Research Assistant Professor position in the field of micro-Energy Harvesters in modern science centre CEZAMAT at the leading technical university in Poland – Warsaw University of Technology.

Position: **Research Assistant Professor**
Application Deadline: **July 24, 2024 16:00 CET**
Please send applications together with documents by e-mail to: Tomasz.Skotnicki@pw.edu.pl

Responsibilities:

- Numerical and analytical energetic performance modelling of piezoelectric energy harvesters;
- Piezoelectric-based µEnergy harvesters layouts design;
- Preparation of technological documentation (*process flow with fabrication recipes*);
- Fabrication of µ-electronic devices in labs with high cleanness class (*work in clean-rooms, handling of specialized and advanced fabrication infrastructure/machines*);
- Execution of electrical (*IV, CV under AC and DC and 4-wires resistance measurements*) and analytical (*scanning electron and optical microscopies, profilometry, ellipsometry, AFM*) characterization upon fabricated devices;
- Analysis and data treatment;
- Preparation of technological and experimental reports;
- Preparation of own and contribution to common scientific publications in recognised scientific journals;
- Preparation of own and contribution to common scientific disseminations in frame of national and international scientific conferences;
- Other tasks within the scope of duties, assigned by supervisor.

Candidates are required:

1) to have completed a higher education with a master's degree or equivalent in a technical engineering;
2) to have a PhD degree (*obtained not more than 10 years before this call publication*) in a subject related to nano- or micro-electronics;
3) to have good knowledge of French and a very good knowledge of written and spoken English, allowing active participation in international scientific conferences, publication of scientific articles, research reports, free work with English scientific literature and submission of scientific grant applications, also taking into account international cooperation;
4) to possess ability to speak and write in Polish enabling: (***i***) to operate effectively and efficiently in the Polish (*Warsaw*) scientific environment and in CEZAMAT laboratories; (***ii***) to apply for scientific grants in Polish research funding institutions and to conduct scientific projects in cooperation with Polish funding institutions;
5) to demonstrate a scientific track record of at least 10 co-authored scientific publications in journals listed in the Journal Citation Report (JCR) database;
6) to have a scientific profile in the field of semiconductor technology, proven by publications, participation in scientific projects and professional experience;
7) to have at least 10 years of experience working in semiconductor manufacturing laboratories (*cleanroom*);

8) to have work experience abroad (at least 3 years) in a research centre focused on electronics research, nano-fabrication with cleanroom facilities and practical experience of working in such facilities;
9) to have practical knowledge of nano- and micro-fabrication methods both from the design side (*topology design*) and from the technological side (*knowledge of production techniques/processes, machine operation and design of process flows*)
10) to have practical knowledge of analytical techniques: (*SEM, optical microscopy, profilometry, ellipsometry, AFM*) and electrical measurements: (*CV, IV, DC, AC, 4-wire resistance measurement*);
11) to have practical knowledge in semiconductor technology including: electron beam lithography, photolithography, plasma etching, high temperature processes, LPCVD and PECVD depositions;
12) to have knowledge of distributed/environmental energy harvesting devices;
13) to possess experience in the organisation of laboratory work, preparation of laboratory protocols and procedures, preparation of scientific publications in English, French and Polish, preparation of research reports;
14) to demonstrate experience in conducting research, proven by a track record of publications and participation in scientific projects.

We offer:

1. Fixed-term employment, 60 months, 60% FTE;
2. Position starting date: September 1, 2024
3. Work in the 5-years SFINKS project funded by the European Research Council in frame of the Advanced Grant competition;
4. Work at a leading technical university in Poland;
5. Possibility of scientific development thought integration with a dynamic team carrying out cutting-edge research in a strategically important area;
6. Possibility to work in hybrid mode;
7. The opportunity to participate in trainings aimed at further development and improvement of qualifications;
8. Possibility of taking advantage from a group insurance package and a social benefits addressed to the Warsaw University of Technology employees (*co-financing of holidays, sports activities, language courses*)

Applicants are invited to submit a CV with their academic achievements (*publications listed chronologically from most recent to oldest*), a copy of their academic degrees by e-mail to: Tomasz.Skotnicki@pw.edu.pl
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We reserve the right to contact only selected people. We do not return submitted documents.