



## Open position in the field of “Terahertz Imaging”

(University of Liège, Belgium)

We are looking for a researcher with a Master in Electrical Engineering and/or Computer Science, or equivalent, to contribute to a research project in the field of the Terahertz Imaging and the associated development of image processing algorithms, with a particular interest in biomedical applications.

**When:** Immediately, or as soon as possible.

**Where:** Laboratory for Signal and Image Exploitation, Department of Electrical Engineering and Computer Science, University of Liège, Belgium, [www.montefiore.ulg.ac.be](http://www.montefiore.ulg.ac.be).

**Context:** TERA4ALL research project.

Terahertz (THz) electromagnetic waves have frequencies that range between 100 GHz and 10 THz. These THz waves can penetrate a wide variety of non-conducting materials that may be opaque to visible light and/or demonstrate low contrast when imaged with classical methods. In addition, THz imaging along with associated image processing algorithms could discriminate opaque objects with clear boundaries and have significant potential applications, e.g., in the biomedical field. In this context, the FEDER TERA4ALL research project intends to develop the THz technology in the Walloon Region and to demonstrate the relevance of this technology in many varied fields. This project is coordinated by MULTITEL Innovation Center (Mons) and includes other research partners from the Walloon Agricultural Research Centre (CRA-W), the Université catholique de Louvain (UCL), the Centre spatial de Liège (CSL).

### Tasks

- You will develop image processing algorithms for, among others, analyzing recorded THz data in the context of, e.g., biomedical applications of the THz Imaging.
- You will be involved in THz experimental tests, and progressively increase the robustness of the algorithms.
- You will interact closely with the research partners of this project and likely with medical doctors.
- You will have the opportunity to participate actively to international conferences.

### Profile

- Master in Electrical Engineering and/or Computer Science, or equivalent.
- Practical, hands-on experience in image processing.
- You have the required programming skills (e.g., MATLAB, C, and C ++).
- Experience with the image processing of THz data is a key asset.
- Experimental background in the terahertz spectroscopy is a plus.
- Good understanding of fundamentals of the THz is a plus.

### Application

Interested candidates are invited to send a cover letter, a detailed CV (including honours, grades, programming skills, publication (if any), etc.), and the contacts of 1-2 referees to Dr. Mohamed Boutaayamou ([mboutaayamou@uliege.be](mailto:mboutaayamou@uliege.be)) and to Prof. Jacques G. Verly ([jacques.verly@uliege.be](mailto:jacques.verly@uliege.be)) from the Department of Electrical Engineering & Computer Science, University of Liège, Belgium.