

The University of Manchester

People

Prof. A. K. Brown

Head of Microwave and Communication Systems Group, Tony Brown has had over 30 years experience in radar, including for civilian applications such as Air Traffic Control, Marine and Coastal surveillance radar. He has advised international authorities on radar related matters including in the UK the Health and Safety Executive (offshore radar) and is a frequent invited speaker on such topics.

Dr Ian Cotton

A lecturer in the Electrical Energy and Power Systems Group, Ian works in the HV laboratory where a 2MV impulse generator simulates lightning attachment. His PhD was on 'Lightning protection of wind turbines', he is a member of the IEC 61400-24 committee standardising wind turbine lightning protection.

Mr Laith Rashid

Wide ranging knowledge in radar modelling and performance analysis of marine radar systems and their interaction with offshore wind-farms.

Mr Vidyadhar Peesapati

Recently graduated with a Masters in Sustainable Electrical Systems and presently working on lightning protection of Wind Turbines.

Relevant Expertise

The Microwave and Communication Systems group at the University of Manchester has extensive experience in radio propagation, radar modeling and signal processing. The group is deeply involved in the modeling the interaction of wind farms on navigational radars, with special emphasis on larger offshore wind-turbines

The Electrical Energy and Power Systems Group is one of the foremost power engineering groups in the world. Its comprehensive high voltage research laboratory, the largest in UK universities, is used for investigations of a wide range of lighting protection systems. The group is widely recognised for work on embedded generation with projects covering the improvement of wind farm power quality, load modelling and the development of lightning protection solutions.

Technical role within the Supergen

With the growth of interest in offshore wind farms the size of wind turbines is set to grow to larger blade lengths. With this growth there is uncertainty on how to provide adequate lightning protection as existing standards are no longer applicable. It is likely that more extensive lightning protection will need to be provided on the blades. This increases the potential impact on surveillance radar systems such as ship borne or ATC surveillance, including in safety critical applications. One of our goals is to consider innovative solutions to larger scale lightning protection systems which are compatible with radar cross section reduction techniques and have a viable cost base. We will also consider implications of such measures on a typical offshore wind farm and look at related LP measures appropriate to this environment.

The School of Electrical And Electronic Engineering at the University of Manchester is the largest department of its type in the UK with 62 full time academics

