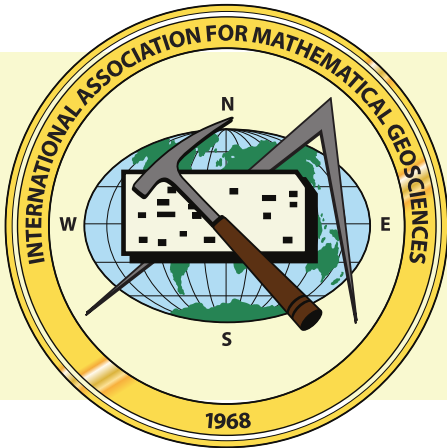


# Programme



# IAMG 2015

Freiberg, Germany,  
September 5-13, 2015

The 17th Annual Conference of the  
International Association for Mathematical Geosciences

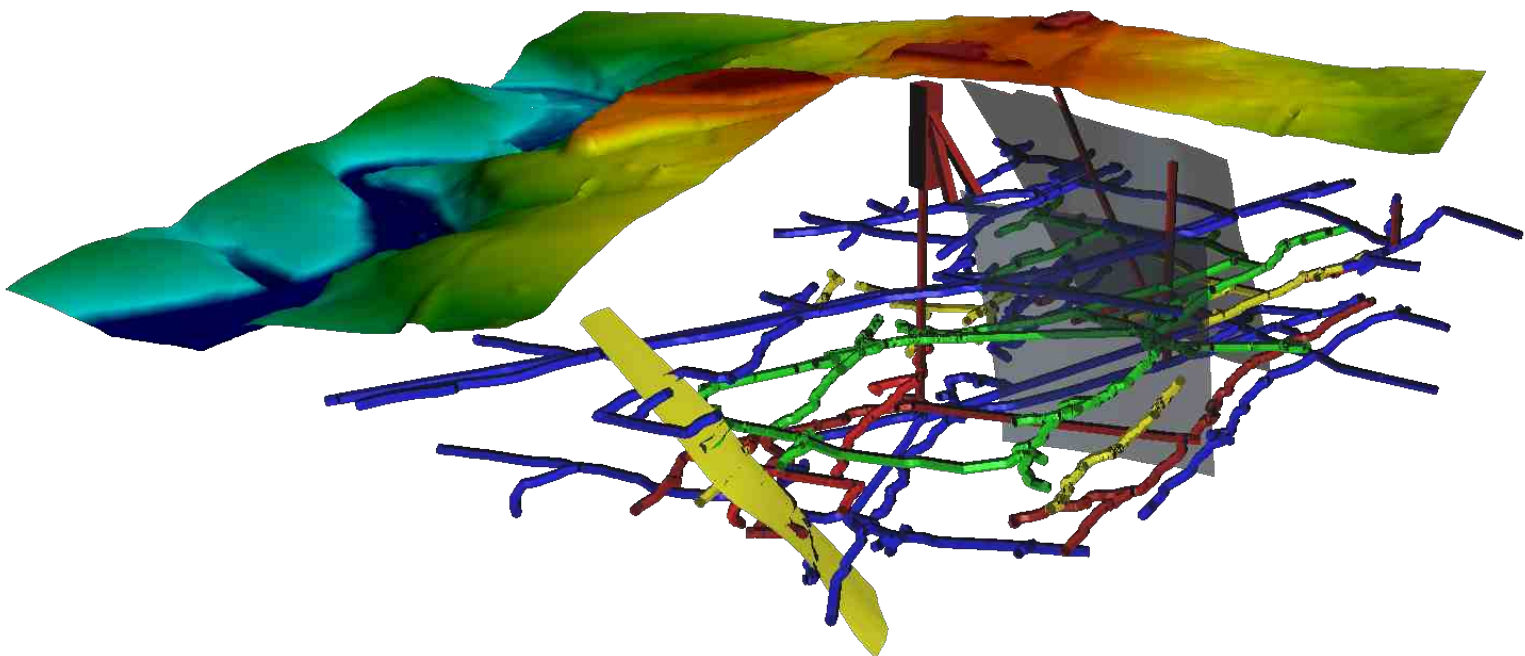
Conference Chairs:

Helmut Schaeben

Raimon Tolosana Delgado, K. Gerald van den Boogaart

Conference office:

Regina van den Boogaart



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## Imprint

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Technische Universitaet Bergakademie Freiberg

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*Personal pictures* on pgs 4-5 and 39 provided by portrayed people

*Maps and CAVE picture* on pages 4, 10, 12 by Technische Universitaet  
Bergakademie Freiberg

As of August 2015.



# Foreword

**Ladies and Gentlemen, dear IAMG2015 participants, guests, colleagues and friends,**

welcome to the IAMG 2015, the 17th Annual Conference of the International Association for Mathematical Geosciences in Freiberg. It is the local organizers' honor and pleasure to host you, to offer an interesting, thought provoking scientific programme as well as relaxed meetings with colleagues and friends. After 2002 in Berlin it is the second time that IAMG's annual conference takes place in Germany. The local organizers are the Technische Universität Bergakademie Freiberg - celebrating its 250 anniversary this year - and the Helmholtz Institute Freiberg for Resource Technology, founded in 2011.

Organizing IAMG's annual conference has been quite an experience for us as well as it has been a challenge for the Association. It is the first time that IAMG itself is organizing its annual conference. To give proper response to this challenge, we initiated an international 'Strategic Committee' complementary to the 'Meetings Committee', to get IAMG's membership more actively committed to the shaping of the programme and the Association's key issues for the next future of our discipline and our Association.

IAMG2015 features five parallel sessions, an exceptional feat of IAMG conferences. The sessions are distributed among tracks dedicated to the thematic topics of 'oil', 'mining', and 'environment', and the methodological topics 'statistics', 'geostatistics', 'numerics', and 'geoinformatics'. Each track is present almost every day.

Moreover, we gratefully acknowledge sponsorship by Wintershall Holding GmbH, Kassel, Germany, The Geological Society of London, UK, Saxore Bergbau GmbH, Freiberg, Germany, and MIBRAG mbH, Zeitz, Germany.

I wish you an enjoyable stay in Freiberg, and an exciting conference providing scientific incentives and encouragement, after Jean Le Rond D'Alembert (1717 - 1783) "Allez de l'avant, la fois vous viendra".

Helmut Schaeben  
Chair of the IAMG2015  
local organizing committee

# Conference highlights

## Monday 7<sup>th</sup>

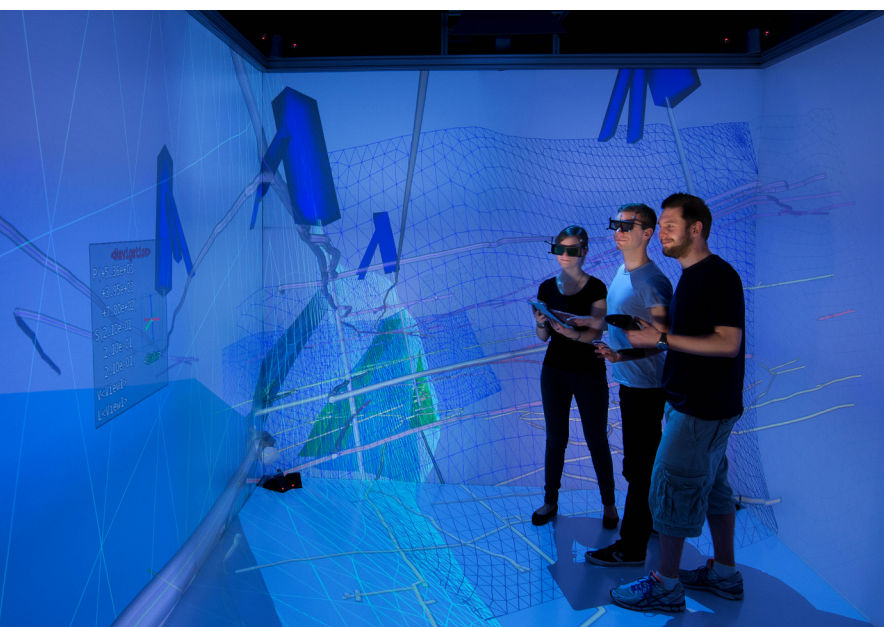
The *opening lecture* will be given by **Friedrich-Wilhelm Wellmer**, former president of the Federal Institute for Geosciences and Natural Resources (BGR, *Bundesanstalt für Geowissenschaften und Rohstoffe*), Dr. h.c. by the Technical University Bergakademie Freiberg and by the Technical University Clausthal, the two historical mining universities of Germany.



The *George Matheron Lecture* is awarded this year to **Roussos G. Dimitrakopoulos**, Professor, Canada Research Chair (Tier I) in Sustainable Mineral Resource Development and Optimization Under Uncertainty, Department of Mining and Materials Engineering, McGill University, Montreal, Quebec, Canada. He will talk about "*Smart(er) Mining Complexes and Mineral Value Chains: A technological perspective on risk management and sustainability*"

## Tuesday 8<sup>th</sup>: *Day of Surveys*

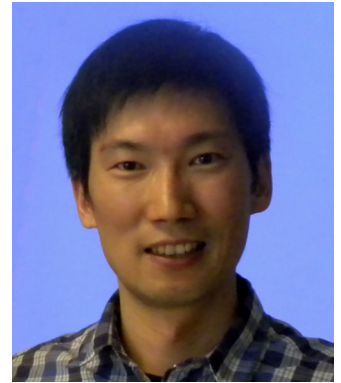
On the *Day of the Geological Surveys* we celebrate the first geological map compiled by William Smith almost exactly 200 years ago. On this occasion, Ian Jackson, former president of the British Geological Survey (BGS) and one of the promoters of the world geological map project *OneGeology*, will ponder on "*Have we made progress since Mr Smith?*".



The Day of Geological Surveys opens two parallel activities to the conference. On Sep 8 and 9, 2015, the conference features the special session *Presentation of 3D Geomodeling and Mining Software* with presentations and an exhibition of commercial software open to the interested public. Finally, on each of these two days, two exhibition sessions will be offered on the CAVE (*Computer Assisted Virtual Environment*), a futuristic 3D visualization and modelling system of the Bergakademie. Inscription is required to visit the CAVE.

## Wednesday 9<sup>th</sup>, *Day of Geometry*

The *Andrei Borisovich Vistelius Research Award* is given this year to **Xiaogang (Marshall) Ma**, PhD, Tetherless World Constellation, Rensselaer Polytechnic Institute, Troy, NY, USA. He will present his plenary lecture "*Geoinformatics in the Semantic Web*".



The *Day of Geometry* invited keynote talk will be given by Peter Jupp, Professor, School of Mathematics and Statistics, University of St Andrews, Fife, Scotland, on "*Directional Statistics in the Geosciences*".

Finally, the IAMG 2016 Distinguished Lecturer, Sean McKenna, PhD, IBM Ireland Research Lab, Dublin, Ireland, will present a summary of his lectures during the IAMG General Assembly on Wednesday afternoon, to which all IAMG Annual Conference participants are invited.



## Thursday 10<sup>th</sup>



The *Felix Chayes Prize for Excellence in Research in Mathematical Petrology* has been awarded this 2015 to **Yongzhang Zhou**, Professor, School of Earth Sciences and Geological Engineering, Research Center for Earth Environment and Resources, Sun Yat-Sen University, Guangzhou, Guangdong, China. He will close the series of keynote talks of IAMG2015 with a plenary lecture on "*Hierarchical paths of migration of impurity trace elements in source rocks and resulted conjugate geochemical anomalies using mathematical modeling and computer simulation*".

The conference will finish with a closing ceremony, on Thursday 10<sup>th</sup>, from 17:00 to 18:00. Here the prizes to the best *Student Poster Presentation* and the best *Student Oral Presentation* will be awarded. You are all cordially invited to attend and congratulate them.



# Practical aspects

House, located in the city centre close to the *Obermarkt*. This is an open event, you are welcome without having registered first.

Network name: [gast](#)

Code: [days2014](#)

## Registration

Sunday 6<sup>th</sup>, from 18:00 to 20:00

Monday 7<sup>th</sup> from 10:00 to 18:00

Tuesday 8<sup>th</sup> to Thursday 10<sup>th</sup>, from 8:00 to 16:00

The registration is done in the Clemens-Winkler-Bau at the University Campus. You can also register during the Ice Breaker Party, directly at Terra Mineralia.

## Meeting venue

[Alte Mensa, Peterstraße 5](#)

The “Alte Mensa” in which the Opening Ceremony will be held is the University Student House, located in the city centre close to the *Obermarkt*. This is an open event, you are welcome without having registered first.

[Campus, between Leipziger Straße and Gustav-Zeuner-Straße](#)

The conference venue takes place in the north-west of Freiberg where a major part of the University Campus is located.

## Ice Breaker Party

[Sunday 6<sup>th</sup>, 18:00 to 21:00, Terra Mineralia, Schlossplatz 4](#)

You are warmly invited to the IAMG 2015 Ice Breaker Party on Sunday. The get-together takes place in the "Terra Mineralia", one of the world largest mineral exhibitions in the world. It is located within the *Schloss Freudenstein* ("*Schloss*" means something like castle or palace in German). The Ice Breaker Party is included in the conference fee.

## Conference dinner

[Wednesday 9<sup>th</sup>, 19:00 to 00:30, Tivoli, Dr.-Külz-Straße 3](#)

During the Conference Dinner which takes place on Wednesday you will be able to enjoy the charming atmosphere of the "Tivoli" ballroom, a notable component of Freibergs night life. The dinner is included in the conference fee. Nevertheless, *pre-registration is required*.

## Freiberg City Tours

[Sunday 6<sup>th</sup>, 16:00 to 18:00 \(Starting point: Freiberg City Hall, Obermarkt 1\)](#)

[Tuesday 8<sup>th</sup>, 17:30 to 19:00 \(Starting point: Clemens-Winkler-Bau\)](#)

Freiberg is a beautiful town located at the foothills of the *Erzgebirge* (ore mountains). The city is known for its long silver mining tradition. We invite you to learn about its history and architecture to get to know the town hosting the IAMG 2015. The Freiberg City Tour is included in the conference fee, but *preregistration is required*.

## Poster presentation

Monday 7<sup>th</sup>, 15:20 to 16:20 -Sessions F05, F09, F15, G15, and G16

Tuesday 8<sup>th</sup>, 15:00 to 16:00 - Sessions F01, F02, G01, G05, G06, G08, G10, G11, G12, and G13

Wednesday 9<sup>th</sup>, 15:00 to 16:00 - Sessions F04, F07 and G19

Thursday 10<sup>th</sup>, 15:00 to 16:00 - Sessions F06, F10, F12, F13, G03, G04, G07, G14 and G18

We kindly ask you to provide posters as A0 portrait (1189mm height, 841mm width). Larger posters or landscape versions can not be accepted. Poster presenters are expected to: (1) print the poster at their convenience, (2) bring it to the conference and (3) prepare a 1 minute teaser presentation, to be given in the corresponding oral session.

A poster includes: the title of the contribution, author name(s), e-mail address of the corresponding author, the assigned presentation code (e.g. F1805) in the lower left corner, a photo of the author(s), and the logo of the IAMG 2015 conference.

*Please be next to your poster during your allocated poster time and provide some A4 or letter printouts of the poster for interested visitors.*

## Oral presentation

The timeframe for the presentation is 14 minutes plus another 4 minutes for discussion. Presenters will be automatically interrupted after 15 minutes. Please upload the slides to the conference website on Thursday 3<sup>rd</sup>, before the conference in order to make the presentation available in every presentation room. The presentations should be provided in standard format (PDF, PPT, PPTX or ODP), running on a Windows 7 machine with the latest office software (MS Office 2010, OpenOffice 4.1, Acrobat Reader X). The use of other formats (videos, SWF, 3D viewers, etc) can be requested. Please contact the technical office in advance!

*Each room is equipped with a computer, a projector and a laser pointer. The use of own computers for presenting is not permitted.*

## Rolling sessions and session transfer

In order to allow for enough time to switch sessions between talks, the conference features rolling starting times in parallel sessions. The next talk in another building always starts 5-15 minutes after the previous has ended. This allows as well enough time to reach all rooms when the breaks end.

## Coffee break

Every morning, 9:30 to 10:00

Monday afternoon, 15:20 to 16:20

Tuesday to Thursday afternoon, 15:00 to 16:00

Coffee breaks will be provided in the tent in front of the Clemens-Winkler-Bau every morning and afternoon. Food and drinks are included in the conference fee. Be aware that the afternoon breaks coincide with poster sessions. Please take the opportunity to visit the posters!

## Lunch break

Every day, 12:00 to 13:20

Lunch will be provided every day in the tent in front of the Clemens-Winkler-Bau . Food and drinks are included in the conference fee.

## **Travelling by train between Freiberg and Dresden**

Trains from *Dresden Main Station (Hbf)* to *Freiberg (Sachs)* are leaving every day from 5:00 to 23.00, usually from platform 12 (RE to Hof on the 53th minute) or platform 13 (S3 to Freiberg on the 37th minute, or RB to Zwickau on the 7th minute). Connection from Dresden Airport to Freiberg require changing at Dresden Main Station.

Trains to *Dresden Main Station (Hbf)* are leaving *Freiberg (Sachs)* every day between 5:00 and 22:00 usually at the minutes 31th or 7h from platform 2 (rush hour trains depart on the 37th minute from platform 4 as well).

For detailed information please visit:

[http://www.bahn.de/p\\_en/view/index.shtml](http://www.bahn.de/p_en/view/index.shtml)

## **Bus to the Campus**

*From the city.* **Line C** will take you to the main conference building the Clemens-Winkler-Bau stopping at **Merbachstraße**. Be aware that bus line C has two parallel routes

*From the train station.* You will find a bus station next to the Freiberg train station. **Line B** with direction to Clausthalerstrasse takes you to the Campus stopping at **Lampadiusstraße**.

Please check the bus routes and timetables on:

<http://netzplan.regiobus.com/de/stadtplan-freiberg>

## **Taxi**

In case you need a taxi please call **+49 3731 355500** or **+49 3731 32134**.

## Where to enjoy dinner

### Bodega-Andaluza Wein & Tapasbar

Meißner Ring 4, Tel.: +49 3731 30820, <http://www.bodega-andaluza.com/>

### Deutsches Haus

Petersstraße 42, Tel.: +49 03731 218206, <http://deutscheshaus-freiberg.de/>

### Favola

Fischerstraße 4A, Tel.: +49 03731 7984567  
<http://www.favola-freiberg.de/benvenuto/>

### Himmel und Hölle

Nikolaigasse 1, Tel.: +49 3731 2039844  
<http://www.himmelundhoelle-freiberg.de/>

### Kartoffelhaus "Am Schüppchenberg"

Berggasse 7, Tel.: +49 3731 355600, <http://www.kartoffelhaus-freiberg.de>

### Le Bambou

Obergasse 1, Tel: +49 3731 353921, <http://www.restaurant-lb.de/>

### Restaurant Bar Mythos

Untermarkt 15, Tel.: +49 3731 1650557  
<http://www.restaurant-bar-mythos.de/>

### Pfeffersack historische Gastwirtschaft

Kirchgasse 15, Tel.: +49 3731 458676  
<http://www.historische-gastwirtschaft-pfeffersack.de/>

### Restauration Julius Kost

Limbacher Str. 26, 01723 Wilsdruff, Tel.: +49 35204 47777  
<http://julius-kost.com/>

### Schwanen Schlößchen

Meißner Ring 33, Tel.: +49 3731 216533  
<http://www.schwanenschloesschen.de/>

### Shahi

Poststr. 16, Tel.: +49 3731 774576

### Stadtwirtschaft

Burgstraße 18, Tel.: +49 3731 692469, <http://www.stadtwirtschaft.de/>

### World-Food Griechisches Bistro/Restaurant

Bahnhofstraße 8, Tel.: +49 3731 206334, <http://www.world-food.de/>

### Zugspitze

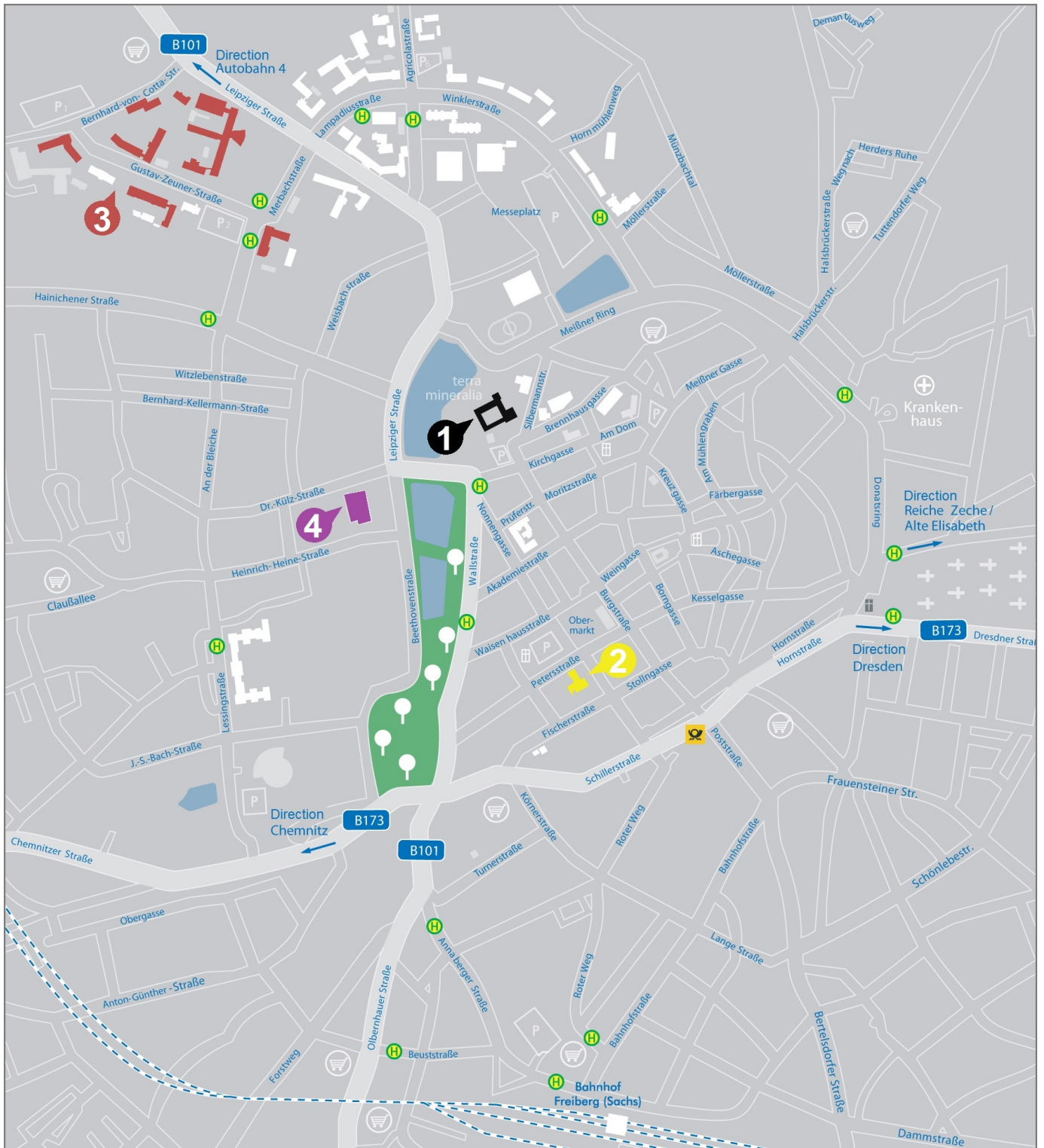
An der Zugspitze 15, 09618 Brand-Erbisdorf, Tel.: +49 37322 52398  
<http://www.zugspitze-sachsen.de/>

... and many more places to go.

# Restaurants





# Find your way




**1** Ice Breaker (Terra Mineralia)      **3** Conference Venue (Campus)

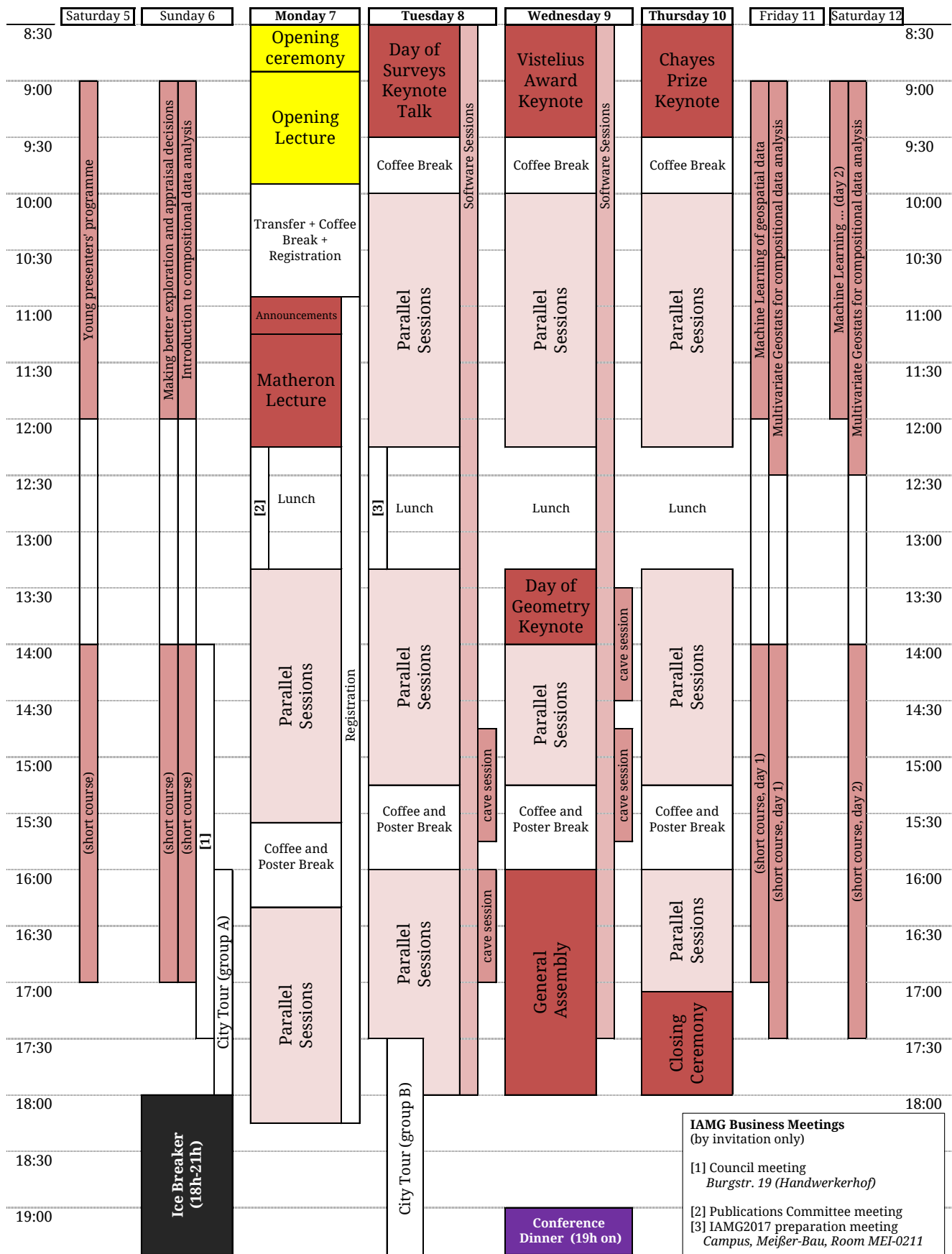
**2** Opening Ceremony (Alte Mensa)      **4** Conference Dinner (Tivoli)

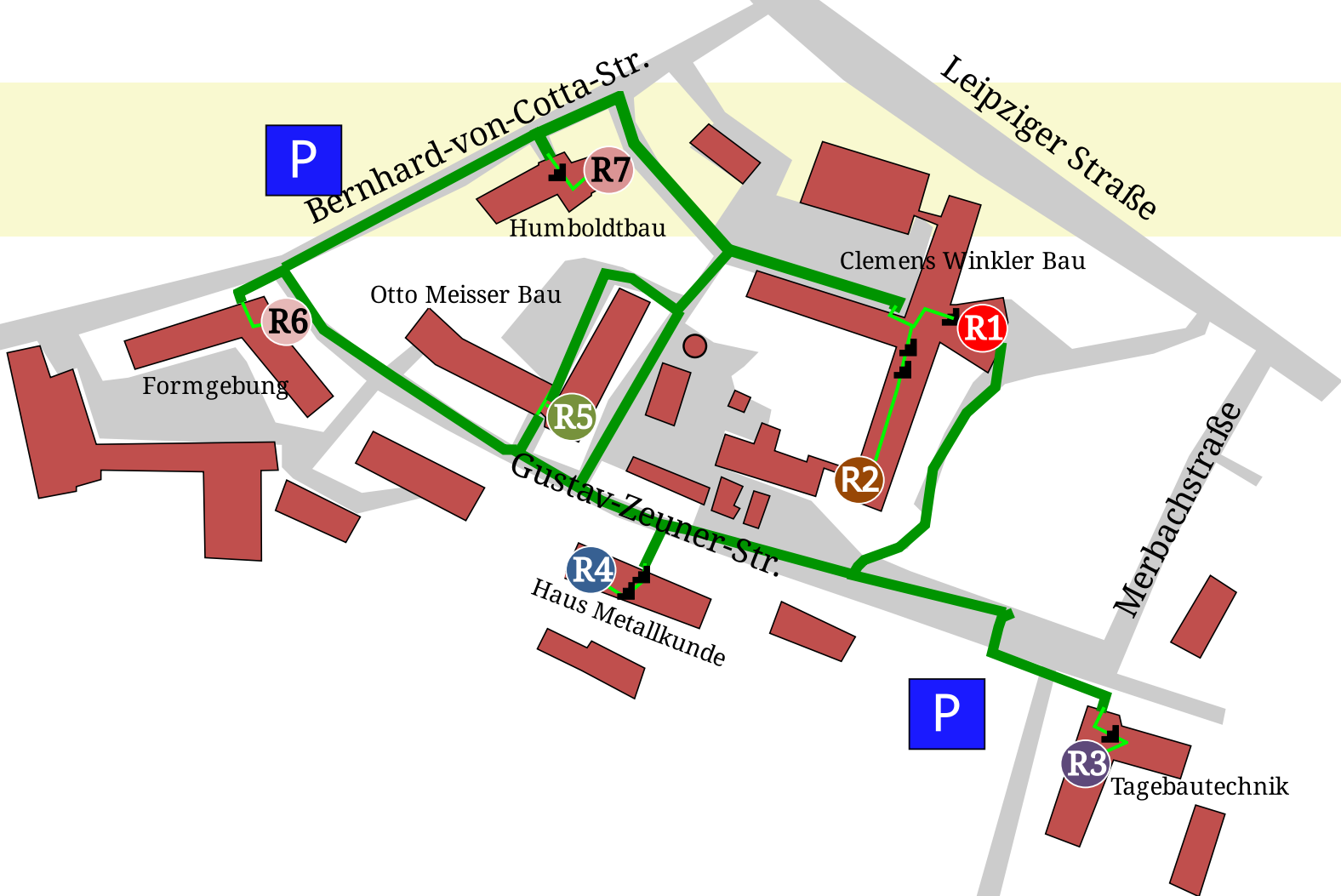
 Train Station

 Bus Stops

 Parking

# Overview





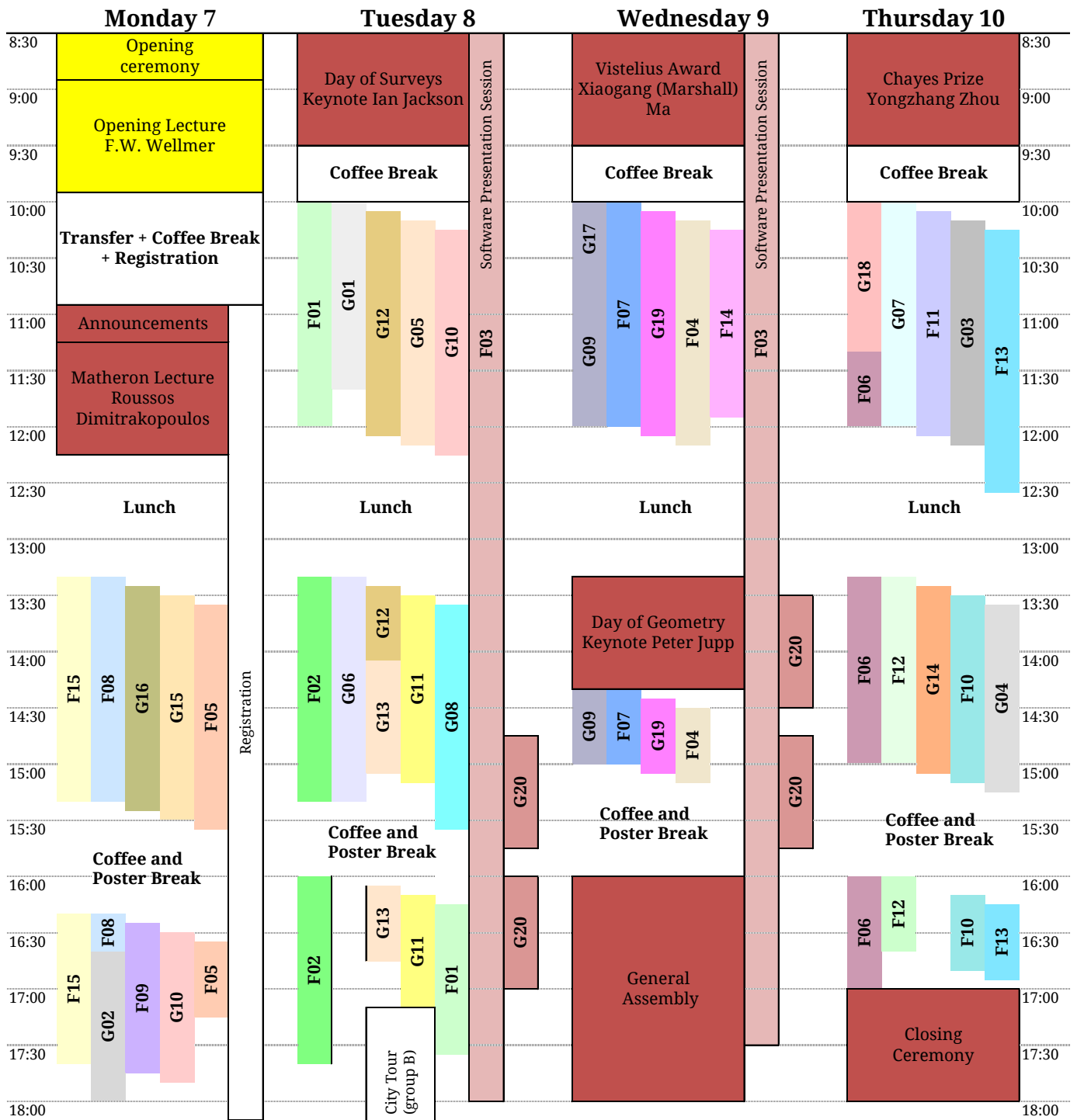
## Focus Sessions

F01	Commemorating William Smith (23 March 1769 – 28 August 1839): 200 years of Geomodelling	Tu
F02	Communicating Digital Geomodels – Methodologies and Challenges	Tu
F03	Presentation of 3D Geomodeling and Mining Software	Tu/We
F04	Geometallurgy	We
F05	Geostatistics and Operations Research in Stochastic Mine Planning	Mo
F06	GeoMap: Regional Geochemistry Mapping with Logratio Techniques	Th
F07	Mathematics of Oil Recovery	We
F08	Mathematical Modelling and Numerical Simulation of Multiphase Flow and Multicomponent Reactive Transport in Porous Media	Mo
F09	Medical Geology	Mo
F10	Quantitative Models in Marine and Coastal Geosciences	Th
F11	Quantitative Approaches in Provenance Analysis	Th
F12	Quantification of Complex Rock Structures in 2D and 3D	Th
F13	Inverse Problems in the Geosciences	Th
F14	Directional Statistics	We
F15	Machine Learning and Knowledge Discovery in the Geosciences	Mo

## General Sessions

G01	Methodological Advances in Numerical Modelling for the Geosciences	Tu
G02	Numerical Modelling in Large Scale Geodynamics	Mo
G03	Numerical Modelling of Basins and Hydrocarbon Resources	Th
G04	Integration of Stochastic and Numerical Models	Th
G05	Analysing Seismic and Remotely Sensed Data (jointly with G13)	Tu
G06	Groundwater	Tu
G07	Geotechnics and Landslide Hazard Assessment	Th
G08	Computer Geomodels for Mineral and Hydrothermal Resources	Tu
G09	General Geomathematics (jointly with G17)	We
G10	General Geostatistics	Mo/Tu
G11	Geostatistics for Mineral Resources	Tu
G12	Mineral Potential Assessment Methods	Tu
G13	Space-Time Statistical Models in Geophysics (jointly with G05)	Tu
G14	Space and/or Time Models in Environmental Problems	Th
G15	Analysing 1D Data	Mo
G16	Quantitative Models for Hydrocarbon Resources	Mo
G17	General Applications of e-Geosciences (jointly with G09)	We
G18	Statistics in Mineral Resource Estimation	Th
G19	Approaches to the Analysis of Compositional Data	We
G20	Visualization of 3D Geomodels in Computer Assisted Virtual Environment (CAVE)	Tu/We

# Scientific sessions



Room	R1	R2	R3	R4	R5	Hall
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R1	R2	R3	R4	R5	R6	R7
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R1	R2	R3	R4	R5	R6	R7
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R1	R2	R3	R4	R5	Room
----	----	----	----	----	------

- R1** WIN-1005 Clemens-Winkler-Bau
- R2** WIN-2258
- R3** HHB-1035 Tagebautechnik
- R4** MET-2065 Haus Metallkunde
- R5** MEI-0080 Otto-Meißner-Bau

Alte Mensa (Peterstrasse 5)

- R6** FOR-0270 Haus Formgebung
- R7** HUM-0190 Humboldt-Bau

## Focus Sessions

- F01. Commemorating William Smith (23 March 1769 – 28 August 1839): 200 years of Geomodelling**  
Michael Peter Suess (Wintershall, Germany), Guillaume Caumon (U. Lorraine, France)
- F02. Communicating Digital Geomodels – Methodologies and Challenges**  
Jens Richter (Saechsisches Landesamt fuer Landwirtschaft, Umwelt und Geologie, Germany), Roland Baumberger (Swisstopo, Switzerland)
- F03. Presentation of 3D Geomodeling and Mining Software**  
Helmut Schaeben and Uwe Kroner (TU Bergakademie Freiberg, Germany), see page 36
- F04. Geometallurgy**  
Julián Ortiz (U. Chile, Chile), Jared L. Deutsch (U. Alberta, Canada)
- F05. Geostatistics and Operations Research in Stochastic Mine Planning**  
Oktay Erten (Curtin U., Australia), Snehamooy Chatterjee (Michigan TU., USA)
- F06. GeoMap: Regional Geochemistry Mapping with Logratio Techniques**  
Antonella Bucciatti (U. Florence, Italy), Josep Antoni Martin-Fernandez (U. Girona, Spain)
- F07. Mathematics of Oil Recovery**  
Sid-Ali Ouadfeul (Algerian Petroleum Institute, IAP, Algeria), Leila Aliouane (LABOPHYT, FHC, UMBB, Algeria), Ricardo A. Olea (USGS, USA)
- F08. Mathematical Modelling and Numerical Simulation of Multiphase Flow and Multicomponent Reactive Transport in Porous Media**  
Peter Knabner (U. Erlangen-Nuernberg, Germany), Rainer Helmig (University of Stuttgart, Germany)
- F09. Medical Geology, Jennifer McKinley (Queens U. Belfast, UK)**  
Pierre Goovaerts (BioMedware Inc, USA)
- F10. Quantitative Models in Marine and Coastal Geosciences**  
Jan Harff (U. Szczecin, Poland), Junjie Deng (U. Wollongong, Australia), Catarina Guerreiro (U. Bremen, Germany), Michal Tomczak (U. Szczecin, Poland)
- F11. Quantitative Approaches in Provenance Analysis**  
Hilmar von Eynatten (U. Goettingen, Germany), Luca Caracciolo (Chemostrat Ltd, UK)
- F12. Quantification of Complex Rock Structures in 2D and 3D**  
Jörn H. Kruhl (Ludwig-Maximilians-U., Germany), Md. Sakawat Hossain (TU München, Germany)
- F13. Inverse Problems in the Geosciences**  
Klaus Spitzer and Michael Eiermann (TU. Bergakademie Freiberg, Germany)
- F14. Directional Statistics**  
Peter Jupp (U. St Andrews, UK), Richard Arnold (Victoria U. of Wellington, New Zealand)
- F15. Machine Learning and Knowledge Discovery in the Geosciences**  
Mikhail Kanevski (U. Lausanne, Switzerland), A. Brenning (U. Jena, Germany), V. Demyanov (Heriot-Watt U., UK)



## General Sessions

- G00. Plenary Invited Talks**
- G01. Methodological Advances in Numerical Modelling for the Geosciences**  
Michael Eiermann (TU. Bergakademie Freiberg, Germany), Peter Knabner (U. Erlangen-Nuernberg, Germany)
- G02. Numerical Modelling in Large Scale Geodynamics**  
Timothy Masterlark (South Dakota School of Mines, USA), Klaus Spitzer (TU Bergakademie Freiberg, Germany)
- G03. Numerical Modelling of Basins and Hydrocarbon Resources**  
Richard Sinding-Larsen (NTNU, Norway), Ricardo A. Olea (USGS, USA)
- G04. Integration of Stochastic and Numerical Models**  
Dionissios Hristopulos (TU Crete, Greece)
- G05. Analysing Seismic and Remotely Sensed Data**  
John C. Davis (Heinemann Oil GmbH, Austria), Enamundram Chandrasekhar (Indian Institute of Technology Bombay, India), Andrzej Lesniak (AGH University of Science and Technology, Poland), jointly with G13
- G06. Groundwater**  
Maria-Theresia Schafmeister (U. Greifswald, Germany), C. Guardiola-Albert (IGME, Spain)
- G07. Geotechnics and Landslide Hazard Assessment,**  
Andrea Fabbri (U. Milano Bicocca, Italy), Juan Jose Egozcue (U. Politecnica de Catalunya, Spain)
- G08. Computer Geomodels for Mineral and Hydrothermal Resources**  
Jean-Jacques Royer (U. Lorraine and CNRS, France), Yongqing Chen (China U. Geosciences Beijing, China)
- G09. General Geomathematic**  
Frits Agterberg (Canada), John H. Schuenemeyer (USGS, USA), jointly with G17
- G10. General Geostatistics**  
P.A. Dowd (U. Adelaide, Australia), Ute Mueller (Edith Cowan U., Australia)
- G11. Geostatistics for Mineral Resources**  
Roussos Dimitrakopoulos (McGill U., Canada), Ricardo A. Olea (USGS, USA)
- G12. Mineral Potential Assessment Methods**  
Eric Grunsky (Canada), Qiuming Cheng (York U. Canada; and China U. Geosciences Beijing, China)
- G13. Space-Time Statistical Models in Geophysics**  
Enamundram Chandrasekhar (Indian Institute of Technology Bombay, India), Andrzej Lesniak (AGH U. Science and Technology, Poland), John C. Davis (Heinemann Oil GmbH, Austria), jointly with G05
- G14. Space and/or Time Models in Environmental Problems**  
Eulogio Pardo Igúzquiza (IGME, Spain)
- G15. Analysing 1D Data**  
June Hill (CSIRO, Australia) and Brett Larkin (GeoCheck, Australia)
- G16. Quantitative Models for Hydrocarbon Resources**  
Richard Sinding-Larsen (NTNU, Norway), Ricardo A. Olea (USGS, USA)
- G17. General Applications of e-Geosciences**  
Liu Gang (China U. Geosciences Wuhan, China), jointly with G09
- G18. Statistics in Mineral Resource Estimation**  
Julián Ortiz (U. Chile, Chile), Jose Almeida (GeoBioTec and U. Nova de Lisboa, Portugal)
- G19. Approaches to the Analysis of Compositional Data**  
Vera Pawlowsky-Glahn (U. Girona, Spain), Karel Hron (Palacky U. Olomouc, Czech Rep.)
- G20. Visualization of 3D Geomodels in Computer Assisted Virtual Environment (CAVE)**  
Helmut Schaeben (TU. Bergakademie Freiberg, Germany)

# Monday 7<sup>th</sup>



Photo: Stadt Freiberg/ Ralf Menzel

8:30	Opening ceremony					
9:00	Opening Lecture F.W. Wellmer					
9:30						
10:00	Transfer + Coffee Break + Registration					
10:30						
11:00	Announcements					
11:30	Matheron Lecture Roussos Dimitrakopoulos (F002)					
12:00						
12:30	Lunch					
13:00						
13:30	Machine Learning and Knowledge Discovery in the Geosciences <b>F15</b>	Mathematical Modelling and Numerical Simulation of Multiphase Flow and Multi-component Reactive Transport in Porous Media <b>F08</b>	Quantitative Models for Hydrocarbon Resources <b>G16</b>	Analysing 1D Data <b>G15</b>	Geostatistics and Operations Research in Stochastic Mine Planning <b>F05</b>	Registration
14:00						
14:30						
15:00						
15:30	Coffee and Poster Break					
16:00						
16:30		Numerical Modelling in Large Scale Geodynamics <b>G02</b>	Medical Geology <b>F09</b>	General Geostatistics (I) <b>G10</b>	<b>F05</b>	
17:00						
17:30						
18:00						
Room	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>	<b>R5</b>	Hall



R1		R2		R3		R4		R5						
13:20	<b>F1502.</b> 13:20 Arman Melkumyan Classification of hyperspectral imagery using Gaussian Process with automated identification of the importance of information conveyed by different wavelengths	<b>F0801.</b> 13:20 Balthasar Reuter Adaptive vertical discretization techniques for transport and mixing in estuaries	<b>G1608.</b> 13:25 Sanjay Srinivasan Reservoir Connectivity Modeling and Uncertainty Quantification using a Discrete Cosine Transform Approach	<b>G1503.</b> 13:30 Behnam Sadeghi Improving Geological Logs of Drill-cores by Correlating with Fractal Models of Drill-hole Geochemical Data	<b>F0501.</b> 13:35 Rodney C. Wolff A Comprehensive Model for Mining Project Valuation Under Geoscientific, Cash-flow, and Decision-making Uncertainties	14:00	<b>G1504.</b> 13:50 Brett Larkin Integration of downhole geophysical and lithological data from coal exploration drillholes	<b>F0502.</b> 13:55 Oktay Erten Characterisation of a Laterite-Type Bauxite Orebody Geometry Using a Pluri-gaussian Simulation Approach	15:00	<b>G1505.</b> 14:10 June Hill Lithochemical boundary detection using geochemical data from drill holes	<b>F0503.</b> 14:15 Tom Wambeke Data assimilation of sensor measurements to improve production forecasts in resource extraction	<b>F0504.</b> 14:35 Jean-Jacques Royer Gold Potential Maps using 3D Restoration, Mount Pleasant Area, Western Australia	<b>F0505.</b> 14:55 Inur Minniakhmetov High-order, data-driven spatial simulation using Legendre-like orthogonal splines	Poster Teasers 15:15 <b>F0508</b>
	<b>F1513.</b> 13:40 Konstantin Krivoruchko Simulations from spatially varying kriging model with compactly supported covariance	<b>F0802.</b> 13:40 Raphael Schulz An Effective Model for Biofilm Growth up to Clogging in Evolving Porous Media	<b>G1601.</b> 13:45 Xiaoming Chen Application of Arps Decline Models in Tight Oil EUR Evaluation and its Influencing Factors Analysis	<b>G1506.</b> 14:30 Enamudram Chandrasekhar Multifractal Analysis of Geophysical Well Log Data	<b>F0507.</b> 14:35 Mouhammed Jandal Berro Signal Transmission in Boreholes and its Processing in MATLAB		Poster Teasers 15:10 <b>G1502, G1501</b>							
	<b>F1505.</b> 14:00 Dionissios Hristopulos Geostatistics with Spartan Spatial Random Fields and Stochastic Local Interaction Models	<b>F0803.</b> 14:00 Martin Schneider Efficient and robust models for multi-phase flow in porous media: Investigation of different numerical approaches	<b>G1603.</b> 14:05 Choongho Lee Characterization of Gas Reservoirs with an Aquifer using Covariance Localization in Ensemble Kalman Filter	<b>G1507.</b> 14:50 Mouhammed Jandal Berro Signal Transmission in Boreholes and its Processing in MATLAB										
14:00	<b>F1506.</b> 14:20 John McGaughy Mineral exploration targeting using HyperCube predictive analytics	<b>F0804.</b> 14:20 Stelios Liodakis Efficient uncertainty propagation of local hydraulic conductivity in a three dimensional hydrogeological model of flow and transport on very large regular grids	<b>G1604.</b> 14:25 Hongbing Xie Methodologies for Predicting the Tight Oil Sweet Spots											
	<b>F1507.</b> 14:40 Mikhail Kanevski Modelling of complex environmental data using regularized neural networks	<b>F0805.</b> 14:40 Johannes Hommel Finding a balance between accuracy and computational effort for modeling biomineralization	<b>G1605.</b> 14:45 Wei Yan Optimal Future's Primary Energy Consumption under a Carbon Dioxide Emissions Constraint											
	<b>F1570.</b> 15:00 Ke Guo Hyperspectral clustering by Fast Search and Find of Density Peaks method	<b>F0806.</b> 15:00 Wei Qiang Numerical simulation of hydrothermal ore-forming systems with complex boundary conditions: An approach based on the lattice Boltzmann method	Poster Teasers 15:05 <b>G1602, G1607, F0705</b>											
Poster Teasers 15:20 <b>F1503, F1512, F1501, F1510</b>														

16:20-18:15

Monday 7<sup>th</sup>

	R1	R2	R3	R4	R5	
16:00	<p><b>F1508.</b> 16:20 Arman Melkumyan Multivariate Outlier Detection in Geochemical Data</p> <p><b>F1509.</b> 16:40 Shuaiwei Ding Optimization Decision-making of Well Placement Using a Hierarchical Hybrid Optimization Approach With Global and Local Optimization for PUNQ-S3 Reservoir</p>	<p><b>F0807.</b> 16:20 Eduard Khramchenkov Rock mechanics and mass exchange processes</p> <p><b>G0201.</b> 16:40 Valentina Filatova Deformation and magmatic structures in the North-East Baltic Shield: mechanisms and dynamics of their formation</p> <p><b>G0202.</b> 17:00 Mireia Peral Millan Numerical Modelling of double porosity subduction: application to the Western Mediterranean basin</p> <p><b>G0204.</b> 17:20 Ariel Vidal Surrogate-based Modeling and Calibration of a Synthetic Geothermal Reservoir Model: Looking for efficient ways of calibration in highly non-convex problems</p> <p>Poster Teasers 17:40 <b>G0203</b></p>	<p><b>F0902.</b> 16:25 N.J. Raju Arsenic Contamination in the Middle Ganga Plain (MGP): A Case Study from Varanasi environs, India.</p> <p><b>F0903.</b> 16:45 Peter Bossew Estimation of radon prone areas from the geogenic radon potential of proxy quantities, calibrated by indoor radon concentration.</p> <p><b>F0904.</b> 17:05 C Guardiola-Albert Probabilistic evaluation of indicator geostatistical map of exceeding a soil geochemical threshold</p> <p>Poster Teasers 17:25 <b>F0901</b></p>	<p><b>G1002.</b> 16:30 Weisheng Hou A multi-scale iterative global-optimization-based multiple-point statistics algorithm</p> <p><b>G1003.</b> 16:50 Mohsen Mohammadzadeh A new family of spatio-temporal covariance functions with no dimple</p> <p><b>G1008.</b> 17:10 Yong Ge Determining the Spatial Scale that Multi-point Simulations should Consider using Spatial Association Analysis: using SNESIM as an Example</p> <p><b>G1009.</b> 17:30 Alfredo Lopez Geodesic kriging in the Wasserstein space</p>	<p><b>F0506.</b> 16:35 Michal Dudek Surface costs as a key profitability factor in optimisation of a greenfield electricity generation project of joint operation of a lignite surface mine and a mine-mouth power plant.</p> <p><b>F0507.</b> 16:55 Joyce Sze Yee Chung Transition from Open pit to Underground – Using Mixed Integer Linear Programming Approach Under Stochastic Grade</p>	
17:00	<p><b>F1511.</b> 17:00 Vitaly Baranov Prospectivity evaluation by seismic trace form classification</p> <p><b>F1504.</b> 17:20 Mikhail Kanevski Exploratory analysis of environmental data using visual data mining</p> <p><b>F1514.</b> 17:40 Magdalena Habrat The evaluation of texture parameters used in geological images analysis</p>					
18:00						

## teasers 13:20-15:35, session 15:20-16:20

**F1501.** 15:20, Sarko Hakim:

*Applied Bayesian Multivariate Geostatistical Algorithm for Formation Permeability Modeling*

**F1503.** 15:23, Michael Leuenberger:

*Decision-Oriented Mapping Using Extreme Learning Machines*

**F1510.** 15:26, Mustafa Al.Mukhtar:

*Predicting Suspended Sediment load Using Artificial Neural Network: A Case Study in the Upper Reach of the Spree River, Germany*

**F1512.** 15:29, Guxi wang:

*Research on Water Resources and Environment Carrying Capacity of the County Level based on Multi-Source Geological Information Optimization Modeling*

**G1602.** 15:05, Hongbing Xie:

*Case Study of tight oil of Quantou Formation in Sanzhao depression of Songliao Basin, China*

**G1607.** 15:08, Qiulin Guo:

*Volcanic Reservoir Characteristics and Accumulation Process Analysis in Santanghu Basin*

**F0705.** 15:11, Junjian Li:

*Identification and Characterization of Channeling With an Ensemble of Methodologies in Waterfloods (oral on session Wednesday 10th, 10:40, cancelled)*

**G1501.** 15:10, June Hill:

*Detecting gradational change in data from exploration drill holes*

**G1502.** 15:13, Wolfgang Gossel:

*Completion and analysis of time series: Example of a groundwater hydrograph*

**F0508.** 15:15, Yosoon Choi:

*Uncertainty Analysis for Mineral Resource and Ore Reserve Estimation*

## teasers 16:20-18:15 (session on Tuesday 15:00-16:00)

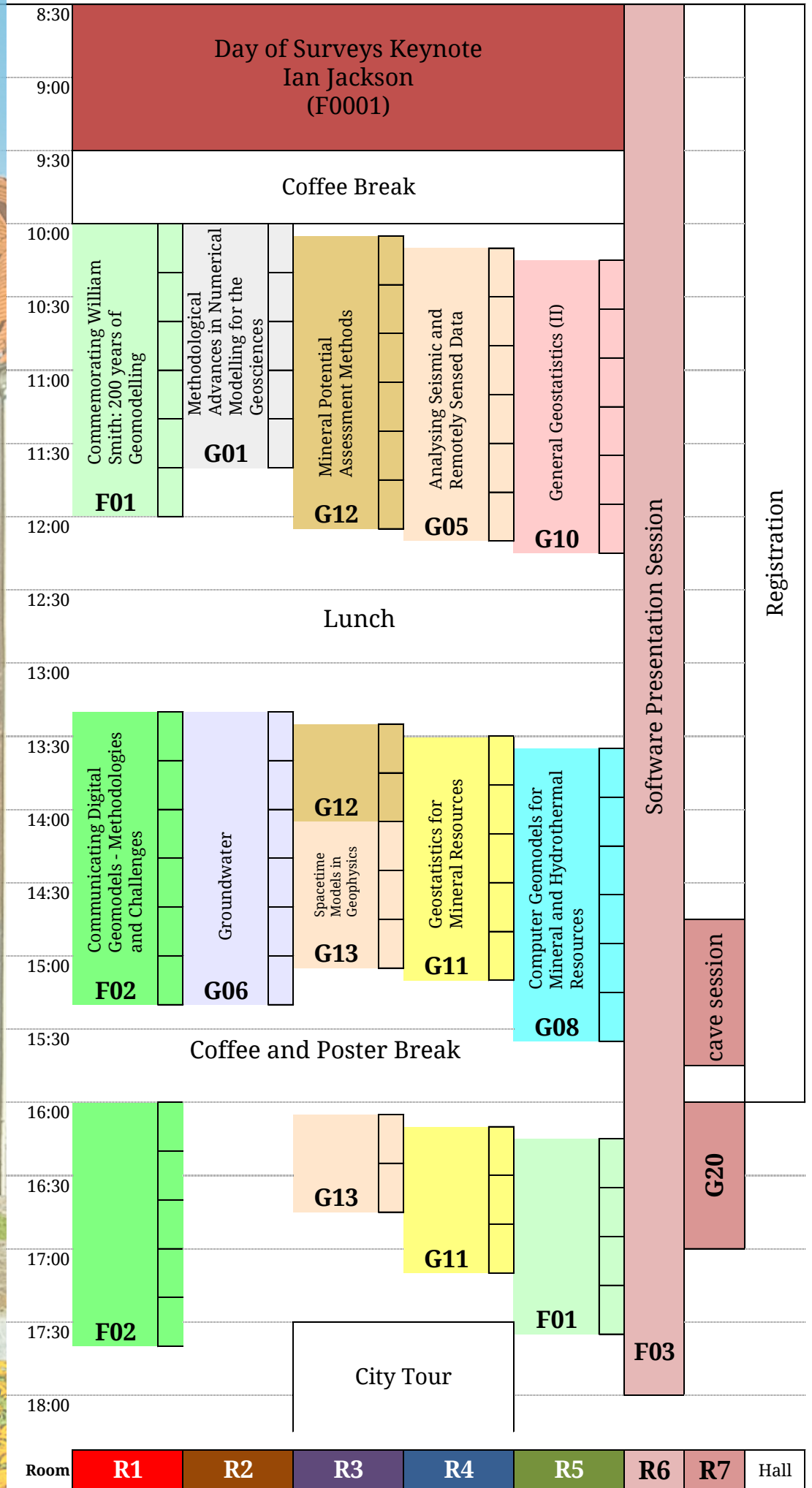
**G0203.** 17:40, Shailendra Singh:

*Pilot Audio Magnetotelluric (AMT) Survey over Greenstone Schist Belt of Dhanjori Volcanics, Eastern India: Inferences on Metallogeny*

**F0901.** 17:25, Peter Bossew:

*A quantitative test for bi-normality*

# Tuesday 8<sup>th</sup>



R1		R2		R3		R4		R5	
10:00	<p><b>F0102.</b> 10:00 Björn Zehner A Proposal for how to Build Large-Scale 3D Geological Models without Using Map Projections</p> <p><b>F0103.</b> 10:20 Simon Lopez Bridging static and dynamic modeling: an application to high energy geothermal reservoir modeling</p> <p><b>F0104.</b> 10:40 Benjamin Chauvin Building folded horizon surfaces from 3D points: a new method based on geomorphological restoration</p> <p><b>F0106.</b> 11:00 Gabriel Courrioux Comparisons from multiple realizations of a geological model. Implication for uncertainty factors identification</p> <p><b>F0108.</b> 11:20 Björn Wiczorek Converting corrupted 3d geomodels into voxel mode</p> <p>Poster Teasers 11:40 <b>F0110, F0109, F0101, F0113</b></p>	<p><b>G0101.</b> 10:00 Peter Menzel CHDRe – a new irregular and parameter constrained approach for the resampling of scattered data</p> <p><b>G0102.</b> 10:20 Isabel Michel Meshfree Numerical Simulation in Soil Mechanics with the Finite Pointset Method (FPM)</p> <p><b>G0103.</b> 10:40 Pankaj K Mishra Meshless RBF based pseudospectral solution for acoustic wave equation</p> <p><b>G0104.</b> 11:00 David Miráz Numerical solution of the geodetic boundary value problem using the finite element method</p> <p><b>G0105.</b> 11:20 Mikhail Kruglyakov The projective method approach in the electromagnetic integral equations solver</p>	<p><b>G1201.</b> 10:05 Keyan Xiao Assessment of China National Mineral Resource Potentiality-Theory and Technique</p> <p><b>G1203.</b> 10:25 Yujie Jiao Effect of indicator transform of predictor variables on potential modeling: A 3d case study</p> <p><b>G1204.</b> 10:45 Wenlei Wang Fractal/multifractal-based spatial analysis in the Malipo area, Southeastern Yunnan, China</p> <p><b>G1205.</b> 11:05 Guimin Xu Noise assisted bi-dimensional empirical mode decomposition (N-A BEMD) for extraction of geochemical anomalies associated with Cu mineralization in the southwestern Fujian province (China)</p> <p><b>G1206.</b> 11:25 Samuel Kost Numerical analysis of mathematical methods for potential modeling with large datasets</p> <p>Poster Teasers 11:45 <b>G1202</b></p>	<p><b>G0502.</b> 10:10 John C. Davis Delineating seismic facies in carbonates by GLCM attributes</p> <p><b>G0510.</b> 10:30 Cheng Lyu The fractal characteristics of spatial distribution of lineaments extracted by remote sensing image in Pinghe area(China)</p> <p><b>G0506.</b> 10:50 Robert Zimmermann Possibilities and challenges of remote sensing for exploration of carbonate-hosted REE deposits</p> <p><b>G0507.</b> 11:10 Sandra Jakob Potential of hyperspectral remote sensing for the exploration of structural related mineralizations</p> <p><b>G0509.</b> 11:30 Zhentao Qin Study on Remote Sensing Images of De-Blurring Based on Dictionary Learning</p> <p>Poster Teasers 11:50 <b>G0504, G0508, G0503, G0511, G0501</b></p>	<p><b>G1011.</b> 10:15 Mariana Quinhã Multipoint statistics of azimuth angle classes: an application to the simulation of channel structures and the evaluation of porosity in siliclastic reservoirs</p> <p><b>G1012.</b> 10:35 Eulogio Pardo Igúzquiza On the statistical testing of the hypothesis of constant global mean in geostatistics</p> <p><b>G1013.</b> 10:55 Sarko Hakim Parallel Programming of Model-Based Geostatistics for Improved Reservoir Characterization</p> <p><b>G1014.</b> 11:15 P.A. Dowd Stochastic simulation of spatial hydrofacies accounting for the uncertainty of facies proportions</p> <p><b>G1406.</b> 11:35 Edzer Pebesma Spatial Statistics' new frontiers</p> <p>Poster Teasers 11:55 <b>G1001, G1010, G1006, G1007, G1004, G1005</b></p>				
11:00									
12:00									



**F0101.** 11:40, Wang Gongwen:

*3D structure modeling in Luanchuan district*

**F0109.** 11:43, Lars Schimpf:

*Geologically structured tetrahedral meshes for numerical geoscientific modeling approaches*

**F0110.** 11:46, Qiyu Chen:

*Knowledge-driven Multiple Scale 3D Geological Modeling Method in Urban Geological Survey*

**F0113.** 11:49, Sosina Haile:

*Three dimensional geological model of Geyer area, Erzgebirge, Germany*

**G1202.** 11:45, Shengyuan Zhang:

*Comparison of weighted weights of evidence and logistic regression models for mineral prediction in the Gejiu Mineral district, China*

**G0501.** 11:50, Michal Kniotek:

*Automatic detection of subsidences and uplifts from interferograms of satellite synthetic-aperture radar (SAR) images.*

**G0503.** 11:53, Tomple Byamungu Mayange:

*Geohazards at the North of Goma Town and the tectonic of MUGARA*

**G0504.** 11:56, Wenlei Wang:

*Integration of Landsat ETM+ data with stream sediment geochemical data for mapping iron alteration in Yamansu mineral district, China*

**G0508.** 11:59, Steven Bernsen:

*Recognition of stick-slip surface wave signals from the Whillans ice stream: a data mining approach combining subspace detection and random forest classification*

**G0511.** 12:02, Zhifang Zhao:

*The Research on the Enhanced Anomaly Information Extraction of Metamorphic Minerals with ASTER Data*

**G1001.** 11:55, Albrecht Gebhardt:

*A greedy heuristic applied to optimal design of experiments for spatial data*

**G1004.** 11:58, Leszek Jurdziak:

*Application of geostatistical methods for analysing distribution of steel cord conveyor belt failures in space and time*

**G1005.** 12:01, Carla Kathryn D. Co:

*Artificial rough fracture generation using sequential Gaussian simulation (SGSIM): correlating spatial aperture characteristics to flow channeling behavior*

**G1006.** 12:04, Haksu Jung:

*Comparison of Kriging methods for ICP and Portable XRF data Integration*

**G1007.** 12:07, Ricardo A. Olea:

*Compensation of clustering in spatial data with preferential sampling*

**G1010.** 12:10, Hans-Martin Haupt:

*Geostatistical threedimensional variogrammetry: Two analysis examples of structures and parameters*

R1		R2		R3		R4		R5	
13:20	<p><b>F0201. 13:20</b> Jan Gietzel A team collaboration tool and platform to share 3d subsurface models</p> <p><b>F0202. 13:40</b> Christian Brogaard Pedersen Assessment of 3D geometry types for a future national 3D geological model</p> <p><b>F0204. 14:00</b> Martin Hansen Danish public shared database for geology, groundwater and drinking water data</p> <p><b>F0205. 14:20</b> Sabine H. Brodhag Data Management Strategy Based on Harmonised Data Models – An Example from Switzerland</p> <p><b>F0209. 14:40</b> Lars Schimpf Geology meets Arts - Presentation of 3D Geological Models</p> <p>Poster Teasers 15:00 <b>F0213, F0203, F0208, F0206, F0215</b></p>	<p><b>G0601. 13:20</b> Zahra Lakdawala Practical considerations for Monte Carlo simulations: From characterization of complex spatial uncertainty to prediction of groundwater flows</p> <p><b>G0602. 13:40</b> Johanna Lippmann-Pipke Quantifying 3D tracer velocity and porosity on core scale from 3D GeoPET image sequences</p> <p><b>G0605. 14:00</b> Simon Schröder STRING 3: Full 3D Visualization of Groundwater Flow</p> <p><b>G0606. 14:20</b> Fabrizio Felletti Using large subsurface data repositories to model 3D hydrofractures distribution: a case study from Porto Cava and the Lagoon of Venice (NE, Italy)</p> <p><b>G1405. 14:40</b> Christien Thiaert Spatial design for selecting an optimum of water wells from an existing network of boreholes to facilitate natural base-line groundwater hydrochemistry of the Karoo in advance of hydraulic fracturing for shale gas</p> <p>Poster Teasers 15:00 <b>G0604, G0603</b></p>	<p><b>G1207. 13:25</b> Helmut Schaben Optimized sub-sampling for logistic regression with unbalanced large datasets</p> <p><b>G1208. 13:45</b> Guoxiong Chen Singularity Theory for Mapping Geochemical Anomaly Based on Wavelet Analysis</p> <p><b>G1301. 14:05</b> Enamundram Chandrasekhar Multifractal Analysis of Geomagnetic Storms</p> <p><b>G1302. 14:25</b> Andrzej Lesniak Recursive filtration of magnetotelluric data</p> <p>Poster Teasers 14:45 <b>G1303</b></p>	<p><b>G1101. 13:30</b> Yelena Van Der Grijp Application of Direct Sampling multi-point statistic and Sequential Gaussian simulation algorithms for modelling uncertainty in gold deposits</p> <p><b>G1102. 13:50</b> Francky Fonedjio Kameni Breccia Pipe Prediction: a new approach using non-stationary covariances</p> <p><b>G1104. 14:10</b> Serge Antoine Séguret Geostatistical Evaluation of Rock Quality Designation and its link with linear Fracture Frequency</p> <p><b>G1105. 14:30</b> Anna Bozhneva Geostatistical model of placer deposits of heavy minerals</p> <p>Poster Teasers 14:50 <b>G1109, G1103</b></p>	<p><b>G0807. 13:35</b> Mohamad Nur Heriawan Optimizing the Resources Model of "Horse Shoe" Cu-Au Porphyritic Deposit Using Unfolding Geostatistical Methods</p> <p><b>G0802. 13:55</b> Ruth Mirdie Automated analysis and imaging of uncertainty in 3D geological models, Sandstone Greenstone Belt, Western Australia.</p> <p><b>G0804. 14:15</b> Wolfgang Gossel Geological and mining model Sangerhäuser Mulde (Saxony-Anhalt, Germany)</p> <p><b>G0806. 14:35</b> Volker Jungk Mapping, structural analysis and geological 3D-modeling in the Hessisch-Thuringian potash district</p> <p>Poster Teasers 14:55 <b>G0803, G0805, G0808</b></p>	<p><b>G2001. 14:45</b> Ines Görz and Henry Lehmann <i>Virtual Mine Reiche Zeche. Virtual geophysical experiment above a salt diapir</i> <b>ATTENTION: pre-registration required!</b> Visit the Registration Desk</p>	<p><b>G0801. CANCELLED</b> Le Gao 3D modeling and visualization for predicting ore bodies, based on Gocad technology</p>		
14:00									
15:00									



teasers 13:20-15:25, session 15:00-16:00

**F0203.** 15:00, Maik Schilling:

*Brandenburg 3D - GIS goes underground, a geological 3D model for the public*

**F0206.** 15:03, Pierre Brouillette:

*Generic Data Model Design and tools, for geoscience mapping projects implemented in ArcGIS.*

**F0208.** 15:06, Sabine H. Brodhag:

*Geology Data Model Suite - Harmonising Geological Data in Switzerland*

**F0213.** 15:09, Gerold Diepolder:

*The Limits of Interoperability – Cross-Border Modelling needs more than Technical Solutions*

**F0215.** 15:12, Carl Watson:

*Why share data and what methodologies can help?*

**G0603.** 15:00, Kristina Helle:

*sensors4plumes - Optimise sensor networks for plume monitoring*

**G0604.** 15:03, Jisu Han:

*Steady-state groundwater flow into a rock tunnel based on the 2-D equivalent pipe network model*

**G1303.** 14:45, Ayrat Kharisov:

*The study of the fine structure of tidal gravity variations using wavelet transform*

**G1103.** 14:50, Jacek Mucha:

*Categorization of mineral resources based upon geostatistical estimation of the continuity of changes of resource parameters*

**G1109.** 14:53, Jacek Mucha:

*Variability and indirect method of cobalt abundance estimation in the polymetallic nodules, the INTEROCEANMETAL exploration area, Pacific Ocean*

**G0803.** 14:55, Sascha Görne:

*Cross border 3D modelling - challenges and results of a transnational geothermal project*

**G0805.** 14:58, Seong Kon Lee:

*Integration of geo-electromagnetic model into a 3D common earth model for geothermal resource evaluation*

**G0808.** 15:01, Tingting Zhang:

*The application of Geo3DML in the exchange of 3D deposit model*

	R1	R2	R3	R4	R5
16:00	<p><b>F0207.</b> 16:00 Gang Liu Geological Spatio-temporal Data Management Model Based on System Project Library</p> <p><b>F0210.</b> 16:20 Carl Watson Integrating commercially generated data into centralised geoscience data repositories for the benefit of urban environments</p> <p><b>F0211.</b> 16:40 Wang Xianghong Integration and Sharing Service System of Three-Dimensional Geological Models Based on Geo3DML</p>		<p><b>G1304.</b> 16:05 David Minkwitz Tomography of the ionosphere with geostatistical inversion</p> <p><b>G0505.</b> 16:25 Eulogio Pardo-Iguzquiza Models of spatial points for describing the spatial distribution of karst depressions in karst terrains</p>	<p><b>G1106.</b> 16:10 Julián Ortiz Practical Aspects of Resources Modeling in presence of Locally Varying Anisotropy</p> <p><b>G1107.</b> 16:30 Gonçalo Gomes The simulation of W-Su grades of the São Pedro das Águas skarn ore deposit (Tabuaço, northern Portugal)</p> <p><b>G1108.</b> 16:50 David Silva The use of rock density for improving the morphological and metal grade models of the sulphide ore deposit of Zambujal (Neves-Corvo mine)</p>	<p><b>F0105.</b> 16:15 Alan Keith Turner Challenges with Applying Geological Modelling for Infrastructure Design</p> <p><b>F0107.</b> 16:35 Qiuning Cheng Concept of Fractal Density and Its Implications In Geo-modeling</p> <p><b>F0111.</b> 16:55 Jeanne Pellerin RINGMesh: A programming library for geological model meshes</p> <p><b>F0112.</b> 17:15 Guillaume Caumon Splay faults and flower structures - a theoretical framework for 3D geomodeling.</p>
17:00	<p><b>F0212.</b> 17:00 Maryke M. den Dulk Modeling the Dutch subsurface: From paper product towards dissemination of a 3D-digital model.</p> <p><b>F0214.</b> 17:20 Martin L. Nayembil The Role of Data modelling in a Modern Geological Survey</p>				
18:00					<p><b>R7</b></p> <p><b>G2001.</b> 16:00 Ines Görz and Henry Lehmann <i>Virtual Mine Reiche Zeche. Virtual geophysical experiment above a salt diapir</i> <b>ATTENTION: pre-registration required!</b> Visit the Registration Desk</p>

# Wednesday 9th

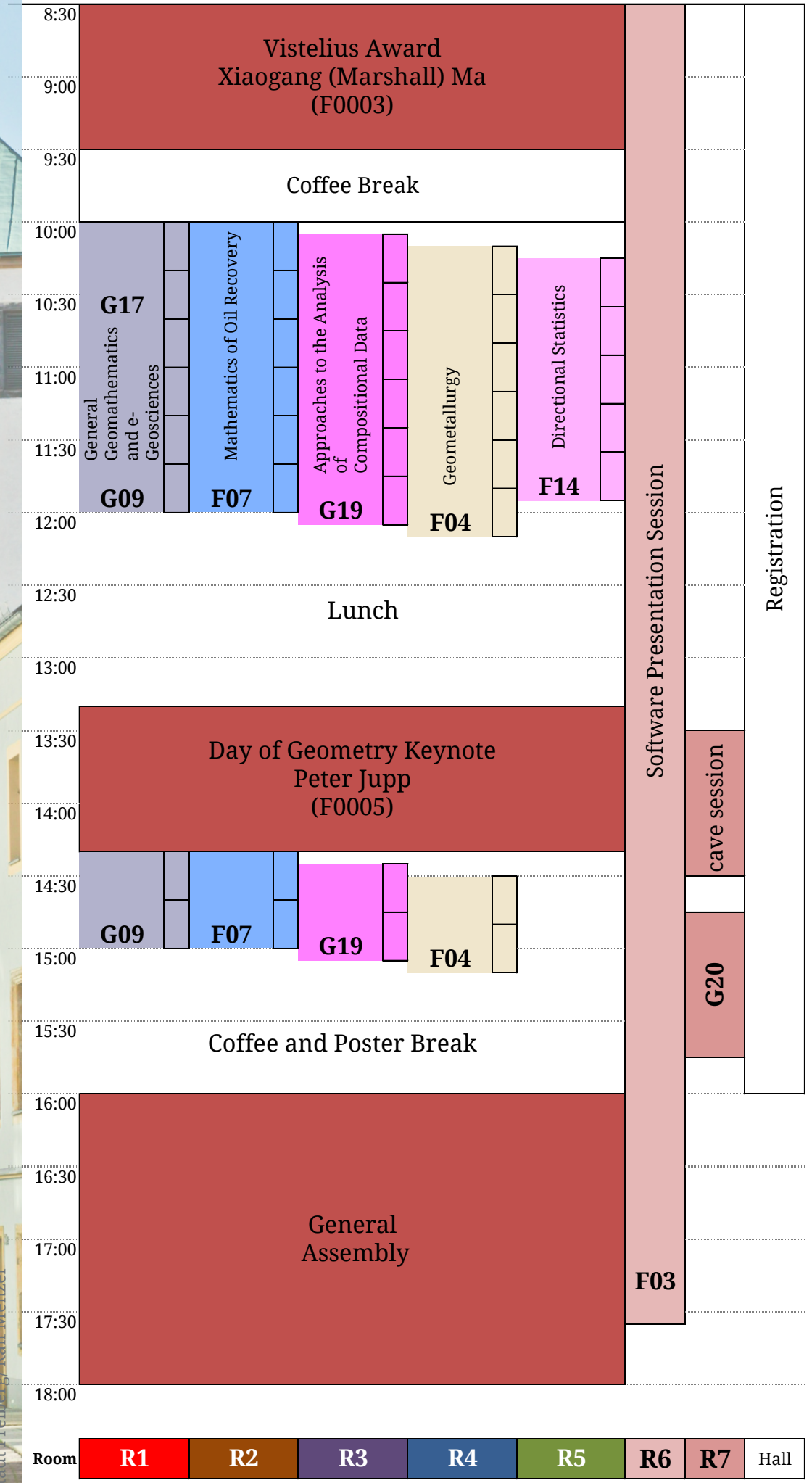


Photo: Stadt Freilburg/Ralf Menzel

	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>	<b>R5</b>
10:00	<p><b>G1701.</b> 10:00 Tong Wang A general tool to construct case library for industrial area redevelopment</p> <p><b>G1702.</b> 10:20 Przemyslaw Lisowski A method of data storage for case of deformations in mining area</p> <p><b>G0901.</b> 10:40 M.I. Ortego An application of modeling of extremal dependence using copulas</p> <p><b>G0902.</b> 11:00 Witold Kawalec Fuzzified modelling of an ultimate pit economic optimisation</p> <p><b>G0903.</b> 11:20 Sean A. McKenna Intersection and detection of target areas with strip transect sample support</p> <p><b>G0904.</b> 11:40 Eulogio Pardo-Iguzquiza Is it possible to select a unique best model in regression when the number of experimental data is small and the number of explicative variables large ?</p>	<p><b>F0701.</b> 10:00 Yuxiang Zhang 3D controlled source electromagnetic parallel simulation using the adaptive finite element method</p> <p><b>F0703.</b> 10:20 Ashkan Soltanieh Discrete Fracture Network Modeling and Gel Injection Simulation in Fractured Carbonates</p> <p><b>F0705.</b> Mo 15:11 Junjian Li Identification and characterization of channeling with an ensemble of methodologies in waterfloods (RESCHEDULED)</p> <p><b>F0706.</b> 11:00 Hossein Roozsaz Investigation of operational constraints on improving the recovery of WAG injection in an Iranian offshore field using simulated annealing</p> <p><b>F0707.</b> 11:20 Oleg Volkov Multiobjective history matching in closed-loop reservoir management</p> <p><b>F0708.</b> 11:40 Abeeb Awotunde Numerical Schemes for Anomalous Diffusion of Single-Phase Fluids In Porous Media</p>	<p><b>G1901.</b> 10:05 Ute Mueller An affine equivariant anamorphosis for compositional data</p> <p><b>G1906.</b> 10:25 Silke Konsulke Method for constructing a mineralogical composition from a measured sample of single components</p> <p><b>G1903.</b> 10:45 Eusebi Jarauta-Bragulat Development of air quality indexes using compositional approach</p> <p><b>G1904.</b> 11:05 Kamila Facevicova Geochemical signature of the Devonian/ Carboniferous boundary - a compositional approach</p> <p><b>G1908.</b> 11:25 Alessandra Menafoglio Spatial clustering and prediction in Bayes spaces for density functions in composite systems</p> <p>Poster Teasers 11:45 <b>G1907, G1909</b></p>	<p><b>F0401.</b> 10:10 Steffen Brammer A Self-Guiding, Domain Tool For Long-Tailed Bi-Modal Data Sets</p> <p><b>F0402.</b> 10:30 Jared L. Deutsch Downscaling and multiple imputation of metallurgical variables</p> <p><b>F0403.</b> 10:50 Stephan Matos Camacho Inference of phase properties from sorting experiments and MLA data</p> <p><b>F0407.</b> 11:10 Steinar Ellefmo Use and analysis of MWD-data to increase selectivity in an industrial mineral operation</p> <p><b>F0408.</b> 11:30 Julían Ortiz Workflows in geometallurgical prediction: challenges and outlook</p> <p>Poster Teasers 11:50 <b>F0404</b></p>	<p><b>F1403.</b> 10:15 Peter Jupp Estimating the number and locations of apices of distributive systems</p> <p><b>F1402.</b> 10:35 Florian Bachmann Diminution of the sample size of individual orientation measurements approximately preserving the orientation density function</p> <p><b>F1401.</b> 10:55 Arthur Pewsey A wrapped Cauchy model for bivariate circular data and its application</p> <p><b>F1405.</b> 11:15 Richard Arnold Statistics of Orthogonal Axial Frames</p> <p><b>F1404.</b> 11:35 Peter Jupp Statistics of Ambiguous Rotations</p>
12:00					

	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>	<b>R7</b>
13:20	<p><b>F0005.</b> 13:20 Peter Jupp Directional Statistics in the Geosciences</p>				
14:00	<p><b>G0905.</b> 14:20 Swanhild Bernstein Kernel-based frames on spheres</p>	<p><b>F0709.</b> 14:20 Jeongwoo Jin Positioning of an injection well by combining watercut matching and adjoint method</p> <p>Poster Teasers 14:40 <b>F0704, F0710, F0702, F0711</b></p>	<p><b>G1905.</b> 14:25 Qiuming Cheng Local Singularity Analysis of Compositional Data</p> <p><b>G1902.</b> 14:45 J.J. Egozcue Compositional approach to mineral singularity assessment</p>	<p><b>F0405.</b> 14:30 Raimon Tolosana Delgado Optimizing a stepwise fractionation chain in mineral processing or metallurgy</p> <p><b>F0406.</b> 14:50 K. Gerald van den Boogaart The Effect of Problem Formulation on Adaptive Processing Decisions</p>	<p><b>G2001.</b> 13:30 Ines Görz and Henry Lehmann <i>Virtual Mine Reiche Zeche. Virtual geophysical experiment above a salt diapir</i> <b>ATTENTION: pre-registration required! Visit the Registration Desk</b></p>
15:00					<p><b>G2001.</b> 14:45 Ines Görz and Henry Lehmann <i>Virtual Mine Reiche Zeche. Virtual geophysical experiment above a salt diapir</i> <b>ATTENTION: pre-registration required! Visit the Registration Desk</b></p>

teasers 10:00-12:15, session 15:00-16:00

**G1907.** 11:45, Maria-Theresa Schafmeister:

*Multivariate data analysis of hydrogeochemical data to detect origin of arsenic contamination in groundwater of Mecklenburg-Vorpommern (Germany)*

**G1909.** 11:48, Josep Antoni Martin-Fernandez:

*Treatment of nondetects in compositional analysis: the R package zCompositions*

**F0404.** 11:50, Thomas Heinig:

*Monitoring gravitational and particle shape settling effects on MLA sampling preparation*

teasers 13:20-15:15, session 15:00-16:00

**F0702.** 14:40, Sid-Ali Ouadfeul:

*Automatic Faults tracking from seismic data using the Wavelet Transform Modulus Maxima lines (WTMM) method*

**F0704.** 14:43, Xiaoming Chen:

*Hydrocarbon Generation & Expulsion Model of Lower Silurian Longmaxi Shale in the Southern Sichuan Basin*

**F0710.** 14:46, Abeeb Awotunde:

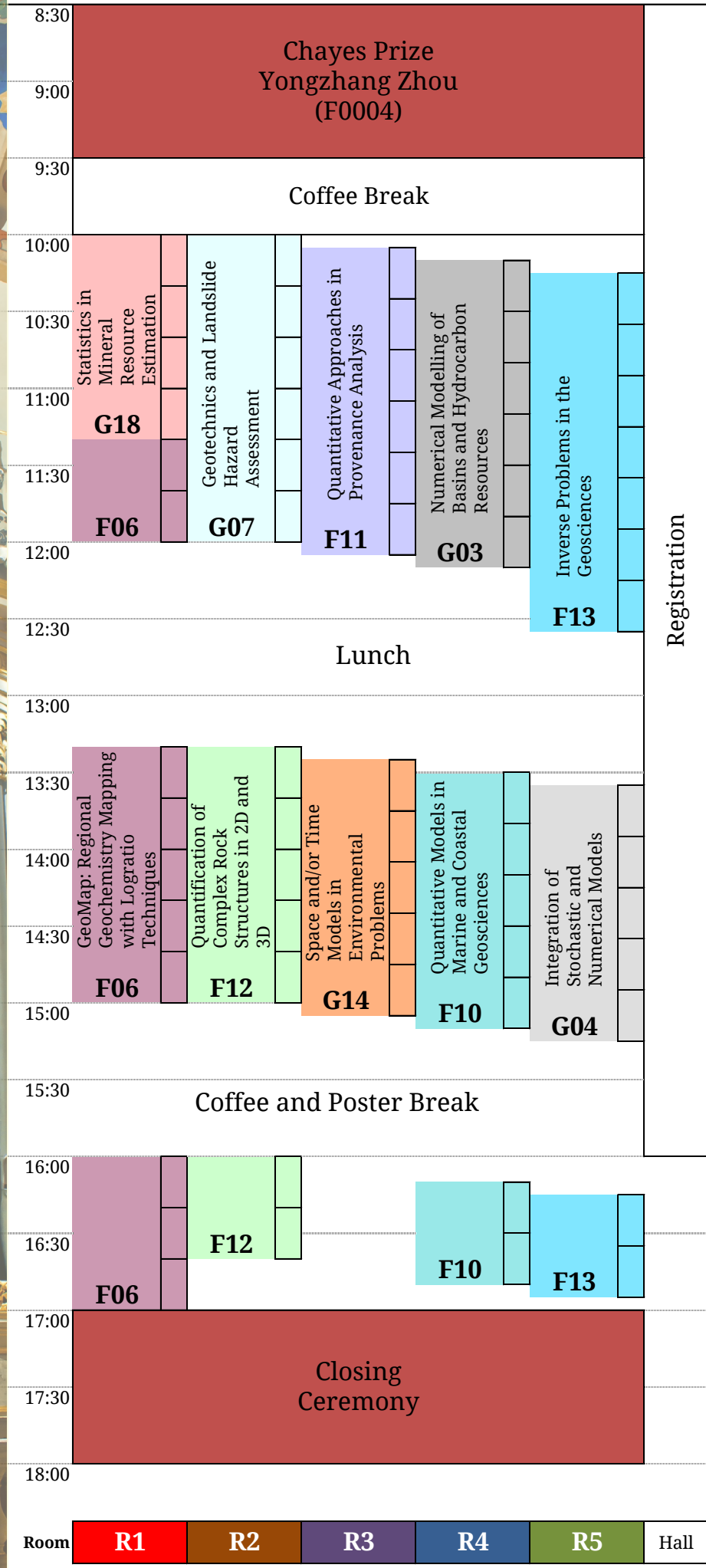
*Sensitivity-based Upscaling for History Matching of Reservoir Models*

**F0711.** 14:49, Leila Aliouane:

*Total Organic Carbon Prediction in shale gas reservoirs using the Radial Basis Function neural network*



# Thursday 10<sup>th</sup>





R1		R2		R3		R4		R5	
10:00	<p><b>G1802.</b> 10:00 Max Frenzel A general method for the assessment of the geological and technological limitations to high-tech metal supply</p> <p><b>G1808.</b> 10:20 Li Sun Metallogenic Prognosis for Pb-Zn deposits in Caixiashan area, East Tianshan, China Using Fuzzy Logic Method</p> <p><b>G1806.</b> 10:40 Vladimir Lisitsin Exploratory spatial analysis of mineral deposit point patterns</p> <p>Poster Teasers 11:00 <b>G1803, G1805, G1809, G1807, G1801</b></p>	<p><b>G0701.</b> 10:00 Hakan A. Nefeslioglu A comprehensive approach for medium scale landslide risk assessment</p> <p><b>G0703.</b> 10:20 Andrea G Fabbri Favourability modelling of landslide hazard with spatial uncertainty of class membership: a reapplication in central Slovenia.</p> <p><b>G0704.</b> 10:40 Alexey Victorov Modeling of Landslides Based on Periodic Markov Chain</p> <p><b>G0705.</b> 11:00 Maciej Dwornik Numerical and experimental stability analysis of earthen levees</p> <p><b>G0706.</b> 11:20 Gabriele Bicocchi Preliminary assessment of the factors controlling the geotechnical and hydrological properties in the hillslope deposits of Eastern Tuscany (Central Italy)</p> <p>Poster Teasers 11:40 <b>G0702, G0707</b></p>	<p><b>F1101.</b> 10:05 Hilmar von Eynatten Controls of source-rock, chemical weathering, and grain size on sediment composition</p> <p><b>F1102.</b> 10:25 István Dunkl How to interpret 'slightly complex' distributions? - a method for bimodality test of low numbers of single-grain age data</p> <p><b>F1103.</b> 10:45 Joerg M. Habermann Multivariate analyses of phenocryst compositional data refine the Bed I tephrostratigraphic framework of Olduvai Gorge, Tanzania</p> <p><b>F1104.</b> 11:05 Solveig Pospiech Provenance Analysis on Tea (<i>Camellia sinensis</i>) by means of Main and Trace Elements</p> <p><b>F1106.</b> CANCELLED Luca Caracciolo Sediment generation in a humid Mediterranean setting: evidence from MUA and heavy mineral analysis on andlastic sands of the Sira Massif, Italy</p> <p>Poster Teasers CANCELLED <b>F1105</b></p>	<p><b>G0301.</b> 10:10 Qiulin Guo 3D Basin Numerical Modeling And Its Application</p> <p><b>G0302.</b> 10:30 Richard Sinding-Larsen Beta Creaming in Petroleum Resource Assessment</p> <p><b>G0303.</b> 10:50 Oleg Volkov Gradient-based optimization framework for closed-loop reservoir management</p> <p><b>G0304.</b> 11:10 Mi Shiyun Improved Arrington Method for Forecasting Reserve Growth Based on Discontinuous Reporting Reserves Data</p> <p><b>G1606.</b> 11:30 Byeongcheol Kang SVD-assisted Ensemble Sampling for Efficient Uncertainty Quantification</p> <p>Poster Teasers 11:50 <b>G0305, G0306</b></p>	<p><b>F1302.</b> 10:15 Hans-Juergen Goetze Advanced interactive 3D potential field modelling</p> <p><b>F1303.</b> 10:35 Konstantinos Modis Bayesian facies inversion, using spatial resampling and cosimulation with model response data</p> <p><b>F1305.</b> 10:55 Taizhong Duan Distance Measure between sedimentary Successions and its Application in Inverse Stratigraphic Modeling</p> <p><b>F1306.</b> 11:15 Sui Tung Inverting for earthquake kinematic source parameters with GPS and InSAR: Stepwise nonlinear and linear FEM-based inverse analyses</p> <p>Poster Teasers 11:35 <b>F1301, F1312, F1310, F1307, F1308, F1311, F1304</b></p>				
11:00	<p><b>F0611.</b> 11:20 Jennifer McKinley What defines a geochemical map? Implications for environmental assessment</p> <p><b>F0602.</b> 11:40 K. Gerald van den Boogaart Compositional data-driven alternatives to single geochemical component maps</p>								
12:00									

teasers 10:00-12:15, session 15:00-16:00

**G1801.** 11:00, Irina Chizhova:  
*3-D Modeling of Polycomponent Heavy Mineral Placer Deposit*

**G1803.** 11:03, Zhanglin Li:  
*An improved IDW method for ore-grade modeling*

**G1805.** 11:06, Irina Chizhova:  
*Comparative Analysis of Tin-Bearing and Barren Zones in the Khingan-Okhotsk Volcanogenic Belt, Russian Far East: Application of a Pattern Recognition Technique*

**G1807.** 11:09, Karl Ellefsen:  
*Improvements to probabilistic estimation of undiscovered mineral resources*

**G1809.** 11:12, Keyan Xiao:  
*Mineral Resource Assessment under Big Data Thinking Pattern*

**G0702.** 11:40, Jeong-Gi Um:  
*Development of a new software to analyze displacement and predict failure time of unstable slope*

**G0707.** 11:43, Alexey S. Viktorov:  
*Some new aspects of the empirical verification of stochastic theory for landslide hazard forecasting (Seattle case study)*

**F1105.** CANCELLED, Thisiane Dos Santos:  
*Provenance of Upper Cretaceous Turbidites from the Rosario Formation, Baja California, Mexico*

**G0305.** 11:50, Rili Gao:  
*Nonlinear Partial Differential Equations and its application in petroleum*

**G0306.** 11:53, Rili Gao:  
*Relationship between Conventional and Unconventional Resources of Silurian Petroleum System in Southern Sichuan Basin*

**F1301.** 11:35, Ying Liu:  
*2D Inversion of Marine Controlled-Source Electromagnetic Data*

**F1304.** 11:38, S. Barala:  
*Determination of Orthogonality- A new methodology for analysis of gravity and magnetic field data*

**F1307.** 12:41, Jesse Railo:  
*Meshless forward modeling and inversion in 3-D magnetotellurics*

**F1308.** 12:44, Theodore Donovan:  
*New Techniques for Developing and Evaluating 3D Heterogeneous Elastic Volcano Deformation FEMs*

**F1310.** 12:47, Petr S. Martyshko:  
*Studying the Structural Features of the Geophysical Potential Fields with the Use of Parallel Algorithms*

**F1311.** 12:50, Mikhail Kruglyakov:  
*The uniqueness of the inverse problem in thin-sheet electromagnetic modeling*

**F1312.** 12:53, Natalia Matveeva:  
*The "native" wavelet transform for solving the inverse problem of gravimetry on a spherical manifold*

<p><b>R1</b></p>	<p><b>R2</b></p>	<p><b>R3</b></p>	<p><b>R4</b></p>	<p><b>R5</b></p>
<p>13:20</p>	<p><b>F0601. 13:20</b> Eulogio Pardo-Iguzquiza Compositional cokriging for mapping the probability of contamination by nutrients including secondary variables</p>	<p><b>F1202. 13:20</b> Eevalisa Laine 3D visualization and analysis of fracturing in the Precambrian bedrock fractured by dykes in southern Finland</p>	<p><b>G1401. 13:25</b> Juliet Newson Analysis of temperature time series from high temperature geothermal springs, New Zealand</p>	<p><b>F1001. 13:30</b> Jue Lin-Ye A multivariate model of NW Mediterranean extreme events at present and future climate: hydrodynamics, energy and duration</p>
<p><b>F0603. 13:40</b> Ricardo A. Olea Deposit-wide mapping of uncertainty in the modeling of the geochemical parts in a coal bed and its calorific value</p>	<p><b>F1203. 13:40</b> José Almeida A comparative study of the tensor and upscaling methods for evaluating permeability in fractured reservoirs</p>	<p><b>G1402. 13:45</b> Olga Trapeznikova Mathematical Modeling of Agricultural Landscape Pattern in different geological conditions</p>	<p><b>F1002. 13:50</b> Sergey Kotov Chaos recognition in palaeoclimatic systems</p>	<p><b>G0401. 13:35</b> Marco Berardi A new data assimilation technique based on EnKF and Brownian bridges in the context of Richards' equation.</p>
<p>14:00</p>	<p><b>F0604. 14:00</b> Marc Comas-Cufí Finite mixtures of distributions: compositional model-based clustering</p>	<p><b>F1204. 14:00</b> Luping Pu A method of automatic extraction fold information from Strata layers based on GIS stratigraphic age pseudo-code encoding scheme</p>	<p><b>F1009. 14:10</b> Mathara A.D. Samanmali Shoreline Changes investigation during the last 15 years in Kalpi-tiya Peninsula, Sri Lanka</p>	<p><b>G0402. 13:55</b> David L. Moreno Bedoya Conditioning geological facies to production and well data using the ensemble smoother method: a study on ensemble size and localization.</p>
<p><b>F0610. 14:20</b> Karel Hron Weighted balances for compositional data and their application to geochemistry</p>	<p><b>F1208. 14:20</b> Md. Sakawat Hossain Quantification of impact-induced brittle deformation features – a case study from the Ries impact (Germany)</p>	<p><b>G1403. 14:05</b> Sandra De Iaco Predictions of complex-valued random fields</p>	<p><b>F1010. 14:30</b> Catarina Guerreiro The compositional dendrogram as a tool to study the (paleo)ecology of co-colithophores from coastal-neritic settings off central Portugal</p>	<p><b>G0404. 14:15</b> Gunter Spöck Space-time-dynamic integrated modelling of pollutant emissions from point sources for the determination of air-, surface-, subsurface- and groundwater pollution</p>
<p>Poster Teasers 14:40 <b>F0608, F0607</b></p>	<p>Poster Teasers 14:40 <b>F1205, F1201, F1207</b></p>	<p>Poster Teasers 14:45 <b>G1407, G1408</b></p>	<p>Poster Teasers 14:50 <b>F1008, F1006, F1007</b></p>	<p><b>G0405. 14:35</b> Hyungsik Jung Stochastic reservoir characterization using Ensemble Smoother with distance-based covariance localization</p>
<p>15:00</p>				

teasers 13:20-15:15, session 15:00-16:00

**F0607.** 14:40, Heinz Reitner:

*Multivariate log-ratio statistics and GIS: A combined approach to analyze geochemistry data of stream sediment samples within granite areas of the Bohemian Massif in Austria*

**F0608.** 14:43, Ute Mueller:

*Multivariate Spatial Analysis of Glacial Till Geochemical Data; Melville Peninsula, Nunavut, Canada*

**F1201.** 14:40, Jörn H. Kruhl:

*3d grain boundary reconstruction using a Fabric Analyser*

**F1205.** 14:43, Yongqing Chen:

*Application of Bi-dimensional empirical mode decomposition in extraction of gravity anomaly associated with the Gejiu tin-copper polymetallic mineralization and the related granites in Southwestern China*

**F1207.** 14:46, Md. Sakawat Hossain:

*Quantification of fragmentation structures in a silicified fault zone: the Fountain Range Fault (Mt. Isa Inlier, Australia)*

**G1407.** 14:45, Antoni Musolas:

*Spatiotemporal Gaussian process models for autonomous path planning in complex wind fields*

**G1408.** 14:48, Eusebi Jarauta-Bragulat:

*Wind model for offshore power simulation*

**F1006.** 14:50, Eleni Kokinou:

*Geomorphologic features of the marine environment in the Eastern Mediterranean using a modern processing approach*

**F1007.** 14:53, sundara raja reddy B.C.:

*Metal pollution , Evolution and foraminifera for Pulicat Lake, East coast of India: A study*

**F1008.** 14:56, Viktorija Rukšnien:

*Meteorological parameters influence on the SE baltic sea surface temperature*

**G0403.** 14:55, Oana Carina Suci:

*Some Aspects of Adaptive Stochastic Collocation*



	R1	R2	R3	R4	R5
16:00	<p><b>F0606.</b> 16:00 Karl Ellefsen Imputation of left-censored geochemical concentrations using spatial and measurement-error information</p> <p><b>F0609.</b> 16:20 Eric Grunsky The use of geochemical survey data for predictive geologic mapping at regional and continental scales</p> <p><b>F0605.</b> 16:40 Raimon Tolosana-Delgado Geostatistical Fisher discriminant analysis</p>	<p><b>F1206.</b> 16:00 Jörn H. Kruhl Evaluation of fragmentation processes by fractal-geometry-based quantification methods</p> <p><b>F1209.</b> 16:20 Gautier Laurent Towards stochastic modelling of folds in poly-deformed terranes using structural information</p>	<p><b>G1405.</b> Tue 14:40 Christien Thiaert Spatial design for selecting an optimum of water wells from an existing network of boreholes to facilitate natural base-line groundwater hydrochemistry of the Karoo in advance of hydraulic fracturing for shale gas (RESCHEDULED)</p> <p><b>G1406.</b> Tue 11:35 Edzer Pebesma Spatial Statistics' new frontiers (RESCHEDULED)</p>	<p><b>F1003.</b> 16:10 Jan Harff Coastline changes: Competition of geological processes, climate changes and anthropogenic activities – a modelling approach</p> <p><b>F1004.</b> 16:30 Junjie Deng Development of a quantitative model for the past and future projection of coastal morphogenesis</p>	<p><b>F1309.</b> 16:15 Alexander Grayver Stochastic inversion using parallelized Covariance Matrix Adaptation algorithm</p> <p><b>F1313.</b> 16:35 Tim Masterlark Volcano deformation source parameters estimated from FEM-based nonlinear inverse analyses of InSAR: Sensitivity to uncertainties in seismic tomography</p>
17:00	<p>17:00 <b>Closing Ceremony</b></p>				
18:00					

# Software presentation

As an effort to bring together both scientific research and business development IAMG2015 features a special session of commercial 3D geomodeling and mining software with oral presentations and exhibition by the developers and producers, included in the scientific programme as session F03. Both exhibition and software demonstrations are open to the interested public.

Tuesday, Sep 8, 2015		Wednesday, Sep 9 2015	
Chair: Uwe Kroner and Helmut Schaeben		Chair: Uwe Kroner and Helmut Schaeben	
9.00 – 9.15	<b>Dr. Annette Schwandtke, Director Chamber of Commerce of Central Saxony</b>	Jan Gietzel, <b>GiGa infosystems</b>	GST - A team collaboration tool and platform to share 3d subsurface models. Visualization, Management and Reporting
9.15 – 9.30	<i>Announcements</i>		
9.30 – 10.00	<b>John McGaughey, Mira Geoscience</b> Integrated Interpretation for Exploration Targeting	Dimitar Misev, <b>rasdaman</b>	EarthServer: Agile Analytics on Big Earth Data
10.00 – 10.30	<b>Thomas D. Krom, Leapfrog</b> Geological modelling concepts behind Leapfrog Geo	<b>John McGaughey, Mira Geoscience</b>	Integrated Interpretation for Exploration Targeting
10.30 – 11.00	<b>Colin Dunlop, Midland Valley</b> Move Software Suite	<b>Laurent Wagner, Geovariances</b>	Minestis, the Route to Resource Estimates
11.30 – 12.00	<b>Laurent Wagner, Geovariances</b> Minestis, the Route to Resource Estimates	<b>Thomas D. Krom, Leapfrog</b>	Implicit modelling with Leapfrog Geo
12.00 – 12.30	<b>Dimitar Misev, rasdaman</b> EarthServer: Agile Analytics on Big Earth Data	<b>Colin Dunlop, Midland Valley</b>	Move Software Suite
12.30 – 13.00	<b>Paul Gabriel, GiGa infosystems</b> GST - A team collaboration tool and platform to share 3d subsurface models. Visualization, Management and Reporting	<b>Carl Watson, BGS</b>	GeoVisionary Software System
14.00 – 14.30	<b>Heike Broichhausen, Euan Macaulay, Midland Valley</b> Stress Analysis in Move: shear and normal stress statistics	<b>Laurent Wagner, Geovariances</b>	Kartotrak, integrated software solution for contaminated site characterization
14.30 – 15.00	<b>Jan Gietzel, GiGa infosystems</b> GST - A team collaboration tool and platform to share 3d subsurface models. Visualization, Management and Reporting	<b>John McGaughey, Mira Geoscience</b>	4D Geohazard Modelling
15.00 – 15.30	<b>Dimitar Misev, rasdaman</b> The OGC Big Geo Data standards: How They Enable Scalability	<b>Colin Dunlop, Midland Valley</b>	Move Software Suite
15.30 – 16.00	<b>Michael O'Brien, Leapfrog</b> Relative Uncertainty Modelling for a Kimberlite Pipe Using an Indicator Interpolant	<b>Michael O'Brien, Leapfrog</b>	Optimizing Triangle Size for Geological Modelling
16.30 – 17.00	<b>Laurent Wagner, Geovariances</b> Kartotrak, integrated software solution for contaminated site characterization	<b>Dimitar Misev, rasdaman</b>	The OGC Big Geo Data standards: How They Enable Scalability
17.00 – 17.30	<b>John McGaughey, Mira Geoscience</b> 4D Geohazard Modelling	<b>Paul Gabriel, GiGa infosystems</b>	GST - A team collaboration tool and platform to share 3d subsurface models. Visualization, Management and Reporting
17.30 – 18.00	<b>Carl Watson, BGS</b> GeoVisionary Software System		



# Short Courses

## **Young presenters' programme**

- H. Schaeben and C. Alexandrakis (TU Freiberg, Germany), K. Saure (Career Center, U Leipzig, Germany) and R. Dimitrakopoulos (McGill U., Canada)
- 5th September, 9:00-12:00, 14:00-17:00; Room MEI-0080

## **Introduction to spatial databases**

- P. Gabriel, J. Gietzel, TU Bergakademie Freiberg, Germany
- CANCELLED because of lack of registered participants

## **Introduction to compositional data analysis**

- V. Pawlowsky-Glahn, U. Girona, Spain; J.J. Egozcue, U. Politecnica de Catalunya, Spain
- 6th September, 9:00-12:00, 14:00-17:00; Room MEI-0150

## **Wavelets and fractals in Geophysics: an overview**

- E. Chandrasekhar, Indian Institute of Technology, India
- CANCELLED because of lack of registered participants

## **Making Better Exploration and Appraisal Decisions Using Modern Asset Valuation Methods**

- David Laughton, U. Alberta and David Laughton Consulting Ltd, Canada; Gordon Kaufman, Massachusetts Institute of Technology, USA
- 6th September, 9:00-12:00, 14:00-17:00; PC-Pool Room MEI-1203a

## **Multivariate Geostatistics for compositional data**

- U. Mueller, Edith Cowan U., Australia; R. Tolosana-Delgado, Helmholtz Institute Freiberg for Resource Technology, Germany
- 11th and 12th September, 9:00-12:30, 14:00-17:30; Room MEI-0150

## **A practical course on the spectral analysis of time series in Geology, Climatology, Environmental Sciences and Engineering**

- E. Pardo-Igúzquiza, IGME, Spain
- CANCELLED because of lack of registered participants

## **Machine Learning of geospatial data: achievements and new trends**

- M. Kanevski, U. Lausanne, Switzerland
- 11th September, 9:00-12:00, 14:00-17:00, and 12th September, 9:00-12:00; PC-Pool Room MEI-1203a

# The organizers

## The IAMG

The International Association for Mathematical Geosciences (IAMG) is a professional multidisciplinary nonprofit society with over 600 members in more than 40 countries. The mission of the IAMG is to promote worldwide the advancement of applications of mathematics, statistics and informatics in the geosciences. The IAMG owns or sponsors three reference international journals: *Mathematical Geosciences* (formerly *Mathematical Geology*), *Computers and Geosciences* and *Natural Resources Research*. More information on the activities of the society can be found at

<http://www.iamg.org>

This conference has been organized under the guidance of the IAMG2015 Strategic Committee of the Association. It is formed by: Frits Agterberg (NRCAN), Graeme Bonham-Carter (NRCAN), K. Gerald van den Boogaart (Helmholtz Institut Freiberg for Resource Technology), Jef Caers (Stanford U.), John Carranza (James Cook U.), Guillaume Caumon (U. Lorraine), Yongqing Chen (China U. Geosci. Beijing), Qiuming Cheng (York U.), David Collins (IAMG treasurer), Roussos Dimitrakopoulos (McGill U.), Liu Gang (China U. Geosci. Wuhan), June Hill (CSIRO), Jennifer McKinley (Queens U. Belfast), Ricardo Olea (USGS), Julián Ortiz (U. Chile), Vera Pawlowsky-Glahn (U. Girona), Helmut Schaeben (TU. Bergakademie Freiberg), Christien Thiart (U. Cape Town), and Raimon Tolosana-Delgado (Helmholtz Institut Freiberg for Resource Technology).

## The TUBAF

The Technical University Bergakademie (meaning mining academy) Freiberg (TUBAF), the resource university since 1765, is the oldest mining university of the world. It was founded in 1765 and serendipitously celebrates its 250th anniversary in the year of the conference. Today it has faculties for mathematics and informatics, for natural sciences, geosciences, engineering, material sciences and economics. Since 2007 there is an active IAMG student chapter, and one of the few universities in the world with a professorship for Mathematical Geology and Geoinformatics.

## The HIF

The Helmholtz Institute Freiberg for Resource Technology (HIF) is an Institute of the Helmholtz Center Dresden Rossendorf e.V. (HZDR), founded by the German Federal Government in 2012 as a joint venture of the TUBAF and the HZDR. HIF is a national Research center for mineral resources. The HZDR is a member of the Helmholtz Society, an 100% publicly-funded association of reference research centers in Germany.

# Committees

## Scientific committee

- Frits Agterberg (Canada)
- Leila Aliouane (Algeria)
- Sandra Birtel (Germany)
- Peter Baumann (Germany)
- Gerald van den Boogaart (Germany)
- Melanie Brandmeier (Germany)
- Antonella Bucciatti (Italy)
- Jef Caers (USA)
- Guillaume Caumon (France)
- Qiuming Cheng (Canada, China)
- Vasily Demyanov (UK)
- Istvan Dunkl (Germany)
- Juan Jose Egozcue (Spain)
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- Jan Harff (Poland)
- June Hill (Australia)
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- Hans-Joerg Starkloff (Germany)
- Dietrich Stoyan (Germany)
- Dan Tetzlaff (USA)
- Raimon Tolosana-Delgado (Germany)
- Gerhard Woerner (Germany)

## Local organizing committee



Helmut Schaeben



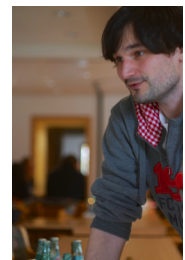
K. Gerald van den Boogaart



Regina van den Boogaart



Silke Konsulke



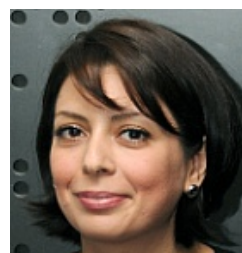
Stephan Matos Camacho



Tina Schulz



Renate Seidel



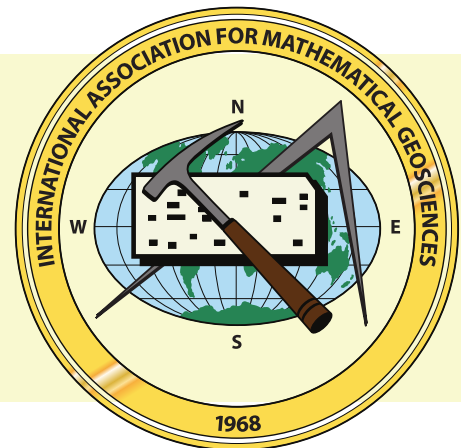
Sanaz Salati



Raimon Tolosana-Delgado



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# Software presenters:



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