

## Job Advertisement

Within the European Industrial Doctorate **IMAGE-IN: Imaging infections: integrated, multiscale visualization of infections and host response** a Marie Skłodowska-Curie Innovative Training Network (MSCA-ITN-EID) of the European Commission, BMD Software offers the position (100%) of an

### Early Stage Researcher (PhD candidate)

in the field of Data Visualization / Imaging / Data Analysis, with the research topic

**“3D visualization and correlation from different spectroscopic imaging modalities to define the pathogen niche”**

The position should be filled between 1 January 2020 (the earliest) until 30 June 2020 (at the latest).

Funding of the position is available for 3 years and comprises an attractive training curriculum with international partners.

#### **Objectives of the research project:**

We aim developing improved data analysis algorithms for the 3D visualization of infected cells using 3D image stacks. For that goal, we will explore combined spectroscopic data sets consisting of fluorescence images, hyperspectral Raman images, real-time intra-vital multimodal imaging (CARS, TPF, FLIM, SHG) and FIB-SEM of infected cells from controlled in-vitro experiments. Work will be carried out in close collaboration with the University of Aveiro (Prof. Carlos Costa, IEETA), where it is planned a research stay of 6 months. A 12 months secondment is also planned at the Leibniz- IPHT (Prof. Rainer Heintzmann, FSU), and at ChemoX, a German young start-up with expertise in chemometrics/statistics.

#### **Be part of the European Industrial Doctorate Network IMAGE-IN:**

The MSCA-ITN-EID IMAGE-IN project combines powerful, multiscale imaging techniques with state-of-the-art data analysis methods to gain deeper insights into the pathogenesis of infections and host response.

IMAGE-IN thus provides high level training to educate the next generation of researchers who can actively advance imaging technology for medical application (e.g. to generate the basis for new diagnostic and therapeutic approaches). You will gain full insight into the medical need, the spectroscopic techniques and the skills to handle and analyse large, multidimensional data. You will be embedded into a network of research and medical institutes as well as companies in Germany and Portugal that are experts in their fields.

#### **Requirements:**

We seek an excellent, open-minded and team-spirited PhD candidates with a MSc degree in Computer Science, Informatics Engineering, Biomedicine Sciences, Mathematics, or other related area. The successful candidate should have good knowledge and interest in both experimental and theoretical work, and interests in interdisciplinary research in the field of medicine, in particular infection research, spectroscopy/imaging and data analysis is expected. Fluent communication skills in English, both spoken and written, and a solid background and knowledge are required.

Candidates will be required to meet the Marie Skłodowska-Curie Early-Stage Researcher eligibility criteria: (<http://ec.europa.eu/research/mariecurieactions/>). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in Portugal for more than 12 months in the three years immediately before the appointment.

#### **We offer:**

The successful candidate will be part of an excellent international research team and benefit from the scientific and complementary training programme of the EU-funded Innovative Training Network (ITN) IMAGE-IN. We offer highly competitive and attractive salaries according to regulations of Marie Skłodowska-Curie Actions, plus mobility and family allowances as applicable.

As an equal opportunity employer BMD Software is committed to increase the percentage of female scientists and therefore especially encourages them to apply.

Informal enquiries may be addressed to Prof. José Luis Oliveira at [jlo@bmd-software.com](mailto:jlo@bmd-software.com).

The application must be accompanied with the following documents in PDF format:

- letter of motivation,
- curriculum vitae,
- transcripts of records from University/University College and copy of degrees,
- two written recommendation letters (e.g. one by your Master thesis supervisor) and up to four referees contacts

Applications should be sent electronically to: [adm@bmd-software.com](mailto:adm@bmd-software.com)

The application is open until the position is filled.