DUT DURBAN UNIVERSITY OF TECHNOLOGY
FACULTY OF ENGINEERING & THE BUILT ENVIRONMENT
DEPARTMENT OF ELECTRICAL POWER ENGINEERING

Power Digest

A newsletter publication

Vol 2020, No. 2
March-June

Message from the Editorial Team

It is with pleasure and enthusiasm to publish our second edition of Power Digest. These are difficult and abnormal times and we urge everyone to take all necessary precautions in preventing the spread of COVID-19. This infectious disease continues to spread around the country and globally. Always remember to use the Health Check screening online before you arrive on campus. Practice social distancing, wear a facemask at all times, wash and sanitize your hands regularly. We hope you enjoy our second edition. You are most welcome to contribute articles, announcements & upcoming events to enrich Power Engineers, Technologist & Technicians.

17th Clemson University Power System Conference 2020

The 17th Clemson University Power System Conference (PSC) took place at Clemson University, SC, USA from 10-13 March 2020. The conference brought together electric power industry experts, electric utilities, government agencies and academic researchers to exchange and present new ideas to improve the state of the art of power engineering. It blends educational and industrial experiences, field implementations of new techniques, new topics and ideas and cutting-edge technologies in the electric power/smart grid industry. Earning the Best Paper Award (3rd place) for an outstanding conference paper at the 17th Clemson University Power System Conference (PSC) is Durban University of Technology's (DUT's) Doctoral student, Elutunji Buraimoh and the Professor and Chair of the Department of Electrical Power Engineering, Dr Innocent Davidson. Mr. Buraimoh is under the supervision of Prof IE Davidson. The focus of this research is on Microgrids, which provides a veritable platform to harness renewable energy sources and effectively integrate them into the traditional electric power grid.

Congratulations
The winning paper is titled: Modelling and Assessment of the Fault Ride-Through Capabilities of Grid Supporting Inverter-Based Microgrids.

Refereed Conference Papers and Posters

[1] Modelling and Assessment of the Fault Ride-Through Capabilities of Grid Supporting Inverter-Based Microgrids Elutunji Buraimoh, Inno Davidson (Durban University of Technology, Durban, South Africa)

[2] A Review of Long-Distance UHVDC Technology - A future Energy Disrupter Inno Davidson (Durban University of Technology, South Africa)

[3] Short term Wind Variability Analysis and Modelling of Afe Babalola University Oladimeji Ayamolowo, Elutunji Buraimoh, Innocent Davidson (AFE Babalola University, Durban University of Technology)

There has been an increased interest on the renewable energy sources owing to the vast amount of energy available and the need to reduce greenhouse gas emissions (GHG). The Department of Electrical Power Engineering is proud to introduce its new Renewable Energy Solar PV system. The installation took place at end of January 2020 with rooftop solar panels placed at the S-Block. The solar panels that are connected to a stack of deep-cycle Lithium storage batteries, also link up with an Inverter located at the Smart Grid Research Centre at S7 Level 2. The infrastructure is used for the purpose of research, demonstration and learning. Figure 1 shows the configuration.

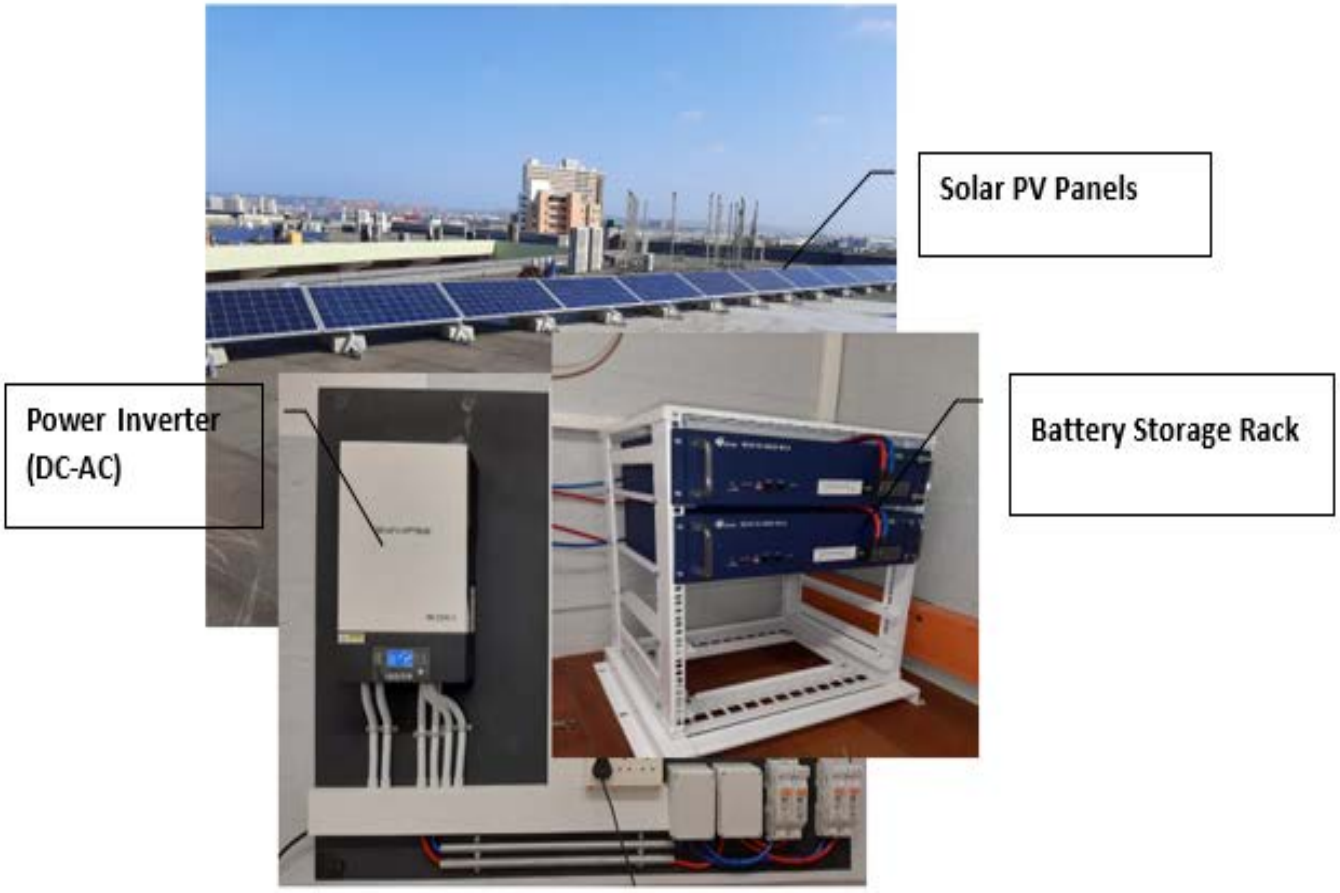
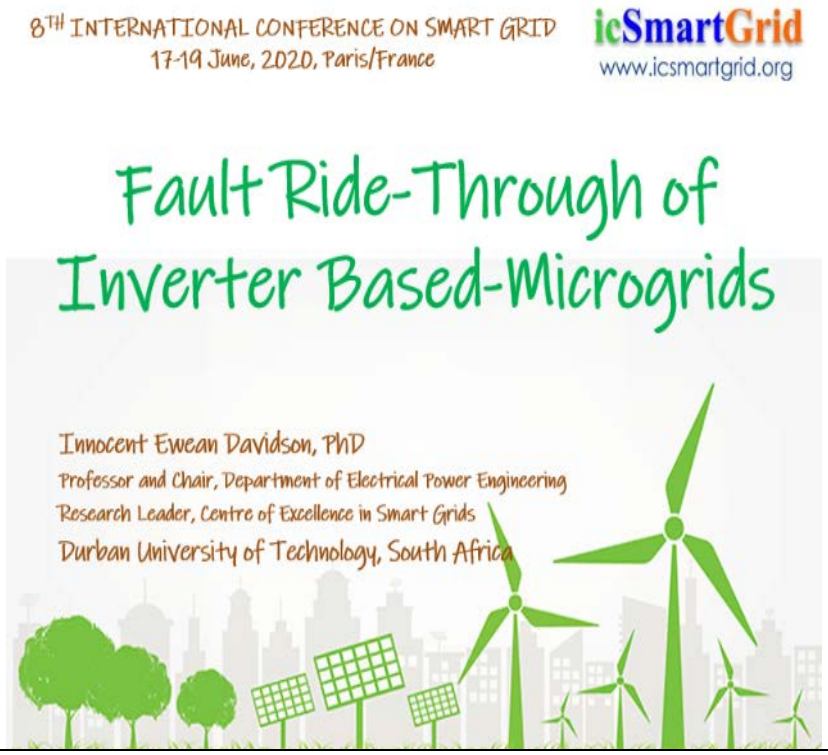


Figure 1: Solar PV Installation

ICSMARTGRID 2020



The 8th International Conference on Smart Grid (icSmartGrid2020) which is co-sponsored by IEEE IES and IAS was conducted virtually due to COVID-19. It took place on the 17-19 June 2020 in Paris, France. The purpose of this conference was to bring together researchers, engineers, manufacturers, practitioners and customers from all over the world to share and discuss advances and developments in Smart Grids research and applications.

Our Department participated in this conference, Professor Davidson chaired a morning session on the 19th. A Tutorial titled: "Fault Ride-Through of Inverter Based Microgrids" was presented by Doctoral student, Elutunji Buraimoh, who is under the supervision of Prof IE Davidson.

Past Events and Announcements	Upcoming Conferences
ECSA Meeting **15 May 2020** **Departmental Research Committee (DRC)** **03 June 2020** **Faculty Research Committee (FRC)** **11 June 2020** **Departmental Staff Meeting** **20 May 2020** **26 May 2020** **05 June 2020**	**IEEE PES & IAS Power Africa Conference** **August 25-28, 2020, Nairobi, Kenya** **NEIS 2020 – Conference on Sustainable Energy Supply and Energy Storage Systems , September 14-15, 2020** **ICRERA 2020** **9th International Conference on Renewable Energy Research and Applications** **September 27-30, 2020, Glasgow/UK** **IEEE Region 8 AFRICON 2021, 13-15 September 2021, Arusha, Tanzania**

EDITORS
Ms Namhla Mtukushe
namhlam@dut.ac.za

Ms Sindisiwe Malanda Email:
Email: SindisiweM7@dut.ac.za