

POWER DIGEST

A NEWSLETTER PUBLICATION

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TORRENTIAL RAINS LEAD TO FLOODS AND LANDSLIDES IN KZN

On 11-13 April, severe flooding triggered landslides and mudslides, caused by heavy rainfall affected southern and south-eastern South Africa, particularly the Provinces of KwaZulu-Natal and Eastern Cape. It was declared as the National State of Disaster in response to the floods and landslides, and rescue teams were deployed to the affected areas to provide humanitarian assistance to those most affected. Severe number of people lost their lives, loved ones, homes, valuable possessions and businesses. Furthermore, the severity of these floods left devastating damage to infrastructure, Umgeni Water, the supplier of water to Durban and KZN, announced that two feeder lines were broken, and these two aqueducts supplied water to the Durban Heights reservoir and repairs were taking place. Water tankers were being used to supply areas without water supplies.

The DUT staff and students were greatly affected by these floods, as a result, the DUT Executive Management has decided to offer assistance to those who were affected internally (staff and students) and externally (communities) as kind gesture of UBUNTU. DUT is currently running a donation drive in which the DUT Community can donate vital items that are needed (non-perishable items, hygiene products, powdered infant formula, and clothes) and funds that can be used to relieve some of the burden carried by the victims. To obtain a form to make a donation you can contact Ms. Phumzile Xulu via email: phumzilex@dut.ac.za or you can use the pledge link <https://forms.office.com/r/KYLKrZPW8Q>



Dr Kayode Timothy Akindeji

DUT STAFF ACHIEVEMENTS

Dr Kayode Timothy Akindeji obtained his national diploma (Electrical and Electronic Engineering Technology) at the Federal Polytechnic, Ede, Osun State in 1995. He further obtained his BSc (2001) and MSc (2010) in Electrical and Electronic Engineering from Obafemi Awolowo University, Ile-Ife, Nigeria. He started his academic career as a Lecturer at Pretoria Technical College, 2010 to May 2013 as the Deputy Engineering Campus Manager. He joined DUT in June 2013 as a Lecturer in the Department of Electrical Power Engineering.

He served as Head of the Department from January 2015 to May 2018. He obtained the PhD degree in Electrical Engineering, from the University of KwaZulu Natal in May



2022. Dr Akindeji is a highly resourceful researcher and an excellent educator. He has taught courses all the Departmental programs, including electrical power systems, electrical engineering principles and project management. He has an impressive track record of coordinating people and managing resources for optimum productivity, efficiency and quality.

Dr Akindeji has published 6 journal articles, 27 conference proceedings, 1 book chapter and successfully graduated eight (8) Masters' students. He serves as a reviewer for reputable journals and conferences. Dr Akindeji is a registered Professional Technologist with ECSA; Member SAIEE and the IEEE, USA. His research interests include: power system analysis and optimization, power delivery systems, grid integration of renewable energy (RE), hybrid RE system, optimization of hybrid power system, and Smart Micro-Grids.



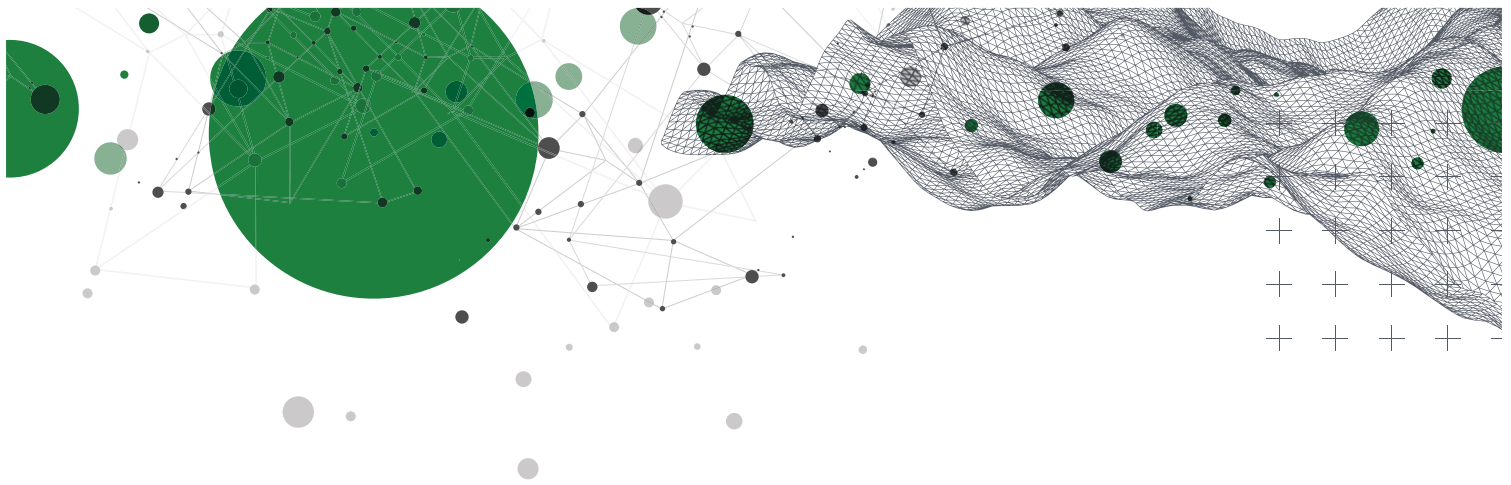
Dr Adebisi A Adebisi (Shine)

Dr Adebisi A Adebisi (Shine) is a Lecturer in the Department of Electrical Power Engineering at DUT. He obtained his first degree in Electrical & Electronic Engineering from Kwara State Polytechnic, Ilorin, Nigeria, 2006. He worked at Covenant University, Ota, Nigeria as a Lab Technologist, Department of Electrical and Information Engineering. He obtained the Master of Engineering (MEng) degree, DUT, in 2017. Dr Adebisi was awarded the Doctor of Engineering (DEng) degree at DUT 2021 Spring graduation. During his doctoral studies, he obtained two European Union (EU) exchange scholarships under the Erasmus scholarship scheme to study at the University of Valladolid, Spain in 2018 where he obtained a Diploma, and later University of Porto, Portugal, where he also earned a Diploma in 2019 after he successfully passed all his modules. Dr Adebisi has published 12 scientific papers in peer-reviewed journals and international conferences.



Dr. Darlington Chinenye Ikegwuoha

Dr. Darlington Chinenye Ikegwuoha is a Senior Lecturer at the Department of Civil Engineering, Midlands. He obtained his BEng from the Federal University of Technology, Owerri, Nigeria in 2008; the Master's (MSc) and Doctorate (PhD) degrees from the University of the Witwatersrand in 2013 and 2022, respectively. He worked at a consulting firm from 2013 to 2015 as a Junior Engineer. He joined UNISA as a Laboratory instrumentalist and later promoted to the rank of Lecturer. He joined DUT in 2019 as a Lecturer. His research interests are Hydrology, Hydraulics, Water Resources, Water management, and Climate change. His most recent publication is titled, "Drought prediction in the Lepelle River basin, South Africa under general circulation model simulations".



CAPACITY ENHANCEMENT

Ms.S Sithole

Ms Slindile Sithole has been appointed Administrator, DUT-DSI Space Science Research Program; which is an externally government funded Postgrad program by the Department of Science and Innovation led by Prof Innocent E. Davidson. Ms Sithole holds a National Diploma (NDip) and Bachelor of Technology (Tech) in Public Management, from Durban University of Technology, 2017 and 2018 respectively. She acquired her in-service training at Murchison District Hospital. Thereafter, she worked at Vascowiz Investments as an Office Administrator. Ms Sithole stated that she believes that this new opportunity will allow her to develop new skills and also grow professionally.



Ms. S Sithole

Mr.A.S Mazibuko

Mr Sandile Mazibuko has recently joined the Electrical Power Engineering Department as a Lab Technician. He holds a National Diploma (NDip) in Mechanical Engineering, from the Vaal University of Technology (2016). Whilst, working at FFS Refiners, he took great interest in Electrical Engineering and thereafter pursued studies in the field with a National Diploma in Power Engineering (2019). He further obtained a BTech degree in Electrical Power Engineering, Vaal University of Technology (2020). Mr Mazibuko has a wealth of practical experience as a Technician, and worked with SASOL South Africa.



Mr. A.S Mazibuko



RESEARCH PUBLICATIONS

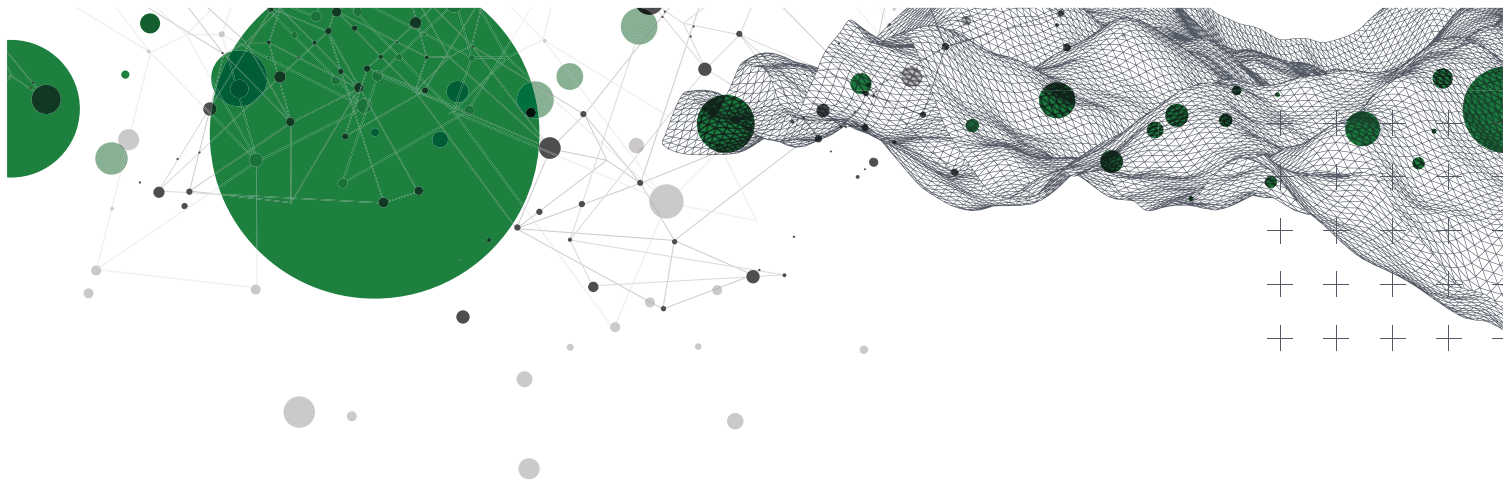
Books Chapters

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- [2] Pelemo, J., Akindeji, K.T., Inambao, F.L., Awogbemi, O. and Onuh, E.I. "A Comparative Evaluation of Biodiesel and Used Cooking Oil as Feedstock for HDRD Application – A Review". In Diesel Engines, P.F. Inambao, Ed., 2022.
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- [4] Anuoluwapo Aluko, Elutunji Buraimoh, Oluwafemi Emmanuel Oni and Innocent Ewean Davidson, "Advanced Distributed Cooperative Secondary Control of Islanded DC Microgrids", *Energies* 2022, 15 (11), 3988; <https://doi.org/10.3390/en15113988>, 28 May 2022.
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- [6] Kayode Timothy Akindeji, Remy Tiako, and Innocent E. Davidson, "Optimization of University Campus Microgrid for Cost Reduction: A Case Study," in *Advanced Engineering Forum*, 2022, vol. 45: Trans Tech Publ, pp. 77-96. DOI <https://doi.org/10.4028/p-13gc8e>

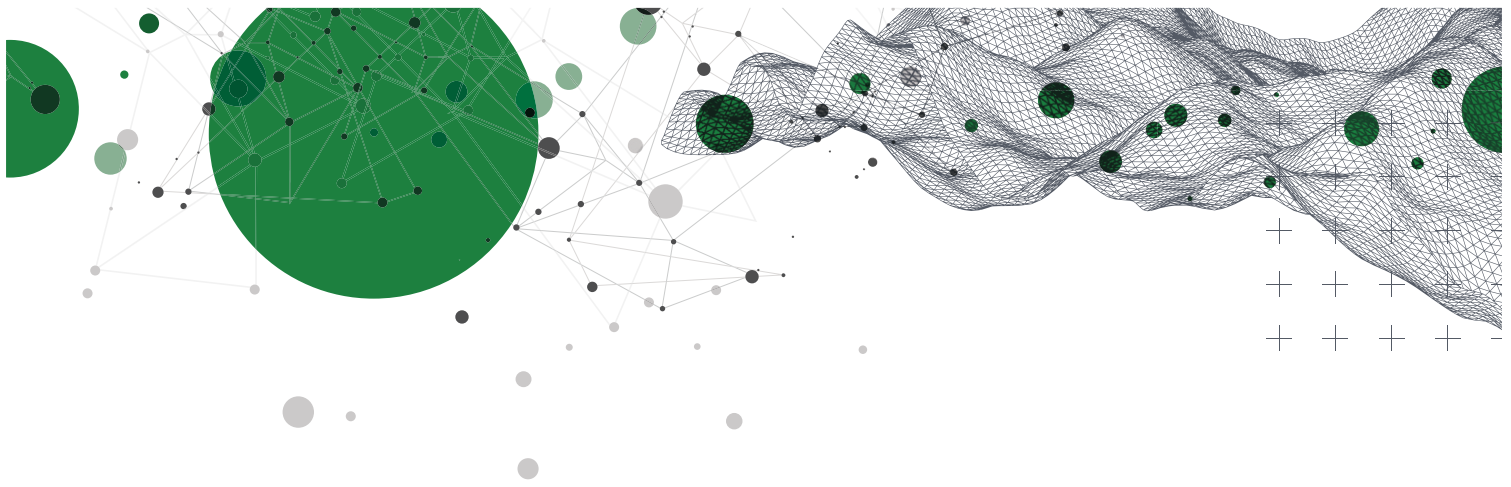
Peer-Reviewed Conference Proceedings

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- [2] S.A. Ntlela and I. E. Davidson, "Solar Irradiation Forecasting for the City of Durban Using Time Series Analysis," 2022, pp. 1-5. DOI 1109/SAUPEC55179.2022.9730711
- [3] E. O. Mkpojiogu, O. E. Okeke-Uzodike, C. Eze, and E. I. Emmanuel, "A UX 3-Factor Hierarchical Model for Understanding, Designing and Evaluating the UX of Software Products," 2022, pp. 1-7. DOI 1109/SAUPEC55179.2022.9730740
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- [6] P.Ngema, E. Buraimoh, and I.E. Davidson, "A New Technique for Improvement of Differential Relay Performance in Power Transformers," 2022, pp. 1-5. DOI | 109/SAUPEC55179.2022.9730768
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