



2012 | 2013
Deutsch-Südafrikanisches
Jahr der Wissenschaft
German-South African
Year of Science

Invitation for a one-day colloquium on

Data Integration Technologies for Earth System Modeling and Resource Management

16 November 2012

9:00 – 18:00

Automated and objective information extraction from large multi-method geoscientific data bases, such as space- and airborne imagery, airborne geophysical or hyperspectral sensing, is a key issue for Earth System Modeling and Resource Management. While data mining and pattern recognition tools, i.e. cluster analyses, artificial neural networks or Bayesian decision techniques, are routinely used by the remote sensing community to explore space- and airborne imagery, such techniques appear increasingly attractive to geophysicists since data production rate of modern geophysical systems exceeds traditional geophysical data evaluation and information extraction processes. This colloquium will bring experts from geophysics and remote sensing together for an exchange of experiences on automated data integration, model zonation and detection of optimal sampling points constrained by geospatial information.

Who should attend (max. 50 delegates)

Researchers and practitioners from Applied Geophysics and Remote Sensing

Venue

Leipziger KUBUS, Permoserstraße 15, 04318 Leipzig, Germany

Registration Fee

40.- € (incl. coffee/tea, biscuits and lunch snacks)

Organisation

Dr. Hendrik Paasche (Helmholtz Centre for Environmental Research – UFZ,
Leipzig, Germany)

PD Dr. Detlef Eberle (Council for Geoscience, Pretoria, South Africa)

Registration (per email)

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Scheduled Program

Scheduled Time	Topic	Speaker
09:00 – 09:30	Welcome message and motivation for the workshop	PD Dr. Detlef Eberle <i>CGS Pretoria</i> Dr. Hendrik Paasche <i>UFZ Leipzig</i>
09:30 – 10:10	Regional scale geophysical airborne data systems	Dr. Uwe Meyer <i>BGR Hannover</i>
11:10 – 10:30	Coffee break	
10:30 – 11:10	Applied geological remote sensing – multi-sensor approaches	Prof. Dr. Cornelia Gläßer <i>MLU Halle-Wittenberg</i>
11:10 – 11:50	Hyperspectral remote sensing for detection of vegetation structures and patterns	Dr. Angela Lausch <i>UFZ Leipzig</i>
11:50 – 13:00	Lunch break	
13:00 – 13:40	Cluster analyses: multi-functional tools for data integration, optimal sampling location and sparse target parameter extrapolation	Dr. Hendrik Paasche <i>UFZ Leipzig</i>
13:40 – 14:20	Geophysics on mobile platforms for digital soil mapping	Dr. Ulrike Werban <i>UFZ Leipzig</i>
14:20 – 15:00	Bayesian classification methods	Dr. Sonali Das <i>CSIR Pretoria</i>
15:00 – 15:30	Coffee break	
15:30 – 16:10	Acquisition of additional remote sensing data for geophysical exploration and mining monitoring	Dr. Monika Pilarski <i>ILV Berlin/ Groitzsch</i>
16:10 – 16:50	Processing of geoscientific data using neuronal networks: Basics, chances, experiences	Dr. Andreas Barth <i>BEAK Consultants GmbH Freiberg</i>
16:50 – 17:20	Pseudo-lithological mapping for mineral exploration: Case studies from Southern Africa	PD Dr. Detlef Eberle <i>CGS Pretoria</i>
17:20 – 18:00	Wrap up discussion	