

Project: *[GaboScope] Numerically enhanced lensless Gabor microscopy for high-throughput marker-free investigation of dynamic live biosamples*

Principal Investigator: Maciej Trusiak, PHD

Position in the Project: Master degree student in the Faculty of Mechatronics, Warsaw University of Technology.

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

Requirements:

1. Bachelor's degree in Physics, Engineering, Optics, Computer Science or Biomedicine. Enrollment in Master degree studies at Faculty of Mechatronics WUT.
2. Very good written and spoken English that allows to understand scientific literature and prepare scientific papers/presentations.
3. Very good programming skills in Matlab/Python.
4. Strong motivation for scientific work (experimental and numerical) both independently and as a part of a team in an interdisciplinary environment, with the ability to creatively propose solutions to problems at hand, pay close attention to detail and to meet deadlines.
5. Very good social skills.

General description of responsibilities:

In the GaboScope we aim at advancing the Gabor lensless holographic microscopy (LHM) in terms of high-throughput label-free bio-imaging of dynamic live cells with algorithmic specificity in hologram low signal-to-noise-ratio regimes.

Master Student will be responsible for

- advancing numerical phase/amplitude reconstruction of time-dependent 3D objects in large volumes imaged by LHM (i.e., developing computational dark-field based automated object 4D tracking and implementing twin-image reduced and SNR-improved phase/amplitude imaging)
- novel experimental advances and bio-imaging applications (i.e., investigating the influence of spatiotemporal coherence on the LHM capacity).

Active participation in dissemination of results to the scientific community is required. Master Student will work closely with PhD Student and will be supervised by Postdoc employed within the GaboScope project.

What we offer:

1. Scholarship contract and remuneration package.
2. Work in dynamic and competent scientific group with excellent research environment and international cooperation promoting publications in high impact journals.
3. Financial support of abroad scientific visits and attending conferences.
4. Encouragement and support in preparing scientific publications and general career development.

Type of NCN Project: SONATA16 – ST.

Application deadline: 08.07.2021, 23:59. Results available on 12.07.2021.

Please submit the following documents to: maciej.trusiak@pw.edu.pl.

Conditions of employment:

Master Student scholarship 1500 PLN/month (net salary), stipend contract for 18 months.

Preferred time of starting the position: 1st August 2021.

Additional information:

To apply, please send your application including motivation letter, CV and achievements list, Bachelor's degree thesis alongside with contact information to the scientific supervisor and other referees (if available) to the following e-mail address: maciej.trusiak@pw.edu.pl (deadline 08.07.2021). Incomplete applications will not be considered.

We thank all applicants for their interest; however, only selected candidates may be invited for an interview. Applications will be accepted until the position is filled. The call deadline may be extended at any time without previous notice to improve the suitability and effectiveness of the recruitment process. If the winner of the competition resigns from signing the scholarship contract, we reserve the right to choose the next person from the ranking list.

Due to the entry into force of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, all candidates are requested to provide consent to the processing of his or her personal data by the institution which carries out the recruitment process.

Thus, please include in your application the following statement: "I hereby agree to the processing of my data included in the application documents by Warsaw University of Technology, Warsaw, Poland, to carry out the recruitment process."

Your personal data is processed on the basis of the Article 6 Part 1 Points (c) and (f) of the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (GDPR; Official Journal of the European Union L 119/1).