UNIVERSITY OF HELSINKI

# PhD student positions in Airborne Imaging Spectroscopy Application and Research on Earth Sciences

The Department of Geography of the University of Helsinki hosts two 4-year PhD student positions in airborne hyperspectral imaging spectroscopy in 2009-2013 as a part of Graduate school in Airborne Imaging Spectroscopy Application and Research on Earth Sciences (AISARES). The successful applicant should have an MSc degree or equivalent with knowledge and experience in quantitative remote sensing, which can be evidenced by a MSc thesis in the field and academic courses carried out. Earlier knowledge of software like MATLAB, ENVI IDL, ArcGIS, Erdas Imagine is needed.

The Department of Geography has a staff of 44 people out of which 10 belong to the GeoInformatics Research Group (GIRG) led by Prof. Petri Pellikka. GIRG is carrying out research on biophysical parameters of Earth surface, landscape, land use and land cover mapping and change detection in Europe, Africa and Americas having external funding from Academy of Finland, European Commission and Ministry of Foreign Affairs of Finland. Currently there are 3 senior scientists and 7 other PhD students in GIRG preparing their dissertation under the supervision of Prof. Petri Pellikka. The current staff is very international and includes researchers from Finland, Kenya, Ethiopia, India, Brazil and Great Britain. In 2010, the Department of Geography will be part of the Department of Geosciences and Geography including also the current Department of Geology and the Institute of Seismology. For more information, refer to http://www.helsinki.fi/geography/geoinformatics.

The students will work with AISA airborne imaging spectroscopy data, which will be made available by the collaboration partners, which are SPECIM Spectral Imaging Ltd, Pöyry Environment Oy, Finnish Geodetic Institute, Geological Survey of Finland and Finnish Environment Institute, and Departments of Physics, Geology and Forest Resource Management of the University of Helsinki. The students will be supervised by Prof. Petri Pellikka and co-supervisors from the cooperation partners.

AISA sensors provided by SPECIM Spectral Imaging Ltd. include airborne imaging spectrometers in visual and near - infrared (AisaEAGLE), short-wave infrared (AisaHAWK) and long-wave infrared (AisaOWL) wavelength area. SPECIM Spectral Imaging Ltd. is a leading imaging spectrometer manufacturer in the world and has sold more than 50 AISA systems worldwide. For more information, please refer to www.specim.fi.

The positions are targeted to the following fields: 1) calibration, validation and processing of hyperspectral remote sensing data including e.g. BRDF and atmospheric corrections, 2) applications in remote sensing of vegetation, 3) applications in remote sensing of cryosphere and/or hydrosphere, 4) applications in geology, and 5) atmospheric applications.

In Finland, postgraduate studies include the doctoral dissertation, which is typically consisting of 4-6 peer reviewed papers in international journals and a synopsis, and studies of an amount of 60 credit units (ECTS). It takes typically 4 years to finish the PhD studies.

The candidate should submit her/his CV, a recommendation from the MSc thesis supervisor, a list of publications, an excerpt of studies, a copy of the MSc degree or equivalent and a description of the potential fields of application of hyperspectral remote sensing data and the candidate's interest in research in hyperspectral remote sensing.

The monthly salary level is based on the qualification of the student ranging between 1700 and 1900 euro. SPECIM will participate in the students travel and field work costs. The deadline for the proposals is June 5 and the candidates should be prepared to visit the Department of Geography between June 15-19 for an interview. The positions will start in August or September 2009.

For more information about the field of research, data available, supervision and studies at the University of Helsinki please contact Prof. Petri Pellikka, petri.pellikka@helsinki.fi, 09-19151068. The applications should be sent by e-mail and by mail to Prof. Petri Pellikka, Department of Geography, University of Helsinki, P.O. Box 64, 00014 Helsinki, Finland by June 5, 2009.