



EPSRC PhD Studentships in Power Electronics and Electrical Machines

- Reference Code: EE028

Closing Date: 31st March 2012

Details:

Name of Supervisor

[Professor. V Pickert](#), School of Electrical, Electronic and Computer Engineering

Sponsor

[Engineering & Physical Sciences Research Council](#) (EPSRC)

Duration of the Award

3 years

Project Description

The Power Electronics, Drives and Machines Research Group has been awarded two PhD EPSRC funded studentships to develop highly integrated power drive trains for electric vehicles:

1) *Research in power electronics*: You will focus on the implementation of new control algorithms for dc/dc converters to reduce the dc/dc converter inductor size. Beside analytical work for the development of the algorithms, extensive simulation work is also requested for validation purposes. The project includes construction of a high power dc/dc converter prototype and testing.

2) *Research in electrical machines*. You will work on the design of a highly power dense switched reluctance motor. Work includes the use of new materials and optimising the machine cooling. With the help of FE and CFD software, a SRM

drive will be designed, constructed and tested. The SRM drive will be compared with a common electric vehicle drive.

Value of the Award of Eligibility

Depending on how you meet the EPSRC's [eligibility criteria](#), you may be entitled to a full or a partial award. A full award covers tuition fees at the UK/EU rate and an annual stipend of £13,590 (2011). A partial award covers fees at the UK/EU rate only.

Person Specification

Candidates should have a minimum of a first class Honours degree, or equivalent, in electrical, electronic or mechanical engineering. Candidates should show good analytical, communication and writing skills and be familiar with circuit simulators and CAD software. Candidates should have the ability to work independently and as part of a team.

How to Apply

You must complete the University's [online application form](#). Select "PhD School of Electrical, Electronic and Computer Engineering (full-time)" as the programme of study, quoting the title of the studentship and reference number **EE028**. Only mandatory fields need to be completed but you must attach a copy of your CV and a covering letter, stating which project you are interested in.

Further Information

For further information please contact Professor. V Pickert
e-mail: volker.pickert@ncl.ac.uk.