



Surrey Space Centre (SSC), School of Electronics and Physical Sciences,
University of Surrey, Guildford, Surrey. GU2 7XH

PhD Studentship: Advanced Spaceborne Receivers for New Galileo Navigation Signals

SSC are offering an EPSRC Industrial CASE Studentship in collaboration with Surrey Satellite Technology Ltd (SSTL), a world leading manufacturer of small satellites for a three year EPSRC funded CASE PhD studentship at the University of Surrey and SSTL. Home/UK applicants (applicants with a relevant connection with the UK, usually established by residence) are eligible to apply for a full EPSRC studentship. Awards cover tuition fees plus a maintenance grant for three years. Applicants with a relevant connection to an EU country other than the UK are eligible to apply for an award to cover tuition fees only for three years. A relevant connection may be established for a student who is an EU national if the student has been in full-time education in the UK throughout the three years preceding the start date of their PhD or masters course. For EPSRC eligibility rules please see: www.epsrc.ac.uk.

The European GALILEO satellite navigation system currently consists of the SSTL-built GIOVE-A and Astrium-built GIOVE-B demonstration satellites. SSTL has now been selected as part of a consortium to supply the 14 satellites of the full operational constellation (FOC) of the Galileo system. Both Galileo and modernised GPS plan to use Binary Offset Carrier (BOC) signals, and the more complex Multiplexed BOC (MBOC) and Alternative BOC (AltBOC) modulations that have high frequency components and wide bandwidths to provide better tracking performance and improved multipath rejection. In addition to terrestrial applications, SSC and SSTL are investigating applications for space-based precise orbit determination and remote sensing of ocean and atmosphere using these signals.

The student will research and exploit BOC tracking concepts building on previous work from SSC and SSTL. The applicant will have access to live signals, data from Galileo satellites and SSTL's receiver hardware; this will enable the development of algorithms and hardware that are able to fully exploit the capabilities of the Galileo and improved GPS signals.

Useful skills include digital signal processing, Matlab, VHDL, C-programming, RF design. GNSS signal design or processing experience is also regarded as an asset.

Applicants require a 2:1, First Class Honours Degree or a Masters Degree in a related discipline. The successful candidate will receive a studentship that pays full Home fees and a maintenance grant for three years subject to satisfactory progress.

SSC is part of the Department of Electronic Engineering which received the highest 5* research rating in the UK Research Assessment Exercise and 23 out of 24 in the Teaching Quality Assessment.

Please send your CV and Application form to: Mrs Karen Collar, Administrator, Surrey Space Centre, BA Building, University of Surrey, Guildford, Surrey GU2 7XH, including transcripts of marks for your undergraduate and/or MSc with your application. For research topic please mark your application "Ref: CIU/GNSS". An application form can be downloaded from:

<http://www2.surrey.ac.uk/postgraduate/apply/researchapp.pdf>

However, please note all applications are to be sent to Karen Collar as detailed above. The deadline for completed applications is 12 March 2010.

For further information about the University of Surrey, please visit www.surrey.ac.uk. The University is committed to an Equal Opportunities Policy.