# JOB OFFER

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| Position in the project: | PostDoc |
| Scientific discipline: | Engineering and Technology: photonics, optical metrology |
| Job type (employment contract/stipend): | employment contract |
| Number of job offers: | 1 |
| Remuneration/stipend amount/month (*"X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"*): | 11.000 PLN of full remuneration cost (75% involvement in the project), i.e. expected net salary at 7.500 PLN |
| Position starts on: | 01.05.2018 |
| Maximum period of contract/stipend agreement: | 18 months |
| Institution: | Photonics Engineering Division, Institute of Micromechanics and Photonics, Warsaw University of Technology, Warsaw |
| Project leader: | prof. Małgorzata Kujawińska |
| Project title: | *Project is carried out within the* **BiOpTo: Tomographic phase microscope for biomedical applications** *programme of the Foundation for Polish Science* |
| 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: | Responsibility for: <br> 1. Development of software that performs full path of data processing (backend) from an optical diffraction tomography system working with a limited angular range of projections (Matlab/Python), with particular emphasis on efficient tomographic reconstruction algorithms, <br> 2. Development of a method of visualization of results, i.e. three-dimensional distribution of the refractive index of examined biological structures, which would meet expectations of biological and medical communities, <br> 3. Development of functional software (frontend) for the processing of optical diffraction tomography data with a user interface adapted to the needs of biological and medical communities. <br><br> Contribution to the development of strategies for the commercialization of optical diffraction tomography setup in both static and dynamic mode. <br><br> Close cooperation with other project participants in order to implement the developed numerical solutions in experimental setups. |
| Profile of candidates/requirements: | 1. PhD degree with specialization in optics, physics or mathematics, <br> 2. Fluent knowledge of the Matlab/Python environment, <br> 3. Expertise on numerical methods used in optical diffraction tomography, including tomographic reconstruction algorithms - confirmed by scientific papers, <br> 4. Expertise in parallel computing (CUDA technology), <br> 5. Expertise on measurements of biological micro-samples, <br> 6. Excellent knowledge of English at a level not lower than C1, confirmed by a certificate, <br> 7. Strong motivation to scientific work. |

| Required documents: | 1. Letter of motivation, |
| | 2. CV, |
| | 3. Recommendation letter, |
| | 4. List of scientific papers and conference proceedings, |
| | 5. Copy of the higher education diploma at PhD level, |
| | 6. Certificate of proficiency in English at a level not lower than C1. |
| We offer: | Unique conditions for scientific research in innovative area of photonics. |
| 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: | 09.04.2018 |
| For more details about the position please visit (website/webpage address): | |
| Euraxess job/stipend offer (in case of PhD and postdoc positions): | https://www.euraxess.pl/ |

Please include in your offer:

European Funds
Smart Growth

FNP Foundation for Polish Science

European Union
European Regional
Development Fund