

From: "Thomas Barkowsky" <barkowsky@informatik.uni-bremen.de>
Subject: **TU Vienna: Two doctoral research assistant positions in GIScience**
Date: 15 February 2010 10:21:21 CET
To: <barkowsky@sfbtr8.uni-bremen.de>
Cc: <kranz@informatik.uni-bremen.de>
Reply-To: <barkowsky@informatik.uni-bremen.de>

The Department of Geoinformation and Cartography at the Vienna University of Technology (<http://www.geoinfo.tuwien.ac.at/>) invites applications for two doctoral research assistant positions in Geographic Information Science (GIScience). We seek individuals whose research interests include (but are not limited to) areas such as qualitative and/or quantitative spatial analyses, spatial cognition, spatial ontology, spatial statistics, user interface design for GI technologies. In particular, we hope to advance some of the following topics:

1. Modeling processes in GIS, possibly with the integration of partial differential equations to describe processes and linkage to finite element software (extending a completed Ph.D. thesis); can we use data from time series to calibrate the process description and redefine GIS as spatial simulation machine?

2. Extend the use of ontologies beyond data integration to automate the construction of graphical user interfaces: What are the semantics of communication between user and GIS? How do they relate to ontologies, database schema and other formal description of semantics?

3. GIS with 3D (and 3D and time): a novel, essentially dimension independent geometric data model that serves multiple resolutions (resulting from a Ph.D. close to completion) should be used to construct essential parts of a GIS (e.g., modeling buildings, geological formation.)

The successful candidates must demonstrate a strong interest in research leading to a Ph.D. and will have opportunities to gain teaching experience. We expect an M.Sc. in GIScience, Surveying and Mapping, Computer Science, or Geography; a good background in mathematics and the ability to program is required (knowledge of Haskell or another functional language, a plus), as well as good command of English. The term of appointment is 4 years, in which time the completion of a Ph.D. is expected. International networking is part of our work environment: we cooperate with other GIScience research labs in Europe and other parts of the world, participate in 2 COST projects and other European research projects and encourage attendance in GIScience conferences.

Applicants should send a letter of application that reviews and documents their qualifications, curriculum vitae, and contact information for three referees to: Andrew Frank, Chair, Department of Geoinformation and Cartography, Gusshausstrasse 27-29 E127, 1040 Vienna, Austria. Email applications will be accepted, preferably before end of February. Email to frank@geoinfo.tuwien.ac.at. Both positions have been already funded, and the review of applications will begin immediately. The starting date of each position is negotiable, preferably early summer.