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Subject: 2 Marie-Curie Doctoral Student Positions in Geoinformatics/GeoWeb 2.0
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▶ 1 Attachment, 534 KB

2 Marie-Curie Early-Stage-Researcher Positions
(doctoral students) in Geoinformatics/GeoWeb 2.0

reference number: A24/11

OVERVIEW

Two Early Stage Researcher (ESR) positions are available at the Cognitive Systems Group, University of Bremen, Germany (<http://cosy.informatik.uni-bremen.de/>). These positions are funded by the EU project GEOCROWD in the Marie Curie Initial Training Network Program (<http://www.geocrowd.eu>). The duration of the positions is 3 years. Applications for smaller periods will be considered. Recruited ESRs will have the option to enroll as PhD students.

GENERAL RESEARCH TOPIC

GeoWeb 2.0 is the geographic embodiment of the Web 2.0 moniker for the next generation Web, that is, it is a term the next generation of geographic information publishing, discovery and use. The goal of the GEOCROWD project is to establish a fertile research environment by means of a training network that will promote the GeoWeb 2.0 vision and advance the state of the art in collecting, storing, analyzing, processing, reconciling, and making large amounts of semantically rich user-generated geospatial information available on the Web. Specifically, activities will be centered on (i) exploiting user-contributed geospatial data, (ii) Web-geodata management, (iii) efficient means for data collection and dissemination, e.g., mobile computing, and (iv) innovative uses for such data. The project goal is to tame this data explosion, which applied to the geospatial domain translates into massively collecting and sharing knowledge to ultimately digitize the world. This is the challenging research goal to be undertaken by the recruited ESRs.

Junior researchers with an MSc in areas such as spatial databases, query processing and indexing, mobile and pervasive computing, large scale data management, distributed systems, AI, geographic information science, geocomputation, and spatial and temporal reasoning are encouraged to apply.

PROJECT POSITION 1: Hybrid qualitative and quantitative spatial reasoning and analysis

Spatial reasoning so far focused on absolute coordinated systems, means of efficient storage (data types) and the expressiveness of respective query languages. We want to go beyond this stage and make spatial objects as well as spatial relations prime citizens for data processing, i.e., reasoning. While some work in this direction exists, i.e., how to represent qualitative spatial relationships in metrical terms, no all encompassing effort has been provided.

In this project we consider a heterogeneous spatial information system that combines quantitative and qualitative spatial data. Typically, there is a lot of new information that can be inferred or discovered in such a system but to do so, suitable techniques to perform combined qualitative and quantitative spatial reasoning are required. This project will also lay the groundwork for work on other projects in this research theme, e.g., data fusion and patterns.

PROJECT POSITION 2: Mobile devices and sensors for data collection

This project builds on hybrid qualitative and quantitative spatial reasoning and analysis. As such, mastering qualitative and quantitative spatiotemporal information in a seamless way will be introduced to agent systems and so to realize various location-based services based on the information collected in the agent system.

The aim of this project is to develop a spatial information system as a component of an intelligent building. The system supports and receives information from human agents as well as from mobile service robots operating in the building. Information provided by the system can be information about spatial aspects of the building (e.g., how to get to some place) or about the current location of an agent. Similarly, the provided information can be about the building (e.g., hallway A is blocked) or about the agents (e.g., person B is currently with me in the kitchen).

ELIGIBILITY

- The recruited ESR should be in the first four years of their research careers (at the time of selection, measured from the date when they obtained the degree which would formally entitle them to embark on a doctorate).
- ESRs should not already have a PhD, and they should have the qualifications to embark on a PhD program (e.g. MSc or diploma degrees).
- ESRs must not have resided or carried out their main activities (work, studies, etc.) in Germany for more than 12 months in the last 3 years. This requirement is irrespective of the applicant's nationality.
- As the University of Bremen intends to increase the proportion of

female employees in science, women are particularly encouraged to apply. In case of equal personal aptitudes and qualification, disabled persons will be given priority. Applicants with a migration background are welcome.

FINANCIAL PROVISIONS

Marie Curie fellows enjoy good salaries and working conditions, career development opportunities and work-life balance. More specifically, the financial support of Marie Curie ITN to the ESR includes:

- A considerable monthly living and mobility allowance,
- a yearly travel allowance (i.e., a fixed amount of money based upon the direct distance between the location of origin of the researcher and the place of work),
- a career exploratory allowance (i.e., a single payment for attending job interviews, additional courses, job fairs, etc.), and
- coverage of the expenses related to the participation of the ESR in research and training activities (contribution to research-related costs, meetings, conference attendance, training actions, etc.).

HOW TO APPLY?

Please address questions about the position and send your application under the reference number (preferably by email) to:

Dr. Thomas Barkowsky
University of Bremen
barkowsky@informatik.uni-bremen.de
Cognitive Systems
P.O. Box 330 440
28334 Bremen / Germany

FB 3 / AG

For a paper-based application, please make sure to only send copies of documents as all received application material will be destroyed after the selection process.

Application deadline: 05 March 2011 (or until a suitable candidate is found).



[ESR_Position....pdf \(534 KB\)](#)