

Job Advertisement

The Leibniz-IPHT is a university independent research institute with close connection to the Friedrich-Schiller-University Jena and member of the Leibniz association.

The Leibniz Institute of Photonics Technology (Leibniz-IPHT) offers within the European Industrial Doctorate **IMAGE-IN: Imaging infections: integrated, multiscale visualization of infections and host response** (Marie Skłodowska-Curie Innovative Training Network (MSCA-ITN-EID) of the European Commission) the position (100%) of an

Early Stage Researcher (PhD candidate) (f/m/d)

in the field of Optical Spectroscopy / Imaging / Analysis with the research topic

“Imaging infections using advanced spectroscopy methods and statistical data analysis”

The position should be filled **as soon as possible**. Funding of the position is available for 3 years and comprises an attractive training curriculum with international partners.

Objectives of the research project:

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. Your project will focus on intracellular infections which can result in persistent, recurring and difficult-to-treat infections. New imaging technologies (including real-time fluorescence imaging, high-resolution fluorescence imaging, label-free 3D Raman spectroscopic imaging and electron microscopy) together with powerful statistical analysis shall be used to visualize bacteria and their direct environment inside intact host cells, reveal details on their metabolic state, distinguish different developmental forms and follow antibiotic treatment in a cell culture models.

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

IMAGE-IN 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. Work will be carried out in close collaboration with the Jena University Hospital. A research stay of 5 months is planned at a German start-up in Wölfersheim/Hessen for in-depth analysis of the Raman imaging data as well as a 13 months stay at project partner BMD in Aveiro, Portugal (SME with excellent expertise in image analysis and visualization).

Requirements:

We seek an excellent, open-minded and team-spirited PhD candidate with a background in spectroscopy, imaging, physics, (bio)chemistry, analytics, photonics or similar. The successful candidate should have good knowledge and interest in both experimental and theoretical work, especially analysis of multidimensional imaging and spectroscopic data. You should have high interest to use and advance your programming skills to apply advanced statistical algorithms and deep learning algorithms to the large data sets. Interest 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 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 Germany 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 Leibniz-IPHT is committed to increase the percentage of female scientists and therefore especially encourages them to apply.

Informal enquiries may be addressed to Prof. Ute Neugebauer at ute.neugebauer@leibniz-ipht.de.

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

- letter of motivation,
- curriculum vitae of at most 3 pages,
- transcripts of records from University/University College and copy of your degree
- list of publications (if available),
- two written recommendation letters (e.g. one by your Master thesis supervisor) and the referees contact details

Please send your application electronically as pdf file via mail **until 15th November 2020** to:

Leibniz-Institute of Photonic Technology Jena
Human Resources
Albert-Einstein-Straße 9, 07745 Jena, Germany
e-mail: Personal_Abt1@leibniz-ipht.de

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