

Title: Postdoctoral position in the field of computational electromagnetics/computational photonics/scientific computing/applied mathematics – competitive salary

Offer Description: This is a postdoctoral position in Prof. Michal Mrozowski's research project: Electromagnetic Design of flexible SensOrs. The goal of the project is to develop a new software tool for fast and accurate simulation-based design of sensing devices and their associated passive circuitry with carefully engineered electromagnetic properties. The software (InventSIM) is based on the finite-element method (FEM) and employs a unique mesh deformation technique and model order reduction algorithms to enable fast optimization. This post is for a researcher that will contribute development of InventSIM by proposing, prototyping and testing of novel FEM/sparse linear algebra/optimization algorithms for fast FEM simulations and optimization of antennas and passive microwave components. The postdoctoral appointment is for 18-24 months, with possible extension contingent on availability of funds and research performance.

Key responsibilities include:

1. Research related to the finite-element method for solving Maxwell's equations intended for fast simulations and optimization of antennas, passive microwave or photonic components
2. Developing, testing and benchmarking of numerical algorithms
3. Report writing
4. Preparation of research papers for leading journals and conferences.
5. Dissemination of project results on workshops and conferences
6. Assisting MSc and PhD students

Researcher Profiles: First Stage Researcher (R1),

Research field: Engineering, Electrical engineering, electronics, Information and Communication Technologies, Scientific Computing, Applied Mathematics

Type of Contract: Temporary

Job Status: Full-time

Hours Per Week: 40

Application Deadline: 15-10-2017 03:00PM (The offer is valid until a suitable candidate is found - screening of applications will start on Sept 12th. Applications received after the deadline will also be accepted)

Timezone: Europe/Warsaw



Envisaged Job Starting Date: between 01-Nov-2017 and 01-June-2018

Reference Number: ?

How to Apply: E-mail with attachments (.pdf files)

E-mail address to send application: mwave@eti.pg.gda.pl

Required documents:

1. Cover letter with the description of particular skills or achievements related to the scope of the project and highlighting the experience with mesh/FEM/computational electromagnetics/scientific computing/numerical code development/applied mathematics
2. CV with a complete list of publications
3. Copies of up to 5 most important publications in JCR journals
4. A copy of the language certificate or other evidence of fluency in English
5. A copy of the PhD thesis
6. A scan of the PhD diploma
7. Reference letters with names and email addresses (and, if possible, phone numbers) of the two academic/professional referees who may be contacted by the recruiting committee

Hiring info & work location: Gdansk University of Technology, Poland,

Organisation/Company *: Gdansk University of Technology, Faculty of Electronics, Telecommunications and Informatics

Organisation Type: Higher Education Institute

Department: Department of Antenna and Microwave Engineering

Country *: Poland

Street : Narutowicza 11/12

City: Gdańsk

State: pomorskie

Postal Code: 80-233

Prof. Micha Mrozowski's (PI) webpage:

<http://mwave.eti.pg.gda.pl/index.php?k=150>

Contact Person Email: mwave@eti.pg.gda.pl

Phone: (+48) 58 347 19 24



Required Education Level: PhD degree (obtained not earlier than January 1st, 2012) in a technical or scientific discipline involving numerical code development (the preference will be given to candidates whose PhD research involved FEM algorithms or sparse matrix algorithms development, tetrahedral mesh generation/refinement or manipulation, computational electromagnetics/scientific computing/linear algebra/applied mathematics/graph algorithms)

Skills/Qualifications:

1. Documented research experience with numerical methods/scientific computation/applied mathematics involving algorithms development and testing
2. Proven experience with Matlab/Python and C++
3. Experience in using numerical libraries for sparse and dense linear algebra would be
4. Good interpersonal and communication skills, be able to work in a multi-cultural environment both independently and as a part of a team

Required Languages:

1. Fluent English

Required Research Experience

1. Good publication record in JCR journals related to computational electromagnetics or photonics/scientific computing/linear algebra/applied mathematics)

Website for additional details:

<http://eminvent.com/projects.html> (English)

<http://mwave.eti.pg.gda.pl/index.php?k=150>

<http://mwave.eti.pg.gda.pl/index.php?k=204> (Polish)

Benefits: Remuneration/month: 9000 PLN , i.e. expected net income at ca 6800 PLN. This wage is very competitive considering the cost of living in Poland. The remuneration is about twice the average salary in Poland.

Eligibility criteria:

PhD degree (obtained not earlier than January 1st, 2012) in a technical or scientific discipline involving numerical code development (the preference will be given to candidates whose PhD research involved graph algorithms/ tetrahedral mesh generation/refinement or manipulation, computational electromagnetics or photonics/scientific computing/linear algebra/applied mathematics)

Selection process:



The recruitment process involves two steps

Evaluation of the applications by a selection committee

Interview with the shortlisted applicants

We reserve the right to contact only applicants selected through verification of the submitted documents and reserve the right to reject all submitted applications, if it is concluded that they do not meet the criteria.

Additional comments

The position is funded by the Foundation for Polish Science under the Team-Tech programme

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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.”

