current Cathodic Protection System on Underground Steel ENGEN Refinery Transferlines System (2018)

Supervisor: **Mr. Eamon Bussy**

Malanda, Sindisiwe Cindy, *BTech, Electrical Engineering*

Dissertation: Transient Fault Analysis of a VSC-Based Multi-Terminal HVDC Scheme. (2018)

Supervisor: **Prof IE Davidson** and Dr Grain Adam.

Ndaba, Iren Sindi, *BTech, Electrical Engineering*

Dissertation: A Technical and Financial Analysis of Smart Prepaid Split Meters on Eskom Electric Power Distribution. (2018)

Supervisor: **Prof IE Davidson**

Leholo, Sempe, *BTech, Electrical Engineering*

Dissertation: Modelling and Optimization of Hybrid Micro-grid System for LTE Base Station. (2018)

Supervisor: Prof P A Owolawi and **Mr. K T Akindeji**

Lafeni, Siphon, *BTech, Electrical Engineering*

Dissertation: Performance Analysis of an Induction Motor fed from a Solar-Photovoltaic Supply. (2018)

Supervisor: **Prof IE Davidson** and **Dr M Kabeya**

Ntombela, Sibusiso Goodenough, *BTech, Electrical Engineering*

Dissertation: Performance Evaluation of a Smart Inverter in Power Distribution Networks with High Solar-PV Penetration. (2018)

Supervisor: **Prof IE Davidson**

Namponya, Chrispin, *BTech, Electrical Engineering*

Dissertation: Modelling, Design and Performance Analysis of Industrial Traction Drive System for Power regeneration (2018)

Supervisor: **Prof IE Davidson**

S'dinile, Philani Sikho, *BTech, Electrical Engineering*

Dissertation: Investigating Microgrid Solution to the Challenges of Rural Electrification in South Africa. (2018)

Supervisor: **Dr E Ojo** and **Mr. K T Akindeji**

Huna, M.P., *BTech, Electrical Engineering*

Dissertation: Analysis of distributed generation on power distribution asset management. (2018)

Supervisor: **Dr. Evans Ojo**

Nadeem, G.H., *BTech, Electrical Engineering*

Dissertation: The Design of Control Plant Systems for a 132/11kV 20MVA Distribution Substation (2019)

Supervisor: **Dr. Evans Ojo**

Bahara, R.K., *BTech, Electrical Engineering*

Dissertation: Analytical and Numerical Investigation of the Integration of Wind Energy in Distribution Network. (2019)

Supervisor: **Dr. Evans Ojo**

Community Service Activities

- [1] Industry-Expert Workshop, Presenter: Innocent E Davidson, Seminar Workshop: "Department of Mechanical and Manufacturing Engineering Stakeholders Workshop to Review Draft PhD Curriculum", Time: 08.45 – 14.00 hours, 5th March 2018, Venue: Arziki Conference Centre. University of Nairobi, Nairobi, Kenya. Sponsor: Supported by the Royal Academy of Engineering through the Quality Engineering Education Through University-Industry Partnerships in Eastern and Southern Africa (RAE-UNIP) Project.
- [2] Timothy Akindeji, External Examiner for Design Project III, Mangosuthu University of Technology (MUT)
- [3] Dr Gulshan Sharma, Reviewer, Electric Power Component and System Journal & Journal of Engineering Science and Technology Review.
- [4] Prof Innocent E Davidson, Reviewer, IEEE Transactions (Power Delivery, Energy Conversion), IEEE Access, Journal of Advanced Computational Intelligence and Intelligent Informatics (Japan), Electric Power Systems Research Journal, Renewable Energy, Technology and Economics of Smart Grids & Sustainable Energy Journal, Engineering Science and Technology: An International Journal, International Journal of Electrical Power and Energy Systems and International Journal of Green Energy.
- [5] Prof Innocent E Davidson, Reviewer, IEEE Power Africa Conference.
- [6] Dr Musasa Kabeya, Reviewer, SAUPEC Conference.
- [7] Mr. Timothy Akindeji, Reviewer, SAUPEC Conference.
- [8] Prof Innocent E Davidson, Reviewer, SAUPEC Conference.
- [9] Mr. Kabulo Loji, Participant in the Work Integrated Learning (WIL) Conference, July 17-20, 2018.
- [10] Mr. Milton Estrice, Participant in the Work Integrated Learning (WIL) Conference, July 17-20, 2018.

Research Grants

- [1] Principal Investigator: Mr Timothy Akindeji; Eskom TESP Grant (RTPSS Centre): R90 000.00.
- [2] Principal Investigator: Mr Dwayne Reddy; Eskom TESP Grant (Photovoltaics): R30 000.00.
- [3] Principal Investigator: Mrs Nomhle Loji; Eskom TESP Grant (Energy Storage): R30 000.00.
- [4] Principal Investigator: Prof IE Davidson; Eskom TESP Grant (Smart Grids): R70 000.00; Eskom TESP Grant (HVDC): R70 000.00.
- [5] Principal Investigator: Mr Timothy Akindeji; Eskom TESP Grant (RTPSS Centre): R90 000.00.
- [6] Principal Investigator: Ms N Mazibuko; Eskom TESP Grant (Renewable Energy): R50 000.00.
- [7] Principal Investigator: Mr. Kabulo Loji; Eskom TESP Grant (Renewable Energy): R30 000.00.
- [8] Co-Investigator: Mr Timothy Akindeji; Newton Fund: R274 920.56
- [9] Co-Investigator: Prof IE Davidson; Royal Academy of Engineering United Kingdom Award (2017 – 2019); Grant Amount: £140 000.00.
- [10] Faculty Researcher of the Year Award, Prof IE Davidson, Grant Amount: R7 500.00.
- [11] DHET-Accredited Outputs Research Incentive Award 2017: Prof IE Davidson, Grant Amount: R36 855.38.
- [12] DHET-Accredited Outputs Research Incentive Award 2018: Prof IE Davidson, Grant Amount: R171 105.98.
- [13] DUT Conference Travel Grant: Prof IE Davidson, 2018 Conference Travel Award: R10 000.00.
- [14] DUT Conference Travel Grant: Elutunji Buraimoh, DEng Student, 2018 Conference Travel Award: R10 000.00.
- [15] DUT Conference Travel Grant: Sindi Malanda, MEng Student, 2018 Conference Travel Award: R9385.70.

Honours, Awards and Recognitions

- [1] Prof IE Davidson "*Energizing Africa's Emerging Economy – Through A Smart Integrated Electric Power Super-Grid*", DUT Inaugural Lecture Series, DOI: 10.13140/ RG.2.2.23245.28640. <https://www.dut.ac.za/prof-davidson-aims-to-make-africa-the-most-electrified-continent-in-the-world/>
- [2] DUT Annual Research & Innovation Awards (based on 2017 research outputs), "*Faculty Researcher of the Year*" Award; Recipient: Prof IE Davidson.