

January 1, 2012

**Czech Technical University in Prague (CTU)**, Faculty of Electrical Engineering, Department of Electromagnetic Field ([www.elmag.org](http://www.elmag.org)) invites applications for a Marie Curie post-doctoral position - **Experienced Researcher** with 4-10 years' experience funded by Marie Curie Industry-Academia Partnerships and Pathways (IAPP) project No. 286333 **WiFEEB - Wireless Friendly Energy Efficient Buildings**.

WiFEEB objectives are to develop and verify the new concept of the wireless friendly, energy efficient building. The wireless propagation properties of building and insulation materials will be assessed. The same properties must be measured for building structures such as wall, floors, facades and window systems. These properties will be evaluated from 400 MHz to 65 GHz to include both current and future wireless networks and systems. A significant part of this project is the development and optimisation of CAD tools that combine wireless propagation models with energy efficiency models producing a complete model for the built environment. New innovative construction materials such as glass and steel fibre reinforcement will be studied and new architectural designs investigated to improve wireless signal propagation while maintaining energy efficiency. The project will address how existing buildings can be reconfigured in addition to showing how new buildings can be designed for wireless and energy efficiency. Several case studies will be modelled including a secure building, a smart home including smart energy metering, the use of intelligent reconfigurable structures and a mixed use shopping/commercial environment. Finally four test projects will evaluate energy and wireless buildings experimentally.

The duration of the contract is **24 months** and the selected candidate will contribute to investigation of building materials properties and wireless friendly structures. It will include material measurements in the mm frequency band and corresponding empirical data processing and investigations of the impact of frequency selective building components on the propagation environment using advanced deterministic modelling techniques.

The candidate must have a strong background in deterministic propagation modelling and experience in software implementation of propagation models. Applicants must hold a Ph.D. degree in electrical engineering, physics or related fields, and demonstrate a capacity to carry out innovative research independently. Fluency in English in both written and oral form is required. Experience in R&D or industrial projects is a plus. The candidate must comply with the Marie Curie **Mobility criteria**, i.e. not have resided or carried out their main activity in the Czech Republic for more than 12 months in the last 3 years prior to April 1, 2012.

Applications should include a cover letter with a statement of motivation and compliance with the Mobility criteria, Curriculum Vitae, and the names and affiliations of at least two referees. The application documents must be submitted in PDF format at [pechac@fel.cvut.cz](mailto:pechac@fel.cvut.cz). **Women are strongly encouraged to apply.**

Formal evaluation of candidates will begin on **February 20, 2012** and will continue until the position is filled. The successful candidate is expected to join CTU as soon as on **April 1, 2012**.

For more information contact Prof. Pavel Pechac, WiFEEB local coordinator at CTU, at [pechac@fel.cvut.cz](mailto:pechac@fel.cvut.cz).