



Program

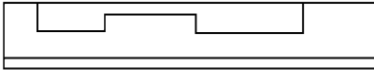


UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

أرامكو السعودية
Saudi Aramco

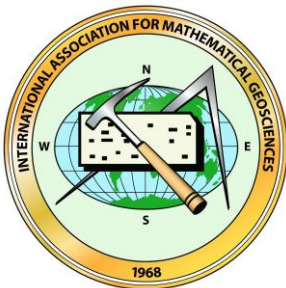


Ciudad Politécnica de la Innovación



GENERALITAT
VALENCIANA

CONSELLERIA D'EDUCACIÓ, INVESTIGACIÓ,
CULTURA I ESPORT



Geovariances
Where no one has gone before

Acknowledgements

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Social program

Tuesday, September 6th

19:30 5K RACE – OLD RIVER BED
Start and finish next to the L'Assut de l'or bridge in the
City or Arts and Sciences



Wednesday, September 7th



18:30 OLD TOWN WALKING TOUR
Start at the Serrano Tower, Furs Square

20:30 ACANTHUS CHOIR CONCERT
At the San Juan del Hospital Church, 5 Trinquete de
Caballeros Street



Thursday, September 8th



20:30 GALA DINNER
At the cloister of the old El Carmen Convent, 2 Museo Street

NOTES: All activities are free for conference participants and companions except for the gala dinner. Gala dinner tickets for companions available at the registration desk.

The QR codes link to the addresses in Google maps.

Oral program

Monday, September 5th

<u>Blue Cube</u>	<u>Plenary Session - SI</u>
<u>Chairman</u>	<u>Ute Mueller</u>

OPENING

8:45-9:00 OPENING

KEYNOTE

9:00-9:40 CASTELO DE SONHOS: GEOSTATISTICAL QUANTIFICATION OF THE POTENTIAL SIZE OF A PALEOPROTEROZOIC CONGLOMERATE-HOSTED GOLD DEPOSIT,
R. Mohan Srivastava, *TriStar Gold Inc., Canada*,
Nicholas Appleyard, *TriStar Gold Inc., Canada*,
Elton Pereira, *TriStar Mineração do Brasil Ltda, Brazil*

MINING ENGINEERING

9:40- 10:00 NEW APPROACH TO RECOVERABLE RESOURCE MODELLING: THE MULTIVARIATE CASE AT OLYMPIC DAM,
Colin Badenhorst, *BHP Billiton, Australia*,
Shane O'Connell, *BHP Billiton, Australia*,
Mario Rossi, *Geosystems International Inc, United States*

10:00- 10:20 A HYBRID MODEL FOR JOINT SIMULATION OF HIGH-DIMENSIONAL CONTINUOUS AND CATEGORICAL VARIABLES,
Hassan Talebi, *Edith Cowan University, Australia*,
Johnny Lo, *Edith Cowan University, Australia*,
Ute Mueller, *Edith Cowan University, Australia*

10:20- 10:40 CONDITIONAL BIAS IN KRIGING - LET'S KEEP IT,
Marek Nowak, *SRK Consulting (Canada) Inc., Canada*,
Oy Leuangthong, *SRK Consulting (Canada) Inc., Canada*

10:40-11:00 A HIGH-ORDER, DATA-DRIVEN FRAMEWORK FOR JOINT SIMULATION OF CATEGORICAL VARIABLES,

Ilnur Minniakhmetov, *Cosmo Lab., McGill University, Canada*,

Roussos Dimitrakopoulos, *Cosmo Lab., McGill University, Canada*

11:00-11:20 JOINT SIMULATION OF CONTINUOUS AND CATEGORICAL VARIABLES FOR IRON RESOURCE EVALUATION,

Nadia Mery, *University of Chile, Chile*,

Xavier Emery, *University of Chile, Chile*,

Alejandro Cáceres, *University of Chile, Chile*,

Diniz Ribeiro, *VALE S.A., Brazil*,

Evandro Cunha, *VALE S.A., Brazil*

11:20-12:10 COFFEE BREAK

Monday, September 5th

Blue Cube
Chairman

Parallel Session - S2
Henning Omre

PETROLEUM ENGINEERING

12:10-12:30 QUANTIFYING SEISMIC VELOCITY UNCERTAINTY BY GRADUAL DEFORMATION OF PERLIN NOISE,

Lewis Li, *Department of Energy Resources Engineering, Stanford University, United States*,

Jef Caers, *Department of Geological Sciences, Stanford University, United States*

12:30-12:50 BAYESIAN SEISMIC TOMOGRAPHY AS A VELOCITY ANOMALY DETECTION TOOL,

Jihane Belhadj, *Mines ParisTech, France*,

Thomas Romary, *Mines ParisTech, France*,

Alexandrine Gesret, *Mines ParisTech, France*,

Mark Noble, *Mines ParisTech, France*

12:50-13:10 AN ENSEMBLE 4D SEISMIC HISTORY MATCHING FRAMEWORK WITH SPARSE REPRESENTATION: A 3D BENCHMARK CASE STUDY,

Xiaodong Luo, *International Research Institute of Stavanger, Norway*,

Tuhin Bhakta, *International Research Institute of Stavanger, Norway*,

Morten Jakobsen, *University of Bergen, Norway*,

Geir Nævdal, *International Research Institute of Stavanger, Norway*

13:10-13:30 CONDITIONING 3D OBJECTS TO DENSE WELL DATA: TWO CASE STUDIES,

Yimin Wang, *University of Alberta, Canada*,

Octavian Catuneanu, *University of Alberta, Canada*,

Michael Pyrcz, *Chevron Energy Technology Company, United States*,

Jeff Boisvert, *University of Alberta, Canada*

13:30-15:00 LUNCH

Monday, September 5th

Red Cube	Parallel Session - S3
Chairman	Clayton V Deutsch

MINING ENGINEERING

12:10-12:30 COMBINING GEOSTATISTICAL HIERARCHICAL CLUSTERING (GHC) AND POTENTIAL FIELD METHOD FOR FAST AND FLEXIBLE DOMAINING WITH UPDATING CAPABILITIES: A CASE STUDY WITH GRADE SHELL MODELLING IN IRON ORE,

Laurent Wagner, *Geovariances, France*,

Didier Renard, *Mine ParisTech, France*,

Thomas Romary, *Mine ParisTech, France*,

Gustavo Pilger, *Dassault-System, Australia*,

Colin Carey, *BHP-Billiton, Australia*,

Paul Whitehouse, *BHP-Billiton, Australia*

12:30-12:50 OPTIMIZING INFILL DRILLING DECISIONS USING MULTI-ARMED BANDITS: APPLICATION IN A LONG-TERM, MULTI-ELEMENT STOCKPILE,

Rein Dirkx, *McGill University, Canada*,

Roussos Dimitrakopoulos, *McGill University, Canada*

12:50-13:10 A NEW HIGH-ORDER STATISTICAL SIMULATION THAT IS NON-STATIONARY AND TRANSFORMATION INVARIANT,

Amir Abbas Haji Abolhassani, *McGill University, Canada*,

Frank P. Ferrie, *McGill University, Canada*,

Roussos Dimitrakopoulos, *McGill University, Canada*

13:10-13:30 MULTIVARIATE DECISION RULES FOR GRADE CONTROL, STOCKPILE
DESTINATION ASSIGNMENT AND MINE PLANNING,

Jeff B. Boisvert, *University of Alberta, Centre for Computational
Geostatistics, Canada,*

Clayton V. Deutsch, *University of Alberta, Centre for Computational
Geostatistics, Canada*

13:30-15:00 LUNCH

Monday, September 5th

Yellow Cube
Chairman

Parallel Session - S4
Peter Dowd

THEORY

12:10-12:30 DATA AGGREGATION AND SPATIAL UNCERTAINTY IN IMAGE QUILTING
SIMULATION,

Júlio Hoffmann, *Stanford University, United States*,
Céline Scheidt, *Stanford University, United States*,
Jef Caers, *Stanford University, United States*

12:30-12:50 SYSTEMATIC COMPARISON OF MPS METHODS USING AN AUTOMATIC
PARAMETER OPTIMIZER,

Ehsanollah Baninajar, *Sahand University of Technology, Iran*,
Yousef Sharghi, *Sahand University of Technology, Iran*,
Grégoire Mariéthoz, *University of Lausanne, Switzerland*

12:50-13:10 ON THE CONCEPTUAL VARIETY OF TRAINING IMAGES IN MULTIPLE-POINT
GEOSTATISTICS,

Lin Y. Hu, *HL&G Studio, United States*

13:10-13:30 VALUE OF INFORMATION IN SPATIAL DECISION SITUATIONS,

Jo Eidsvik, *NTNU, Norway*,
Tapan Mukerji, *Stanford University, United States*,
Debarun Bhattacharjya, *IBM, United States*,
Geetartha Dutta, *Stanford University, United States*

13:30-15:00 LUNCH

Monday, September 5th

Blue Cube
Chairman

Parallel Session - S5
Tatiana Chugunova

PETROLEUM ENGINEERING

15:00-15:20 VALUE OF INFORMATION ANALYSIS FOR TIME-LAPSE SEISMIC DATA IN RESERVOIR DEVELOPMENT,

Geetartha Dutta, *Stanford University, United States*,
Tapan Mukerji, *Stanford University, United States*,
Jo Eidsvik, *Norwegian University of Science and Technology, Norway*

15:20-15:40 INTRODUCING PROPORTION UNCERTAINTIES IN CATEGORICAL VARIABLE SIMULATIONS,

Dimitri D'Or, *Ephesia Consult, Belgium*,
Denis Allard, *INRA, France*,
Pierre Biver, *TOTAL, France*

15:40-16:00 MODELING OF DEPOSITIONAL ENVIRONMENTS - SHORELINE TRAJECTORY - THE LINK BETWEEN SEQUENCE STRATIGRAPHY AND TRUNCATED GAUSSIAN FIELDS,

Lars Edward Rygg Kjellesvik, *Digital Geology AS, Norway*,
Erling Igor Heintz Siggerud, *Digital Geology AS, Norway*,
Arne Skorstad, *Roxar Software Solutions AS, Norway*

16:00-16:20 A NEW INSIGHT OF THE FRACTAL GEOMETRY-THEORY, SOLUTION AND APPLICATION IN GEOSCIENCE,

Xinmin Ge, *China University of Petroleum, China*,
Yiren Fan, *China University of Petroleum, China*,
Shaogui Deng, *China University of Petroleum, China*,
Yujiao Han, *China University of Petroleum, China*,
Jiaxiong Liu, *China University of Petroleum, China*

16:20-16:50 COFFEE BREAK

Monday, September 5th

Red Cube	Parallel Session - S6
Chairman	Jean-Marc Chautru

MINING ENGINEERING

15:00-15:20 APPLICATION OF DIRECT SEQUENTIAL SIMULATION AND CO-SIMULATION FOR EVALUATION OF RESOURCES AND UNCERTAINTY OF THE NCONDEZI COAL DEPOSIT IN MOZAMBIQUE,
Sara Sokhin, *Faculty of Sciences and Technology, Universidade NOVA de Lisboa, Portugal*,
José Almeida, *Faculty of Sciences and Technology, Universidade NOVA de Lisboa, Portugal*,
Sofia Barbosa, *Faculty of Sciences and Technology, Universidade NOVA de Lisboa, Portugal*

15:20-15:40 HYBRID WAVELET AND BAYESIAN CLUSTERING ALGORITHM FOR NON-STATIONARY GEOSTATISTICAL SIMULATION,
Alex Miltenberger, *Michigan Technological University, United States*,
Snehamoy Chatterjee, *Michigan Technological University, United States*

15:40-16:00 GEOSTATISTICS FOR VARIABLE GEOMETRY VEINS,
Alfredo Marín-Suárez, *Consultorio Geoestadístico Doctor Alfredo Marín, Perú*

16:00-16:20 COMPARISON OF TWO GRADE MULTIVARIATE SIMULATION APPROACHES ON AN IRON OXIDE COPPER GOLD DEPOSIT,
Antonio Cortés, *AMEC Foster Wheeler, Chile*

16:20-16:50 COFFEE BREAK

Monday, September 5th

Yellow Cube
Chairman

Parallel Session - S7
Thomas Romary

THEORY

15:00-15:20 FUNCTIONAL CO-KRIGING FOR COMPUTER EXPERIMENTS; APPLICATION TO FLUID FLOW IN POROUS MEDIA,

Ognjen Grujic, *Stanford University, United States*,
Alessandra Menafoglio, *Politecnico di Milano, Italy*,
Jef Caers, *Stanford University, United States*

15:20-15:40 SPATIAL ESTIMATION: DEPENDENCE, COPULAS, AND SECONDARY INFORMATION – USING GROUNDWATER QUALITY PARAMETERS IN BADEN-WÜRTTEMBERG,

Claus P. Haslauer, *University of Tübingen, Germany*,
Theresia Heißerer, *University of Stuttgart, Germany*,
András Bárdossy, *University of Stuttgart, Germany*

15:40-16:00 CONDITIONAL LATIN HYPERCUBE SIMULATION ON 3D LARGE GRIDS INCORPORATING UNCERTAINTY IN MODEL PARAMETERS.,

Stelios Liodakis, *Department of Geography, University of the Aegean, Greece*,
Phaedon Kyriakidis, *Department of Civil Engineering and Geomatics, Cyprus University of Technology, Cyprus*,
Petros Gaganis, *Department of Environmental Studies, University of the Aegean, Greece*

16:00-16:20 MODELING ASYMMETRICAL FACIES SUCCESSIONS USING PLURI-GAUSSIAN SIMULATIONS,

Thomas Le Blevac, *Imperial College, United Kingdom*,
Olivier Dubrule, *TOTAL, France*,
Cedric M. John, *Imperial College, United Kingdom*,
Gary J. Hampson, *Imperial College, United Kingdom*

16:20-16:50 COFFEE BREAK

Monday, September 5th

Blue Cube	Parallel Session - S8
Chairman	Colin Daly

PETROLEUM ENGINEERING

16:50-17:10 STOCHASTIC SIMULATION OF CHANNEL MIGRATION CONDITIONED TO
SUBSURFACE DATA,

Marion Parquer, *RING - Université de Lorraine, France*,
Pauline Collon, *RING - Université de Lorraine, France*,
Guillaume Caumon, *RING - Université de Lorraine, France*

17:10-17:30 COUPLED MULTI-SCALE WELL AND SURFACE SEISMIC DATA INVERSION USING
WAVELET DECOMPOSITION,

Sarouyeh Khoshkholgh, *Copenhagen University, Denmark*,
Andrea Zunino, *Copenhagen University, Denmark*,
Thomas Hansen, *Copenhagen University, Denmark*,
Klaus Mosegaard, *Copenhagen University, Denmark*

17:30-17:50 INVERSION OF AVO SEISMIC DATA BY A MONTE CARLO METHOD TARGETING
RESERVOIR PARAMETERS AND UNCERTAINTY ESTIMATION,

Andrea Zunino, *University of Copenhagen, Denmark*,
Anissa Mohrath, *University of Copenhagen, Denmark*,
Klaus Mosegaard, *University of Copenhagen, Denmark*

17:50-18:10 IMPROVED INITIAL ENSEMBLE DESIGN SCHEME FOR CHARACTERIZATION OF
CHANNELIZED GAS RESERVOIRS WITH AN AQUIFER,

Sungil Kim, *Seoul National University, South Korea*,
Jungyu Park, *Seoul National University, South Korea*,
Choongho Lee, *Seoul National University, South Korea*,
Kyungbook Lee, *Korea Institute of Geoscience and Mineral Resources,
South Korea*,
Jonggeun Choe, *Seoul National University, South Korea*

Monday, September 5th

Red Cube
Chairman

Parallel Session - S9
Celine Scheidt

THEORY

16:50-17:10 LOCALIZED/SHRINKAGE KRIGING-PREDICTION IN A NON-STATIONARY
GAUSSIAN RANDOM FIELD,

Zeytu Gashaw Asfaw, *Norwegian University of Science and Technology
(NTNU), Norway,*

*Henning Omre, Norwegian University of Science and Technology
(NTNU), Norway*

17:10-17:30 HOW TO DETERMINE SPATIAL IRREVERSIBILITY: DIRECTIONAL ASYMMETRY,

*Sebastian Hörning, University Stuttgart, Institute for Modelling Hydraulic
and Environmental Systems, Germany,*

*András Bárdossy, University Stuttgart, Institute for Modelling Hydraulic
and Environmental Systems, Germany,*

Tobias Mosthaf, *University Stuttgart, Institute for Modelling Hydraulic and
Environmental Systems, Germany*

17:30-17:50 ANALYSIS OF GEOSPATIAL DATA USING THE MULTIPOINT MORISITA INDEX,

Mikhail Kanevski, *IDYST, University of Lausanne, Switzerland,*

Jean Golay, IDYST, University of Lausanne, Switzerland

Monday, September 5th

Yellow Cube	Parallel Session - S10
Chairman	Pierre Goovaerts

HYDRO(GEO)LOGY

16:50-17:10 GEOSTATISTICAL MODELING OF LOCAL RAINFALL PATTERNS,

Lionel Benoit, *University of Lausanne - Institute of Earth Surface Dynamics, Switzerland,*

Grégoire Mariéthoz, *University of Lausanne - Institute of Earth Surface Dynamics, Switzerland*

17:10-17:30 3D DISTRIBUTION OF GROUNDWATER SALINITY AS DERIVED FROM HELICOPTER-BORNE ELECTROMAGNETIC MEASUREMENTS AND A STOCHASTIC GEOLOGICAL MODEL,

Jan L. Gunnink, *Geological Survey of the Netherlands - TNO, Netherlands,*
 Willem Dabekaussen, *Geological Survey of the Netherlands - TNO, Netherlands,*

Esther van Baaren, *Deltares, Netherlands,*

Joost Delsman, *Deltares, Netherlands,*

Marios Karoulis, *Deltares, Netherlands,*

Pieter Pauw, *Deltares, Netherlands,*

Bernhard Siemon, *Federal Institute for Geosciences and Natural Resources (BGR), Germany*

17:30-17:50 INVERSE MODELING AIDED BY THE CLASSIFICATION AND REGRESSION TREE (CART) ALGORITHM,

Julio César Gutiérrez-Esparza, *Institute of Water and Environmental Engineering, Universitat Politècnica de València, Spain,*

J. Jaime Gómez-Hernández, *Institute of Water and Environmental Engineering, Universitat Politècnica de València, Spain*

ENVIRONMENTAL ENGINEERING AND SCIENCES

17:50-18:10 ASSESSING THE PERFORMANCE OF THE GSIMCLI HOMOGENISATION METHOD
WITH PRECIPITATION MONTHLY DATA FROM THE COST-HOME BENCHMARK,
Sara Ribeiro, *NOVA IMS, Universidade Nova de Lisboa, Portugal*,
Júlio Caineta, *NOVA IMS, Universidade Nova de Lisboa, Portugal*,
Ana Cristina Costa, *NOVA IMS, Universidade Nova de Lisboa, Portugal*

Tuesday, September 6th

<u>Blue Cube</u>	<u>Plenary Session - S11</u>
<u>Chairman</u>	<u>José A. Vargas-Guzmán</u>

KEYNOTE

9:00-9:40 INVESTIGATING THE PRIOR GEOSTATISTICAL MODEL IN ITS ABILITY TO REPRODUCE NATURE'S VARIABILITY,
Celine Scheidt, *Stanford University, United States*,
Jef Caers, *Stanford University, United States*

THEORY

9:40-10:00 BAYESIAN SPATIAL INVERSION WITH CONJUGATE PRIOR MODELS,
Henning Omre, *Department of Mathematical Sciences, NTNU, Norway*

10:00-10:20 APPLICATION OF GENETIC PROGRAMMING IN A FUNCTIONAL KRIGING FRAMEWORK,
Rúben Nunes Nunes, *Instituto Superior Técnico, Portugal*,
Leonardo Azevedo, *Instituto Superior Técnico, Portugal*,
Amílcar Soares, *Instituto Superior Técnico, Portugal*

10:20-10:40 SIMULATION ON UNSTRUCTURED GRIDS WITH NONLINEAR UPSCALING,
Alexandre Boucher, *Advanced Resources and Risk Technology, LLC, United States*,
Herve Gross, *Advanced Resources and Risk Technology, LLC, United States*

10:40-11:00 A TRULY MULTIVARIATE NORMAL SCORE TRANSFORM BASED ON LAGRANGIAN FLOW,

Ute Mueller, *Edith Cowan University, Australia*,

K. Gerald van den Boogaart, *Helmholtz Zentrum Dresden-Rossendorf,*
Helmholtz Institute for Resources Technology, Germany,

Raimon Tolosana-Delgado, *Helmholtz Zentrum Dresden-Rossendorf,*
Helmholtz Institute for Resources Technology, Germany

11:00-11:20 CONDITIONAL SIMULATION OF MAX-STABLE RANDOM FIELDS USING LATENT VARIABLES,

Christian Lantuéjoul, *MinesParisTech, France*,

Liliane Bel, *AgroParisTech, France*

11:20-12:10 COFFEE BREAK

Tuesday, September 6th

Blue Cube
Chairman

Parallel Session - S12
Mohammed Khalifa

PETROLEUM ENGINEERING

- 12:10-12:30 SIMULTANEOUS INTEGRATION OF WELL-LOG DATA AND SEISMIC INTERPRETATION INTO GEOSTATISTICAL SEISMIC AVA INVERSION,
Leonardo Azevedo, *CERENA - Instituto Superior Técnico, Portugal*,
Amílcar Soares, *CERENA - Instituto Superior Técnico, Portugal*,
Ruben Nunes, *CERENA - Instituto Superior Técnico, Portugal*,
Maria H. Caeiro, *Partex Oil & Gas, Portugal*,
Luis Guerreiro, *Partex Oil & Gas, Portugal*
- 12:30-12:50 COMBINED USE OF OBJECT-BASED MODELS, MULTIPOINT STATISTICS AND DIRECT SEQUENTIAL SIMULATION FOR GENERATION OF THE MORPHOLOGY, POROSITY AND PERMEABILITY OF TURBIDITE CHANNEL SYSTEMS,
Inês Marques, *GeoBioTec, FCT Universidade Nova de Lisboa, Portugal*,
José Almeida, *GeoBioTec, FCT Universidade Nova de Lisboa, Portugal*,
Mariana Quininha, *FCT Universidade Nova de Lisboa, Portugal*,
Paulo Legoinha, *GeoBioTec, FCT Universidade Nova de Lisboa, Portugal*
- 12:50-13:10 INTEGRATION OF SEISMIC REFLECTION DATA INTO GEOSTATISTICAL HISTORY MATCHING WITH ENSEMBLE UPDATING,
Amílcar Soares, *CERENA - Instituto Superior Técnico, Portugal*,
Catarina Marques, *CERENA - Instituto Superior Técnico, Portugal*,
Leonardo Azevedo, *CERENA - Instituto Superior Técnico, Portugal*,
Vasily Demyanov, *Institute of Petroleum Engineering - Heriot-Watt University, United Kingdom*

13:10-13:30 CHANNELIZED RESERVOIR CHARACTERIZATION USING ENSEMBLE KALMAN
FILTER WITH AN INITIAL ENSEMBLE SELECTION SCHEME,

Hyungsik Jung, *Seoul National University, South Korea*,
Hyungjun Yang, *Seoul National University, South Korea*,
Honggeun Jo, *Seoul National University, South Korea*,
Kyungbook Lee, *Korea Institute of Geoscience and Mineral Resources,
South Korea*,
Jonggeun Choe, *Seoul National University, South Korea*

13:30-14:45 LUNCH

Tuesday, September 6th

Red Cube	Parallel Session - S13
Chairman	Maria Joao Pereira

ENVIRONMENTAL ENGINEERING AND SCIENCES

12:10-12:30 AN EXPONENTIAL EXTERNAL DRIFT MODELING FOR URBAN SCALE

INTERPOLATION,

Maxime Beauchamp, *INERIS, France*,

Laure Malherbe, *INERIS, France*,

Chantal de Fouquet, *Mines ParisTech, France*,

Laurent Létinois, *INERIS, France*

12:30-12:50 ESTIMATING THE PROBABILITY OF ROAD CRASH FATALITY USING GEOSTATISTICS:

A BRAZILIAN CASE STUDY,

Monique Martins Gomes, *University of São Paulo, Brazil*,

Cira Souza-Pitombo, *University of São Paulo, Brazil*,

Ali Pirdavani, *Hasselt University, Belgium*,

Tom Brijs, *Hasselt University, Belgium*

12:50-13:10 APPLYING GEOSTATISTICS TO ASSIGN WASTE OWNERSHIP AND WASTE

MANAGEMENT RESPONSIBILITIES,

Caroline Le Boulch, *Arcadis, France*,

Emilie Aubonnet, *Arcadis, France*,

Anne Delos, *Arcadis, France*

13:10-13:30 COMPARISON OF TREND DETECTION APPROACHES IN TIME SERIES AND THEIR APPLICATION TO IDENTIFY TEMPERATURE CHANGES IN THE VALENCIA REGION (EASTERN SPAIN),

Hong Wang, *China University of Mining and Technology, China*,

Eulogio Pardo-Igúzquiza, *Geological Survey of Spain, Spain*,

Peter Dowd, *University of Adelaide, Australia*,

Yongguo Yang, *China University of Mining and Technology, China*

13:30-14:45 LUNCH

Tuesday, September 6th

Yellow Cube
Chairman

Parallel Session - S14
Liangping Li

HYDRO(GEO)LOGY

12:10-12:30 GEOSTATISTICAL MODELING AND SIMULATION SCENARIOS AS OPTIMIZING TOOLS FOR CURTAIN GROUTING DESIGN AND CONSTRUCTION AT A DAM FOUNDATION,

Vasco Gavinhos, *Univ. Beira Interior - Faculty of Engineering, GEOBIOTEC, Portugal,*

Jorge Carvalho, *Univ. Porto - Faculty of Engineering, CERENA, Portugal*

12:30-12:50 GENERALIZED SENSITIVITY ANALYSIS APPLICATION IN BASIN AND PETROLEUM SYSTEM MODELING, CASE STUDY ON PICEANCE BASIN, COLORADO, US,

Yao Tong, *Stanford University, United States,*

Tapan Mukerji, *Stanford University, United States*

12:50-13:10 CONDITIONING OF STOCHASTIC DFN MODELS TO GEOMETRIC AND HYDRAULIC DATA,

Tomas Bym, *Golder Associates AB, Sweden,*

Sven Follin, *Golder Associates AB, Sweden,*

Jan Hermanson, *Golder Associates AB, Sweden*

13:30-14:45 LUNCH

Tuesday, September 6th

Blue Cube
Chairman

Parallel Session - S15
Hans Wackernagel

14:45-15:15 SPEED POSTER PITCH

15:15-16:30 POSTER SESSION

Tuesday, September 6th

Blue Cube
Chairman

Parallel Session - S16
Alexandre Boucher

PETROLEUM ENGINEERING

16:30-16:50 DEEPWATER RESERVOIR CONNECTIVITY REPRODUCTION FROM MPS AND
PROCESS-MIMICKING GEOSTATISTICAL METHODS,
Rhonika Kaplan, *Chevron Energy Technology Company, United States*,
Michael Pycz, *Chevron Energy Technology Company, United States*,
Sebastien Strebelle, *Chevron Energy Technology Company, United States*

16:50-17:10 RECENT ADVANCEMENTS TO NON-PARAMETRIC MODELLING OF INTERACTIONS
BETWEEN RESERVOIR PARAMETERS,
Håvard Goodwin Olsen, *Norwegian Computing Center, Norway*,
Gudmund Horn Hermansen, *Norwegian Computing Center, Norway*

17:10-17:30 A GRADUAL DEFORMATION METHOD TO PRODUCE MULTIPOINT SIMULATION
COMPLIANT TO DYNAMIC DATA,
Hassan Rezaee, *École Polytechnique de Montréal, Canada*,
Denis Marcotte, *École Polytechnique de Montréal, Canada*

17:30-17:50 REVEALING MULTIPLE GEOLOGICAL SCENARIOS THROUGH UNSUPERVISED
CLUSTERING OF POSTERIOR REALIZATIONS FROM REFLECTION SEISMIC
INVERSION,
Mats Lundh Gulbrandsen, *University of Copenhagen, Denmark*,
Knud Skou Cordua, *University of Copenhagen, Denmark*,
Thomas Mejer Hansen, *University of Copenhagen, Denmark*,
Klaus Mosegaard, *University of Copenhagen, Denmark*

Tuesday, September 6th

Red Cube
Chairman

Parallel Session - S17
Raimon Tolosana-Delgado

MINING ENGINEERING

16:30-16:50 A GEOSTATISTICAL APPROACH TO REAL-TIME RECONCILIATION OF THE GRADE CONTROL MODEL – A STUDY REGARDING THE INFLUENCE OF MEASUREMENT VOLUME, UPDATE INTERVAL, SENSOR PRECISION AND BLENDING RATIOS,
Tom Wambeke, *Delft University of Technology, IHC MTI, Netherlands*,
Joerg Benndorf, *Delft University of Technology, Netherlands*

16:50-17:10 PERFORMANCE ANALYSIS OF CONTINUOUS RESOURCE MODEL UPDATING IN LIGNITE PRODUCTION,
Cansin Yüksel, *TU Delft, Netherlands*,
Jörg Benndorf, *TU Delft, Netherlands*

17:10-17:30 WHOLE-ROCK NORMATIVE MINERALOGY FROM PARTIAL GEOCHEMISTRY, DENSITY AND SENSOR DATA,
Volker Osterholt, *TU Delft, Netherlands*

17:30-17:50 SENSITIVITY OF GEOSTATISTICAL MODELS IN ESTIMATION OF MULTI-UNIT DEPOSITS WITH TRANSITIONAL BOUNDARIES,
Sara Kasmaeeyazdi, *University of Bologna, Italy*,
Giuseppe Raspa, *University of Rome “La Sapienza”, Italy*,
Chantal de Fouquet, *Mines ParisTech, France*,
Stefano Bondua, *University of Bologna, Italy*,
Roberto Bruno, *University of Bologna, University of Bologna*

Tuesday, September 6th

Yellow Cube
Chairman

Parallel Session - S18
Gregoire Mariethoz

THEORY

16:30-16:50 AUTOMATIC COVARIANCE MAP OPTIMIZATION FOR TRUNCATED PLURIGAUSSIAN SIMULATION,

Samaneh Sadeghi, *University of Alberta, Centre for Computational Geostatistics (CCG), Canada,*

Jeff B. Boisvert, *University of Alberta, Centre for Computational Geostatistics (CCG), Canada*

16:50-17:10 SEQUENTIAL SIMULATION AND UNCERTAIN CONDITIONAL INFORMATION,

Thomas Mejer Hansen, *Niels Bohr Institute, University of Copenhagen, Denmark,*

Le Thanh Vu, *I-GIS, Denmark,*

Knud Skou Cordua, *Niels Bohr Institute, University of Copenhagen, Denmark*

17:10-17:30 CONSIDERATIONS FOR THE USE OF SEQUENTIAL SAMPLING TECHNIQUES,

Jaap Leguijt, *Shell International, Netherlands*

17:30-17:50 BAYESIAN INVERSION IN HIDDEN MARKOV CHAINS BASED ON PRIOR WITH VERTICALLY VARYING PROPORTIONS,

Selamawit Moja, *NTNU, Norway,*

Henning Omre, *Hawassa University, Ethiopia*

Wednesday, September 7th

<u>Blue Cube</u>	<u>Plenary Session - S19</u>
<u>Chairman</u>	<u>J. Jaime Gómez-Hernández</u>

KEYNOTE

9:00-9:40 MODELS ON THE GLOBE AND ITS IMPLEMENTATION IN RANDOM FIELDS,
Martin Schlather, *Universität Mannheim, Germany*

SPECIAL SESSION IN HONOR OF PROF. DANIE KRIGE

9:40-10:00 PROFESSOR DANIE KRIGE'S FIRST MEMORIAL LECTURE: A SUMMARY OF THE BASIC
TENETS OF EVALUATING THE MINERAL RESOURCE ASSETS OF MINING
COMPANIES, AS OBSERVED IN PROFESSOR DANIE KRIGE'S PIONEERING WORK
OVER HALF A CENTURY,
Winfred Assibey-Bonsu, *Gold Fields Ltd., Australia*

10:00-10:20 CHOOSING A KRIGING PLAN,
Clayton Deutsch, *University of Alberta, Canada*

10:20-10:40 OBJECT-ORIENTED KRIGING AND STOCHASTIC SIMULATION FOR THE
GEOSTATISTICAL CHARACTERIZATION OF ENVIRONMENTAL DATA,
Alessandra Menafoglio, *Politecnico di Milano, Italy*,
Piercesare Secchi, *Politecnico di Milano, Italy*,
Alberto Guadagnini, *Politecnico de Milano, The University of Arizona,*
Italy, United States

- 10:40-11:00 USING CLASSICAL GEOSTATISTICS TO QUANTIFY THE SPATIOTEMPORAL DYNAMICS OF A NEURODEGENERATIVE DISEASE FROM BRAIN MRI,
Robert Marschallinger, *Interfaculty Department of Geoinformatics Z_GIS, Univ. Salzburg, Austria,*
Mark Mühlau, *Department of Neurology, Klinikum rechts der Isar, TU München, Germany,*
Paul Schmidt, *Department of Statistics, Ludwig-Maximilians-University München, Germany,*
Peter Atkinson, *Faculty of Science and Technology, Lancaster Univ., United Kingdom,*
Eugen Trinkka, *Department of Neurology, Christian Doppler Medical Centre, Paracelsus Medical University, Department of Neurology, Christian Doppler Medical Centre, Paracelsus Medical University,*
Stefan Golaszewski, *Department of Neurology, Christian Doppler Medical Centre, Paracelsus Medical University, Department of Neurology, Christian Doppler Medical Centre, Paracelsus Medical University,*
Johann Sellner, *Department of Neurology, Christian Doppler Medical Centre, Paracelsus Medical University, Department of Neurology, Christian Doppler Medical Centre, Paracelsus Medical University*

- 11:00-11:20 KRIGING TO CATCH THE BAD GUYS,
R. Mohan Srivastava, *Tristar Gold Inc., Canada*

- 11:20-12:10 COFFEE BREAK

Wednesday, September 7th

Blue Cube

Parallel Session - S20

Chairman

Valérie Langlais

PETROLEUM ENGINEERING

12:10-12:30 USING SPATIAL CONSTRAINTS IN CLUSTERING FOR ELECTROFACIES

CALCULATION,

Jean-Marc Chautru, *Geovariances, France*,

Emilie Chautru, *Mines ParisTech, Centre de Géosciences, France*,

David Garner, *TerraMod Consulting, Canada*,

Mohan Srivastava, *FSS Canada Consultants, Canada*,

Jeffrey Yarus, *Halliburton, Landmark Graphics, Halliburton, Landmark Graphics*

12:30-12:50 GRIDLESS SIMULATION OF CATEGORICAL PROPERTIES OF NATURAL PHENOMENA IN 3D,

Yevgeniy Zagayevskiy, *Halliburton, United Kingdom*,

Gaetan Bardy, *Halliburton, United Kingdom*,

Jin Fei, *Halliburton, United States*,

David Garner, *TerraMod Consulting, Canada*,

Mohan Srivastava, *Halliburton, United States*,

Jeffrey Yarus, *Halliburton, United States*

12:50-13:10 IMPACT OF PLURIGAUSSIAN PARAMETER OPTIONS ON MODEL TRANSITION STATISTICS,

David Garner, *TerraMod Consulting, Canada*,

Mohan Srivastava, *FSS Canada Consultants, Canada*,

Jeffrey Yarus, *Halliburton Landmark, United States*,

Jean-Marc Chautru, *Geovariances, France*

13:10-13:30 THEORETICAL GENERALIZATION OF MARKOV CHAIN RANDOM FIELD IN
RESERVOIR LITHOFACIES STOCHASTIC SIMULATION,

Xiang Huang, *Department of Statistics, Central South University, China,*
Zhizhong Wang, *Department of Statistics, Central South University, China,*
Jianhua Guo, *School of Geosciences and Info-Physics, Central South
University, China*

13:30-13:50 ASSEMBLY

13:50-15:00 LUNCH

Wednesday, September 7th

Red Cube
Chairman

Parallel Session - S21
Roussos Dimitrakopoulos

MINING ENGINEERING

12:10-12:30 ESTIMATION OF MINERAL RESOURCES USING DISCRETE DISJUNCTIVE KRIGING,

Xavier Freulon, *AREVA Mines, France*,
Jacques Rivoirard, *MINES ParisTech, PSL Research University, France*,
Didier Renard, *MINES ParisTech, PSL Research University, France*,
Lotfi Slim, *MINES ParisTech, PSL Research University, France*

12:30-12:50 A GEOSTATISTICAL APPROACH FOR IDENTIFYING SUSPICIOUS GEOLOGICALLY MISLOGGED SAMPLES,

Amir Adeli, *University of Chile, CSIRO Chile International Centre of Excellence in Mining and Mineral Processing, Chile*,
Xavier Emery, *University of Chile, Chile*

12:50-13:10 MINERAL RESOURCE CLASSIFICATION BASED ON MULTIGAUSSIAN KRIGING,

Alejandro Cáceres, *GeolInnova, Chile*,
Xavier Emery, *Universidad de Chile, Chile*

13:10-13:30 BOREHOLE PLAN OPTIMIZATION IN ROCK MASSES USING GEOSTATISTICAL SIMULATION,

Marisa Pinheiro, *Institute for Sustainability and Innovation in Structural Engineering, University of Minho, Portugal*,
Xavier Emery, *Advanced Mining Technology Center, University of Chile, Chile*,
Ana Maria A. C. Rocha, *Algoritmi Research Center, University of Minho, Portugal*,
Tiago Miranda, *Institute for Sustainability and Innovation in Structural Engineering, University of Minho, Portugal*,
Luís Lamas, *National Laboratory for Civil Engineering, Portugal*

13:30-13:50 ASSEMBLY

13:50-15:00 LUNCH

Wednesday, September 7th

Yellow Cube
Chairman

Parallel Session - S22
Martin Schlather

THEORY

12:10-12:30 FUNCTIONAL DECOMPOSITION KRIGING FOR EMBEDDING STOCHASTIC ANISOTROPY SIMULATIONS,

J.A Vargas-Guzmán, *Saudi Aramco, Saudi Arabia*,
B. Vargas-Murillo, *Saudi Aramco, Saudi Arabia*

12:30-12:50 SPATIAL ESTIMATOR RANDOM FORESTS - COMBINING KRIGING WITH A MACHINE LEARNING NON-PARAMETRIC REGRESSION AND CLASSIFICATION ALGORITHM.,

Colin Daly, *Schlumberger, United Kingdom*

12:50-13:10 MIXED-POINT GEOSTATISTICAL PRIOR MODELS BASED ON A COMBINATION OF TWO- AND MULTI-POINT STATISTICS,

Knud Skou Cordua, *Solid Earth Geophysics, Niels Bohr Institute, University of Copenhagen, Denmark*,
Mats Lundh Gulbrandsen, *Solid Earth Geophysics, Niels Bohr Institute, University of Copenhagen, Denmark*,
Klaus Mosegaard, *Solid Earth Geophysics, Niels Bohr Institute, University of Copenhagen, Denmark*,
Christophe Barnes, *Department of Geosciences and Environment, University of Cergy-Pontoise, Denmark*,
Thomas Mejer Hansen, *Solid Earth Geophysics, Niels Bohr Institute, University of Copenhagen, Denmark*

13:10-13:30 A GLM-BASED TECHNIQUE FOR JOINT MULTIPOINT GEOSTATISTICAL ANALYSIS
OF BOTH CATEGORICAL AND QUANTITATIVE FIELDS,

Raimon Tolosana-Delgado, *Helmholtz Zentrum Dresden Rossendorf,
Helmholtz Institute Freiberg for Resource Technology,
Germany,*

K.Gerald van den Boogaart, *Helmholtz Zentrum Dresden Rossendorf,
Helmholtz Institute Freiberg for Resource Technology,
Germany,*

Ute Mueller, *Edith Cowan University, School of Science, Australia*

13:30-13:50 ASSEMBLY

13:50-15:00 LUNCH

Thursday, September 8th

Blue Cube

Plenary Session - S23

Chairman

Amílcar Soares

KEYNOTE

9:00-9:40 MAPPING THE SIGNIFICANCE OF EL NIÑO/LA NIÑA IMPACTS ON VEGETATION PATTERNS IN THE AMAZON BASIN,
Sean McKenna, *IBM Research, Ireland*

ENVIRONMENTAL ENGINEERING AND SCIENCES

9:40-10:00 CONSTRAINED SPATIAL CLUSTERING OF CLIMATE VARIABLES FOR GEOSTATISTICAL RECONSTRUCTION OF OPTIMAL TIME SERIES AND SPATIAL FIELDS,
Peter Dowd, *University of Adelaide, Australia*,
Hong Wang, *China University of Mining and Technology, China*,
Eulogio Pardo-Igúzquiza, *Geological Survey of Spain, Spain*,
Yongguo Yang, *China University of Mining and Technology, China*

10:00-10:20 PREDICTING THE PROBABILITY OF REMAINING ELEVATED LEAD LEVELS IN FLINT DRINKING WATER: THE FIRST GEOSPATIAL MODEL,
Pierre Goovaerts, *BioMedware, Inc, United States*

10:20-10:40 A GEOSTATISTICAL AND COMPOSITIONAL APPROACH USING AIRBORNE RADIOMETRICS AND COMPOSITIONAL GEOCHEMICAL GROUND SURVEY DATA AS PREDICTORS FOR GEOGENIC RADON POTENTIAL,
Jennifer McKinley, *Queen's University Belfast, United Kingdom*,
Peter Atkinson, *Lancaster University, United Kingdom*,
Antonio Ferreira, *British Geological Survey, United Kingdom*,
Barry Rawlins, *British Geological Survey, United Kingdom*,
Raimon Tolosana-Delgado, *Helmholtz Institute Freiberg for Resource Technology, Germany*

10:40-11:00 URBAN DYNAMICS ESTIMATION USING MOBILE PHONE LOGS AND LOCALLY VARYING ANISOTROPY,

Óscar F. Peredo, *Telefonica R & D, Chile, Chile*,
José A. García, *Telefonica R & D, Chile, Chile*,
Ricardo Stuvan, *Telefonica R & D, Chile, Chile*,
Julián M. Ortiz, *University of Chile, Chile*

11:00-11:20 PATTERN-BASED DOWNSCALING OF TOPOGRAPHIC DATA USING MULTIPLE-POINT GEOSTATISTICS,

Luiz Gustavo Rasera, *University of Lausanne, Switzerland*,
Grégoire Mariéthoz, *University of Lausanne, Switzerland*,
Stuart N. Lane, *University of Lausanne, Switzerland*

11:20-12:10 COFFEE BREAK

Thursday, September 8th

<u>Blue Cube</u>	Parallel Session - S24
<u>Chairman</u>	Evgeniy Kovalevskiy

PETROLEUM ENGINEERING

- 12:10-12:30 MODELING STRUCTURAL UNCERTAINTY ON FAULT NETWORKS USING MARKED POINT PROCESSES WITHIN A BAYESIAN FRAMEWORK,
Orhun Aydin, *Energy Resources Engineering, Stanford University, United States*,
 Jef Caers, *Geological Sciences, Stanford University, United States*
- 12:30-12:50 CONVOLVED HIDDEN MARKOV MODELS WITH SPATIAL COUPLING,
Torstein Fjeldstad, *Norwegian University of Science and Technology, Norway*,
 Henning Omre, *Norwegian University of Science and Technology, Norway*
- 12:50-13:10 THE INTERPLAY BETWEEN GEOSTATISTICAL PRIOR INFORMATION AND MODELING ERROR IN SEISMIC DATA,
Rasmus Bødker Madsen, *Niels Bohr Institute, University of Copenhagen, Denmark*,
 Thomas Mejer Hansen, *Niels Bohr Institute, University of Copenhagen, Denmark*
- 13:10-13:30 BERNSTEIN COPULA-BASED SPATIAL STOCHASTIC SIMULATION OF PETROPHYSICAL PROPERTIES USING SEISMIC ATTRIBUTES AS SECONDARY VARIABLE,
Martín Díaz-Viera, *Instituto Mexicano del Petróleo, Mexico*,
 Arturo Erdely, *Facultad de Estudios Superiores Acatlán, Universidad Nacional Autónoma de México, Mexico*,
 Tatiana Kerdan, *Instituto Mexicano del Petróleo, Mexico*,
 Raúl del-Valle-García, *Instituto Mexicano del Petróleo, Mexico*,
 Francisco Mendoza-Torres, *Posgrado de Ciencias de la Tierra, Universidad Nacional Autónoma de México, Mexico*
- 13:30-14:45 LUNCH

Thursday, September 8th

<u>Red Cube</u>	<u>Parallel Session - S25</u>
<u>Chairman</u>	<u>Xavier Emery</u>

MINING ENGINEERING

12:10-12:30 DIAMOND DRILL HOLES AND BLAST HOLES, A FORMAL STUDY,

Serge Antoine Seguret, *Mines ParisTech, France*,
Sebastián De La Fuente, *Codelco, Chile*

12:30-12:50 A NON-PARAMETRIC CLUSTERING APPROACH FOR MULTIVARIATE
GEOSTATISTICAL DATA,

Francky Fouedjio, *CSIRO Mineral Resources, Australia*

12:50-13:10 FROM THE SPATIAL SAMPLING OF A DEPOSIT TO MINERAL RESOURCES
CLASSIFICATION,

Jacques Rivoirard, *MINES ParisTech, PSL Research University, France*,
Didier Renard, *MINES ParisTech, PSL Research University, France*,
Felipe Celhay, *Codelco, Chile*,
David Benado, *Codelco, Chile*,
Celeste Queiroz, *Vale, Brazil*,
Leandro Jose Oliveira, *Vale, Brazil*,
Diniz Ribeiro, *Vale, Brazil*

13:10-13:30 RESOURCE MODEL DILUTION AND ORE LOSS: A CHANGE OF SUPPORT
APPROACH,

Óscar Rondón, *CSIRO, Australia*

13:30-14:45 LUNCH

Thursday, September 8th

Yellow Cube

Parallel Session - S26

Chairman

Jenny McKinley

HYDRO(GEO)LOGY

12:10-12:30 STOCHASTIC GROUNDWATER FLOW MODELLING UNDER TRANSIENT ICE SHEET

CONDITIONS IN GREENLAND,

Olivier Jaquet, *In2Earth Modelling Ltd, Switzerland*,

Rabah Namar, *In2Earth Modelling Ltd, Switzerland*,

Peter Jansson, *Stockholm University, Sweden*,

Siegel Pascal, *In2Earth Modelling Ltd, Switzerland*

12:30-12:50 STATISTICAL INVERSION APPROACH FOR MODELING SUBGLACIAL DRAINAGE

SYSTEM.,

Iñigo Irarrázaval, *Université de Lausanne, Switzerland*,

Grégoire Mariéthoz, *Université de Lausanne, Switzerland*,

Frédéric Herman, *Université de Lausanne, Switzerland*

12:50-13:10 A COMPARISON OF ENKF AND ENPAT INVERSE METHODS: NON-

GAUSSIANITY,

Liangping Li, *South Dakota School of Mines and Technology, United States*,

Haiyan Zhou, *South Dakota School of Mines and Technology, United*

States,

J.Jaime Gómez-Hernández, *Universitat Politècnica de València, Spain*,

Sanjay Srinivasan, *Pennsylvania State University, United States*

OTHER

13:10-13:30 SEQUENTIAL SIMULATION PATH: BIASES AND HOW TO LIVE WITH THEM,

Raphaël Nussbaumer, *University of Lausanne, Switzerland*,

Erwan Gloaguen, *INRS, Canada*,

Grégoire Mariéthoz, *University of Lausanne, Switzerland*,

Klaus Holliger, *University of Lausanne, Switzerland*

13:30-14:45 LUNCH

Thursday, September 8th

Blue Cube
Chairman

Parallel Session - S27
Javier Rodrigo-Illari

14:45-15:15 POSTER PITCHES

15:15-16:30 POSTER SESSION

Thursday, September 8th

Blue Cube
Chairman

Parallel Session - S28
Xian-Huan Wen

PETROLEUM ENGINEERING

16:30-16:50 STOCHASTIC INVERSION OF MULTIVARIATE PROPERTIES WITH ADAPTIVE SAMPLING,

Maryam Hadavand, *University of Alberta, Canada*,
Clayton Deutsch, *University of Alberta, Canada*

16:50-17:10 MACHINE LEARNING METHODS FOR SWEET SPOT DETECTION: A CASE STUDY,

Vera Louise Hauge, *Norwegian Computing Center, Norway*,
Gudmund Horn Hermansen, *Norwegian Computing Center, Norway*

17:10-17:30 GENERATING FACIES PROBABILITY MAPS USING PRODUCTION DATA IN MULTIPLE-POINT GEOSTATISTICS,

Kyungbook Lee, *Korea Institute of Geoscience and Mineral Resources, South Korea*,

Hyunsuk Lee, *Korea Institute of Geoscience and Mineral Resources, South Korea*,

Byeongcheol Kang, *Seoul National University, South Korea*,

Jonggeun Choe, *Seoul National University, South Korea*,

Wonsuk Lee, *Korea Institute of Geoscience and Mineral Resources, South Korea*,

Taehun Lee, *Korea Institute of Geoscience and Mineral Resources, South Korea*,

Taewoong Ahn, *Korea Institute of Geoscience and Mineral Resources, South Korea*

17:30-17:50 STATISTICAL ANALYSIS OF FAULT SEISMIC ATTRIBUTES,

Dmitriy Kolyukhin, *Trofimuk Institute of Petroleum Geology and
Geophysics SB RAS, Russia,*

Behzad Alaei, *Independent, Norway,*

Anita Torabi, *Uni Research CIPR, Norway*

Thursday, September 8th

Red Cube

Parallel Session - S29

Chairman

Sandra De Iaco

THEORY

16:30-16:50 ON UNIFORM STRUCTURE CONSTRAINS IN BAYESIAN INVERSION.,
Giulia de Pasquale, *UNIL Université de Lausanne, Switzerland*,
Niklas Linde, *UNIL Université de Lausanne, Switzerland*

16:50-17:10 BAYESIAN ADAPTED PARAMETERIZATION OF A MARKOV MESH MODEL,
Xin Luo, *Norwegian University of Science and Technology, Norway*,
Håkon Tjelmeland, *Norwegian University of Science and Technology,*
Norway

17:10-17:30 A SPECTRAL-TURNING BANDS ALGORITHM TO JOINTLY SIMULATE STATIONARY
AND INTRINSIC GAUSSIAN RANDOM FIELDS IN D-DIMENSIONAL EUCLIDEAN
SPACES,
Daisy Arroyo, *University of Chile, Chile*,
Xavier Emery, *University of Chile, Chile*

17:30-17:50 ENSEMBLE BASED DATA ASSIMILATION FOR A GEOLOGICAL PROCESS MODEL,
Jacob Skauvold, *NTNU, Norway*,
Jo Eidsvik, *NTNU, Norway*

Thursday, September 8th

Yellow Cube

Parallel Session - S30

Chairman

Sean McKenna

BIG DATA

16:30-16:50 INCREASING THE SPECTRAL RESOLUTION OF OLD IMAGES,

Mathieu Gravey, *University of Lausanne, Switzerland*,

Grégoire Mariéthoz, *University of Lausanne, Switzerland*

16:50-17:10 COVARIANCE SCALE DECOMPOSITION FOR THE KRIGING OF LARGE DATASETS,

Thomas Romary, *Mines ParisTech, France*,

Nicolas Desassis, *Mines ParisTech, France*,

Francky Fouedjio, *CSIRO, Australia*

OTHER

17:10-17:30 A GEOSTATISTICAL APPROACH FOR TRAVEL MODE CHOICE ISSUES,

Anabele Lindner, *University of São Paulo, Brazil*,

Lucas Assirati, *University of São Paulo, Brazil*,

Cira Souza-Pitombo, *University of São Paulo, Brazil*,

Ana Rita Salgueiro, *Federal University of Ceará, Brazil*

17:30-17:50 GEOSTATISTICAL MODELS AND NEW COMPUTATIONAL ASPECTS FOR SPACE-TIME PREDICTIONS,

Sandra De Iaco, *University of Salento, Italy*,

Monica Palma, *University of Salento, Italy*,

Donato Posa, *University of Salento, Italy*,

Sabrina Maggio, *University of Salento, Italy*

Friday, September 9th

Blue Cube

Parallel Session - S31

Chairman

Lin Ying Hu

PETROLEUM ENGINEERING

09:40-10:00 A COMPARATIVE ANALYSIS OF GEOSTATISTICAL METHODS FOR A FIELD WITH A
LARGE NUMBER OF WELLS,

Maria Volkova, *GridPont Dynamics, Russia,*

Mikhail Perepechkin, *GridPont Dynamics, Russia,*

Evgeniy Kovalevskiy, *GridPont Dynamics, Russia*

10:00-10:20 GEOSTATISTICS ON UNSTRUCTURED GRIDS, THEORETICAL BACKGROUND AND
APPLICATIONS.,

Pierre Biver, *TOTAL, France,*

Victor Zaytsev, *Mines ParisTech, France,*

Denis Allard, *INRA, France,*

Hans Wackernagel, *Mines ParisTech, France*

10:20-10:40 MODELING COMPLEX PETROPHYSICAL PROPERTIES TRANSITION ACROSS FACIES
BORDERS,

Jean-Marc Chautru, *Geovariances, France,*

Laurent Fontanelli, *Repsol (Móstoles), Spain,*

Noelia Rodríguez-Morillas, *Repsol (Móstoles), Spain,*

Taoufik Ait-Ettajer, *Repsol (Houston), United States*

10:40-11:00 ESTIMATION OF UNCERTAINTIES IN GEOLOGICAL MODELS,

Denise Maljers, *TNO – Geological Survey of the Netherlands, Netherlands,*

Maryke den-Dulk, *TNO – Geological Survey of the Netherlands, Netherlands,*

Johan ten-Veen, *TNO – Geological Survey of the Netherlands, Netherlands,*

Jan Hummelman, *TNO – Geological Survey of the Netherlands, Netherlands,*

Jan Gunnink, *TNO – Geological Survey of the Netherlands, Netherlands,*

Jan Stafleu, *TNO – Geological Survey of the Netherlands, Netherlands,*

Serge van-Gessel, *TNO – Geological Survey of the Netherlands, Netherlands*

11:00-11:30 COFFEE BREAK

Friday, September 9th

Red Cube
Chairman

Parallel Session - S32
Mo Srivastava

MINING ENGINEERING

09:40-10:00 APPROACHING SIMULTANEOUS LOCAL AND GLOBAL ACCURACY,
Danny Kentwell, *SRK Consulting, Australia*

10:00-10:20 FIXING PANEL ARTIFACTS IN LIK BLOCK MODELS,
William Hardtke, *WCH Consulting LLC, United States*,
Celeste Wilson, *Newmont Mining Corp., United States*

10:20-10:40 IMPLICATIONS OF ALGORITHM AND PARAMETER CHOICE: IMPACTS OF
GEOLOGICAL UNCERTAINTY SIMULATION METHODS ON PROJECT DECISION
MAKING,
Arja Jewbali, *Newmont Mining Corporation, United States*,
Bruce Perry, *Newmont Mining Corporation, United States*,
Lawrence Allen, *Newmont Mining Corporation, United States*,
Richard Inglis, *Newmont Mining Corporation, United States*

10:40-11:00 THE IMPACT OF DECLUSTERING TECHNIQUE CHOICE ON THE OUTCOME OF
RESOURCE MODEL UNCERTAINTY QUANTIFICATION USING CONDITIONAL
AND CATEGORICAL SIMULATION,
Henrique da Silva, *Newmont Mining Company, United States*

11:00-11:30 COFFEE BREAK

Friday, September 9th

Yellow Cube

Parallel Session - S33

Chairman

Jacques Rivoirard

THEORY

09:40-10:00 CAN MEASUREMENT ERRORS BE CHARACTERIZED FROM DUPLICATES?,

Chantal de Fouquet, *Mines ParisTech-PSL, Ecole des Mines de Paris, France*

10:00-10:20 MISSING DATA: HOW TO PROCEED?,

Camilla da Silva, *Universidade Federal do Rio Grande do Sul, Brazil*,
João Felipe Costa, *Universidade Federal do Rio Grande do Sul, Brazil*

10:20-10:40 ANALYSIS OF THE SPATIAL DEPENDENCE OF LARGE GRADES,

Emilie Chautru, *Mines ParisTech, France*,
Christian Lantuéjoul, *Mines ParisTech, France*

10:40-11:00 MEANS AND COVARIANCE FUNCTIONS FOR SPATIAL COMPOSITIONAL DATA: AN

AXIOMATIC APPROACH,

Denis Allard, *INRA, France*,
Thierry Marchant, *Ghent University, Belgium*

11:00-11:30 COFFEE BREAK

Friday, September 9th

Blue Cube	Plenary Session - S34
Chairman	Petter Abrahamsen

PETROLEUM ENGINEERING

11:30-11:50 INTEGRATING NEW DATA IN RESERVOIR FORECASTING WITHOUT BUILDING NEW MODELS,

Sebastien Strebelle, *Chevron Energy Technology Company, United States*,
 Sarah Vitel, *Chevron Energy Technology Company, United States*,
 Michael Pyrcz, *Chevron Energy Technology Company, United States*

11:50-12:10 GEOSTATISTICAL HISTORY MATCHING WITH ENSEMBLE UPDATING,

Maria Quintão, *CERENA/Instituto Superior Técnico, Portugal*,
 Amílcar Soares, *CERENA/Instituto Superior Técnico, Portugal*,
 Leonardo Azevedo, *CERENA/Instituto Superior Técnico, Portugal*

12:10-12:30 OBJECT-BASED MODELLING WITH DENSE WELL DATA,

Ragnar Hauge, *Norwegian Computing Center, Norway*,
 Maria Vigsnes, *Norwegian Computing Center, Norway*,
 Bjørn Fjellvoll, *Norwegian Computing Center, Norway*,
 Markus Lund Vevle, *Roxar Software Solutions AS, Norway*,
 Arne Skorstad, *Roxar Software Solutions AS, Norway*

12:30-12:50 PORE NETWORK MODELING FROM MULTI-SCALE IMAGING USING MULTIPLE POINT STATISTICS.,

Tatiana Chugunova, *TOTAL, France*,
 Helene Berthet, *TOTAL, France*

12:50-13:10 EFFICIENT UNCERTAINTY QUANTIFICATION AND HISTORY MATCHING OF
LARGE-SCALE FIELDS THROUGH MODEL REDUCTION,

Jianlin Fu, *Chevron ETC, United States*,

Xian-Huan Wen, *Chevron ETC, United States*,

Song Du, *Chevron ETC, United States*

KEYNOTE

13:10-13:50 ALL REALIZATIONS ALL THE TIME AND OTHER TRENDS IN PETROLEUM
GEOSTATISTICS,

Clayton Deutsch, *University of Alberta, Canada*

13:50-15:00 LUNCH

Poster program

Tuesday, September 6th

THEORY

GEOPHYSICS-BASED MODEL SELECTION OF CONCEPTUAL SUBSURFACE MODELS: APPLICATION TO THE SOUTH OYSTER BACTERIAL TRANSPORT SITE, VIRGINIA, USA,
Carlotta Brunetti, *University of Lausanne, Switzerland*,
Niklas Linde, *University of Lausanne, Switzerland*

MPS: A C++ CLASS FOR MULTIPLE-POINT SIMULATION,
Thomas Mejer Hansen, *Niels Bohr Institute, University of Copenhagen, Denmark*,
Le Thanh Vu, *I-GIS, Denmark*,
Torben Bach, *I-GIS, Denmark*

REVISITING THE RELATIONSHIP BETWEEN TRUE TRACE LENGTH AND FRACTURE DIAMETER DISTRIBUTIONS,
Amin Hekmatnejad, *University of Chile, Chile*,
Xavier Emery, *University of Chile, Chile*,
Javier Vallejos, *University of Chile, Chile*

REVISITED FFT-MOVING AVERAGE FOR GEOSTATISTICAL SIMULATIONS,
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