



UNIVERSITY  
of  
GREENWICH

### Information on Postgraduate Research Scholarship - Ref: PGRO-ENG-01-15

**Faculty:** Faculty of Engineering and Sciences, Department of Engineering Science, Medway Campus

**Lead Supervisor:** Dr Yi Wang

**Project Title:** Synthesis and application of multi-port filtering networks for mobile communications and satellite systems

#### **Project Description:**

Multi-port filtering network (MPFN) is a new concept of microwave filters with multiple inputs and outputs. It has found many applications in microwave signal distribution networks (e.g. multiplexers) and multi-role microwave devices (e.g. filtering power dividers) for satellite and telecoms systems. This PhD project will involve two strands of work: (1) to develop the synthesis technique of MPFNs using both analytical and numerical methods, based on the coupling matrix approach; (2) to design and prototype novel microwave devices. The project will benefit from close collaboration with academic and industrial partners. The research will be linked to the UK-EPSCRC project EP/M013529/1.

**Duration:** 3 years, Full-Time Study

#### **Tax-free bursary available (subject to satisfactory performance):**

Year 1: £14057      Year 2: In line with RCUK rate      Year 3: In line with RCUK rate

In addition, the successful candidate will receive a contribution to tuition fees equivalent to the university's Home/EU rate (£4052) for the duration of their scholarship. International applicants will need to pay the difference between the international and home/EU tuition fees of £7648 for the 2015/16 session and is subject to an annual increase. Highly qualified international students will be supported to apply for top-up scholarship.

<b>Person Specification of Essential (E) or Desirable (D) requirements:</b>	
<b>Criteria:</b>	<b>E or D</b>
<b>Education and Training:</b>	
<ul style="list-style-type: none"> <li>1<sup>st</sup> Class or Upper 2<sup>nd</sup> class Honours Bachelor's Degree or Master's degree (UK or UK equivalent) in a relevant discipline</li> </ul>	<b>E</b>
<ul style="list-style-type: none"> <li>For those whose first language is not English and/or if from a country where English is not the first language (as recognised by the UKBA), a language proficiency score of at least IELTS 6.5 (in all elements of the test) or an equivalent UK VISA and Immigration secure English Language Test is required, unless the degree above was taught in English <b>and</b> obtained in a majority English speaking country, e.g. UK, USA, Australia, New Zealand, etc, as recognised by the UKBA.</li> </ul>	<b>E</b>
<b>Experience &amp; Skills:</b>	
<ul style="list-style-type: none"> <li>Experience of undertaking research at undergraduate or taught masters level through a dissertation or similar</li> </ul>	<b>E</b>
<ul style="list-style-type: none"> <li>Good knowledge or experience in microwave passive circuit design</li> </ul>	<b>E</b>
<ul style="list-style-type: none"> <li>Experience in the synthesis and design of resonator-coupled microwave filters</li> </ul>	<b>D</b>
<ul style="list-style-type: none"> <li>Experience with programming (e.g. Matlab or similar) and microwave CAD tools (e.g. Sonnet, CST or equivalent)</li> </ul>	<b>D</b>
<ul style="list-style-type: none"> <li>Strong analytical and mathematical skills.</li> </ul>	<b>D</b>
<b>Personal Attributes:</b>	
<ul style="list-style-type: none"> <li>Understands the fundamental differences between a taught degree and a research degree in terms of approach and personal discipline/motivation</li> </ul>	<b>E</b>
<ul style="list-style-type: none"> <li>Able to, under guidance, complete independent work successfully</li> </ul>	<b>E</b>
<b>Other Requirements:</b>	
<ul style="list-style-type: none"> <li>This scholarship may require Academic Technology Approval Scheme approval for the successful candidate if from outside of the EU/EEA</li> </ul>	<b>E</b>
<ul style="list-style-type: none"> <li>A PhD project research proposal that is related to the research area</li> </ul>	<b>E</b>
<ul style="list-style-type: none"> <li>The scholarship must commence before <b>1 February 2016</b>.</li> </ul>	<b>E</b>

**Closing date for applications: *midnight UTC on 20 November 2015.***

**For further information contact: Dr Yi Wang**

**Contact details: *E-mail: yi.wang@gre.ac.uk***

#### **Making an application:**

Please read this information before making an application. Information on the application process is available at: [http://www2.gre.ac.uk/research/study/apply/application\\_process](http://www2.gre.ac.uk/research/study/apply/application_process). Applications need to be made online via this link. **No other form of application will be considered.**

All applications **must include** the following information. **Applications not containing these documents will not be considered.**

- **Scholarship Reference Number (Ref PGRO-ENG-01-15)**– included in the personal statement section together with your personal statement as to why you are applying
- **a research proposal related to the subject topic \***
- **a CV including 2 referees \***
- **academic qualification certificates/transcripts and IELTS/English Language certificate if you are an international applicant \***

\*upload to the supporting information section of the application form. Attachments must be a PDF format.

Before submitting your application you are encouraged to liaise with the Lead Supervisor on the details above. A selection interview will take place shortly after the closing date.