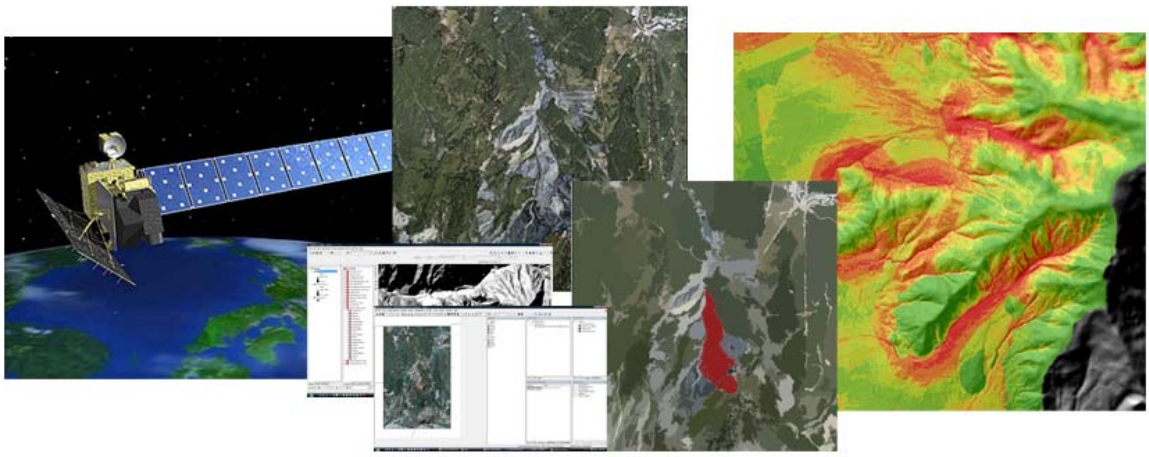
André Stumpf

Title: Landslide recognition, mapping and monitoring from optical remote sensing data on different scales

Part of parent project: Safeland - Living with landslide risk in Europe: Assessment, effects of global change, and risk management strategies (http://www.safeland-fp7.eu, Work Area 4)

Level: PhD at

- Centre National de la Recherche Scientifique (CNRS), Institut de Physique du Globe de Strasbourg (http://eost.u-strasbg.fr/IPGS/)
- International Institute for Geo-Information Science and Earth Observation (ITC) Department of Earth Systems Analysis (ESA) http://www.itc.nl/Pub/organisation/Introduction-Scientific-departments/ESA



Description of work:

The emerging availability of high and very-high resolution remotely sensed imagery and coordinating international initiatives on Earth observation open up new possibilities for landslide hazard and risk assessment. To take full advantage of the daily incoming data object-oriented image analysis is a useful tool to integrate existing landslide inventories and expert knowledge for a more efficient mapping, characterization and monitoring. In my research I focus on:

- Object-based recognition of landslides in monotemporal data and multitemporal datasets
- Better integration of topographic information and expert-knowledge into classification processes
- Generalization of segmentation and classification parameters for better model transferability

- Object-based recognition and monitoring of surface features on slow moving landslides
    - Integration of airborne photography, geophysical data and Lidar
    - Comparison with digital image correlation of ground based stereoscopic photography

Biography: André Stumpf was born in 1982 in Plauen, Germany. After some volunteering work in Ecuador in 2004, he worked from 2006-2007 at the Helmholtz Centre for Environmental Research in Leipzig, Germany, in the Department for Urban Ecology, Environmental Planning and Transport, Geomatics Unit. This as followed by fieldwork in the Chilean Andes in 2007-2008. In 2008 he finished his Diplom degree in Geography at Dresden Technical University on "Landslide susceptibility mapping in Central Chile". Before starting PhD work at ITC and CNRS in October 2009, he worked at the JRC IES - Institute for Environment and Sustainability in Ispra, Italy, and the International Earthquake Research Centre Montessus de Ballore at the University of Chile.

Publications:

Stumpf A, Sepúlveda SA, Weiland U. (2009) Landslide hazard zonation for Santiago de Chile and the bordering Andes by means of probabilistic multivariate statistics. International Conference "Megacities: Risk, Vulnerability and Sustainable development. Leipzig, Germany. 7th of September 2009 (http://www.risk-habitat-megacity.ufz.de/)

Sepúlveda SA, **Stumpf A** , Schachter P, Piñero L, Leyton F (2009) Susceptibilidad de Remoción en Masa en la Zona Cordillerana de Santiago mediante Métodos Estadísticos Multivariados, XII Congreso Geológico Chileno, 22 - 26 de noviembre, Santiago de Chile (http://www.congresogeologico2009.cl)