FULL TIME DOCTORAL POSITION IN IMAGE PROCESSING AND MACHINE LEARNING

BELSPO Funded project
Making Analog Seismograms FAIR to Enable Research

LABORATORY OF IMAGE SYNTHESIS AND ANALYSIS (LISA) – UNIVERSITÉ LIBRE DE BRUXELLES

Job description

With this project, we propose to bring century-old analog seismic data and metadata compliant with modern standards by bridging two domains of expertise, namely seismology and machine learning.

The goal of the project is to develop methodologies to make pre-digital seismic (i.e. scanned seismogram images) data compliant with FAIR principles (Findability, Accessibility, Interoperability, and Reuse of digital assets) which are the core of modern community standards. This data and metadata, once discoverable and usable, are the only source of independent observations available to atmosphere-ocean-solid earth coupling modelers to study the ocean climate using the seismic waves they generate during the pre-satellite period.

The project is done in collaboration with the Royal Observatory of Belgium.

Profile

- Master degree in Engineering or Computer Sciences, with a focus on either image or signal processing
- Good programming skill (Python)
- Demonstrated organisational skills
- Demonstrated problem-solving abilities
- Ability to work independently and as a member of a team (the project is a collaboration between several institutes)
- English language is mandatory

Specific Requirements

- Advance practice in Image processing
- Experience in Deep neural network architecture implementation and usage
- Image and signal processing
- Data management and analysis
- Data sharing
Interested?

The applicant should send PDF documents:
- cover letter (1 page maximum)
- curriculum vitae

Submit application to: Olivier.Debeir@ulb.be

If judged suitable, applicants will be selected for an online interview.

Starting date: As soon as possible.

Deadline for the submission of applications: Positions open until filled