



## **Tawachi NYASULU**

**Home Country:** Malawi

**Degree:** PhD in Electronic and Electrical Engineering

**Expertise:** Telecommunications Infrastructure Management

**Research Focus :** Wireless White Space Communication for Development

**Host University:** University of Strathclyde, Glasgow, United Kingdom

**Fellowship Awarded:** 2016

Tawachi Nyasulu was born in Malawi, a small country in southeast Africa. Her parents have a passion for education and ran a small agricultural business in addition to their regular jobs to help cover the costs of schooling their seven children. Tawachi achieved excellent grades at school where she specialized in mathematics and sciences, receiving an award for her performance from the National Research Council of Malawi. While waiting for college admission she enrolled for a course in computer programming and later studied for a Diploma in Computer Systems Design, which helped shape her future career.

Tawachi obtained a BSc in Electrical Engineering from the University of Malawi in 2003, graduating as the best student and one of only two women in a class of 20. The majority of her career to date has been spent managing telecommunications infrastructure for United Nations operations in Malawi. In 2014, she was awarded a Commonwealth Scholarship to study in the United Kingdom, where she gained an MSc in Digital Communications Networks from the University of Leeds before moving to Glasgow for her postgraduate studies.

Regulatory bodies allocate parts of the radio frequency spectrum to providers of wireless network services. Some of these frequency ranges are extremely congested, while an estimated 90% is underutilized in many areas and is known as “white space”. Frequencies used by television transmissions fall into this category, especially in rural areas, and there is the potential to use these frequencies for other wireless applications. Tawachi plans to investigate the use of white space communication for e-health solutions in clinics for children under-five, including field work in Malawi.

After completing her PhD, Tawachi plans to return to Malawi to take up a teaching position she has recently accepted as a Lecturer in Telecommunications in the department of Computer Science at the newly established Malawi University of Science and Technology (MUST). She also intends to champion e-health solutions in partnership with the country’s Ministry of Health.