

## DAMOC Student Exchange Programme Report

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Name of home institution: University of Stellenbosch, South Africa

Name of host institution: TU-Dresden

Semester and dates: Summer semester 28 March -30 July 2019

### Introduction

This report provides an overview of my stay, activities and tasks I undertook under the DAMOC student exchange program at TU Dresden, Germany between 28 March 2019 and 30 July 2019. The main goal of this was to get exposure and build my knowledge in the field of smart grids.

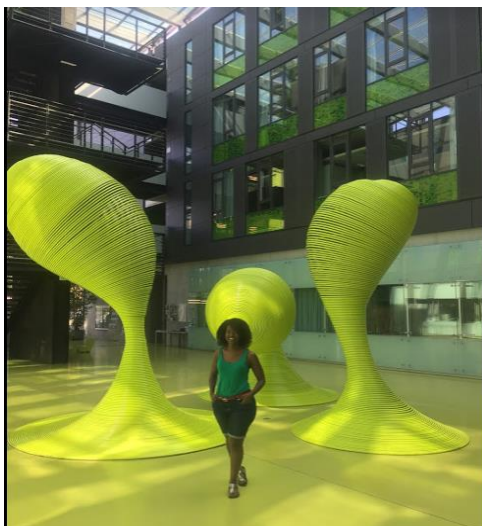
### Studies

I attended modules at the faculty of Computer Science as well as the Economics, namely Wireless Sensor Networks (WSN) and Stakeholder Management. Within the WSN module, offered by Dr W. Dargie, I learnt about the applications of WSNs, node architecture, operating systems amongst others.

Based on that background I took a research project on the subject focused on the challenges slowing deployment of wireless sensor networks for smart grid networks, from big data management to energy resource constraints and data reliability.

With regards to Stakeholder Management course, I gained knowledge on how different stakeholders and external conditions influence the success and sustainability of projects and I found this course to be valuable for decision-making when developing technologies or pursuing research.

Furthermore, I was able to concurrently pursue my current Master research project focused on renewable energy embedded generators using the wealth of academic resources at the SLUB, i.e. the state library and the assistance of Simon Puteanus, a student from the Electrical Engineering department who was also on the same exchange programme.



*At the Faculty of Computer Science TU-Dresden*



*Simon explaining some details at the SLUB*

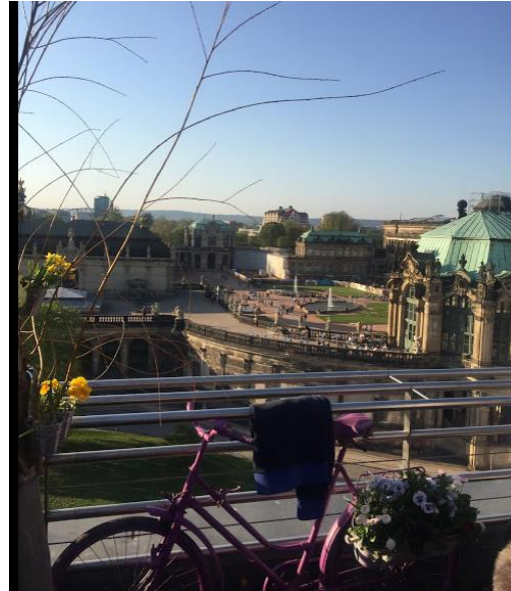
Overall, my entire studies stimulated me to further research on this exciting field upon completion of my current master's program.

## Culture and life

I was accommodated at the Fritz-Löffler residence where mostly international students are accommodated and I met other students mostly from Europe some from Asia and North America and a few Africans. I must admit the lack of diversity was an interesting experience as well as the diverse personalities and cultures. During some holidays and weekends, we briefly toured places like Leipzig and some European cities like Prague and Vienna. I also learnt to take solo trips and visited Frankfurt, Munich as well as Amsterdam.



*Trip to Prague with fellow ERASMUS students*



*A roof-top view of Zwinger Palace, Dresden*

As far as German culture I was lucky to meet Simon who introduced me to other Germans where I learnt the culture and history. I was also lucky enough to arrive during spring/summer season and I thoroughly enjoyed the amazing weather with tons of outdoor activities like swimming, hiking and barbeques.

Before this experience I had only known Germans for what I call their top three strengths; engineering ingenuity in car and wind turbine manufacture as well as their beer brewing craft but after this experience, I now appreciate a different side of them.

## Conclusion and Recommendation

In conclusion, the DAMOC/German exchange program has been one of the most amazing and invaluable experiences of my life from the academic offerings at an international level as well as the culture. The paradigm shift has changed my life outlook and career ambition for a greater involvement in smart grid development in Africa. I would recommend it to anyone considering the program and I also recommend more African students take it up and get exposed to technology development at international standards and in the smart grid field to enable more rapid technology adoption and development in the field of smart grids in the continent.

**Acknowledgement**

I would like to firstly extend my sincere gratitude to the DAMOC project coordinators and ERASMUS for their vision and sponsorship. I would also like to thank Professor Mahomed Nawaz for giving me this opportunity to participate as well as the DAMOC team at TU-Dresden for their guidance and efficient coordination throughout the programme and lastly Simon Puteanus, a fellow student who became my German brother away from home.