

# Dr Olayiwola Alatise



## Research Interests

Power Semiconductor Materials and Devices
Power Electronic Converters and Systems
Energy Conversion in Electrical Systems

## Biography

Layi Alatise graduated with a 1st class honours BEng in Electrical/Electronic Engineering and a PhD in Microelectronics and Semiconductors from Newcastle University. His PhD research at Newcastle

### Title

Reader

### Contact

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Coventry CV4 7AL focused on the mixed signal performance enhancements in strained Si/SiGe MOSFETs (metal oxide on semiconductor field effect transistors). In 2004 and 2005, Layi briefly joined ATMEL North Tyneside where he worked on the process integration of the 130 nm CMOS technology node. In June 2008, he joined the Innovation R&D department of NXP semiconductors as a development Engineer where he designed, processed and qualified discrete power trench MOSFETs for automotive applications and switched mode power supplies. In November 2010, Layi joined Warwick University as a Science City Research Fellow to investigate advanced power semiconductor materials and devices for improved energy conversion efficiency. In October 2011, he was appointed as an Assistant Professor of Electrical Engineering, in October 2014 he was appointed as an Associate Professor in Power Electronics and as of July 2017 has been appointed as a Reader in Power Electronics. He is currently the leader of an MSc module in Electrical Machines and teaches undergraduate Electrical power Engineering. Dr Alatise is the principle investigator and co-Investigator of several EPSRC and TSB projects in Power Electronics and has written several scientific journal papers, served as a reviewer for the IEEE journals, is a member of the IEEE and IET as well as a Chartered Engineer.

#### **EPSRC Funding**

<u>EP/R004366/1</u>. (£1.2M). Principal Investigator. 2017 to 2020. *Condition Monitoring in Power Electronics* 

<u>EP/K008161/1</u> . (£125k). Principal Investigator. 2013 to 2015. *Reliability in Power Electronics* <u>EPSRC Centre of Power Electronics Funding</u> . (£300k). Principal Investigator. 2015 to 2017. *Pressure Packages for Silicon Carbide*.

EP/L007010/1 . (£2M). Co-Investigator. 2014 to 2017. *Underpinning Power Devices*.

EP/K034804/1. (£2M). Co-Investigator. 2014 to 2017. *Components Integration in Power Electronics*.

EP/L021579/1 . (£1.1M) .Co-Investigator. 2014 to 2018. Power Electronics for HVDC.

#### Other Funding

TSB/KTP. Co-Investigator. 2014 to 2016. *Condition monitoring of power electronics for wind turbines.* 

Low Carbon Network Fund FLEXDGRID. Co-Investigator. 2012 to 2015. Fault management technologies in Low voltage distribution networks.

#### PhD Supervision

Dr Saeed Jahdi. (2016). <u>Analysis of Dynamic Performance and Robustness in Silicon and Silicon</u>
<u>Carbide Power Electronic Devices</u>

Dr Ji Hu. (2016). <u>Finite Element Electrothermal Modelling and Characterization of Silicon and Silicon Carbide Power Devices</u>

Dr Roozbeh Bonyadi. (2016). Reliability Assessment and Modelling of Power Electronic Devices for

#### Automotive Application and Design

Dr Jose Ortiz Gonzalez (2017) <u>Electrothermal Modelling for Condition Monitoring in Modern Power</u> <u>Devices</u>

Dr Petros Alexakis (2018) Modelling and Characterization of Power Devices under Unclamped Inductive Switching

Zarina Davletzhanova (to submit in 2018) Loss Distribution and Analysis in 3-Level NPC Converters

#### **Post-Doctoral Research Supervision**

Dr Jose Ortiz Gonzalez. (2013 to Present).

Dr Nadeesh Nobeen. (2015 to 2016).

Dr Qian Zhou. (2013 to 2015).

Dr Ahmad Soli. (2014 to 2016).

### **Undergraduate and Postgraduate Teaching**

ES185. Electrical and Electronic Circuits.

ES2B1. Energy Conversion and Power Systems.

ES3B3. Power Systems and Electrical Machines.

ES96Z. Electrical Machines and Drives.

## Research Projects

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**Publications** 

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