Description:

The SARLab of the Remote Sensing Laboratories at the University of Zurich is inviting applications from motivated candidates with solid technical and analytical skills for

Two (2) Ph.D. positions in the field of processing, enhancing and analyzing airborne SAR and optical images

We are an interdisciplinary research group involved in a wide range of SAR applications such as signal processing/focusing, geographic information interpretation, cartography, geodesy, navigation and computer science.

One candidate will be expected to develop algorithms for the detection and tracking of moving objects in airborne synthetic aperture radar (SAR) data, known as SAR-GMTI. With this technique, information about moving objects is retrieved while simultaneously focusing the SAR image. Main research topics include SAR focusing, image processing, feature extraction and tracking methods. Within the current SAR-GMTI framework, the successful candidate will extend the existing methods and potentially implement her/his own independent approaches in the longer term.

A second candidate will work on the fusion of airborne SAR and optical imagery, with potential applications including landcover segmentation, object detection and surveillance, especially in & around urban areas. SAR-optical data fusion methods aim at enhancing the available information compared with the input images alone. The successful candidate will familiarize her/himself with the work performed so far, improve existing approaches and/or implement new methods based on the literature. In the longer term, (s)he will be encouraged to propose new (or hybrid) methods, and ideally propose or demonstrate potential new applications for the methods developed.
Requirements:

• Master’s degree in Geography with a major in remote sensing (or related field), as well as a solid background in electrical engineering/computer science/mathematics/physics
  OR
  Master’s degree in electrical engineering/computer science mathematics/physics (or related field) with a solid background in remote sensing.

• Experience with SAR remote sensing is a strong advantage

• Very good knowledge of written and spoken English

• Good skills in programming languages (e.g., Matlab, C, C++)

Contact Persons:
Please send your application (including one-page summary, copies of academic certificates, CV and letter(s) of recommendation) to

• Dr. Daniel Henke daniel.henke@geo.uzh.ch
  for the SAR-GMTI position
• Dr. Adrian Schubert, adrian.schubert@geo.uzh.ch
  for the SAR-optical data fusion position

For general questions and information:
  Dr. Erich Meier, erich.meier@geo.uzh.ch

or information about Remote Sensing Laboratories (RSL):