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**DURBAN UNIVERSITY OF TECHNOLOGY**  
**INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE**

## Department of Electrical Power Engineering

### Postgraduate Research Candidate



#	<b>Student Name / Surname</b>	AYODEJI STEPHEN AKINYEMI	<b>Start Date</b>	2019	<b>Supervisor</b>	Dr. M. Kabeya
	<b>Title of Project</b>	Voltage Rise Mitigation at the Point of Common Coupling of Large Renewable Distributed Generation and Distribution Network	<b>Completion</b>	2022	<b>Co-Supervisor(s)</b>	Prof. I.E Davidson
<b>Program of Study (M Eng. / D Eng.)</b>			D Eng.			
	<b>Student #</b>	21960204	<b>Email Address</b>	aystevo@gmail.com		
<p><b>Synopsis of Research Project: (&lt; 300 words)</b></p> <p>A lot of changes are taking place in a power system as a result of the introduction of renewable distributed generation. Gradually, electricity generated by fossil fuel is being replaced by electricity generated from renewable energy sources, small generator units connecting to the distribution system are replacing large generator units connected to the transmission system. The splinting of generation, transmission, and distribution system, depending on each country, has brought competition in the market. The generation assets are no longer owned by one or a few owners, but a lot of investors have entered the electricity market. Individuals can now generate their own electricity using small combine heat and power, rooftop solar panels, and small wind energy converters, to mention a few. It is obvious that all these changes have an impact on the power system. The introduction of a Renewable Distributed Generation (RDG) into the distribution network will have impacts on the voltage profiles, overvoltages with the use of centralised large power generating units are traditionally of less concerned, the introduction of RDGs into a distribution network has eliminated the issue of excessive voltage drop while an overvoltage/voltage rise is now the major concerned due to the injection of active and reactive power. The research work will focus on the mitigation technique of voltage rise at the Point of Common Coupling without disconnection of Large Renewable Energy connected to a Distributed network using Pulse Width Modulation (PWM).</p>						