Postdoc - Multispectral Remote Sensing for mine site monitoring

ORGANISATION/COMPANY: Université de Liège (ULiege)

RESEARCH FIELD: Engineering; Image Processing; Remote Sensing

RESEARCHER PROFILE: Postdoctoral level, Recognised Researcher (R2), Established Researcher (R3)

APPLICATION DEADLINE: 30 June 2017

LOCATION: Liege, Belgium

TYPE OF CONTRACT: Postdoctoral Fellowship (4650 €/month + Mobility Allowance 600 € / month)

Duration: 1 year (01 July 2017 - 30 June 2018)

About the University

The University of Liege (http://www.ulg.ac.be) is a comprehensive university welcoming more than 23000 students, 3000 researchers and 2000+ PhD students. The University of Liege hosts the Liege Space Centre (http://www.csl.ulg.ac.be), a major partner of the European Space Agency, offering all facilities for space research and in particular support to young entrepreneurs through the FabSpace 2.0 initiative. The University of Liege is also a core-partner of EIT Raw Materials (funding the current project) and as such is leading major research projects in the raw materials sector from exploration to recycling of metals.

About the GeMMe research group

Specialized in the development of digital micro/macro imaging technologies for the mineral’s industry, the GeMMe group has progressively extended its know how towards airborne and spaceborne optical imaging techniques. Back in 1999, the GeMMe developed a joint expertise in multispectral imaging with the Liege Space Center leading to the creation of the KeyObs start up company. Thereafter GEMME worked on remote sensing applications for geological exploration in the Andes Cordillera of Bolivia and Peru. The processing of airborne hyperspectral data to analyze the impact of industrial and mining activities as well as the use of similar technologies in core-scanning were the next steps in this process with a special interest in recent years for research into new spatio-spectral classification tools.

GeMMe is a member of EARSEL (European Association of Remote Sensing labs).

About the project

Based on funding awarded from DG GROW to EIT RawMaterials to explore unexplored applications of Copernicus/Sentinel/Earth Observation data in exploration, mining and urban
mining activities, this project aims at exploring the potential of Copernicus data in mine site monitoring and especially in mapping dust dispersion patterns around active sites. Previous studies of similar problems in Australia and in Europe have been performed with airborne hyperspectral data (HyMap) or discontinued spaceborne data (ASTER) offering both higher spatial and spectral resolutions. Nevertheless, the proven potential of Sentinel 2 for mapping iron oxides and the use of the most recent multi-sensor fusion/classification techniques open a window of opportunities to serve the raw materials community. This project also considers the high revisiting time of the Sentinel 2 program as another very interesting asset when it comes to mapping the dynamic of dust dispersion around extractive sites, but also transportation (rail, road) and loading sites (ports).

The successful post-doctoral researcher will work together in a broader RawMATCop consortium comprising two other researchers addressing the application of Copernicus/Sentinel/Earth Observation data in the raw materials sector at two other European institutes, as well as closely with the EIT RawMaterials Copernicus Committee, comprising EIT RawMaterials staff in headquarters in Berlin/Germany and other Copernicus experts.

**Postdoctoral position**

The GeMMe-Georesources and GeoImaging group at the University of Liege, Belgium is looking for a postdoctoral researcher with an excellent track record to apply for a one year postdoc funded by the EIT RawMaterials.

Applicants should hold a PhD with experience in hyperspectral imaging, spectral/spatial classification, remote sensing, etc. and be available immediately.

Interested candidates are invited to send CV and motivation letter to gemme@ulg.ac.be before 30 June 2017.