



DR. AHMAD ZAKI BIN ANNUAR



Senior Lecturer
(DS51)



PhD (University of
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I gained an interest in renewable energy systems, in particular with the energy power conversion application. I was awarded a PhD of Science and Engineering from the University of Edinburgh. My PhD research was concerned with the design of the electrical topology for an array of a multiple wave energy devices in an offshore wave farm. To maximize the power produced from each device the detailed knowledge of wide range of engineering disciplines is required which includes hydrodynamics of the wave movement, electrical machine design, power electronic converter, control theory and electrical power systems. After I completed my PhD I worked with a renewable energy company based in Edinburgh for 18 months. The company named AlbaTERN, is a wave energy development company that has a key expertise in offshore mechanical and electrical system design and application. My role in the company is to presents a novel working networked DC power collection architecture that is the primary focus of the in-house electrical design. Many issues need to be addressed before embarking any marine energy device deployments. The research in this area will focus on developing an economic, robust and reliable marine energy converter within a test rig size to demonstrate its feasibility on extracting the energy from the ocean. Besides that, I also working on designing new power converter for renewable energy applications. The objective is to offer significant improvements over conventional power electronics topologies in terms of weight, cost and efficiency.

Expertise Area

Main Field	: Electrical Engineering
Sub Field	: Renewable Energy & Power Electronics
Specialization	: Ocean and Hydro Renewables, Microgrids

Professional Membership

- Institute of Electrical and Electronics Engineers (IEEE), Member, 2011-Present
- Institution of Engineering and Technology (IET), Member, 2013-Present
- Board of Engineers Malaysia (BOM) – Application In process

Networking & Collaboration

- Institute for Energy System (IES), The University of Edinburgh, UK
- SuperGen Marine Group including Queens' Belfast, Lancaster, Heriot Watt and Strathclyde Universities, UK.
- AlbaTERN Ltd, Scotland UK.
- Power System Group, University of Aberdeen, UK.
- ABB, UK
- Local universities including EnCON Group, UTM and Power Group UiTM Shah Alam.

Publication Reference

- Google Scholar Citations - A.Z.Annuar
<https://www.mendeley.com/profiles/az-annuar/>