We are looking for a candidate
who will carry out research work in the Institute of Chemical Engineering and
Environmental Protection Processes, Chair of System Design and Process
Optimization, dealing with numerical modelling of solid-oxide fuel cell systems.

The topic will be conducted in conjunction with a cooperation project SAPIENS "Solid
Oxide Fuel Cell Auxiliary Power in Emissions/Noise Solutions" financed by the European
Commission in the 7th Framework Programme in the project’s category: "New portable
and micro fuel cell solutions".

The main tasks of the PhD student will include:

- analysis of fuel cell stacks and peripheral devices, including heat exchangers, fuel
  reformer, afterburner using the ANSYS-FLUENT/COMSOL and AspenOne
  packages. This will cover: i) generating 3D numerical grids, ii) numerical modelling
  of steady and transient processes of mass and heat flow in a complex 3D geometry,
  including flows with chemical reactions, iii) writing user defined functions to
  implement into the CFD code, iv) optimizing the geometry of the system, v)
  processing the numerical results, verification and comparison with experimental and
  literature data,
- giving a major contribution to writing deliverables of the project,
- cooperation with and support for the project team.

Requirements:

- M.Sc. degree, preferred graduates of faculties: process engineering, mechanical,
  electrical engineering specialized in power generation / energy transformation,
- very good knowledge of CFD analysis, in particular of the ANSYS-FLUENT or
  COMSOL package, ability to create 3D meshes and writing user defined functions
to implement in the CFD code,
- experience in the analysis and optimization of fuel cell systems using CFD codes,
- ability to teamwork,
- good command of English is mandatory (spoken and written),
• analytical thinking,
• flexibility, organizational skills, ability to diligent and independent action,
• proficient computer skills including the programs of MS Office, Matlab, AspenOne.

We offer:
• participation in the international research project,
• duration of the internship for a minimum of 10 months with a possible extension, starting date February 1, 2013,
• competitive salary of approx. 800 euro monthly,
• opportunity to develop, extend knowledge and obtain the degree of PhD.

Required documents:
• resume and cover letter,
• references from previous places of work/study,
• certified evidence of completed courses, internships and training,
• statement of consent to processing of personal data for the open competition in accordance with the Polish law of 29/08/1997 on the protection of personal data.

If you are interested please send your application by 15.12.2012 to the e-mail address: paulina.pianko@zut.edu.pl
or by writing to:
West Pomeranian University of Technology, Szczecin
Faculty of Chemical Technology and Engineering
Systems Design and Process Optimization
c/o Project SAPIENS
Piastow 42 ave.
71-065 Szczecin
Poland

Contact:
dr inż. Paulina Pianko-Oprych - leader of the research team in the SAPIENS project in ZUT, phone: +48 91 449 47 31, fax: +48 91 449 46 42, e-mail: paulina.pianko@zut.edu.pl
Please add the following clause:
"I hereby agree to processing my personal data included in my job application for the needs of the recruitment process in accordance with the Law on Personal Data Protection dated August 29, 1997 (Journal of Laws of 2002 No. 101, item 926, as amended)"

**Other information:**
Please note that we will contact only selected candidates.
We guarantee full confidentiality of applications.
Documents will not be returned.