

JOB OFFER

Position in the project: PostDoc Candidate

Scientific discipline: Engineering and Technology: photonics, optical metrology, biomedical engineering, 3D imaging

Job type (employment contract/stipend): employment contract

Number of job offers: 1

Remuneration/stipend amount/month: 11.000 PLN of full remuneration cost (75% involvement in the project), i.e. expected net salary at 7.500 PLN

Position starts on: 01 January 2018

Maximum period of contract/stipend agreement: 22 months

Institution : Photonics Engineering Division, Institute of Micromechanics and Photonics, Warsaw University of Technology, Warsaw

Project leader: prof. Małgorzata Kujawińska

Project title: BiOpTo: Tomographic phase microscope for biomedical applications

Project description:

The main goal of the project is to develop, test and prepare for commercialization (TRL7) a novel tool for quantitative 3D analysis of phase biological microobjects namely the tomographic phase microscope (TPM). TPM is working with projections acquired within a limited angular range, which are captured sequentially or through an innovative system of parallel projections. The system of computational imaging provides full processing path: from digital acquisition of investigated object's projections up to 3D visualization. The TPM supports such biomedical applications as histopathology, traceable measurement of cells and tissues, advanced therapy medicinal products for the treatment of osteoarthritis, cancer and cardiac diseases. In the course of the project, an initial business plan will be created in order to prepare the TPM for commercialization.

Key responsibilities include:

1. Design of optomechanics measurement systems based on microscopy
2. Development of concept and design of multichannel optical diffraction tomographic system for analysis of dynamic biological microobjects
3. Building and testing of optical diffraction tomograph for analysis of dynamic biological microobjects, The system should meet expectations of medical and biological societies
4. Implementation of the system for the selected measurement applications
5. Cooperation with other participants of the project in order to implement the numerical methods into experimental setups.

Profile of candidates/requirements:

1. PhD degree in physics or engineering with the specialty in the field of optics or photonics
2. Expertise in the design of optical and optomechanics systems
3. Expertise in the field of optical metrology, including holographic microscopy and tomography
4. Expertise in the field of investigation of biological samples
5. Very good knowledge of English (at least C1 level) confirmed by a certificate
6. Strong motivation for scientific work.

Required documents:

1. Cover letter
2. CV
3. A transcript that includes grades from the last two years of the studies (or PhD studies) with the final grade from the studies
4. Recommendation letter
5. List of publications and conference papers
6. Copy of the higher education degree diploma
7. Certificate of English (C1 or higher)

Please submit the following documents to: electronically to zif@mchtr.pw.edu.pl, please write "PostDoc Candidate for BiOpTo" in the message title.

Application deadline: 14 December 2017, 20.00

For more details about the position please visit:

Please include in your offer:

"I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Personal Data Protection Act as of 29 August 1997, consolidated text: Journal of Laws 2016, item 922 as amended."