

## Dr. Annett Bartsch



Dr. Annett Bartsch is senior postdoctoral fellow and lecturer at the Institute of Photogrammetry and Remote Sensing, Vienna University of Technology. Her work focuses on the application of active microwave satellite data for operational monitoring of the hydrosphere on regional to global scale. She is currently coordinating a project of the European Space Agency on circumpolar permafrost monitoring. Some of her previous work includes soil moisture monitoring in Africa, wetlands research in Siberia, and geomorphological processes studies in periglacial environments (Scandinavia). Dr. Bartsch is current recipient of a research fellowship of the Austrian Science Fund for supporting women in science.

### Capabilities of the European Space Agency's ENVISAT ASAR instrument's Global Mode for monitoring of the hydrosphere

Monday, October 4<sup>th</sup>, 2010 | EV1 - 221 | Start at: 12:00 p.m.  
Lunch will be provided.

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#### Abstract:

ENVISAT is a satellite of the European Space Agency which was launched in 2002. It carries a number of instruments, one of which is an Advanced SAR (Synthetic Aperture Radar) instrument. The ASAR can operate in several modes that differ not only in spatial resolution but also data quality. Higher resolution data (150m and less) are acquired on request only and therefore not continuously. This can pose problems when fast changing surface parameters such as soil moisture, lakes or flood plains are to be monitored. Whenever there is no request, data are acquired in the background – so called ‘Global’ – mode. It exhibits high noise and has only 1km spatial resolution. For many regions, however, a high number of images are available. They have been exploited in the past, especially for the monitoring of surface hydrology. Related studies are reviewed in this seminar, and also the follow-up SAR sensor of Sentinel-1 will be discussed.