General Information

Session A—Ground Water Applications

Conveners:

- Geoffrey C. Bohling, Kansas Geological Survey, USA
- Maria-Theresia Schafmeister, Institut fuer Geologische Wissenschaften, Germany

Tuesday Afternoon—Room I, Wednesday Morning and Afternoon—Room III

Session B—Computer-Aided Modeling in Marine Geosciences

Conveners:

- Jan Harff, Baltic Sea Research Institute, Germany
- Gert Jan Weltje, Delft University of Technology, The Netherlands

Monday Morning and Afternoon—Room I

Session D—Geostatistics and Data Integration

Conveners:

- Jef Caers, Stanford University, USA
- Pierre Goovaerts, University of Michigan, USA

Monday Morning and Afternoon—Room III, Tuesday Morning—Room III

Session E—Geophysics and Geoengineering

Conveners:

- José Rafael Aranda López, Comisión Federal de Electricidad, Mexico
- Richard Miller, Kansas Geological Survey, USA

Monday Afternoon—Salón del Sol

Session F—GIS applications and digital field data capture: integration of geologic database development, analysis, and map production

Conveners:

- Ernst M. Schetselaar, International Institute for Aerospace Survey and Earth Sciences, The Netherlands
- David R. Collins, Kansas Geological Survey, USA
- Jorgina A. Ross, Kansas Geological Survey, USA

Monday Afternoon—Room II, Wednesday Morning and Afternoon—Room II

Session G—Mineral Resources, Mining, and the Environment

Conveners:

- Leopold Weber, Austrian Federal Mining Authority, Austria
- Jaime J. Gutierrez Nunez, Minas de Bacis, Mexico
- Ing. Sergio Almazán Esqueda, Consejo de Recursos Minerales

Monday Morning—Salón del Sol

Session H—Geologic Modeling and Simulation of Sedimentary Systems

Conveners:

- Daniel Merriam, Kansas Geological Survey, USA
- John Davis, Kansas Geological Survey, USA

Monday Morning and Afternoon—Room IV, Tuesday Afternoon—Room II

Session I—Building National and Regional Geologic Map Databases

Conveners:

- David R. Soller, U.S. Geological Survey, USA
- John Broome, Geological Survey of Canada, Canada

Monday Morning and Afternoon—Room V, Tuesday Morning and Afternoon—Room V (see note on page 4)

Session J—Petroleum Geology

Conveners:

- John Doveton, Kansas Geological Survey, USA

Tuesday Morning and Afternoon—Room I

Session K—Prediction Models in Spatial Data Analysis

Conveners:

- Chang-Jo Chung, Geological Survey of Canada, Canada
- Andrea G. Fabbri, International Institute for Aerospace Survey and Earth Sciences, The Netherlands

Wednesday Afternoon—Salón del Sol

Session L—Statistics in the Earth Sciences

Conveners:

- Carol A. Gotway Crawford, Centers for Disease Control and Prevention, USA
- Michael E. Hohn, West Virginia Geological Survey

Tuesday Afternoon—Room IV, Wednesday Morning and Afternoon—Room IV

Session M—Numerical Methods and Applications

Conveners:

- Lynn Watney, Kansas Geological Survey, USA
- Eugene Rankey, Iowa State University, USA
- Ulisses T. Mello, IBM Thomas J. Watson Research Center, USA

Wednesday Morning and Afternoon—Room III

Session N—Fractal/Multifractal and Scaling Modeling and Geographical Information Systems

Conveners:

- Qiuming Cheng, York University, Canada
- Frederik P. Agterberg, Geological Survey of Canada

Wednesday Morning and Afternoon—Room V

Opening Session Schedule

Monday Morning, Rooms I and II

8:00 am	**Jorgina A. Ross, IAMG2001 Chair**
8:05 am	**Moisés Dávila, José Luis de la Rosa, IAMG2001 Local Committee in Mexico**
8:10 am	**Graeme Bonham-Carter, IAMG president**
8:15 am	**David R. Soller, Keynote speaker**
8:35 am	**Mike Price, ESRI presentation**
8:55 am	**John C. Davis, IAMG2011 Technical Committee, Chair**

Dinner hosted by ESRI/IAMG

Hotel Fiesta Americana Grand Coral Beach, Sunrise Terrace
Monday Evening, 8:00 pm

This year's dinner is sponsored by ESRI, who are releasing their new **Geostatistical Analyst Software**.

ArcGIS Geostatistical Analyst is an ArcGIS extension that provides a powerful suite of tools for spatial data exploration and optimal surface generation using sophisticated statistical methods. Geostatistical Analyst allows users to create a surface from data measurements occurring over an area where collecting information for every possible location would be impractical. From improving estimation of temperature values to assessing environmental risks to predicting the existence of any geophysical element, ArcGIS Geostatistical Analyst gives anyone with spatial data the freedom to investigate, visualize, and create optimal surfaces. Geostatistical Analyst enables users to take advantage of these tools and techniques in a friendly and dynamic user interface.

Geostatistical Analyst also comes with a variety of tools for spatial data exploration, identification of anomalies in data, and evaluation of uncertainty in predictions.

Sponsoring Organizations

International Association for Mathematical Geology http://www.iamg.org/	United Nations Educational, Scientific and Cultural Organization http://www.unesco.org/
Kansas Geological Survey http://www.kgs.ukans.edu/	Office of International Programs, University of Kansas http://www.ukans.edu/home/oip/
ESRI—GIS and Mapping Software http://www.esri.com/	American Association of Petroleum Geologists Energy Minerals Division http://www.aapg.org/

2000 John Cedric Griffiths Teaching Award
of the International Association for Mathematical Geology
will be commemorated with a speech by
LAWRENCE J. DREW
on Monday Afternoon, 2:00 pm, in the Salón del Sol

2001 Felix Chayes Prize for Excellence in Research
in Mathematical Geology of the International Association
for Mathematical Geology
will be presented to
JAMES NICHOLLS
on Tuesday Morning, 8:00 am, in the Salón del Sol

2001 Andrei Borisovitch Vistelius Research Award
of the International Association for Mathematical Geology
will be presented to
JEF CAERS
on Wednesday Morning, 8:00 am, in the Salón del Sol

Extended Exploration Session

Session I—Building National and Regional Geologic Map Databases on Tuesday Morning and Afternoon, Room V

On Tuesday, Session I—Building National and Regional Geologic Map Databases will continue with an informal session. This continuation of Session I will give session presenters and the audience the opportunity to explore topics and technical issues that were raised during the formal Sessions oral and poster presentations on Monday. Tuesday's informal session will consist of open discussion, questions & answers, and informal follow-up presentations regarding the technical issues and challenges to implementing large geologic map databases. This informal session is intended to: 1) build professional contacts among the world's managers of national and regional geologic map databases, and 2) solicit guidance from IAMG attendees.

Session B—Computer-Aided Modeling in Marine Geosciences

Room I

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-9:00 am	Opening Session—Rooms I and II
10:00 am	**Transgressive stratigraphy on the Northern California Margin: A preliminary test of hypothesis by the FACIES Model** Shejun Fan, Donald Swift, Steven B. Parsons
10:30 am	**Morphodynamic Modelling of the Hoernum Tidal-Basin Using Representative Wave Situations** Thomas Hirschhaeuser*, Peter Mewis, Ulrich Zanke
11:00 am	**Coastal Change in the Baltic Sea: Historical Reconstruction and Future Scenarios** Jan Harff*, Michael Meyer, Ulrich Cubasch, Reinhard Lampe
11:30 am	**Changes in the Deep Ocean Conveyor and Eolian Sediment Transport Caused by Meltwater Events in High Latitudes** Bernd J. Haupt*, Dan Seidov
12:00 noon	**Recent Dynamics of the Coast Between Ortona and Vasto (Abruzzo, Italy)** Alessandra Marino*, Giancarlo Ludovisi, Antonio Moccaldi, Mariano Ciucci
11:30 am	
12:00 noon	
12:30-2:00 pm	Lunch Break

Monday Morning

Session D—Geostatistics and Data Integration

Room III

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-9:00 am	Opening Session—Rooms I and II
9:00 am	
9:30 am	**Correspondence Analysis on a Space-Time Data Set for Multiple Environmental Variables** Monica Palma
10:00 am	**A Space-Time Multivariate Analysis for Environmental Data** Sandra De Iaco
10:30 am	**Accounting for Measurement and Interpolation Errors in Soil Contaminant Mapping and Decision-Making** Pierre Goovaerts, Marc Van Meirvenne
11:00 am	**Comparison of Different Types of Factorial Kriging Maps in an Environmental Case Study** Ana C. Batista*, Eduardo Ferreira Silva, A.J. Sousa, E. Cardoso Fonseca
11:30 am	**Geostatistics without Stationary Assumptions within GIS** Alexander Brenning*, K. Gerald van den Boogaart
12:00 noon	
12:30-2:00 pm	Lunch Break

Session G—Mineral Resources, Mining, and the Environment

Salón del Sol

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-9:00 am	Opening Session—Rooms I and II
9:00 am	
9:30 am	
10:00 am	**Applications of Nuclear Analytical Techniques in Geoscience** J. Aspiazu*, J. López, J. Ramírez, M.E. Montero, P. Villaseñor
10:30 am	**Geomapper System for Mining and Exploration Mapping** George H. Brimhall*, Abel Vanegas
11:00 am	**3D-Modeling of the Santa Terezinha Coalfield, Brazil: Assessment of Coal Bed Methane Potential** Heinz H. Burger*, Anita Schauf, R. Prissang, M. Holz, W. Kalkreuth
11:30 am	**The Austrian Computer Based Metallogenetic Information System IRIS** Leopold Weber, F. Ebner, Güenther Hausberger, John C. Davis
12:00 noon	
12:30-2:00 pm	Lunch Break

Monday Morning

Session H—Geologic Modeling and Simulation of Sedimentary Systems

Room IV

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-9:00 am	Opening Session—Rooms I and II
9:00 am	**A New Paradigm for Basin Modelers? Will it be Worth It?** John W. Harbaugh
9:30 am	**Sedimentary Process Modeling: from Academia to Industry** Daniel Tetzlaff and Gary Priddy
10:00 am	**SEDSIM in Hydocarbon Exploration** Cedrick M. Griffiths, Chris Dyt, Evelina Paraschivoiu, and Keyu Liu
10:30 am	**Siliciclastic Sedimentary Processes and Profile Morphology of Continental Slopes** James P.M. Syvitski*, Damian B. O'Grady
11:00 am	**Predicting Fluvial-deltaic Aggradation in Lake Oxburgh, New Zeland: A test of a couple water and sedment routing model** Ruth A. J. Robinson, Rudy L. Slingerland, and Jeremy M. Walsh
11:30 am	**How Predictive is a Geologic Model? The role of Parameters Sensitivity and Data Fitting with an Example from Cusiana Field, Colombia** Johannes Wendebourg*, Nathalie Bordas
12:00 noon	**Simulating Carbonate and Mixed Carbonate/Clastic Sedimentation** Klaus Bitzer, Ramon Salas
12:30-2:00 pm	Lunch Break

Session I—Building National and Regional Geologic Map Databases

Room V

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-9:00 am	Opening Session—Rooms I and II
9:00 am	**The IGME 5000: A Means to Pan-European Geological Standards (Or just another local and transient convention ?)** Kristine Eva Charlotte Asch
9:30 am	**Evolution of an Object-Oriented, NADM-Based Data Model Prototype for the USGS National Geologic Map Database Project** Jordan Hastings*, Boyan Brodaric
10:00 am	**Developing the Canadian Geoscience Knowledge Network: Overcoming Technical, Cultural and Political Challenges** H. John Broome*, Peter Davenport, Eric C. Grunsky
10:30 am	**Geologic Data Transfer Using XML** Simon J.D. Cox
11:00 am	**Building of Trans-national Geologic Map Databases--The Iberian Pyrite Belt Case** Luís M. Delgado, Guillermo Ortiz, Román J. Hernández, Fernando Pérez Cerdán
11:30 am	**Management of Data and Information that Underpins Geological Maps--Is it a Technical or Cultural Problem?** Jeremy R.A. Giles
12:00 noon	**The Computers and Geosciences Silver Anniversary CD-ROM: 25 Years of Computer Program Code** Jean E. Hubay, Eric C. Grunsky, Graeme F. Bonham-Carter
12:30-2:00 pm	Lunch Break

Monday Afternoon

Session B—Computer-Aided Modeling in Marine Geosciences

Room I

12:30-2:00 pm	Lunch Break
2:00 pm	Griffiths Award—Salón del Sol
2:30 pm	**Simulating Event Deposition: Effects of Events on the Shallow Marine Stratigraphic Record** Joep E. A. Storms
3:00 pm	**Representing Shelf Bottom Boundary Transport in 2D-SedFlux: Stratigraphic Formation on Continental Margins** James P. M. Syvitski*, Carl Friedrichs, Patricia Wiberg, Chris Reed
3:30 pm	**Modeling Sedimentation and Load Deformation in the Marine Environment** Daniel M. Tetzlaff
4:00 pm	**Sources and dispersal patterns of deep-marine siliciclastics: inferences from end-member modeling of grain-size distributions** Gert Jan Weltje, Maarten A. Prins
4:30 pm	**Facies-Environment-Relationship: An Application in the Western Baltic Sea** Bernd Bobertz
5:00 pm	
5:30 pm	
6:00 pm	
6:30 pm	
7:00 pm	
8:00 pm	**Dinner hosted by ESRI/IAMG** at the Hotel Fiesta Americana Grand Coral Beach

Session D—Geostatistics and Data Integration

Room III

12:30-2:00 pm	Lunch Break
2:00 pm	Griffiths Award—Salón del Sol
2:30 pm	**Matheron's Contribution to Geostatistics** Margaret Armstrong*, Alain Galli
3:00 pm	**Multiple-point Geostatistics: The new challenge** Andre G. Journel
3:30 pm	**Sequential Updating of Local Distribution Functions: A New Implementation of the Sequential Principle** Roland Froidevaux
4:00 pm	**A Gauss Markov Approach to Conditioning to Block Data** Sunderrajan Krishnan, Jef Caers
4:30 pm	**Combining Dependent Realizations within the gradual Deformation Method** Lin Ying Hu
5:00 pm	**Inverse Stochastic Transport Modeling in the Subsurface** Jaime Gómez Hernández, Harrie-Jan Hendricks Franssen, Andrés Sahuquillo Herráiz
5:30 pm	**GsTL: The Geostatistics Template Library in C++** Nicolas H. Remy, Arben Shtuka, Bruno Levy, Jef Caers
6:00 pm	**Statistical and Geostatistical Analysis of Rain Fall in Central Japan** Tetsuya Shoji, Hisashi Kitaura
6:30 pm	**On the Space-Time Variogram Models--An Application to Seasonal Precipitation** Ali M. Subyani
7:00 pm	**Why is Universal Kriging Better than IRFk-kriging: Estimation of Variograms in the presence of trend** K. Gerald van den Boogaart, Alexander Brenning
7:30 pm	
8:00 pm	**Dinner hosted by ESRI/IAMG** at the Hotel Fiesta Americana Grand Coral Beach, Sunrise Terrace

Monday Afternoon

Session E—Geophysics and Geoengineering

Salón del Sol

12:30-2:00 pm	Lunch Break
2:00 pm	Griffiths Award—Salón del Sol
2:30 pm	**Rock Mass Characterization by Magnetotelluric Profiles** Rafael Aranda
3:00 pm	**3D Geophysical Modelling of Kutemajärvi and Pampalo Gold Deposits in Southern Finland** Eevaliisa Laine, Markku Peltoniemi
3:30 pm	**Electrical Tomography Survey for the Prevention of Soil Slumps in a Refinery's Ground** Daniel Saucedo Quiñones*, Angel Parra Barrera
4:00 pm	**Kriging for Processes Satisfying Partial Differential Equations** K. Gerald van de Boogaart
4:30 pm	**Interpretation of Seismic Cross-hole Measurements with the Combination of Two Methods** Adolfo Vázquez Contreras
5:00 pm	**Geostatistical Approach to Bayesian Inversion of Geophysical Data** Seokhoon Oh, Byungdoo Kwon, Jae Cheol, Lee Dukkee
5:30 pm	**A Data Mining Method for Extraction of Geological Properties from Seismic Data Characterization** Paulo Camargo Silva
6:00 pm	**Radial Basis Function Network Applied to Seismic Reservoir Characterization** Paulo Camargo Silva
6:30 pm	**Optimal Feature Selection by using Fuzzy Curves in the Seismic Reservoir Characterization** Paulo Camargo Silva
7:00 pm	
8:00 pm	**Dinner hosted by ESRI/IAMG** at the Hotel Fiesta Americana Grand Coral Beach, Sunrise Terrace

Session F—GIS applications and digital field data capture: integration of geologic database development, analysis, and map production

Room II

12:30-2:00 pm	Lunch Break
2:00 pm	Griffiths Award—Salón del Sol
2:30 pm	**GeoMapper: A completely Integrated Digital Mapping System with a Practical End User Focus** George H. Brimhall, Abel Vanegas
3:00 pm	**Surface Exploration Mapping at the Getchell Mine, Nevada, Using GeoMapper, a Real Time Digital System** Radu R. Conelea
3:30 pm	**Digital Reconnaissance Geological Mapping and Sampling in the Remote, Harsh, Desert Terrain of Northern Chile** Terry L. Arcuri*, George H. Brimhall
4:00 pm	**Photogrammetric Measurement of the Attitude of Planar and Linear Features** SangGi Hwang
4:30 pm	**3-D Symbolization of Planar and Linear Fabric Elements using Surfboards as an Aid to the Analysis of Geological Structures** Ernst Martinus Schetselaar, Eric A. de Kemp
5:00 pm	**GeoMapper Visual Legend Maker: A New User Interface Feature for Rapid Start-Up and Customization in Digital Mapping** Abel Vanegas, George H. Brimhall
5:30 pm	**Bayes' Rule and GIS for Evaluating Sensitivity of Groundwater to Contamination** L. Alberti, M. De Amicis, Marco Masetti*, Simone Sterlacchini
6:00 pm	**New Digital Tools for Landslides Data Capture: The 3D Navigator** Stefano Lo Russo, Elena Albery, Andrea Lingua, Ivano Guglielmotto
6:30 pm	
7:00 pm	
8:00 pm	**Dinner hosted by ESRI/IAMG** at the Hotel Fiesta Americana Grand Coral Beach, Sunrise Terrace

Monday Afternoon

Session H—Geologic Modeling and Simulation of Sedimentary Systems

Room IV

12:30-2:00 pm	Lunch Break
2:00 pm	Griffiths Award—Salón del Sol
2:30 pm	**Three-Dimensional Regionalization for Oil Field Modeling** Jan Harff, Lynn W. Watney, Geoff Bohling, John H. Doveton, Ricardo A. Olea, David K. Newell
3:00 pm	**Modeling Vertical Changes in Reservoir Pore-Throat Microarchitecture from Petrophysical Logs: Implications for Petroleum Geology and Sedimentology** John H. Doveton
3:30 pm	**Stochastic Simulation and Economic Decision-Making** Michael E. Hohn, Ronald R. McDowell
4:00 pm	**Temperature Analysis in the Mature Hydrocarbon Province of Kansas:Utilizing a Large Database of Well-Completion Histories** Andrea Foerster, Daniel F. Merriam, and W. Lynn Watney
4:30 pm	**Estimating the Size of a Metal Anomaly Around a Base-Metal Smelter in Quebec, Canada Using Peatland Data: A Monte Carlo Error Analysis** Graeme F. Bonham-Carter
5:00 pm	**Multifractal Simulation of Geochemical Map Patterns** Frederik P. Agterberg
5:30 pm	**Conditioning Channel Switching for a 3-D fluvio-deltaic Process Model** Irina Overeem, Gert Jan Weltje
6:00 pm	**Stochastic Object-Based Simulation of Channels constrained by High Resolution Seismic Data** Sophie Viseur*, Arben Shtuka, Jean-Laurent Mallet
6:30 pm	**Threshold of Particle Transport Under Oscillatory Waves** Jacobus P. Le Roux
7:00 pm	**Meandering Channelized Reservoirs: A Process-Based and Stochastic Approach** Simon Lopez, Alain Galli, Sabelle Cojan
8:00 pm	**Dinner hosted by ESRI/IAMG** at the Hotel Fiesta Americana Grand Coral Beach, Sunrise Terrace

Session I—Building National and Regional Geologic Map Databases

Room V

12:30-2:00 pm	Lunch Break
2:00 pm	Griffiths Award—Salón del Sol
2:30 pm	**The Geological Map Database of Great Britain: Version One Complete: So what's Next?** Ian Jackson
3:00 pm	**The Geological Reference System of France--2D and 3D imaging--2001-2005 priorities** Patrick Ledru, Denis Bonnefoy, Jacques Demange, P. Nehlig*
3:30 pm	**The United States National Geologic Map Database** David R. Soller, Thomas M. Berg
4:00 pm	**The Geological Reference System of France: Towards a New Generation of 3D Maps** Jacques Vairon*, Gabriel Courrioux, Jean-Paul Chilés, Pierre Nehlig
4:30 pm	**Prototype Implementations of the North American Data Model Steering Committee for a Geologic Map Database** Ronald R. Wahl
5:00 pm	**Developing Standards for Building National Geological Map Database in a Systematic Way** Zuoqin Jiang
5:30 pm	**National Natural Resources Digital Information--Availability and Implications** Francisco Javier Jiménez Nava
6:00 pm	**Some Study and Development of Geoscience Data Model in the Ministry of Land and Resources of China** Keyan Xiao
6:30 pm	**The "Terre Virtuelle" Project: A Company Plan for BRGM** Francois C. Robida*, Jean-Marc Trouillard*, Alain Beauce
7:00 pm	
8:00 pm	**Dinner hosted by ESRI/IAMG** at the Hotel Fiesta Americana Grand Coral Beach, Sunrise Terrace

Monday Posters

Session B—Computer-Aided Modeling in Marine Geosciences—Room I

Facies-Environment-Relationship: An Application in the Western Baltic Sea
Bernd Bobertz

Session D—Geostatistics and Data Integration—Room III

Preliminary geostatistical analysis of Geomagnetic Stations data over Northeast Brazil during first half of XX Century (1903-1954)
Juan Esteban Hernandez-Quintero*, Jesus Hernan Flores-Ruiz, Luiz Muniz Barreto, Ronaldo Marins

Variographic Analysis of the Soil Characteristics and its Application in the Irrigation Projects in a Small Rural Area in the Paraiba State, Northeast Brazil
Aristóteles de Jesus Teixeira Filho, Tumkur R. Gopinath, José Elias da Cunha Matri

Preliminary geostatistical analysis of Geomagnetic Spatial correlation between the Radon-222 and Radio-226 concentrations collected from Los Azufres Geothermal reservoir in fractured rocks
Jesus Hernan Flores-Ruiz, Juan Esteban Hernandez-Quintero, J. Urrutia Fucugauchi, R. Martinez Angeles

Volume and Yield Estimation of Clastic Deposits Using Stochastic Simulation: A case study from the Maas River, the Netherlands
Johannes Gerard Veldkamp*, Brecht B.T. Wassing, Chris N. Bremmer

Session E—Geophysics and Geoengineering—Salón del Sol

Mathematical Simulation of Geophysical Fracture Processes on the Earth Surface
Alexander S. Bykovtsev, Alexander A. Katz

Electric Structure of the Chicxulub Impact Basin along Two Magnetotelluric profiles
Omar Delgado-Rodríguez, Jaime Urrutia Fucugauchi, Jorge A. Arzate Flores, José Oscar Campos Enríquez

Tectonic Model for the Guadalajara Urban Area
Marco Antonio Delgado-Vázquez, Antonio Uribe Carvajal, David Barrera Hernández

The Chicxulub Impact Structure, Yucatan Peninsula, Mexico--Studies in the Eastern Merida-Valladolid Sector
Jaime Urrutia Fucugauchi, José M. Chavez Aguirre, José Luis De la Rosa

Textures of Experimentally Deformed Hematite Ores with Magnetite and Wuestite
Heinrich Siemes, Birgit Klingenberg, Ekkehard Jansen, Wolfgang Schaefer, Georg Dresen, Erik Rybacki, Michael Naumann

Estimates of Rock Quality, Based on Q-Barton for a New Subway Line Installation in Sao Paulo City, Brazil
José Ricardo Sturaro, Paulo Roberto Costa Cella, Amarilis L. Castelli Figueiredo

Session F—GIS applications and digital field data capture—Room II

Geological Map Production Challenges
Victor Dohar, Bryan Monette

An Object-Genetic Model for Network Analysis in GIS: The Optimal and Shortest Path and Node Locating
Paola A. Sánchez, José Lubín Torres*, Jesús Antonio Hernández

Applied GIS: Thai-German Technical Cooperation Project, Environmental Geology for Regional Planning
Wolfgang Schirrmacher*, Suree Pokaew, Jürgen Lietz, Margane Armin

Session G—Mineral Resources, Mining, and the Environment—Salón del Sol

Geomapper System for Mining and Exploration Mapping: How to use it and completed project results
George H. Brimhall, Derek Lerch, Abel Vanegas

Effective Exploration and Development Strategies Design of 3-Dimensional Solutions for Optimal Flank Geometry of Superdeep Open Pit Mine
Alexander S. Bykovtsev*, Alexander A. Katz

An Integrated Approach to Screening of Abandoned Mines for Remediation: Digital Field Mapping, IR Spectometry and Time-Series Water Chemistry
Tina K. Takagi, Irene C. Sanchez Montero, George H. Brimhall

Geostatistc Mapping of Arsenic, Manganese and Iron Contamination Risk in the Port of Santana, Amapa, Brazil
Joaquim Carlos Barbosa Queiroz, José Ricardo Sturaro, Paulina Setti Riedel

Monday Posters

Session H—Geologic Modeling and Simulation of Sedimentary Systems—Room II

Model of Early Jurassic to Mid-Miocene Geological Evolution of the Back-Arc Sedimentary Basin of Northern Chile and Northwestern Argentina
Terry L. Arcuri, George H. Brimhall

Geologic Modeling and Simulation of Exogenic Processes of Destruction on the Earth's Surface
Alexander S. Bykovtsev, Alexander A. Katz*

3D Seismic Inversion as a Tool to Optimize the Exploration Risk Analysis at Burgos Basin, Mexico
Efrain Mendez Hernandez, Javier Mendez De Leon.

Modelling of Sediment Discharge as a Markov Process
Robert M. Hoogendoorn*, Gert Jan Weltje

Subsidence and Paleotectonic Modeling: Western Carpathians Case Study
Tadeusz Slomka, Jan Golonka, Osczypko Nestor, Krobicki Michal, Lesniak Tadeusz

Types of Deep-Sea Sedimentation in the Silesian basin of the Carpathian Tethys
Tadeusz Slomka, Elzbieta Slomka

3D reconstruction of shallow subsurface geological bodies: methods and applications
Simone Sterlacchini, Andrea Zanchi*

Session I—Building National and Regional Geologic Map Databases—Room V

Design Criteria in Government Institutional GIS
Carlos Gabriel Asato

Efficient Chrono-Stratigraphic Database Structure in GIS
Carlos Gabriel Asato

A Joint European GIS Under Construction: The 1:5 Million International Geological Map of Europe and Adjacent Areas (IGME 5000)
Kristine Eva Charlotte Asch

Saudi Geological Survey---Integrated Geoscientific Database
Philippe Bernard, Mustafa A. Makki, and others

The Bedrock Geology Map Database for the Canadian Geoscience Knowledge Network (CGKN)
Peter H. Davenport, Éric Boisvert, and others

The State-of-the-art Digital Geologic Mapping in Korea Towards UML-based Data Modeling Approach
Kiwon Lee, No-Wook Park*, Kwang-Hoon Chi

The USGS Paleontological Database, Geologic Map Database, and Geologic Names Lexicon: The Integration of a Powerful Internet Reference Set
Bruce R. Wardlaw*, Nancy R. Stamm, David R. Soller

Central American Project of Geographical Information and its Impact on the Development of Spatial Data Infrastructure in Central America
Dennis Fuentes

Digital Cartographic Support Provided to Procig-El Salvador by the CNR/IGN
Roberto Lopez Meyer

Global Information Systems and Geology in Guatemala
Mario René De León García

Tuesday Morning

Session D—Geostatistics and Data Integration

Room III

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Chayes Prize—Salón del Sol
8:30 am	**Evaluation of the Expected Number of Discoveries and Resources Given Spatial Dependency** Richard Sinding-Larsen, Erasmo Mejía
9:00 am	**Quantifying the Impact of Additional Drilling on an Open Pit Gold Project** Sarah Goria, Margaret Armstrong, Alain Galli
9:30 am	**Grade Tonnage Curve: How Far Can it Be Relied upon?** Francisco Silva, Amílcar Soares
10:00 am	**The KTNVS Method--Using a variogram surface instead of fitting theoretical model variograms to improve Kriging** Erasmo Mejía
10:30 am	**Kriging of Surface Normal Vectors** Helmut Schaeben, K. Gerald van den Boogaart, Marcus Apel
11:00 am	**Geostatistics in Simulation Model of Groundwater Flow in Fractured Rock** Javier J. Cortés Bracho
11:30 am	**A Process-Oriented Stochastic Simulation Method to Generate Digital Rocks for Reservoir Heterogeneity Modeling** Renjun Wen, Philip Ringrose
12:00-1:30 pm	Lunch Break

Session J—Petroleum Geology

Room I

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Chayes Prize—Salón del Sol
8:30 am	**Compositional Interpretation of Well-logs** J.J. Egozcue, R. Tolosana-Delgado, V. Pawlowsky Glahn
9:00 am	**Applications of SpectroLith Quantitative Lithology in Petroleum Exploration and Development** Jack P. Horkowitz
9:30 am	**All Models Are Wrong, but Some Models Are Useful: "Solving" the Simandoux Equation** John H. Doveton
10:00 am	**Wireline Logs for High-Resolution Subsurface Stratigraphy** Ricardo A. Olea, Jorgina A. Ross, John C. Davis, David R. Collins, Daniel F. Merriam, Lynn W. Watney
10:30 am	**The Natural Gamma Effect on Density Determination by the Gamma-Gamma Sonde and its Correction** Yeonghwa Kim*, Back Soo Suh, Kiju Kim
11:00 am	**The Application of GIS in the Interpretation of Radiometric and Electromagnetic Surveys to Mapping Geological and Environmental Features** Mark G. Stevenson, Michael J. McCullagh*, Rob Cuss
11:30 am	**Petroleum Systems Analysis: Algorithms, Special Procedures and Case Studies** Erwin E. Dufour*, Melvyn M.R. Giles, Kees C. Vuik, Guus A. Segal, Koos J.A. Meijerink
12:00-1:30 pm	Lunch Break

Tuesday Afternoon

Session A—Ground Water Applications

Room III

12:00-1:30 pm	Lunch Break
1:30 pm	**Hydrogeologic Significance of the Correlation Between Well-Yield Variography and Multiscale Bedrock Geologic Structures** Lawrence J. Drew, Thomas R. Armstrong, Michael R. Karlinger, John H. Schuenemeyer
2:00 pm	**3D Analytical Solution for Transport in a Double Porosity Aquifer System with First-Type Rectangular Source** Roger Gonzalez Herrera
2:30 pm	**A Systematic and Detailed Approach to Fractured Reservoir Petrophysical Modeling for Reservoir Simulation** Henry Abuya Ohen, Sezgin Daltaban, Pauly Enwere
3:00 pm	**Influence of Ground Water Infiltration on Collapse Zones at Vacuum Field, New Mexico** Efrain Mendez Hernandez
3:30 pm	**A Local Scale 3D Hydrogeological Model for a Previously Proposed Radioactive Waste Underground Laboratory in Southern France** Alfonso Rivera, Olivier Jaquet
4:00 pm	**Characterization and Mathematical Modeling of the Groundwater Flow and Transport in Punta Limón** Rafael Acosta Quevedo, Severiano Sánchez Uribe, Juan Diego Martínez Nájera, and Gilberto Dorantes López
5:00-6:00 pm	Bus to Xcaret
6:15-6:30 pm	Mayan Ball Game
6:30:7:00 pm	Walk through park to amphitheater
7:00-8:00 pm	Folkloric show
8:00-9:30 pm	**Banquet**
9:30-10:30 pm	Return to Hotel

Session H—Geologic Modeling and Simulation of Sedimentary Systems

Room II

12:00-1:30 pm	Lunch Break
1:30 pm	**Revision of Systematics in Sedimentary Petrology with Special Reference on Sandstone Composition in Tectonic Provinces** Niichi Nishiwaki
2:00 pm	**Couples and Bundles in Siliciclastic Sediments** Hernani Aquini Fernandes Chavez
2:30 pm	**Predicting Initial Porosity as a Function of Grain-Size Distribution from Simulations of Random Sphere Packs** Luc J.H. Alberts, Gert Jan Weltje
3:00 pm	**The Hoffmann Shape Entropy of Natural Sediments** Jacobus P. Le Roux
3:30 pm	**Genetic Model for Gas Reservoir Simulation** José Lubín Torres*, Jesús Antonio Hernández, Gildardo Osorio Gallego
4:00 pm	
5:00-6:00 pm	Bus to Xcaret
6:15-6:30 pm	Mayan Ball Game
6:30:7:00 pm	Walk through park to amphitheater
7:00-8:00 pm	Folkloric show
8:00-9:30 pm	**Banquet**
9:30-10:30 pm	Return to Hotel

Tuesday Afternoon

Session J—Petroleum Geology

Room I

12:00-1:30 pm	Lunch Break
1:30 pm	**Using Flash Calculations to determine Phase Compositions and Properties in Petroleum Systems Modeling** Armin Ingo Kauerauf*, Thomas R. Hantschel
2:00 pm	**Interpretation of the Fault System in a Hydrocarbon Source Rock--The Kimmeridge Clay Formation in the North Sea, United Kingdom** Miguel Guerrero Muñoz
2:30 pm	**Integrated Geomechanical Modeling for Prediction of Subsidence and Induced Seismicity Due to Hydrocarbon Extraction** Bogdan Orlic*, Jan Diederik van Wees, Rob van Eijs
3:00 pm	
3:30 pm	
4:00 pm	
5:00-6:00 pm	Bus to Xcaret
6:15-6:30 pm	Mayan Ball Game
6:30:7:00 pm	Walk through park to amphitheater
7:00-8:00 pm	Folkloric show
8:00-9:30 pm	**Banquet**
9:30-10:30 pm	Return to Hotel

Session L—Statistics in the Earth Sciences

Room IV

12:00-1:30 pm	Lunch Break
1:30 pm	**Choosing a Valid Model for the Variogram of an Isotropic Spatial Process** Dora Silvia Maglione*, Angela M. Diblasi
2:00 pm	**Space-Time Modeling and the Linear Coregionalization Model** Donald E. Myers, Sandra De Iaco, Donato Posa
2:30 pm	**About Covariance and Correlation on the Simplex** Vera Pawlowsky Glahn*, Juan José Egozcue Rubí
3:00 pm	**Spatial Prediction and Measurement Error** Jeremy Aldworth
3:30 pm	**Application of a Doubly Stochastic Poisson Model to the Spatial Prediction of Unexploded Ordnance** Sean A. McKenna
4:00 pm	**Looking for Powerful Goodness of Fit Tests** J.J. Egozcue, E. Pardo-Iguzquiza, V. Pawlowsky-Glahn
5:00-6:00 pm	Bus to Xcaret
6:15-6:30 pm	Mayan Ball Game
6:30:7:00 pm	Walk through park to amphitheater
7:00-8:00 pm	Folkloric show
8:00-9:30 pm	**Banquet**
9:30-10:30 pm	Return to Hotel

Tuesday Posters

Session A—Ground Water Applications—Room III

Function Transfer Models Applied to Water Table
Ilana Arensburg, Rafael Seoane

Qualitative and Quantitative Analysis of Fractures in Precambrian Formations and Their Potential for Underground Water Storage
Tumkur R. Gopinath, Cloves R.S. Da Costa

Application of the Single-Well Technique through Labeling the Whole Piezometric Column Using a Radioactive Tracer--An Alternative Analysis for Quantitative assessment of in site Hydraulic Parameters
Gilberto Dorantes López

A Physical-Model Hole Experiment for Determining Hydraulic Constants in Boreholes using an Electrical Conductivity Log Technique
Yeonghwa Kim*, Huntae Lim

The Impact of Small Kansas Landfills on Underlying Aquifers: Modelling and Risk Assessment
Marios A. Sophocleous

Session D—Geostatistics and Data Integration—Room III

Preliminary geostatistical analysis of Geomagnetic Stations data over Northeast Brazil during first half of XX Century (1903-1954)
Juan Esteban Hernandez-Quintero*, Jesus Hernan Flores-Ruiz, Luiz Muniz Barreto, Ronaldo Marins

Variographic Analysis of the Soil Characteristics and its Application in the Irrigation Projects in a Small Rural Area in the Paraiba State, Northeast Brazil
Aristóteles de Jesus Teixeira Filho, Tumkur R. Gopinath, José Elias da Cunha Matri

Preliminary geostatistical analysis of Geomagnetic Spatial correlation between the Radon-222 and Radio-226 concentrations collected from Los Azufres Geothermal reservoir in fractured rocks
Jesus Hernan Flores-Ruiz, Juan Esteban Hernandez-Quintero, J. Urrutia Fucugauchi, R. Martinez Angeles

Volume and Yield Estimation of Clastic Deposits Using Stochastic Simulation: A case study from the Maas River, the Netherlands
Johannes Gerard Veldkamp*, Brecht B.T. Wassing, Chris N. Bremmer

Tuesday Posters

Session H—Geologic Modeling and Simulation of Sedimentary Systems—Room II

Model of Early Jurassic to Mid-Miocene Geological Evolution of the Back-Arc Sedimentary Basin of Northern Chile and Northwestern Argentina
Terry L. Arcuri, George H. Brimhall

Geologic Modeling and Simulation of Exogenic Processes of Destruction on the Earth's Surface
Alexander S. Bykovtsev, Alexander A. Katz*

3D Seismic Inversion as a Tool to Optimize the Exploration Risk Analysis at Burgos Basin, Mexico
Efrain Mendez Hernandez, Javier Mendez De Leon.

Modelling of Sediment Discharge as a Markov Process
Robert M. Hoogendoorn*, Gert Jan Weltje

Subsidence and Paleotectonic Modeling: Western Carpathians Case Study
Tadeusz Slomka, Jan Golonka, Osczypko Nestor, Krobicki Michal, Lesniak Tadeusz

Types of Deep-Sea Sedimentation in the Silesian basin of the Carpathian Tethys
Tadeusz Slomka, Elzbieta Slomka

3D reconstruction of shallow subsurface geological bodies: methods and applications
Simone Sterlacchini, Andrea Zanchi*

Session J—Petroleum Geology—Room I

Stratigraphic Relations of Area and Volume in Petroleum Reservoirs in Rift Basins
Hernani Aquini Fernandes Chaves

Wireline Logs for High-Resolution Subsurface Stratigraphy
Ricardo A. Olea, Jorgina A. Ross, John C. Davis, David R. Collins, Daniel F. Merriam, Lynn W. Watney

Wednesday Morning

Session A—Ground Water Applications

Room I

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Vistelius Award—Salón del Sol
8:30 am	
9:00 am	**CFCs and SF6 in Aquifer Investigations--The Significance of the Unsaturated Zone and the Origin of Groundwater** Jürgen Mahlknecht*, Jean Friedrich Schneider, Harald Oster
9:30 am	**Groundwater Artificial Recharge and Salinization Prevention as a Drought-Fighting Measure in Coastal Areas of Vietnam** Maria-Theresa Schafmeister, Nguyen Van Hoang
10:00 am	**Geoelectrical Methods Applications to Fresh Water-Saline Water Relations. Case Study: NW Buenos Aires Providence, Argentina** Jerónimo E. Ainchil, Eduardo E. Kruse
10:30 am	**Analysis of the Temporal and Spatial Variations of the Chloride Concentrations in Groundwater** Jacqueline Köhn, Eduardo E. Kruse, Jerónimo E. Ainchil
11:00 am	**Quantitative Evaluation of River-Aquifer Supply Systems** Juan Diego Martínez Nájera, Carlos Flores Ibarra, Mario Olvera Coronel
11:30 am	
12:00-1:30 pm	Lunch Break

Wednesday Morning

Session F—GIS applications and digital field data capture: integration of geologic database development, analysis, and map production

Room II

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Vistelius Award—Salón del Sol
8:30 am	
9:00 am	**Constructing Drainage Basin Models from DEM's—A Case Study from Chase County, Kansas** John C. Davis*, Güenther Hausberger
9:30 am	**Design and Implementation of a Non-Invasive Water Sampling Program to Characterize the Temporal Variation of Stream and River Water Quality Effects of Three Abandoned Cu-Zn Mines in the Sierra Nevada Foothills, California: Combining GIS, Digital Field Data, and Time-Series Chemical Data** Tina K. Takagi, George H. Brimhall
10:00 am	**A New Methodology to Estimate Groundwater Discharge in a Lake** Ierotheos Z. Zacharias, Theodoros Koussouris, Elias Dimitrioy
10:30 am	**Weighted Principal Component Analysis: An Application Using Spatial Weights from a GIS** Graeme F. Bonham-Carter*, Qiuming Cheng, Daneshfar Bahram
11:00 am	**Enhanced Subsurface Interpolation by Geological Cross-Sections** SangGi Hwang
11:30 am	**Modeling of the 3D Geometry of the Sant-Llorenc' Growth Fold Using GIS and 3D Modeler Gocad** Thomas Jerome, Mary Ford
12:00-1:30 pm	Lunch Break

Wednesday Morning

Session L—Statistics in the Earth Sciences

Room IV

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Vistelius Award—Salón del Sol
8:30 am	
9:00 am	**Sensitivity Analysis of Monte Carlo Simulation Results Using the Kolomorov-Smirnov D Statistic** Hitoshi Makino, Sean A. McKenna, Keiichiro Wakasugi
9:30 am	**Fracture-Distribution Modeling in Rock Mass Using Borehole Data and Geostatistical Simulation** Katsuaki Koike, Kazuya Komorida, Yuichi Ichikawa*
10:00 am	**Elicitation of Expert Judgment to Assess Undiscovered Oil and Gas Resources** John H. Schuenemeyer
10:30 am	**Mathematical Foundations of Compositional Data Analysis** Carles Barceló Vidal*, Josep Antoni Martín Fernández, Vera Pawlowsky Glahn
11:00 am	**Decomposing Compositions: Minimum Chi-Square Reduced-Rank Approximations on the Simplex** Gert Jan Weltje
11:30 am	**A New Approach for Quantifying the Impact of Geostatistical Uncertainty on Production Forecasts; The Joint Modeling Method** Isabelle Zabalza-Mezghani, Emmanuel Manceau, Frederic Roggero
12:00-1:30 pm	Lunch Break

Session M—Numerical Methods and Applications

Room III

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Vistelius Award—Salón del Sol
8:30 am	**The Use of Multibeam Radarsat for Mapping Geologic Structures and Surface Morphology** Eric C. Grunsky
9:00 am	**Satellite Image Classification Using Expert Structural Knowledge: A Method Based on Fuzzy Partition Computation and Simulated Annealing** Hirotaka Suzuki*, Pascal Matsakis, Serge Andréfouët, Jacky Desachy
9:30 am	**Semi-Automated Fast Mineral Identification Algorithm for Ultraviolet, Visible and Near Infrared Reflectance Spectroscopy** Irene C. Montero S.*, George H. Brimhall
10:00 am	**Spherical Wavelets with an Application in Preferred Crystallographic Orientation** Helmut Schaeben*, Daniel Potts, Jüergen Prestin
10:30 am	**Novel Algorithms for Modeling Sedimentation and Compaction Using 3D Unstructured Meshes** Ulisses T. Mello*, Jose Roberto Pereira, Paulo R. Cavalcanti
11:00 am	**Numerical Investigations of Fluid Flow Through Some Geological Discontinuities** Abdullah Khalifa Al-Hadhrami*, Derek B. Ingham, Lionel Elliott, X. Wen
11:30 am	**Simulation of Glacially-Driven Hydromechanical Processes for Safety Assessment of Geological Disposal Sites** Bogdan Orlic*, A.F.B. Wildenborg
12:00-1:30 pm	Lunch Break

Wednesday Morning

Session N—Fractal/Multifractal and Scaling Modeling and Geographical Information Systems

Room V

6:30-8:00 am	Breakfast Buffet—Azulejos Restaurant
8:00-8:30 am	Vistelius Award—Salón del Sol
8:30 am	**Aspects of Multifractal Modeling** Frederik P. Agterberg*
9:00 am	**Simulation of Metallogenic Material Accumulation in Diffusion-Reaction System** Ming Chen*, Chongwen Yu, Yan Guangsheng, Qiuming Cheng, Liu Xiaoduan
9:30 am	**Multi-Fractal Properties of Well Logging Data and Applications** Qingmou Li*, Qiuming Cheng
10:00 am	**Fractal Analysis of Fractured Patterns from Tomographic Images** Ma. Eugenia Miranda M.*, Fernando Castrejón V., Klaudia Oleschko L.
10:30 am	**Fractal Analysis of Mineral Weathering--Toward Quantitative Approach** Klaudia Oleschko*, Jean-Francois Parrot, Taud Hind
11:00 am	**The Fractal Properties of Geochemical Landscapes as an Indicator of Weathering and Transport Process within the Eastern Alps** Gerd Rantitsch
11:30 am	**Fractal/Multifractal Modeling of Mineral Deposits of China** Zhaoping Yang, Qiuming Cheng
12:00-1:30 pm	Lunch Break

Wednesday Afternoon

Session A—Ground Water Applications

Room I

12:00-1:30 pm	Lunch Break
1:30 pm	**Control of the Leveling of Filter Pipe Strings by Supervised Classification of Hydrochemical Parameters** Hannes Thiergärtner
2:00 pm	**Inverse Analysis by Quasi-Newton Method for Estimation of Aquifer Flow and Dispersion Parameters** Maria-Theresa Schafmeister, Nguyen Van Hoang

Wednesday Afternoon

Session F—GIS applications and digital field data capture: integration of geologic database development, analysis, and map production

Room II

12:00-1:30 pm	Lunch Break
1:30 pm	**Providing Geological Knowledge by GIS** Wolfdietrich Skala, Gudrun Heyn*, Brigitte Richter
2:00 pm	**Patterns and Propositions: Symbolic and Sub-Symbolic Representation of Geologic Concepts in the Mind and in GIS** Robin M. Harrap
2:30 pm	**Development of a 3D GIS based on the 3D modeller Gocad** Marcus Apel
3:00 pm	**Geologic Maps and Databases in the Age of Geoinformatics and the Internet** David R. Collins*, Detlev Doherr, and Jorgina A. Ross
3:30 pm	**Prospects of Digital Atlases** Soenke W. Rehder, Matthias Dorn
4:00 pm	**On the Possibility of a Seamless World Geological Map Based on the Global Map and Operated in GIS** Ryoichi Kouda, Donald Allen Singer, Akiyama Minoru
4:30 pm	**Geological Spatial Database of China** Chenyang Li*, Baoliang Wang, Yang Donglai

Session K—Prediction Models in Spatial Data Analysis

Salón del Sol

12:00-1:30 pm	Lunch Break
1:30 pm	**Polluted or Nonpolluted--A Fuzzy Approach Determining Soil Pollution** Marko Komac*, Robert Sajn
2:00 pm	**Spatial Support in Landslide Hazard Predictions Based on Map Overlays** Andrea G. Fabbri*, Chang-Jo F. Chung
2:30 pm	**Testing on the Time-Robustness of a Landslide Prediction Model** Hirohito Kojima*, Chang-Jo F. Chung
3:00 pm	**Geologic and Geophysics Data Integration for Isosist Line Interpretation with Interpolation Process and Tectonic Implications for Southern Mexico** Carlos Francisco Mondragón Yañez, Jesús Uribe Luna*
3:30 pm	**Using Linear and Non-linear Kriging Interpolators to Produce Probability Maps** Konstantin Krivoruchko
4:00 pm	**Spatial Integration of Geological Data for Predictive Mineral Mapping: A Case Study from Taebaeksan Area, Korea** Kwang-Hoon Chi, No-Wook Park*, and Chang-Jo F. Chung
4:30 pm	**Geologically-constrained Fuzzy Mapping of Gold Mineralization Potential, Baguio District Philippines** John M. Carranza*, Martin Hale

Wednesday Afternoon

Session L—Statistics in the Earth Sciences

Room IV

12:00-1:30 pm	Lunch Break
1:30 pm	**Some Practical Aspects on Multidimensional Scaling of Compositional Data** J. A. Martín Fernández, Matevz Bren
2:00 pm	**The Commercial Characterisation of Dimension Stones through the Use of Multivariate Statistics: The Case Study of the Bitti Granites (North-Central Sardinia, Italy)** Andrea Cappelli, Maurizio Violo, Vincenzo Zappatore
2:30 pm	**The Use of R-Mode Factor Analysis in the Study of Palaeoclimatic and Palaeoceanographic Changes in SW Aegean Sea, Greece** Maria Geraga, Stella Tsaila Monopoli, George Papatheodorou*, George Ferentinos, Chrisanthi Ioakim
3:00 pm	**Assumptionless Statistics** Ulrich Zier, Soenke Rehder*

Session M—Numerical Methods and Applications

Room III

12:00-1:30 pm	Lunch Break
1:30 pm	**Confidence Evaluation for Risk Prediction** Nicolas Gilardi*, Tom Melluish, Michel Maignan
2:00 pm	**Simulating Landslides of Different Complexity with Hexagonal Cellular Automata** M.V. Avolio, D. D'Ambrosio, S. Di Gregorio, R. Rongo, W. Spataro, G. Iovine, V. Lupiano, L. Merenda, G. Nardi
2:30 pm	**The Catania 1669 Lava Eruptive Crisis: Simulation of a New Possible Eruption** G. M. Crisci, S. Di Gregorio, R. Rongo, M. Scarpelli, W. Spataro*, S. Calvari
3:00 pm	**Finite Element Strain Localization in 3D Geological Models** Paulo Roma Cavalcanti, Joao Luiz Campos, Luiz Fernando Martha*, Euripedes Vargas Jr.
3:30 pm	**Hyperspectral Imaging and Classification Algorithm for the Environmental Problems in Coastal Sea Waters** Carla Simeoni*, Sergio Bellagamba, Massimo Villarini
4:00 pm	**Recent Advances in Quantitative Study of Atoll Environments Using Remote Sensing** Serge Andréfouët*, Pascal Matsakis, Eric Hochberg
4:30 pm	**Scaling of Fluid Flow Associated with Flow Through Complex Geological Structures** Simon D. Harris*, Lionel Elliot, Derek B. Ingham, Rob J. Knipe, Eddie McAllister
5:00 pm	**Modeling of Very Heterogeneous Fractured Aquifers and Reservoirs** Mario Cesar Suarez Arriaga

Wednesday Afternoon

Session N—Fractal/Multifractal and Scaling Modeling and Geographical Information Systems

Room V

12:00-1:30 pm	Lunch Break
1:30 pm	**An Improved Fractal Model for Characterizing Spatial Distribution of Undiscovered Petroleum Accumulations** Zhuoheng Chen*, Kirk G. Osadetz, Petter Hannigan
2:00 pm	**Comparison of Sensitivity of Box-Counting and Cluster Density Methods to the Map Projection through Fractal Modeling of Simulated Data Sets and World Uranium Deposits** Zhaoping Yang*, Tetsuya Shoji, Qiuming Cheng, Hiroaki Kaneda
2:30 pm	**Fractal Analysis of Fracture Networks** Alexander S. Balankin, Daniel Morales Matamoros, Fernando Castrejon, Carlos Pacheco, Jorge Zaldivar, Luis Velasquillo
3:00 pm	**Singularity Analysis for Image Processing and Anomaly Enhancement** Qiuming Cheng
3:30 pm	**Singularity Strength Analysis and Entropy Spectrum of Pore-Size Soil Distribution** Javier F. Caniego*, Fernando San José Martínez, M. Angel Martin
4:00 pm	**Diversity Analysis of Some Earth Surficial Systems and Their Repercussions on Biodiversity and Conservation Biology** Fernando San José Martínez*, F.J. Caniego, J.J. Ibañez

Wednesday Posters

Session A—Ground Water Applications—Room I

Function Transfer Models Applied to Water Table
Ilana Arensburg, Rafael Seoane

Qualitative and Quantitave Analysis of Fractures in Precambrian Formations and Their Potential for Underground Water Storage
Tumkur R. Gopinath, Cloves R.S. Da Costa

Application of the Single-Well Technique through Labeling the Whole Piezometric Column Using a Radioactive Tracer--An Alternative Analysis for Quantitative assessment of in site Hydraulic Parameters
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A Physical-Model Hole Experiment for Determining Hydraulic Constants in Boreholes using an Electrical Conductivity Log Technique
Yeonghwa Kim*, Huntae Lim

The Impact of Small Kansas Landfills on Underlying Aquifers: Modelling and Risk Assessment
Marios A. Sophocleous

Session F—GIS applications and digital field data capture—Room II

Geological Map Production Challenges
Victor Dohar, Bryan Monette

An Object-Genetic Model for Network Analysis in GIS: The Optimal and Shortest Path and Node Locating
Paola A. Sánchez, José Lubín Torres*, Jesús Antonio Hernández

Applied GIS: Thai-German Technical Cooperation Project, Environmental Geology for Regional Planning
Wolfgang Schirrmacher*, Suree Pokaew, Jürgen Lietz, Margane Armin

Session K—Prediction Models in Spatial Data Analysis— Salón del Sol

Fracture Density and Scaling Laws in Granite Massifs and Their Importance on Site Selection Criteria for Waste Disposal
Mário A. Gonçalves*, Helena Amaral, A. Mateus, Fernando O. Marques

Wednesday Posters

Session M—Numerical Methods and Applications—Room III

Numerical Methodologies for the Study of Active Faults Interaction
Alexander S. Bykovtsev*, Alexander A. Katz
Permiability Scaling and Geometry of Fault Damage Zones
Simon D. Harris*, Noelle E. Odling, Eddie McAllister, Rob J. Knipe
2D Computational Anisotropic Coupled Fluid Flow-Solid Deformation Model of an Oil Reservoir
Joaquin R. Hernández Perez*, Juan Manuel S. Alvarez Tostado, Alonso S. Plata Amarillas, Mario G. Garcia Herrera
Quantifying Spatial Patterns and Shapes of Carbonate Sediment Accumulations Using Remote Sensing, Andros Island, Bahamas
Eugene C. Rankey

Session N—Fractal/Multifractal and Scaling Modeling and Geographical Information Systems—Room V

Dynamic Model of Mineralization Enrichment with Application in Mineral Resource Prediction
Wei Shen*, Pengda Zhao*
Fractal/Multifractal Modeling of Mineral Deposits of China
Zhaoping Yang, Qiuming Cheng*