Post-doctoral position at Michelin Company & IPREM Laboratory (Pau)
Development of ToF-SIMS analysis for rubber applications

Michelin is a worldwide leader company in manufacturing and developing tyres with a strategy largely based on innovative research and deep materials knowledge. Tyres are made of composite materials mostly constituted of polymers, reinforcing material and molecules so that high physical performances can be achieved.

IPREM (Institute of analytical Sciences and Physical Chemistry for Environment and Materials) is a research laboratory between the CNRS and the University of Pau, where 200 researchers (engineers, professors, PHD students and postdoctoral fellows are currently working. The group "Materials, Surfaces and Interfaces" of the institute is specialised in the surface and interface analysis of the functional properties of various classes of materials. These studies are performed thank to a state of the art technology platform: X-ray Photoelectron Spectroscopy (XPS) (3 machines), Scanning Probe Microscopies (AFM-STM), Auger Electron Spectroscopy (AES) and Time of Flight Secondary Ions Mass Spectroscometry (TOF-SIMS).

The objective of the project is to develop ToF-SIMS experiments to detect and localize specific molecules in rubber compounds. ToF-SIMS analysis will be carried out on raw materials, simplified and complex rubbers.

Requirements
The successful candidate will be integrated in a team composed of PhD students, post-doctoral fellows, professors and engineers. Knowledge and skills required are:
- A PhD in physical-chemistry and materials. Knowledge in surface science especially in ToF-SIMS will be highly considered.
- Experience on multivariate analysis (PCA, MCR…) will be appreciated
- Good analytical thinking & problem solving capabilities.
- Excellent communication and interpersonal skills.
- Ease for team work, as well as autonomy

The candidate will be hosted mainly at IPREM laboratory in Pau (France) for the ToF-SIMS analysis, but part of the work will also be made at the Michelin Center of Technology of Clermont-Ferrand (France), especially for the sample preparation.

**Details and contacts**
The position is available as soon as possible from January 2018 for a period of 12 months. Salary will depend upon experience. Interested candidates should submit a CV, names and contacts of references to:
Dr Ludovic Devant, Ludovic.devant@michelin.com
Pr Hervé Martinez, herve.martinez@univ-pau.fr, Dr Cécile Courreges, cecile.courreges@univ-pau.fr