



## **Geraldine RIMVEN**

**Home Country:** Nigeria

**Degree:** PhD in Engineering

**Expertise:** Information and Communications Technology

**Research Focus:** Wireless Communications in Outdoor Environments

**Host University:** University of Hull, United Kingdom

**Fellowship Awarded:** 2016

Geraldine Rimven was born in Plateau State in the north-central region of Nigeria, and grew up in a home where she was treated equally to her two brothers. She discovered a talent for mathematics and physics and a passion for teaching during her early years at secondary school, where she would often help her classmates with their calculations.

Geraldine attended Abubakar Tafawa Balewa University, Bauchi State, Nigeria, where in 2000 she graduated with a bachelor's degree in Electrical Engineering. She subsequently worked in various computing and electrical support roles before joining the University of Jos, Nigeria, as a Systems Engineer for its Network and Internet Services. In 2011, Geraldine gained an MSc in Personal, Mobile and Satellite Communication from the University of Bradford United Kingdom and since 2014 has been a Lecturer in the Electrical/Electronic Department of the Faculty of Engineering at the University of Jos.

Geraldine's MSc thesis focused on the performance of multiple-input and multiple-output (MIMO) systems in indoor environments. MIMO is a method for multiplying the capacity of a radio link using several transmission and receiving antennas to exploit multipath propagation, and is an essential element of wireless communication. For her PhD research, Geraldine is building on her MSc studies to evaluate the performance of MIMO in the outdoor environment. In particular she is investigating the effect of rain on wireless communication, which can negatively impact signal strength. Some regions of Nigeria experience long periods of heavy rain, therefore the results of her work will be especially relevant to improving local telecommunications infrastructure in these areas.

Upon completion of her PhD program, Geraldine plans to return to teaching and research at the University of Jos. She expects her qualifications will help her mentor female students in her department, where there are currently no women in senior positions. Geraldine also intends to work with industry by offering consultancy services on communication issues.