



# Marie Curie Fellows in GNSS Ionospheric Research



**Closing Date: 30 April 2011**

**Total salary cost will be > € 38 000 for ESR (depending on location and mobility allowance),  
> € 61 000 for ER (depending on mobility allowance)**

These posts are available from August/September 2011 and will be offered on a fixed-term contract for a period of up to 3 years. There are 13 posts available for applicants classed as Early Stage Researchers (ESRs) and 1 for Experienced Researcher (ER). All applicants will have to comply with the Marie Curie Actions eligibility criteria ([ftp://ftp.cordis.europa.eu/pub/fp7/docs/wp/people/m-wp-201101\\_en.pdf](ftp://ftp.cordis.europa.eu/pub/fp7/docs/wp/people/m-wp-201101_en.pdf))

Applications are invited for the above posts as part of an exciting Marie Curie Initial Training Network (ITN) funded by the FP7 PEOPLE Programme, entitled **TRANSMIT – Training Research and Applications Network to Support the Mitigation of Ionospheric Threats**. Research will aim to counter the serious problems posed by the Earth's ionosphere to, principally, Global Navigation Satellite Systems (GNSS).

Global Navigation Satellite Systems (GNSS), such as the American GPS (Global Positioning System) and the Galileo system being developed in Europe, have a multi-billion Euro world-wide industry - the EC has predicted an annual global market for GNSS of €300bn by 2020. The ionosphere can cause serious problems to GNSS satellites signals, in particular related to extreme solar events, as frequently reported in the media during times of high sunspot activity. The next solar maximum is predicted for 2013 and TRANSMIT aims to tackle the threat it will pose to GNSS, through an integrated programme of academic and industrial training, including a comprehensive set of courses and secondments. We are looking for outstanding and highly motivated scientists who will form a critical mass of top experts in this field in Europe and therefore become high flyer candidates for future employment in the related industry and academia.

Your background must be in a numerate subject such as Mathematics, Physics, Engineering or a closely related subject, and you must have a keen interest in disciplines such as Physics, Geophysics, Mathematics, Statistics, Modelling, Forecasting, Electronics, Signal Processing, Geodesy, Surveying, Mapping, Navigation, Imaging, Data Management, Data Assimilation, Geo-informatics, Remote Sensing, Telecommunications. An ability to publish research papers and to present work at seminars, workshops and conferences is required. Experience in IT and computer programming, as well as a willingness to travel and undertake fieldwork are essential for these posts. Excellent communication and team work skills are also fundamental to the success of this project, which will include additional training that will equip the fellows for research in the modern academic world and to prepare them for interactions with industry.

TRANSMIT comprises a consortium of leading Universities and Research Centers in Europe, with associated partners from top European industry stakeholders, as well as industry and academia from as far afield as Brazil and Canada. TRANSMIT industrial partners will play a central role in the project and all researchers will be expected to undertake secondments which will facilitate meaningful interaction with them.

TRANSMIT's host institutions and project titles are listed below with the corresponding researchers they will recruit:

Host	Fellow	Projects
University of Nottingham, UK	ESR1	<b>Real time and post mission mitigation tools against effects on GNSS positioning.</b>
	ESR2	<b>Improved receiver tracking models and GNSS signal scintillation simulation tool</b>
Politecnico di Torino, Italy	ESR3	<b>Tools for mitigation of effects on GNSS Augmentation systems</b>
	ESR4	<b>Radio Occultation for ionospheric monitoring</b>
Space Research Center, Poland	ESR5	<b>Improved physical and empirical models of scintillation</b>
	ESR6	<b>Ionospheric monitoring with GPS scintillation monitors, ionosondes and beacon radio receivers</b>
Technische Universitaet Berlin, Germany	ESR7	<b>Characterisation of effects on current GNSS observing systems</b>
	ESR8	<b>Real time positioning related issues</b>
University of Bath, UK	ESR9	<b>Novel tomography and imaging techniques to describe the upper atmosphere</b>
	ESR10	<b>Data assimilation to support real time models and tools for situational awareness</b>
University of Nova Gorica, Slovenia	ESR11	<b>Prediction of small scale gradients and description of their correlation with the background ionosphere</b>
	ESR12	<b>Characterisation of effects on future GNSS systems (new Galileo and modernized GPS signals)</b>
University of Zagreb, Croatia	ESR13	<b>Nature of the GNSS ionospheric error and modeling of mid-latitudes ionospheric structures in relation to the space weather</b>
Istituto Nazionale di Geofisica e Vulcanologia, Italy	ER1	<b>Coordination and strategy definition for data management and treatment for system implementation</b>

ESR candidates are expected to enroll on a PhD programme at the University or Research Institution where they will be employed.

For further information applicants should contact Prof Roman Galas (TRANSMIT Recruitment Manager, email: roman.galas@tu-berlin.de ) or Dr Marcio Aquino (TRANSMIT Coordinator, email: marcio.aquino@nottingham.ac.uk). Applicants should send CVs to Roman Galas indicating which position they are applying for, observing the Marie Curie Action rules for mobility.