GEOMORPHOMETRY 2009

"Automated analysis of elevation data in R+SAGA/GRASS"

Venue:

Saturday 29th of August
and Sunday 30th of August

Irchel Campus

Workshop moderators:

Tomislav Hengl
(Universiteit van Amsterdam)

Carlos H. Grohmann
(University of São Paulo)

Registration fees:
200 CHF
(150 CHF for PhD students)

Registration dead-line:
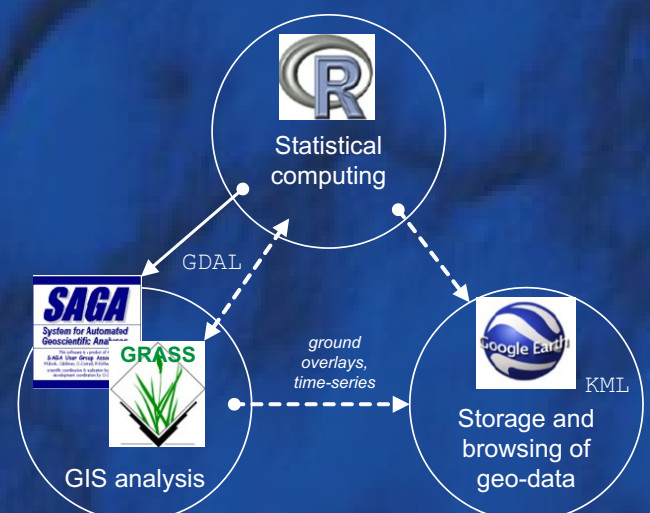## August 14th 2009

WORKSHOP DESCRIPTION:

This workshop aims at PhD students and professionals interested to use open source software packages for processing of their elevation data. R is the open-source version of the S language for statistical computing; SAGA (System for Automated Geoscientific Analyses) and GRASS (Geographic Resources Analysis Support System) are the two most used open-source desktop GIS for automated analysis of elevation data. A combination of R+SAGA/GRASS provides a full integration of statistics and geomorphometry.
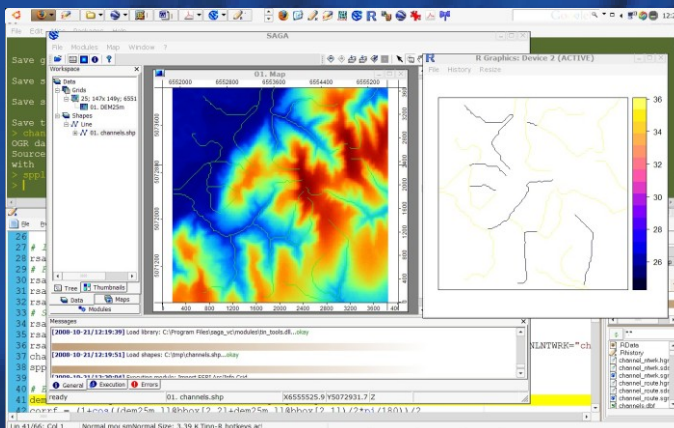
The topics in this workshop will range from selection of grid cell size, choice of algorithms for DEM generation and filtering, to geostatistical simulations and error propagation. The workshop moderators will demonstrate that R+SAGA/GRASS is capable of handling such demanding tasks as DEM generation from auxiliary maps, automated classification of landforms, and sub-grid parameterization of surface models.

The course will focus on understanding R and SAGA/GRASS syntax and building scripts that can be used to automate DEM-data processing. Each participant should come with a laptop PC and install all software needed prior to the workshop. Registered participants will receive an USB stick with all data sets and overheads at the beginning of the course.
Participants will follow a case study that focuses on generation of DEMs, extraction of DEM parameters and landform classes, and implementation of error propagation in geomorphometry.

R — Statistical computing

SAGA / GRASS — GIS analysis

Google Earth — Storage and browsing of geo-data

GDAL

ground overlays, time-series

KML

Hosted by: Department of Geography University of Zürich