

IAMG2014

Friday, October 17thAuditorium 1Plenary Session

OPENING IAMG NEW DELHI 2014

9.00 - 10.00 OPENING ACT

Dr. Shailesh Nayak (Secretary, MOES, Govt. of India)
 Prof. I.S. Thakur (Dean of the School of Environmental Sciences, JNU)
 Prof. Qiuming Cheng (President, IAMG)
 Dr. N. Janardhana Raju (Chairman, IAMG New Delhi 2014)

10.00-10.40 KEYNOTE SPEECH

Shailesh Nayak (Secretary, Ministry of Earth Science, India)

10.40-11.00 **GROUP PHOTO SESSION**11.15-12.00 Coffee Break (**POSTER SESSION I**)Lecture Hall 1Friday, October 17thParallel Session

SESSION 2: HYDROLOGY AND TIME-SERIES ANALYSIS

*Convener: Wolfgang Gossel*12.00 - 13.15 *Chairman: Wolfgang Gossel*

GEOMATHEMATICS: THEORETICAL FOUNDATIONS, APPLICATIONS AND FUTURE DEVELOPMENTS (**Invited**)

Frits Agterberg

STUDY ON CHAOTIC TIME SERIES AND ITS APPLICATION ON FORECASTING WATER INRUSH IN MINES

Yang Yongguo, Chen Yuhua and Cheng Qiuming

SPATIOTEMPORAL CHARACTERISTICS OF DROUGHT IN THE BAITARANI RIVER BASIN, INDIA

J. P. Patra, Rakesh Kumar and P. K. Mani

CANAL IRRIGATION AND ITS IMPACT ON SPATIAL AND TEMPORAL VARIATION IN GROUNDWATER LEVEL: A CASE STUDY IN INDIRA GANDHI CANAL PROJECT STAGE-I COMMAND AREA

Sandhya and S.Sreelesh

ANALYSIS OF A HIGH RESOLUTION GROUNDWATER HYDROGRAPH: TIME SERIES ANALYSIS AND OTHER STATISTICAL METHODS

W. Gossel, R. Laehne and P. Wycisk

13.15 - 14.00 Lunch Break

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

*Conveners: N. Janardhana Raju and AL Ramanathan*14.00 - 16.00 *Chairman: V Balaram*

VULNERABILITY OF GROUND WATER QUALITY TO CHANGING CLIMATE - A CASE STUDY FROM KALPITIYA PENINSULA, SRI LANKA

D. Samanmali Mathara Arachchi, Ranjana U.K.Piyadasa and Deepthi Wikramasinghe

GROUNDWATER ARSENIC CONTAMINATION AFFECTING DIFFERENT GEOLOGICAL DOMAINS IN INDIA: ITS RELATION TO FLUVIAL GEOMORPHOLOGY AND QUATERNARY MORPHOSTRATIGRAPHY

Babar Ali Shah

GEOMORPHOLOGICAL INFLUENCE ON GROUNDWATER QUALITY AND ARSENIC DISTRIBUTION IN PARTS OF BRAHMAPUTRA RIVER BASIN ADJOINING EASTERN

HIMALAYAS

Swati Verma and Abhijit Mukherjee

PERSISTENT PESTICIDES IN FLUVIAL SEDIMENT AND THEIR RELATIONSHIP WITH BLACK CARBON

Musarrat Parween, AL. Ramanathan, N. Janardhana Raju and P.S. Khillare

210 PB GEOCHRONOLOGY AND TRACE METAL FLUXES (CU, CR, AND PB) IN A TROPICAL ESTUARY FROM THE BRAZILIAN COAST

I. Moreira, J. M. Godoy, A. V. Oliveira, A. C. Almeida, and A. G. Figueiredo Junior

EVALUATION OF URBAN AIR POLLUTION DISTRIBUTION IN THE COLOMBO MUNICIPAL COUNCIL AREA, SRI LANKA

D. Samanmali Matharaarachchi, L. Manawad and Jagath Gunatilake

ELEMENTAL AND STABLE ISOTOPE ANALYSIS OF SEDIMENTARY ORGANIC MATTER IN BHITARKANIKA MANGROVE-ESTUARINE COMPLEX FOR IDENTIFYING THE SOURCES

Sasmita K Das and AL Ramanathan

CHROMIUM CONTAMINATION IN GROUNDWATER IN AGRA CITY AND ITS ENVIRONS, UTTAR PRADESH, INDIA- A CASE STUDY

D.S. Pandey, A. V. Singh, S. G. Bhartariya and Anmol Sharma

16.00 - 16.15 Coffee Break

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION*Conveners: N. Janardhana Raju and AL Ramanathan*16.15 - 18.00 Chairman: **V. Subramanian**

CRUSTAL EVOLUTION OF THE BUNDELKHAND CRATON, CENTRAL INDIA: GEOCHRONOLOGICAL APPROACH AND GEODYNAMIC SETTING

Vinod K. Singh and Alexander Slabunov

COAL MINING AND ORGANIC POLLUTANTS: A CASE STUDY OF MAHANADI BASIN COALFIELDS, INDIA

Amiya Shankar Naik

TWO-DIMENSIONAL ANALYTICAL SOLUTION OF ADVECTIVE-DISPERSIVE EQUATION

Mritunjay Kumar Singh and Sultana Begam

GIS BASED GROUNDWATER QUALITY INDEX ASSESSMENT AND LAND-USE MAPPING: STUDY FROM AN ALLUVIAL AQUIFER IN NORTH INDIA

Arina Khan and Rashid Umar

HYDROGEOCHEMICAL ASSESSMENT TO EXPLORE THE EXTENT, NATURE AND SOURCE OF FLUORIDE CONTAMINATION WITHIN THE GROUNDWATER OF THE PANDA RIVER BASIN, SONBHADRA DISTRICT, UTTAR PRADESH, INDIA

Sangita Dey and N. Janardhana Raju

UNDERSTANDING OF THE PROCESSES RESPONSIBLE FOR THE MOBILIZATION OF ARSENIC IN THE BRAHMAPUTRA FLOOD PLAINS USING A MULTIVARIATE STATISTICAL APPROACH

Nilotpal Das and M. Kumar

ANALYTICAL MODEL OF SOLUTE TRANSPORT IN HETEROGENEOUS MEDIA WITH VARYING VELOCITY FIELD

Mritunjay Kumar Singh and Pintu Das

18.00 End of Technical Session

Lecture Hall 2**Friday, October 17th****Parallel Session****SESSION 8: ENGINEERING GEOLOGY AND GEOTECHNICAL ENGINEERING***Conveners: Robert Marschallinger and Shilpa Pal*12.00 - 13.15 Chairman: **Shilpa Pal**

FORECASTING OF HOLLOWES IN ABANDONED SHALLOW COAL MINES IN ZONE OF INTENSIVE WEATHERING

V. Palchik

GIS BASED LANDSLIDE SUSCEPTIBILITY MODEL (GLSM) USING WEIGHTED BAYESIAN DATA MINING CLASSIFICATION APPROACH

M. Venkatesan, T. Arunkumar, M. Anbarasi, K. Malarvizhi and A.S. Rajawat

SPATIAL DISTRIBUTION OF SEISMIC SITE COEFFICIENTS FOR GUWAHATI CITY

Jagabandhu Dixit, S. T. G. Raghu Kanth and Sujit Kumar Dash

APPLICATION OF FUZZY OPERATORS IN LANDSLIDE SUSCEPTIBILITY MAPPING ALONG YERCAUD GHAT ROAD SECTION, TAMIL NADU, INDIA

V. Ramesh, Thanchaipou Phaomei, M. Baskar and S. Anbazhagan

EARTHQUAKES IN GARHWAL HIMALAYA, INDIA

Arun K Shandilya

13.15 - 14.00 Lunch Break

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

Conveners: N. Janardhana Raju and AL Ramanathan

14.00 - 16.00 Chairman: *T V Krishna Reddy*

REMEDIATION STUDIES OF ARSENIC IN SOILS AND SEDIMENTS CONTAMINATED BY ARSENOPYRITE-BEARING GOLD MINE TAILINGS (**Invited**)

S. R. Patchineelam, M.M. Ferreira, Z.C. Castilhos and W. Calmano

MODELLING ARSENIC DISTRIBUTION IN GROUNDWATER OF BEGUSARAI DISTRICT, BIHAR: A GEOSTATISTICAL APPROACH

B. C. Sarkar, Kalyan Saikia and Pallabi Chakraborty

TREATMENT OF COKE OVEN EFFLUENTS BY DUCKWEEDS PONDS- A LABORATORY SCALE STUDY

Subodh Kumar Maiti and Arindam Halder

WATER ENVIRONMENTAL RESPONSE TO ORE DEPOSITS AND MINING OF THE DIAOJIANG RIVER BASIN, GUANGXI, CHINA

ZHOU Yongzhang, MO Liping and ZHONG Lili

IMPACT OF CANAL RECHARGE ON GROUNDWATER QUALITY OF KOLAYAT BLOCK, BIKANER DISTRICT, INDIA

Sumant Kumar, N. C. Ghosh, R.P Singh, Rajesh Singh and Surjeet Singh

PRODUCTION TECHNIQUES USED IN PREHISTORIC BRAZILIAN POTTERY BY RADIOGRAPHY AND –CT

A. V. B. Bellido, R. M. Latini, M. I. S. Souza, G. L. Almeida, H. Alves, I. Lima and R. T. Lopes

A COMPARATIVE ASSESSMENT OF METAL LEACHING FROM MOBILE PHONE PARTS USING THREE DIFFERENT METHODS

Satyamanyu Yadav and Sudesh Yadav

DOMESTIC WASTEWATER TREATMENT USING TANFLOC: A TANNIN BASED COAGULANT

Rajesh Singh, Sumant Kumar and Megha Garg

CHARACTERIZATION OF THE WEATHERING PROFILE ON QUARTZITE NEAR SADEW (NE INDIA) USING MASS TRANSFER COEFFICIENTS FOR MAJOR ELEMENTS

Sarajit Sensarma, R V S Shimyaphy and Tapan Chakraborty

16.00 - 16.15 Coffee Break

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

Conveners: N. Janardhana Raju and AL Ramanathan

16.15 - 18.00 Chairman: *Dinesh Mohan*

MONITORING OF IMPACT OF INDUSTRIAL COMPLEXES ON WATER QUALITY OF THE CENTRAL ASIAN TRANSBOUNDARY RIVERS

P. I. Normatov

STUDY ON METHANE EMISSION AND RECLAMATION OF MUNICIPAL SOLID WASTE (MSW) LANDFILL AREAS: A CASE STUDY FROM DELHI, INDIA

Manju Rawat, AL. Ramanathan and T. Kuriakose

RARE EARTH ELEMENTS FOR GREEN TECHNOLOGY: IMPLICATIONS ON URBAN ENVIRONMENT AND HEALTH

N. Siva Siddaiah

MULTIVARIATE STATISTICAL CHARACTERIZATION OF GROUNDWATER IN MORADABAD CITY, WESTERN UTTAR PRADESH

Naseem-Us-Saba and Rashid Umar

GEO THERMOBAROMETRY AND BARROVIAN METAMORPHISM OF DARJEELING-MANGPU REGION

Suparna Tewari and Divya Prakash

RELATIONSHIP BETWEEN PHYSICO-CHEMICAL PARAMETERS AND TOXICITY OF LEACHATE FROM MUNICIPAL SOLID WASTE LANDFILL SITE IN DELHI

Anshu Gupta and Paulraj R.

HIGH – PRESSURE AND ULTRAHIGH-TEMPERATURE METAMORPHISM AT DIGUVA

SONABA, EASTERN GHATS MOBILE BELT (INDIA): NEW CONSTRAINTS FROM PHASE EQUILIBRIA MODELLING

Divya Prakash

18.00 End of Technical Session

Lecture Hall 3

Friday, October 17th

Parallel Session

SESSION 9: TRENDY GEOSTATISTICS

Convener: Jaime Gomez-Hernandez

12.00 - 13.15 Chairman: **C V Deutsch**

A COMPARISON OF DOWNSCALING APPROACHES FOR CLIMATE CHANGE SCENARIOS OVER SYDNEY, AUSTRALIA

R. Mehrotra, S. K. Jha and D. Arjun

DOWNSCALING OF PRECIPITATION IN MAHANADI BASIN, INDIA USING SUPPORT VECTOR MACHINE, K-NEAREST NEIGHBOUR AND HYBRID OF SUPPORT VECTOR MACHINE WITH K-NEAREST NEIGHBOUR

Manjula Devak and C.T.Dhanya

RESURRECTING GSLIB BY CODE OPTIMIZATION AND MULTI-CORE PROGRAMMING

Oscar Peredo and Julián M. Ortiz

MODELLING GEOLOGICAL SCENARIO UNCERTAINTY FROM SEISMIC DATA USING PATTERN SIMILARITY: APPLICATION TO CHANNELIZED TURBIDITE RESERVOIR IN EQUATORIAL GUINEA, WEST AFRICA

Cheolkyun Jeong, Céline Scheidt, Jef Caers and Tapan Mukerji

MULTIVARIATE GRID-FREE GEOSTATISTICAL SIMULATION OF NATURAL PHENOMENA

Y. Zagayevskiy and C.V. Deutsch

13.15 - 14.00 Lunch Break

SESSION 21: DIGITAL ROCK GEOPHYSICS

Conveners: Tapan Mukerji and Nishank Saxena

14.00 - 16.00 Chairman: **Tapan Mukerji**

TRANSPORT OF MOLECULAR FLUIDS THROUGH THREE-DIMENSIONAL POROUS MEDIA

A. Pazdaniakou and P.M. Adler

DIRECT SAMPLING FROM N DIMENSIONS TO N DIMENSIONS APPLIED TO POROUS MEDIA

T. Nguyen Kim, P.M.Adler, D. Coelho, J.-C. Robinet and J. Wendling

EXHUMATION HISTORY AND TECTONICS ACROSS PURULIA-BANKURA SHEAR ZONE : CONSTRAINTS FROM APATITE, SPHENE AND ZIRCON FISSION TRACK ANALYSIS

Amal Kumar Ghosh

UPSCALING FOR MULTILAYERED TRANSVERSELY ISOTROPIC MEDIA WITH A TILT IN SYMMETRY AXIS

A. Stovas

PROCESS-BASED COMPUTATIONAL ROCK PHYSICS AS A TOOL TO ESTIMATE GEOLOGIC PROPERTY TRENDS, UNDERSTAND PORE-SCALE HETEROGENEITY, AND REFINE THEORETICAL MODELS

Tapan Mukerji, Ratnanabha Sain and Gary Mavko

ROCK VISUALISATION BY GRAPHICS PROCESSING UNIT

Sunjay and Manas Banerjee

16.00 - 16.15 Coffee Break

SESSION 5: CLIMATE AND GROUNDWATER FUNCTIONING: THE NEED FOR CORRECT QUESTIONS

Convener: Joel Carrillo Rivera

16.15 - 18.00 Chairman: **Arun K Attri**

IMPACT OF CLIMATE CHANGE ON WATER RESOURCES OF GOMTI RIVER BASIN USING SIMULATION MODELS

R K Mall and Diva Bhatt

GROUNDWATER FLUCTUATION AND TREND IN AMRITSAR, PUNJAB, INDIA

Gopal Krishan, A.K. Lohani, M.S. Rao, C.P. Kumar and K.S. Takshi

HIGH SPONTANEOUS POTENTIAL (SP) OF ELECTRICAL LOGGING FOR DECIPHERING HIGHLY CONDUCTIVE FORMATIONS IN HOST HARD ROCK- A CASE STUDY

Ashok Kumar Madhukar

IN THE FACE OF CHANGING CLIMATE: GROUNDWATER DEVELOPMENT THROUGH ARTIFICIAL RECHARGE IN HARD ROCK TERRAIN OF KUMAUN LESSER HIMALAYA

M. Tripathi

WATER LEVEL RESPONSE TO RAINFALL IN PULIVENDULA BASIN (GARANDALA VANKA), ANDHRA PRADESH, INDIA

M.V.Subba Reddy, U. Suresh, R.C.Hanumanthu and T.V.Krishna Reddy

18.00 End of Technical Session

Common Hall

Friday, October 17th

Parallel Session

SESSION 24: SEDIMENTARY BASIN ANALYSIS

Conveners: Daniel M. Tetzlaff and Cedric Griffiths

12.00 - 13.15 Chairman: *Cedric Griffiths*

PARAMETER ESTIMATION AND SENSITIVITY ANALYSIS IN CLASTIC SEDIMENTATION MODELLING

A. Acevedo, A. Khramtsov, H. A. Madhoo, L. Noomee and D. Tetzlaff

ABUNDANCE OF CYCLADOPHORA DAVISIANA USED AS AN INDICATOR FOR PALEOENVIRONMENT IN SOUTHERN OCEAN, LEG 119, SITE 738B

Girish Kumar Sharma and Sheetal Kanojia

PARTICLE SIZE CHARACTERISTICS OF RAMGANGA CATCHMENT AREA OF GANGA RIVER

M.Y.A. Khan and G.J. Chakrapani

MIXING CALCULATIONS TO DETERMINE PROVENANCE OF SANDSTONES: A CASE STUDY FROM THE KAIMUR GROUP, VINDHYAN SUPERGROUP, CENTRAL INDIA

Shinjana Sen and Meenal Mishra

MAJOR AND TRACE ELEMENT GEOCHEMISTRY OF LAKE SEDIMENTS, INDIA: IMPLICATIONS FOR WEATHERING AND CLIMATE CONTROL

Shaik A. Rashid

13.15 - 14.00 Lunch Break

SESSION 1: 3D VISUALIZATION IN GEO-AND ENVIRONMENTAL SCIENCES

Convener: Peter Wycisk

14.00 - 16.00 Chairman: *Peter Wycisk*

RESEARCH ON THREE-DIMENSIONAL GEOLOGICAL MODEL DATA EXCHANGE FORMAT

Honggang Qu, Zhangang Wang, Zixing Wu, Yongbo Zhang and Guangsheng Yan

3D GEOLOGICAL MODELING BASED ON MULTI-SOURCE AND MULTI-SCALE DATA INTEGRATION IN SHIBAOGOU ZONE OF LUANCHUAN, CHINA

WANG Gongwen, ZHANG Shouting, YAN Changhai and SONG Yaowu

HYDROLOGIC MODELLING OF YAMUNA BASIN USING ARCSWAT

Himanshu Tyagi and A. K. Gosain

LANDSLIDE HAZARD ASSESSMENT BASED ON SLOPE UNIT IN WENCHUAN COUNTY OF SICHUAN PROVINCE, CHINA

Wu-nian YANG, Cong-qiang NAN, Han-hu LIU, Xin YANG and Qiong WANG

APPLICATION OF SEISMIC DETECTION TECHNOLOGY IN THE CENTRAL AREA OF SICHUAN BASIN IN THE HYDROCARBON EXPLORATION

Zhang Yan-fang, Wang Quan-feng, Zhang Xiao-pan, Chang Xin Xu and Bin Li Yi

THREE-DIMENSIONAL MODELLING OF URBAN GEOLOGICAL BODY BASED ON THE KNOWLEDGE-DRIVEN ANALYSIS: A CASE STUDY OF BEIJING CITY, CHINA

Chen Jian-ping, Tian Yi and Chen Yu-Chen

THREE—DIMENSIONAL METALLOGENIC PREDICTION IN TONGLVSHAN REGION BASED ON DIGITAL ORE DEPOSIT MODEL

Li Cheng and Liu Bing-li

GENERATION OF STREAM LENGTH GRADIENT INDEX MAP USING VISUAL BASIC PROGRAM R.PROFILER WITH A CASE STUDY FROM SOUTH INDIA

A.C. Dinesh, Vipin Joseph Markose and K.S. Jayappa

HIGH RESOLUTION 3D GEOLOGICAL MODELS – OPTIONS FOR SUSTAINABLE RESOURCES

MANAGEMENT
Peter Wycisk and Wolfgang Gossel

16.00 - 16.15 Coffee Break

SESSION 11: MULTIVARIATE GEOSTATISTICS

Convener: Jose A. Vargas-Guzman

16.15 - 18.00 Chairman: *Jose A Vargas-Guzman*

MULTIVARIATE STATISTICAL TECHNIQUES FOR DECIPHERING THE ORIGIN AND EVOLUTION OF VOLCANOES AT THE VOLCANIC FRONT OF THE CENTRAL PART OF THE MEXICAN VOLCANIC BELT

Fernando Velasco-Tapia and Surendra P. Verma

COMPOSITIONALLY COMPLIANT CONTACT ANALYSIS

R. Tolosana-Delgado, U. Mueller and K.G. van den Boogaart

MULTIPLE-POINT STATISTICS APPLIED TO DERIVING SOIL MAPS FROM INFORMATION ON LOCAL COVARIATES AND SOIL MAPS FROM OTHER AREA

S. K. Jha, B. P. Malone, B. Minasny and A. McBratney

APPLICATION OF STATISTICAL TECHNIQUES TO IDENTIFY THE HYDROGEOCHEMICAL PROCESSES IN COASTAL AQUIFERS OF PONDICHERRY REGION-TAMIL NADU

Thilagavathi R, Chidambaram S, Thivya .C, Pethaperumal S, Tirumalesh K and Prasanna MV

COMPARISON OF UNIVARIATE AND MULTIVARIATE GEOSTATISTICAL METHODS FOR INTERPOLATION OF RAINFALL IN INDIAN HIMALAYAS OF UTTARAKHAND REGION

Madhuri Kumari, Ashoke Basistha, Oinam Bakimchandra and C. K. Singh

18.00 End of Technical Session

Friday, October 17th

Convention Centre Hall

Plenary Session

POSTER SESSION I

11.15 - 12.00

SESSION 2: HYDROLOGY AND TIME SERIES ANALYSIS

A TIME SERIES ANALYSIS OF SPATIAL AND TEMPORAL DISTRIBUTION OF RAINFALL AT PAMPA RIVER BASIN, KERALA, INDIA

N.A. Mayaja and C.V. Srinivasa

SESSION 8: ENGINEERING GEOLOGY AND GEOTECHNICAL ENGINEERING

GEOTECHNICAL INVESTIGATION OF TAWANG HYDRO ELECTRIC PROJECT STAGE-I (600 MW)

Sumit Dabral and Abinash K. Gupta

SESSION 9: TRENDY GEOSTATISTICS

DESIGN OF A NON-STATIONARY NON-LINEAR GEOSTATISTICAL MODEL AND ITS APPLICATION IN A BEACH SAND DEPOSIT FOR RECOVERABLE RESERVE ESTIMATION

M. Thakur, B. Samanta and D. Chakravarty

SPARSE SEISMIC SIGNAL PROCESSING AND IMAGING

Sunjay and Manas Banerjee

VARIOGRAPHIC ANALYSIS OF THE ELECTRICAL STRUCTURE OF SOUTH INDIAN UNSATURATED ZONE

Tanvi Arora and Shakeel Ahmed

SESSION 24: SEDIMENTARY BASIN ANALYSIS

APPLICATION OF EMPIRICAL MODEL DECOMPOSITION (EMD) TO GRAVITY ANOMALIES SEPARATION:A CASE STUDY FOR GOBI DESERT COVERAGE IN EASTERN TIANSHAN, XINJIANG PROVINCE, CHINA

Chengbin Wang, Jianguo Chen and Fan Xiao

SEDIMENT CONCENTRATION PREDICTION AT GANGOTRI IN THE HIMALYAS USING ARTIFICIAL NEURAL NETWORKS

Nandita Singh and G.J. Chakrapani

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

EFFECTS OF COAL MINING ACTIVITIES ON SOIL PROPERTIES WITH SPECIAL REFERENCE TO HEAVY METALS

Bhanu Pandey, Madhoolika Agrawal and Siddharth Singh

SOURCES AND PROCESSES CONTROLLING DISSOLVED TRACE ELEMENTS IN SON RIVER, INDIA

Chinmaya Maharana, Jayant K. Tripathi and Abhay K Singh

ELEMENTAL ENRICHMENT DURING IRON-MANGANESE NODULE FORMATION IN THE GANGA ALLUVIUM

Divya Sharma and Jayant K. Tripathi

GROUNDWATER QUALITY IN JAWAHARLAL NEHRU UNIVERSITY CAMPUS, NEW DELHI, INDIA

N. Janardhana Raju, Anurag Choudhary, Sadaf Nazneen and Shubhra Singh

HYDROLOGICAL AND HYDROCHEMICAL CHARACTERISTICS OF PUCHHE GLACIER, LEH, LADAKH, JAMMU & KASHMIR

Namrata Priya and AL.Ramanathan

DEVELOPMENT OF MAGNETIC AND NONMAGNETIC FAST PYROLYSIS BIOCHARS FOR LEAD REMEDIATION FROM WATER

Prachi Singh and Dinesh Mohan

SELECTIVE REMOVAL OF PB (II) FROM WATER USING SUPER- PARAMAGNETIC IRON OXIDE (Fe₃O₄) NANOPARTICLES

Shalini Rajput and Dinesh Mohan

IDENTIFICATION OF SEASONAL MAXIMUM AND MINIMUM TEMPERATURE TRENDS IN MAHANADI RIVER BASIN, INDIA

P. Sonali and D. Nagesh Kumar

DEVELOPMENT OF PONGAMIA PINNATA BIOSORBENT FOR CHROMIUM REMOVAL FROM SYNTHETIC TANNERY WASTEWATER

Rupa Sharma and Dinesh Mohan

HYDRO-GEOCHEMISTRY FOR THE ASSESSMENT OF GROUND WATER QUALITY IN THE VARANASI CITY, UTTAR PRADESH, INDIA

Arif Ahamad, Sughosh Madhav, N J Raju, J Pandey, A H Khan, A L Srivastav

EVALUATION OF WATER QUALITY OF PONDS IN PARTS OF VARANASI CITY, INDIA

Sughosh Madhav, Arif Ahamad, Amit Kumar Singh, Pardeep Singh, N. J. Raju and P. K. Mishra

RELATIONSHIP BETWEEN ROAD TRAFFIC NOISE LEVELS AND ANNOYANCE IN RESIDENTIAL AREA OF DELHI

Deepak Singh, Amit Kumar, B.P. Singh, Manoj Singh, Krishan Kumar and V.K. Jain

SESSION 21: DIGITAL ROCK GEOPHYSICS

NUMERICAL MODELING OF THE SEISMIC ACTIVITY MIGRATION (ON THE EXAMPLE OF KAMCHATKA)

A.N. Chetyrbotsky

SESSION 1: 3D VISUALIZATION IN GEO- AND ENVIRONMENTAL SCIENCES

SHEAR SEAM IN DAM FOUNDATION SYSTEM

Abhishek Singh, Aayushi Singh, Shatrughan Kumar yadav, Aditi Singh, Rachit Saxena and Abhishek Singh Kushwaha

INTEGRATING SMART PLATFORMS TO ANALYSE ENERGY PATTERNS IN ACADEMIC BUILDING

Bakul Budhiraja, Deepika Mann, Prasad Pathak and Debopam Acharya

THREE-DIMENSIONAL GEOLOGICAL MODELING AT CHINA GEOLOGICAL SURVEY

Honggang Qu, Zhangang Wang, Zixing Wu, Yongbo Zhang and Guangsheng Yan

GIS BASED 3D SMART CAMPUS SYSTEM

J.Dilip Kumar and A. Subathra

HABITAT SUITABILITY MODELING OF TIGER SPECIES (PANTHERA TIGRIS) IN BANDHAVGARH NATIONAL PARK, MADHYA PRADESH, INDIA

Jagriti Dabas and C K Singh

COMPARATIVE STUDIES ON RAINFALL DATA FROM WESTERN AND EASTERN GHATS OF SOTHERN INDIA: CAUSES AND EFFECTS

Neelratan Singh and Mukesh Kumar

SESSION 11: MULTIVARIATE GEOSTATISTICS

LOG-NORMAL KRIGING PREDICTIONS

Christien Thiart, Linda Haines and Nashruddin Emamally

MULTIVARIATE STATISTICAL CHARACTERIZATION OF HYDRO- GEOCHEMICAL DATA TO INDICATE THE FLUORIDE CONTAMINATED REGIONS IN THE PANDA RIVER BASIN, SONBHADRA DISTRICT, UP, INDIA.

Sangita Dey and N.Janardhana Raju

LAND USE AND LAND COVER CHANGES AND THEIR IMPACTS ON FLOODS IN PAMPA RIVER BASIN IN KERALA:A REMOTE SENSING BASED ANALYSIS

*N.A. Mayaja and C.V.Srinivasa***IAMG2014****Saturday, October 18th****Auditorium 1****Plenary Session****KRUMBEIN MEDALIST**

9.00 - 10.00 KEYNOTE SPEECH

MULTIPLE-POINT GEOSTATISTICS: STOCHASTIC MODELING WITH TRAINING IMAGES

*Jef Caers (Stanford University, USA)***Lecture Hall 1****Saturday, October 18th****Parallel Session****SESSION 28: SPATIOTEMPORAL MODELING***Conveners: Alexander Kolovos and Andreas Langousis*10.00 - 11.15 Chairman: **KG Van den Boogaart**

A PARTICLE FILTER MARKOV CHAIN MONTE CARLO APPROACH FOR SPATIOTEMPORAL MODELLING OF ENVIRONMENTAL PROCESS

L. Linguet and J. Atif

STOCHASTIC QUANTIFICATION OF LOW-RESOLUTION GEOCODING UNCERTAINTY AND ITS APPLICATION TO CATASTROPHE MODELLING

S.J. Lee and D. Carttar

EXPLOITING HIGH RESOLUTION SPATIO-TEMPORAL DATA TO ANALYSE IMPACTS OF ENVIRONMENT AND LIFE-STYLE ON HEALTH PARAMETERS

Deepika Mann, Bakul Budhiraja, Prasad Pathak and Debopam Acharya

TEMPORAL CHANGES IN THE SEMIVARIOGRAM OF LATENT HEAT FLUX UNDER LINEAR TREND

Manoj Kumar Singh and Parvatham Venkatachalam

CHARACTERIZING AND QUANTIFYING THE EFFECT OF AEROSOL OPTICAL DEPTH OVER NORTH INDIAN PLAIN DURING HARVESTING SEASON

Prasenjit Acharya and S.Sreekes

DYNAMICS OF STREAMFLOW UNDER CHANGING CROPPING PATTERN: A SPATIAL MODELING APPROACH IN PENGANGA SUB-WATERSHED

*Abira Dutta Roy and S. Sreekes*11.15 - 12.00 Coffee Break (**POSTER SESSION II**)**SESSION 6: NUMERICAL SOLUTIONS IN HYDROGEOLOGY***Convener: Wolfgang Gossel*12.00 - 13.15 Chairman: **Wolfgang Gossel**

p-T COMPUTATION SCHEMES FOR THERMODYNAMIC PROPERTIES OF PURE WATER: I. A COMPARATIVE EVALUATION OF IAPWS-95 AND IAPWS-IF97 FORMULATIONS AND LIMITATIONS IN STEAM TRANSPORT IN GEOTHERMAL PIPELINE NETWORK

Mahendra P. Verma

A PREDICTIVE MODEL OF WATER TABLE FLUCTUATIONS IN AN ANISOTROPIC AQUIFER INDUCED BY INTERMITTENTLY APPLIED TIME-VARYING RECHARGE AND PUMPING FROM MULTIPLE BASINS AND WELLS

S.N. Rai and A. Manglik

COLLOIDAL TRANSPORT UNDER NONLINEAR SORPTION IN A SINGLE VARIABLE FRACTURE APERTURE

Nikhil

UNDERSTANDING HYDROTHERMAL MINERALIZATION PROCESS-PERSPECTIVE FROM NUMERICAL MODELLING OF FLUID FLOW AND HEAT TRANSFER IN ORE-FORMING SYSTEM: A CASE STUDY FROM THE GEJIU TIN-COPPER POLYMETALLIC ORE DISTRICT, YUNNAN, CHINA

Fan Xiao, Jianguo Chen, Chengbin Wang

13.15 - 14.00 Lunch Break

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

Conveners: N. Janardhana Raju and AL Ramanathan

14.00 - 16.00 Chairman: **AL Ramanathan**

PLATINUM, PALLADIUM AND RHODIUM IN ROAD DUST/TOP SOILS FROM MAJOR INDIAN CITIES: IMPLICATIONS ON ENVIRONMENT AND HUMAN HEALTH (**Invited**)

Balaram, V., Kamala, C.T., Satyanarayanan, M and Sreenivasa Rao, A

HYDROGEOLOGICAL STUDIES AROUND HUTTI GOLD MINES, KARNATAKA, INDIA (**Invited**)

Prabhakar Sangurmath

GIS AND GEOSTATISTICAL ASSESSMENT OF GROUNDWATER AND ITS POLLUTION IN KUWAIT

R.S. Divi and F. Al-Ruwaih

A SUSTAINABLE GROUND WATER FUTURE IN VARANASI DISTRICT: CURRENT SITUATION AND NEED FOR EFFECTIVE STRATEGIES

Prahlad Ram and N. Janardhana Raju

PHOSPHOROUS FRACTIONATION OF SURFACE SEDIMENTS OF TWO EASTERN HIMALAYAN HIGH ALTITUDE LAKES

Jyoti Prakash Deka, Belibarua and Manish Kumar

SHIFT FROM FUELWOOD TO LPG AND ITS IMPACT SOCIAL AND ECOLOGICAL SYSTEMS: A CASE STUDY FROM CENTRAL HIMALAYAS, INDIA

Sunil Nautiyal

GROUNDWATER QUALITY APPRAISAL IN PARTS OF DUN VALLEY AQUIFERS IN THE TERAI REGION, CENTRAL NEPAL

N. Janardhana Raju, Deepa Gurung and Priyanka Patel

ASSESSMENT OF GROUNDWATER QUALITY IN THE YESHWANTHAPUR SUB-BASIN, WARANGAL DISTRICT, SOUTH INDIAN USING GIS

M. Prashanth, S. Sateesh and Omkar Verma

ASSESSMENT OF POLLUTION POTENTIAL OF LEACHATE FROM THE MUNICIPAL SOLID WASTE DISPOSAL SITE AND ITS IMPACT ON GROUNDWATER QUALITY, IN THE VARANASI ENVIRONS, UTTAR PRADESH, INDIA

Shubhra Singh and N. Janardhana Raju

16.00 - 16.15 Coffee Break (*End of Technical Session*)

Lecture Hall 2

Saturday, October 18th

Parallel Session

SESSION 24: SEDIMENTARY BASIN ANALYSIS

Conveners: Daniel M. Tetzlaff and Cedric Griffiths

10.00 - 11.15 Chairman: **Daniel M. Tetzlaff**

GRAIN SIZE DISTRIBUTION OF A STABILIZED COASTAL SAND DUNE ALONG GOPALPUR COAST, INDIA

S. K. Barik, P. K. Mohanty, P. K. Kar, B. Behera and P. Mishra

SPATIAL AND TEMPORAL VARIABILITY IN GRAIN SIZES OF ALAKNANDA RIVER

S. Panwar and G. J. Chakrapani

GEOSTATISTICAL ANALYSIS OF VELOCITIES IN PREDICTING THE STRUCTURAL ORIENTATION: A CASE STUDY FROM CAMBAY BASIN, GUJARAT

Sumani Das, Bhabesh C. Sarkar, Rabi Bastia and Atul Bhoil

POLYPHASE DEFORMATION OF THE ROCKS OF THE DELHI SUPERGROUP IN THE NORTHERN, CENTRAL AND SOUTHERN RAJASTHAN

Sumit Kumar Mitra

CHARACTERIZATION OF UNCONVENTIONAL GAS RESOURCES IN PICEANCE BASIN AND SENSITIVITY ANALYSIS USING 3D BASIN MODEL

Yao Tong, Tapan Mukerji, Allegra Hosford Scheirer

11.15 - 12.00 Coffee Break **(POSTER SESSION II)**

SESSION 17: MULTIPLE POINT GEOSTATISTICS

Convener: Hari S. Pandalai

12.00 - 13.15 Chairman: **TRP Singh**

GEOSTATISTICAL MODELLING AND RESOURCE ESTIMATION OF BAILADILA IRON ORE DEPOSIT THROUGH ORDINARY KRIGING METHOD, INDIA **(Invited)**

V. Kameshwara Rao

EXPERIMENTAL BAYESIAN INVERSION PROBLEM WITH SIMULATION STUDIES

Ayele Taye Goshu

A PROBABILISTIC SPATIAL MODEL TO DESCRIBE THE PRIMARY STRUCTURAL HETEROGENEITY OF THE DEPOSITIONAL HYDROFACIES

F. Wawra and S. K. Jha

JOINT GEOSTATISTICAL SIMULATION OF CATEGORICAL AND CONTINUOUS VARIABLES

K.G. van den Boogaart, R. Tolosana-Delgado, M. Lehmann and U. Mueller

EFFECT OF HORIZONTAL CONNECTIVITY ON VERTICAL HYDRAULIC CONDUCTIVITY IN ALLUVIAL SYSTEM

S. K. Jha, G. Mariethoz, F. Wawra, G. Mathews, J. Vial, D. D. Re and M. Smith

13.15 - 14.00 Lunch Break

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

Conveners: N. Janardhana Raju and AL Ramanathan

14.00 - 16.00 Chairman: **S R Patchineelam**

ASSESSMENT OF CONTAMINANT MIGRATION FROM DISPOSAL OF HUSSAINSAGAR LAKE BED SEDIEMENTS IN THE PROPOSED GRANITE QUARRY PITS IN GREATER HYDERABAD **(Invited)**

M.J.Nandan, M. Durga Prasad, R. Dhakate, M. Lingaswamy and V.V.S. Gurunadha Ra

SUSTAINABLE BIOCHAR- A TOOL FOR CLIMATE CHANGE MITIGATION, SOIL MANAGEMENT AND WATER AND WASTEWATER TREATMENT **(Invited)**

Dinesh Mohan, Abhishek Kumar and Charles U Pittman

CURATIVE PARADISE IN MINERALS **(Invited)**

O.P. Varma

APPLICATIONS OF BOUNDARY ANALYSIS TO MEDICAL GEOLOGY

P. Goovaerts

SPATIO-TEMPORAL VARIATION IN WATER QUALITY OF CHILIKA LAKE, ODISHA

Sadaf Nazneen and N. Janardhana Raju

PREDICTION OF GROUNDWATER LEVEL OF RANCHI DISTRICT USING ARTIFICIAL NEURAL NETWORK

Neeta Kumari, Gopal Pathak, Priyanka Sah, Ravikant Kumar, Nishant Kumar and Umang Khakha

AN OVERVIEW OF CLIMATE CHANGE AND IT IMPACT ON WATER QUALITY: PHYSICAL AND CHEMICAL CHANGE (A REVIEW)

Bahukhandi Kanchan Deoli and N.A. Siddiqui

EQUILIBRIUM UPTAKE AND SORPTION DYNAMICS MODELING FOR PICRIC ACID REMEDIATION FROM WATER USING LOW COST MAGNETIC AND NONMAGNETIC ACTIVATED CARBONS

Ankur Sarswat and Dinesh Mohan

16.00 - 16.15 Coffee Break *(End of Technical Session)*

Lecture Hall 3

Saturday, October 18th

Parallel Session

SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT

Conveners: S. Sreekesh and Shakil Romshoo

10.00 - 11.15 Chairman: **Shakil Romshoo**

VOLUMETRIC CARBON CONTENT CALCULATIONS: A GEOSTATISTICAL AND COMPOSITIONAL APPROACH

J. McKinley, A. Keaney, A. Ruffell and B. Rawlins

LONGER GROWING SEASON DECREASES PEAK SUMMER VEGETATION PRODUCTIVITY IN NORTH AMERICAN ECOSYSTEMS

Bikash Ranjan Parida and Wolfgang Buermann

INVESTIGATION OF SEEPAGE CHANNEL USING REMOTE SENSING TECHNIQUE IN JODHPUR CITY RAJASTHAN

Birendra Pratap, N. Janardhana Raju and G.S. Yadav

A FORENSIC LOOK INTO LAND USE/ LAND COVER CHANGES IN HIRAKUD CANAL COMMAND AREA, INDIA

Satiprasad Sahoo and Anirban Dhar

MULTI-CLASSIFIER FUSION FOR LAND USE LAND COVER MAPPING IN JHARIA COAL FIELD

Sumit Kumar Chaudhary, Dheeraj Kumar and M. K. Jain

11.15 - 12.00 Coffee Break **(POSTER SESSION II)**

SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT

Conveners: S. Sreekesh and Shakil Romshoo

12.00 - 13.15 Chairman: **VVS Gurunadha Rao**

RESEARCH OF OBJECT-BASED LAND USE/COVER CHANGE DETECTION METHOD FOR HIGH-SPATIAL RESOLUTION REMOTE SENSING IMAGES

Huang Jin

NEURAL NETWORK BASED APPROACH FOR CLASSIFICATION OF POLARIMETRIC SAR DATA

Rishi Prakash, Prateek Goel, Hmanshu Bahuguna and Dharmendra Singh

PROPAGATING GEOMETRIC UNCERTAINTIES FROM IMAGE SEGMENTATION TO SPATIAL INDICATORS OF URBAN SPRAWL

V.C.E. Laurent, N. Saint-Geours, J.-S. Bailly and J.-P. Chéry

NDVI TEMPORAL AND SPATIAL VARIATION OF QIANGTANG NATIONAL NATURE RESERVE AND THE CORRELATION WITH THE MAJOR CLIMATIC FACTORS

Wu Xiaoping, Yang Wunian, Li Guoming

GROUNDWATER RESOURCE ASSESSMENT IN A BASALTIC TERRAIN OF CHHINDWARA, M.P. INDIA: AN INTEGRATED APPROACH

Prafull Singh

HYDRO-GEOMORPHIC CHARACTERISTICS OF NANOI RIVER BASIN, ASSAM USING REMOTE SENSING AND GIS TECHNIQUES

Niranjan Bhattacharjee

13.15 - 14.00 Lunch Break

SESSION 13: CLASSICAL STATISTICS IN THE EARTH SCIENCES

Convener: John Schuenemeyer

14.00 - 16.00 Chairman: **Frits Agterberg**

A NONLINEAR DIFFERENTIAL EQUATION CHARACTERIZING MULTIPLE TYPES OF PROBABILITY DISTRIBUTIONS

Qiuming Cheng

TECTONOMAGMATIC ORIGIN OF IGNEOUS ROCKS OF THE WESTERN MEXICAN VOLCANIC BELT FROM A COHERENT STATISTICAL TRANSFORMATION TECHNIQUE

Surendra P. Verma and Kailasa Pandarinath

SPATIO-TEMPORAL VARIABILITY OF RAINFALL AND TEMPERATURE IN NORTHEAST INDIA

S. Sreekesh and Manasi Debnath

COMPARATIVE PERFORMANCE OF THIRTEEN SINGLE OUTLIER DISCORDANCY TESTS FROM MONTE CARLO SIMULATIONS

M. Rosales-Rivera, L. Díaz-González and S. P. Verma

DISTRIBUTION STUDY OF ORE-SOURCED ELEMENTS FROM A LONG DRILL CORE IN A LOESS- COVERED AREA

Deyi Xu, BangQin Feng, Changhai Tan and Qiuming Cheng

ESTIMATION OF THE WIND SPEED IN THE SUBURBAN ATMOSPHERIC SURFACE LAYER

Tanja Likso

APPLICATION OF GEOGRAPHICALLY WEIGHTED LOCAL STATISTICS TO IDENTIFY SPATIAL GEOCHEMICAL PATTERNS

Haicheng Wang, Qiuming Cheng and Renguang Zuo

16.00 - 16.15 Coffee Break (End of Technical Session)

Common Hall

Saturday, October 18th

Parallel Session

SESSION 30: NEW FRONTIERS OF MATHEMATICAL GEOLOGY FOR RESOURCES EXPLORATION

Conveners: Katsuaki Koike and Ryoichi Kouda

10.00 - 11.15 Chairman: *Katsuaki Koike*

SINGULARITY THEORY AND INFORMATICS TECHNIQUES FOR PREDICTION OF CONCEALED MINERAL RESOURCES IN COVERED AREA

Qiuming Cheng

ESTIMATION OF REGIONAL GROUNDWATER SYSTEM IN A GRANITIC BODY BY 3D PERMEABLE ZONE MODELLING AND FLOW SIMULATION

T. Kubo, N. Matsuda, K. Kashiwaya, C. Liu and K. Koike

THE INTEGRATION MODEL OF DEEP STRUCTURE AND ORE-FORMING SYSTEMS OF THE PECHENGA DISTRICT (BALTIC SHIELD)

K.V. Lobanov, M.V. Chicherov, I.A. Chizhova and N.V. Sharov

3D CRUSTAL TEMPERATURE MODELLING OVER JAPAN FOR GEOTHERMAL RESOURCE ASSESSMENT

B.Tian, and K. Koike

DIGITAL MODELLING IN THE STUDY OF HEAVY MINERAL PLACERS

N. P. Laverov, I. A. Chizhova, D. P. Khrushchov, A. V. Lalomov, and E. A. Remezova

11.15 - 12.00 Coffee Break (**POSTER SESSION II**)

SESSION 30: NEW FRONTIERS OF MATHEMATICAL GEOLOGY FOR RESOURCES EXPLORATION

Conveners: Katsuaki Koike and Ryoichi Kouda

12.00 - 13.15 Chairman: *Ryoichi Kouda*

COMBINING QUANTITATION OF REMOTE SENSING INFORMATION OF LOCAL STRUCTURES AND CALCULATION OF STRUCTURAL STRESS FIELD

Wu-nian Yang, Xin Yang, Han-hu Liu, Zhen-tao Qin and Xiao-ping Wu

A BLIND-WAVELET ALGORITHM AND ITS APPLICATION IN DENOISING OF THE METAL MINE SEISMIC DATA

Zhongli Zhou, Bin Liu, Feilong Qin and Guangxin Huang

HYPERSPECTRAL IMAGE CLASSIFICATION USING A NEW DICTIONARY LEARNING APPROACH WITH STRUCTURED SPARSE REPRESENTATION

Zhen-tao Qin, Wu-nian Yang, Pei-fen Pan and Cong Deng

VARIATIONS OF GOLD-SILVER RATIO IN ORES OF EPITHERMAL DEPOSITS: COMPARATIVE ANALYSIS

I. A. Chizhova, A.V. Volkov and K.V. Lobanov

KERNEL FISHER DISCRIMINANT ANALYSIS, A NOVEL METHOD FOR MINERAL PROSPECTIVITY

J. Yang and Q. Cheng

13.15 - 14.00 Lunch Break

SESSION 15: PREDICTION AND CHARACTERIZATION OF NATURAL DISASTERS

Conveners: David Carttar and Seung Jae Lee

14.00 - 16.00 Chairman: *Seung Jae Lee*

COMPARISON OF LANDSLIDE SUSCEPTIBILITY MAPPING METHODS IN KUMLUCA, BARTIN, TURKEY

A.S. Selcuk-Kestel, A. Erener, N. Yesiloglu-Gultekin, and H.S.B. Duzgun

CHALLENGES OF INCLUDING GROUNDWATER DEPTH IN A LIQUEFACTION LOSS MODEL

T. Ancheta and S.J. Lee

RECOGNITION OF DISASTER RESPONDERS USING WIRELESS SENSOR NETWORKS

Ankit Agarwal, Burla Rajesh and K. Aanandha Saravanan

INTEGRATED STUDY OF EARTHQUAKES AND PREDICTION OF FUTURE MAJOR SHOCKS IN NORTH-EASTERN INDIA

Deepak K. Gupta

A PRECIPITATION-RUNOFF SIMULATION MODEL FOR FLOOD FORECASTING OF RIVER TEL, ODISHA (INDIA)

Prabeer Kumar Parhi

RAPID EXTRACTION STUDY ON THE URBAN RAINWATER DISASTER POINTS BASED ON THE OLD CHANNEL FITTING METHOD IN HAIDIAN DISTRICT, BEIJING CITY OF CHINA

Tian Yi, Chen Jian-ping and Chen Yu-Chen

IONOSPHERE AND EARTHQUAKE

Bindu Mangla

CHARACTERIZING THE GEOENVIRONMENTAL CONDITIONS AND FLASH FLOOD VULNERABILITY IN BEAS RIVER BASIN

Ram Nagesh Prasad and Padmini Pani

16.00 - 16.15 Coffee Break (End of Technical Session)

Saturday, October 18th

Convention Centre Hall

Plenary Session

POSTER SESSION II

11.15 - 12.00

SESSION 28: SPATIOTEMPORAL MODELLING

MONITORING GLACIAL PARAMETERS IN PARTS OF ZANSKAR BASIN, JAMMU AND KASHMIR

Iram Ali, Aparna Shukla and Junaid Qadir

SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT

APPLICATIONS OF HIGH RESOLUTION REMOTE SENSING WITH SPATIAL MODELLING FOR SUSTAINABLE GRASSLAND AGRICULTURE

A. Shepherd, P.Harris, R. Orr, B. Griffith and P. Murray

OPTIMIZATION OF NEURAL NETWORKS FOR MULTISOURCE CLASSIFICATION IN A GLACIATED TERRAIN

A. Shukla and B. Yousuf

SESSION 30: NEW FRONTIERS OF MATHEMATICAL GEOLOGY FOR RESOURCES EXPLORATION

THE STUDY OF PRECISION OF MONTE CARLO MINERAL RESOURCES POTENTIAL EVALUATION METHOD WITH DIFFERENT MODEL AREA

Pu Luping, Lin Jinfu and Yin Yiqiu

APPLICATION OF GIS-BASED WEIGHTS OF EVIDENCE METHOD FOR METALLOGENIC PREDICTION TO COPPER RESOURCES IN WESTERN REGION OF ZHEJIANG, CHINA

Wei SHEN and Haiyan Du

THE STUDY OF N-DIMENSIONAL MATRICES AND ITS APPLICATION IN GEOLOGY

Wei SHEN and Haiyan Du

STRUCTURE-THERMAL EVOLUTION MODELING AND ORIGIN OF NATURAL GAS HYDRATE IN SOUTHERN QILIAN BASIN

WANG Quan-feng, ZUO Yin-hui, LU Zhen-quan, Chang Xin, ZHANG Xiao-pan, HU Rong-jie, XU Bin, PENG Qiang

SESSION 6: NUMERICAL SOLUTIONS IN HYDROGEOLOGY

A NOVEL ENSEMBLE CERTAINTY FACTOR AND FEED FORWARD BACK-PROPAGATION

NEURAL NETWORKS FOR LANDSLIDE SUSCEPTIBILITY ASSESSMENT IN THE OSADO ISLAND, JAPAN

Jie Dou and P. Yunus Ali

GEOLOGICAL STRUCTURES AS CONSTRAINTS FOR NUMERICAL MESH GENERATION

L. Schimpf, W. Gossel and P. Wycisk

SEMIANALYTICAL SOLUTIONS FOR MULTISPECIES TRANSPORT COUPLED WITH A SEQUENTIAL FIRST-ORDER REACTION NETWORK USING GITT TECHNIQUES

Heejun Suk, Byung-Gon Chae and Junghae Choi

SESSION 4: ENVIRONMENTAL GEOCHEMISTRY AND POLLUTION

FORSTERITE DISSOLUTION FROM INDIAN OLIVINE IN SALINE WATER

Amit Kumar Agrawal, Daniel E. Giammar and Anurag Mehra

IDENTIFYING DATA GAPS IN PREDICTING RISKS OF CONTAMINATION OF NANOMATERIALS TO GROUNDWATER FROM CONTAMINATED SLUDGE

Baranidharan Sundaram and Arun Kumar

DEVELOPMENT OF LOW COST MAGNETIC BIOCHARS FOR CADMIUM AND LEAD REMEDIATION FROM WATER

Hemant Kumar and Dinesh Mohan

SOIL PAHS AND THEIR ASSOCIATION WITH CARBON IN A MAJOR CITY OF THE BRAHMAPUTRA VALLEY

Karishma Hussain and Raza Rafiqul Hoque

EFFECTS OF SOIL SUBSTRATE CHARACTERISTICS ON AQUATIC PLANT DISTRIBUTION AT NANNIKITHA ELA STREAM STRETCH IN KANNELIYA FOREST RESERVE

L.N. Wijewardene, H.B. Asanthi and T. G. Dayananda

SYNTHESIS, CHARACTERIZATION AND UTILIZATION OF MAGNETITE NANOSPHERES IN WATER AND WASTEWATER TREATMENT

Madhu Kumari and Dinesh Mohan

ARSENIC MOBILIZATION AND ENRICHMENT IN THE SUBSURFACE WATERS, BALLIA, CENTRAL GANGETIC PLAIN, INDIA

Manoj Kumar, AL. Ramanathan and Naveen Kumar

ASSESSMENT OF GROUND WATER QUALITY USING GIS AND REMOTE SENSING DATA AT AN URBAN AREA TIRUPATI, INDIA

M. Praveen Kumar, S. Venkata Mohan and S. Jayarama Reddy

PHYSICO-CHEMICAL STUDIES TO SUPPORT THE MOVE FROM SOLUTION TO SOLID PHASE CO₂ CAPTURE

S.Ramanaiah

APPLICATION OF ENVIRONMENTAL ISOTOPES AS A TOOL IN INVESTIGATING OF GROUNDWATER CONTAMINATION

Shilpi Saxena, J.P. Shrivastava, S.K.Verma, C.P. Kumar and Bhishm Kumar

TEXTURAL VARIATION OF SEDIMENTS IN THE COURSE OF A SMALL RIVER: A CASE STUDY FROM KHURAR RIVER, KHAJURAH, CHHATERPUR DISTRICT, MADHYA PRADESH, INDIA

Shyam Kanhaiya and B. P. Singh

ASSESSMENT OF THE ACUTE TOXICITY OF OIL DISPERSANT TYPE 3 (4 AMINO 12 DITHIOLANE 4 CARBOXYLIC ACID) ON *ABUDEFDUF VAIGIENSIS* UNDER LABORATORY CONDITIONS

W. K. Suwandhahannadi, R. A. Maithreepala and H.B. Asanthi

NEAR REAL-TIME MAPPING OF SOIL CONTAMINATION IN ABANDONED MINE SITES USING HANDHELD XRF AND GIS

H. Lee, Y. Choi and N. S. Choi

SESSION 13: CLASSICAL STATISTICS IN THE EARTH SCIENCES

SPATIAL CLASSIFICATION OF SPATIO-TEMPORAL WIND SPEED DATA USING PEARSON'S CORRELATION

Jinsol Kim, Hyun-Goo Kim and Hyeong-Dong Park

RAINFALL STATISTICS CHANGE IN WEST BENGAL (INDIA) FROM PERIOD 1901-2000

Sourav Mukhaopadhyay, Sneha Kulkarni, Pallavi Kulkarni and Samiran Dutta

SESSION 15: PREDICTION AND CHARACTERIZATION OF NATURAL DISASTERS

RAINFALL THRESHOLDING IN INDIAN HIMALAYAS – FUTURE OF LANDSLIDE HAZARD PREDICTION AND EARLY WARNING

D. P. Kanungo

SEISMIC RISK ASSESSMENT FOR MUMBAI CITY

Jagabandhu Dixit, D. M. Dewaikar and R. S. Jangid

FORECASTING OF MALARIA EPIDEMIC RISK USING REMOTELY-SENSED DATA: A CASE STUDY UDAHAI RANGE, NILGIRI DISTRICT

M. Rajamanickam and G. Victor Rajamanickam

IMPACT OF VERY SEVERE CYCLONIC STORM (VSCS) PHAILIN ON COASTAL STRUCTURE AND MORPHOLOGY ALONG SOUTH ODISHA COAST, INDIA

S. K. Barik, P. K. Mohanty, P. K. Kar, B. Behera and P. Mishra

TSUNAMI ARRIVAL TIME CALCULATIONS USING DIFFERENT GIS TECHNIQUES ALONG THE EAST AND WEST COAST OF INDIA

M. Swapna and Kirti Srivastava

CHARACTERIZATION OF SPACE-TIME TYPHOON TRACKS IN THE VICINITY OF TAIWAN

Hwa-Lung Yu and Yuan-Chien Lin

EFFECT OF TSUNAMIS FROM MAKHRAN SUBDUCTION ZONE AND ITS EFFECT ON LAKSHADWEEP

*Shila Saha and Kirti Srivastava***IAMG2014****Sunday, October 19th****Auditorium 1****Plenary Session****GRIFFITHS TEACHING AWARD**

9.00-10.00 KEYNOTE SPEECH

MANAGING COMPLEX RELATIONSHIPS WITH INCOMPLETE DATA

*Clayton V. Deutsch (University of Alberta, Canada)***Lecture Hall 1****Sunday, October 19th****Parallel Session****SESSION 14: COMPOSITIONAL DATA ANALYSIS AND ITS APPLICATIONS***Conveners: Vera Pawlowsky-Glahn and Juan Jose Egozcue*10.00 - 11.15 Chairman: **Vera Pawlowsky-Glahn**

GEOSTATISTICAL ANALYSIS OF FUNCTIONAL COMPOSITIONS: CHARACTERIZATION OF SOIL PARTICLE-SIZE CURVES THROUGH THE AITCHISON GEOMETRY

A. Menafogli, A. Guadagnini and P. Secchi

QUANTITATIVE PROVENANCE ANALYSIS OF SEDIMENTS IN THE CHANGJIANG (YANGTZE) RIVER (CHINA)

G. Vezzoli, E. Garzanti, Y. Shouye and M. Limonta

COMPOSITIONAL STATISTICAL ANALYSIS OF INTER-LABORATORY COMPARISONS OF GEOTHERMAL WATER CHEMISTRY

Mahendra P. Verma

COMPOSITIONAL REGRESSION: AN OVERVIEW

R. Tolosana-Delgado, K.G. van den Boogaart, P. Filzmoser, K. Hron and M. Templ

A LOG RATIO METHOD TO PROCESS ITRAX GEOCHEMICAL COMPOSITIONAL DATA

*Renguang Zuo, Yu Li and Yin Bai*11.15 - 12.00 Coffee Break **(POSTER SESSION III)****SESSION 14: COMPOSITIONAL DATA ANALYSIS AND ITS APPLICATIONS***Conveners: Vera Pawlowsky-Glahn and Juan Jose Egozcue*12.00 - 13.15 Chairman: **Juan Jose Egozcue**

APPLICATION OF A COHERENT MULTI-DIMENSIONAL TECHNIQUE TO THE CENTRAL PART OF THE MEXICAN VOLCANIC BELT

Surendra P. Verma

TECTONIC SETTING OF BASIC METAVOLCANIC ROCKS OF BORBOREMA PROVINCE BY USING MULTI-DIMENSIONAL DISCRIMINATION DIAGRAMS

Sanjeet K. Verma and Elson P. Oliveira

ISSUES AND NEW APPROACH TO THE COKRIGING OF SUB-COMPOSITIONAL DATA

V. Pawlowsky-Glahn, J.J. Egozcue, E. Pardo-Igúzquiza and R.A. Olea

COMPOSITIONAL DATA ANALYSIS FOR STREAM SEDIMENT GEOCHEMICAL DATA USING ROBUST PRINCIPAL COMPONENT ANALYSIS

Yue Liu, Qiuming Cheng, Qinglin Xia and Xinqing Wang

13.15 - 14.00 Lunch Break

SESSION 16: FRACTAL MODELING

Conveners: Qiuming Cheng and Frits Agterberg

14.00 - 16.00 Chairman: **Qiuming Cheng**

SMALL TO LARGE-SCALE ROCK FRACTURE PATTERNS AS INDICATORS OF SHOCK-RELATED FRAGMENTATION

Md. Sakawat Hossain & Jörn H. Kruhl

SUMMED AREA TABLE FOR RAPID LOCAL SINGULARITY MAPPING

Zhijun Chen and Qiuming Cheng

RECOGNITION OF DEEP GEOLOGICAL ANOMALY

Qinglin Xia, Qiuming Cheng and Zhijun Chen

SINGULARITY-BASED GEO-INFORMATION EXTRACTION FOR CHARACTERIZING MINERALIZATION-ASSOCIATED GEOLOGICAL PROCESSES IN GEJIU MINERAL DISTRICT, CHINA

W. Wang, J. Zhao and Q. Cheng

A COMPARATIVE STUDY ON IDENTIFYING THE WEAK GEOCHEMICAL ANOMALIES BASED ON REGIONAL STREAM SEDIMENT DATA WITH BASED ON SOIL DATA IN THE GRASSLAND COVERED AREAS IN INNER MONGOLIA (CHINA)

Renguang Zuo and Hangliang Liu

16.00 - 16.15 Coffee Break (*End of Technical Session*)

Lecture Hall 2

Sunday, October 19th

Parallel Session

SESSION 22: MATHEMATICAL MORPHOLOGY IN GEOSCIENCES AND GEOINFORMATICS

Convener: B.S Daya Sagar

10.00 - 11.15 Chairman: **B S Daya Sagar**

STUDY OF MAGNETIC CLOUD IN YEAR 2005 AT ONE AU

D.S. Burud and R.S. Vhatkar

CHARACTERIZATION OF SAMPLING ERROR IN INSTANTANEOUS ORBITAL DATA PRODUCTS OF TRMM OVER INDIAN SUBCONTINENT

J. Indu and D. Nagesh Kumar

PERSPECTIVE OF DEVELOPMENT OF AGRICULTURE OF MOUNTAIN AREAS IN MODERN CONDITIONS OF CLIMATE CHANGE

I. Sh. Normatov and A. Muminov

FRACTAL CHARACTERIZATION VIA MORPHOLOGICAL ANALYSIS

Raghvendra Sharma and B. S. Daya Sagar

GEOMORPHOLOGICAL AND GEOLOGICAL STUDIES OF SHIWALIK RANGES BETWEEN GANGA AND YAMUNA RIVERS (U.K.) WITH SPECIAL REFERENCE TO SOIL MORPHOGENESIS, DEPLETION AND CONVERSATIONAL MEASURES

Pooja Sharma

11.15 - 12.00 Coffee Break (**POSTER SESSION III**)

SESSION 18: MARINE GEOLOGY AND OCEANOGRAPHY

Conveners: Jan Harff and Jiaxue Wu

12.00 - 13.15 Chairman: **Jan Harff**

MODELLING OF COASTAL MARINE HAZARDS IN THE BAY OF BENGAL AND THE

ARABIAN SEA

S. K. Dube, A. D. Rao and Jismy Poulose

SPATIAL DELINEATION OF SALTWATER-FRESHWATER INTERFACE THROUGH TIME DOMAIN ELECTROMAGNETIC (TDEM) SOUNDING AT SHOAL BAY, SOUTH ANDAMAN ISLAND, INDIA

Mrutyunjaya Sahoo and N. Ramanujam

IMPLICATIONS OF SEDIMENTARY CORE ANALYSIS ON THE EVOLUTION OF THE PULICAT LAKE, ANDHRA PRADESH

Sundara Raja Reddy. B.C

13.15 - 14.00 Lunch Break

SESSION 19: ADVANCES IN MINING ASSESSMENT

Convener: R. Mohan Srivastava

14.00 - 16.00 Chairman: **R Mohan Srivastava**

DISTRIBUTION LAW FOR MINERAL AND CHEMICAL CONSTITUENT FRACTIONS IN ROCKS AND ORES WITH APPLICATIONS IN MINING INDUSTRY (**Invited**)

B.K. Sahu

VISUALISED RESERVES ESTIMATION BASED ON THE 3D KRIGING METHOD

Xianchuan YU, Weike Deng, Cheng YANG, Keyan XIAO and Zou WEI

METALLURGICAL VARIABLE RE-EXPRESSION FOR GEOSTATISTICS

J.L. Deutsch, J. Szymanski and T.H. Etsell

MINERAL RESOURCE ASSESSMENT OF "TUWU-TYPE" PORPHYRY COPPER-MOLYBDENUM DEPOSITS IN GOBI DESERT LANDSCAPE OF EASTERN TIANSHAN, CHINA

Jianguo Chen, Fan Xiao, Pengda Zhao and Chengbin Wang

AN IMPROVED IDW METHOD FOR ORE-GRADE ESTIMATION

LI Zhang-lin, WU Chong-long, ZHANG Xia-lin, Liu Gang and Wang Ping

GEOSTATISTICAL MODELLING OF A GOLD DEPOSIT

B.C. Sarkar, S. S. Kalo and S. Pandey

16.00 - 16.15 Coffee Break (*End of Technical Session*)

Lecture Hall 3

Sunday, October 19th

Parallel Session

SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT

Conveners: S. Sreekish and Shakil Romshoo

10.00 - 11.15 Chairman: **S Sreekish & K R Murali Mohan**

A NEW METHOD FOR MONITORING ELEVATION CHANGE OF GLACIER IN GREENLAND

Hao Zhang and Jianguo Chen

REMOTE SENSING CLUSTERING ANALYSIS BASED ON OBJECT-ORIENTED INTERVAL MODELING

Hui HE, Tianheng LIANG, Dan HU and Xianchuan YU

SPATIAL DATA MINING FOR NATURAL RESOURCE MANAGEMENT WITH REMOTE SENSING DATA

D.Santhadevi and Suruchi Sinha

ROLE OF REMOTE SENSING DATA IN GEOENVIRONMENTAL MAPPING: (CASE STUDIES FROM SYRIA)

Mohamad Rukieh

EVALUATION OF GROUNDWATER POTENTIALITIES IN PARTS OF SWARNAMUKHI RIVER BASIN, CHITTOOR DISTRICT, ANDHRA PRADESH, INDIA USING REMOTE SENSING AND GIS

S. Md. Farooq Basha

11.15 - 12.00 Coffee Break (**POSTER SESSION III**)

SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT

Conveners: S. Sreekish and Shakil Romshoo

12.00 - 13.15 Chairman: **Rao S Divi**

IDENTIFICATION AND INTERPRETATION OF KNICKPOINTS IN THE DRAINAGE BASINS OF THE WESTERN ARABIAN PENINSULA

P. Yunus Ali

THE EXTRACTION OF OIL AND GAS INFORMATION BY USING SASI MAGERY IN THE JIMUSAER FIELD, XINJIANG-CLAY ALTERATION MINERALS

Peng Tao and Wang Maozhi

CLIMATE CHANGE IMPACTS ON VEGETATION DISTRIBUTION IN NORTH WESTERN HIMALAYAS

Irfan Rashid, Shakil Ahmed Romshoo, Thatiparti Vijayalakshmi and Rajiv Kumar Chaturvedi

INTEGRATED RS AND GIS APPROACH IN HYDRO-GEOMORPHOLOGICAL ANALYSIS OF A WATERSHED IN BUNDELKHAND REGION

Dilip G. Durbude

ESTIMATING LAND SURFACE TEMPERATURE AND ITS LAPSE RATE OVER KASHMIR VALLEY USING MODIS DATA

Mohammad Rafiq, Irfan Rashid and Shakil A. Romshoo

13.15 - 14.00 Lunch Break

SESSION 20: PETROLEUM SYSTEMS

Convener: Sanjay Srinivasan

14.00 - 16.00 Chairman: *Richard Sinding-Larsen*

BEST ESTIMATE UNDISCOVERED PETROLEUM RESOURCE REPORTING: A RESOURCE GEOLOGICAL PERSPECTIVE

R. Sinding-Larsen, P. Blystad, B. Henriksen and J. K. Lillestøl

THE STATISTICAL LOBE HIERARCHY CONSTRAINT IN SURFACE-BASED RESERVOIR MODELLING

Siyao Xu and Tapan Mukerji

STATISTICAL SCALEUP OF RESERVOIR PROPERTIES AND DISPERSIVITIES IN HETEROGENEOUS RESERVOIRS

Vikrant Vishal and Juliana Y. Leung

GEOSTATISTICAL SIMULATION OF 3-D SAND-CHANNEL GEOMETRY: A CASE-STUDY

P. Saideswar Rao and H.S. Pandalai

CALIBRATION OF SUBSURFACE FLOW MODELS USING ANNEALING NESTED SAMPLING

Ahmed H. Elsheikh and Mike Christie

16.00 - 16.15 Coffee Break (*End of Technical Session*)

Common Hall

Sunday, October 19th

Parallel Session

SESSION 27: COMPUTER APPLICATION IN EARTH SCIENCES

Conveners: Gang Liu and A.P. Dimri

10.00 - 11.15 Chairman: *Gang Liu*

COMPUTER APPLICATION IN FINDING OF EMERGING ROLE OF EASTERN INDIAN OCEAN ON INDIAN NORTHEAST MONSOON

Ramesh Kumar Yadav

MATHEMATICAL APPLICATIONS IN CO₂ GEOLOGICAL STORAGE FOR COMBATING CLIMATE CHANGE

Di Zhou, Peng-Chun Li and Jia-Long Peng

HIGH PERFORMANCE COMPUTING OF HYDROTHERMAL ORE-FORMING SYSTEMS: AN APPROACH BASED ON LATTICE BOLTZMANN METHOD

Wei Qiang and Hui Cao

THE INTERCOMPARISON OF VARIABILITY OF MONSOON IN A DUST AND NO-DUST EXPERIMENT

P. Maharana and A. P. Dimri

MULTI-ERROR ANALYSIS OF 3D GEOLOGICAL MODELS USING AN ENTROPY-BASED 1D PROBABILITY DENSITY FUNCTION

Weisheng Hou, Liang Yang, Keith Clarke, Chenxi Ye and Zhijun Yang

11.15 - 12.00 Coffee Break (**POSTER SESSION III**)

SESSION 27: COMPUTER APPLICATION IN EARTH SCIENCES*Conveners: Gang Liu and A.P. Dimri*12.00 - 13.15 Chairman: **A P Dimri**

PARALLEL INDEXING TECHNIQUE FOR MOVEMENT DATA

Zhenwen. H., *Gang Liu, Chonglong. Wu and Zufang Zheng*

AN IMPROVED METHOD FOR RECONSTRUCTION OF 3D STRATA MODEL BASED ON BOREHOLE DATA

Pan Mao, *Gao Zhongbo and Zhou Hui*

CBMDPS - A NEW TOOLKIT OF THE SIMULATION OF COALBED RESERVIORS DYNAMICS

Chen Yuhua, *Yang Yongguo, Luo Jinhui and Qin Yong*

3D PERSPECTIVES MAPPING BASED ON GEOMETRY OF GEOLOGICAL BODY AND QUANTITATION TECHNOLOGY

Xiao Keyan, *Xing Shuwen and Li Nan*

13.15 - 14.00 Lunch Break

SESSION 27: COMPUTER APPLICATION IN EARTH SCIENCES*Conveners: Gang Liu and A.P. Dimri*14.00 - 16.00 Chairman: **Jef Caers**

WORKING WITH HIERARCHICAL DATABASES IN R TO MODEL GEOMETALLURGICAL DATA

S. Matos Camacho and *K.G. van den Boogaart*

THREE DIMENSIONAL QUANTITATIVE EXTRACTION AND INTEGRATION FOR GEOSCIENCES INFORMATION: A CASE STUDY OF LUANCHUAN MO DEPOSIT AREA

Li Ruixi, *Wang Gongwen, Zhu Yanyan and Qu Jianan*

GENERALIZED COMPENSATION MODEL FOR THE GRAVIMETRIC MOHO RECOVERY

Robert Tenzer and *Wenjin Chen*

SIMULATION OF SEVERE HAIL STORM EVENTS OVER SOUTHERN PENINSULA

Geeta Agnihotri

SPATIAL DECISION SUPPORT SYSTEM FOR HEALTH IMPACT ASSESSMENT OF ANTHROPOGENIC POLLUTION AND FORMULATION OF RESTORATION STRATEGIES FOR A RIVER BASIN

Madhuri Kumari, *Prateek Srivastava and Ambrina S. Khan*16.00 - 16.15 Coffee Break (*End of Technical Session*)**Sunday, October 19th****Convention Centre Hall****Plenary Session****POSTER SESSION III**

11.15 - 12.00

SESSION 14: COMPOSITIONAL DATA ANALYSIS AND ITS APPLICATIONS

COMPOSITIONAL DATA ANALYSIS (CODA) AS A TOOL TO STUDY THE (PALEO) ECOLOGY OF COCCOLITHOPHORES FROM THE CENTRAL PORTUGUESE SUBMARINE CANYONS

*Catarina Guerreiro, Mário Cachão, Vera Pawlowsky-Glahn, Juan José Egozcue, Anabela Oliveira and Aurora Rodrigues***SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT**

ACCURACY COMPARE OF DIGITAL ELEVATION MODEL FROM CARTOSAT-1 WITH ASTER, SRTM AND DGPS ELEVATION POINT

Baburam Mandal & Prashant Kawishwer

INFERRING LAND SURFACE PROCESSES FROM WATERSHED CHARACTERIZATION

Gowhar Meraj

SPATIO-TEMPORAL STUDY OF THE DISTRIBUTION OF LANDUSE AND LANDCOVER

CHANGE PATTERN IN CHANDIGARH, INDIA USING REMOTE SENSING AND GIS TECHNIQUES

N.Sidhu and M.S. Rishi

STUDY OF THE URBAN GREEN SPACE PLANNING USING GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND REMOTE SENSING (RS) APPROACHES FOR THE CITY OF COLOMBO, SRI LANKA

M. S. P. M Sirirwardane, S. Sivanandarajah and Jagath Gunatilake

SESSION 27: COMPUTER APPLICATION IN EARTH SCIENCES

GEOLOGICAL STRUCTURES INTERPRETATION AND MINERALIZATION PREDICTION BASED ON 3D VISUALIZATION OF REMOTE SENSING IMAGE IN PINGHE AREA, FUJIAN PROVINCE, CHINA

Cheng. Lyu, Xueping. Wang and Qiuming. Cheng

NUMERICAL SIMULATION OF A WINTER HAILSTORM EVENT OVER DELHI, INDIA ON 17 JAN2013

A. Chevuturi, A.P. Dimri and U.B. Gunturu

NESTING OF GRIDS FOR TSUNAMI MODELING USING PARALLEL COMPUTING

Harini Guruhappa, Swapna M, Madhu C and Kirti Srivastava

MODIFIED TETRAHEDRAL MESH SUBDIVISION METHOD AND ITS APPLICATION IN 3D GEOLOGICAL BODY DISCRETE ANALYSIS

Gang Liu, Zhengping Weng, Zhiting Zhang and Qing Zhou

RECOVERING HISTORIC STRUCTURAL GEOLOGY DATA WITH AN OPEN-SOURCE MATLAB CODE

Ludger O. Suarez-Burgoa

WEB BASED FACILITY MANAGEMENT SYSTEM USING OPEN SOURCE GIS

P. Naga Vineet and L. Gnanaphazzam

GLOBAL SUB-CRUSTAL STRESS FIELD

Robert Tenzer and Mehdi Eshagh

3D ORE-BODY MODELING BY AN OPTIMIZED MARCHING CUBES METHOD

WANG Ping, LI Zhang-lin, ZHANG Xia-lin; LIU Gang and WU Chong-long

AN INTEGRATED GOLDEN SPIKE INFORMATION PORTAL ENABLED BY DATA VISUALIZATION AND SEMANTIC WEB TECHNOLOGIES

Xiaogang Ma, Linyun Fu, Peter Fox and Gang Liu

SESSION 16: FRACTAL MODELING

GEOCHEMICAL COMPREHENSIVE ANOMALY EXTRACTION BASED ON KALMAN FILTERING

Guo Ke and Liu Bingli

KERNEL PRINCIPAL COMPONENT ANALYSIS IN THE APPLICATION OF GEOCHEMICAL COMPREHENSIVE FEATURE EXTRACTION

Liu Binling, Guo Ke, and Zhang Li

THE DIFFERENTIATION - ENRICHMENT MECHANISMS OF CA-Fe ELEMENT IN THE VOLCANIC IRON DEPOSITS OF AWULALE AREA

Zhang Longlong, Cheng Qiuming and Yao Yuxian

SESSION 20: PETROLEUM SYSTEMS

SOURCE ROCK POTENTIAL OF MAND-RAIGARH COALS MAHANADI GONDWANA BASIN, CHHATISGARH, INDIA

Amiya Shankar Naik

DEGLACIATION IN WARWAN SUB-BASIN IN LAST DECADE: A STUDY USING REMOTE SENSING

Rupal M. Brahmabhatt, H. C. Nainwal, A.V. Kulkarni, R. D. Shah and I. M. Bahuguna

A BENCHMARK SYNTHETIC DATASET FOR FRACTURED RESERVOIR

Ankur Roy, Yongduk Shin, Orhun Aydin, Tapan Mukerji and Jef Caers

EVALUATION OF HYDROCARBON POTENTIAL OF OLIGOCENE COALS OF MAKUM COAL FIELD, UPPER ASSAM

Kakoli Gogoi and M.N. Dutta

PERMANENT DOWNHOLE GAUGE DATA ANALYSIS BY WAVELETS TRANSFORM

Sunjay and Manas Banerjee

Monday, October 20th

Auditorium 1

Plenary Session

MATHERON LECTURER

9.00 - 10.00 KEYNOTE SPEECH

MULTIPLE POINT STATISTICS UNDERSTOOD IN MATHERONIAN PRINCIPLES
K.G. van den Boogaart (University of Freiberg, Germany)

Lecture Hall 1

Monday, October 20th

Parallel Session

SESSION 18: MARINE GEOLOGY AND OCEANOGRAPHY

Conveners: Jan Harff and Jiaxue Wu

10.00 - 11.15 Chairman: **Jiaxue Wu**

VARIOGRAPHIC APPLICATIONS IN MINERAL RESOURCE ESTIMATION USING EXPONENTIAL MODEL FOR LAND AS WELL AS MARINE DEPOSITES (**Invited**)

TRP Singh and M. Sudhakar

MODELLING THE PALEO- GEOMORPHOLOGY OF WAVE-DOMINATED SANDY AND TIDE-INFLUENCED MUDDY COASTAL EMBAYMENTS ON THE DECADAL TO CENTENNIAL TIME SCALE - A COMPARATIVE STUDY

J. Deng, J. Harff, Y. Li and W. Zhang

LISS III, OCM AND GOOGLE EARTH BASED OBSERVATIONS ON THE ZONATION AND CONDITION OF CORAL REEFS OF THE GULF OF KACHCHH

Benidhar Deshmukh and Shailesh Nayak

OBSERVATIONS OF TURBULENT MIXING AND THEIR RESPONSES TO TROPICAL CYCLONE GAEMI IN THE NORTHERN SOUTH CHINA SEA

Yongsheng Cui and Jiaxue Wu

COASTLINE CHANGE – TRANSGRESSION AND REGRESSION AT MARGINAL SEAS

Jan Harff, Junjie Deng, Andreas Groh, àm Quang Minh, Yantao Yao and Wenyang Zhang

11.15 - 12.00 Coffee Break (**POSTER SESSION IV**)

SESSION 18: MARINE GEOLOGY AND OCEANOGRAPHY

Conveners: Jan Harff and Jiaxue Wu

12.00 - 13.15 Chairman: **Prabhakar Sangurmath**

STRUCTURE AND GENESIS OF THE HAINAN DELTA – BASICS ON A SOURCE-TO-SINK MODEL

M. Tomczak, W. X. Huang, W. K. Huang and J. Zhang

MARINE DRUGS DEVELOPMENT: PRESENT STATUS AND FUTURE STUDIES

R. Arthur James and S. Vignesh

HYDROTHERMAL ACTIVITY IN THE NE PORTION OF THE SEWELL RISE, CENTRAL ANDAMAN TROUGH: EVIDENCES FROM MULTIBEAM AND PETROGRAPHIC STUDIES

S. Varghese, K.K. Bhat and N.Subhash

13.15 - 14.00 Lunch Break

SESSION 3: ISOTOPE HYDROLOGY

Conveners: U. Saravana Kumar and Stephan Weise

14.00 - 16.00 Chairman: **Stephan Weise**

ISOTOPIC CHARACTERISTICS OF STABLE ISOTOPES IN INDIAN SUMMER MONSOON: A COMPARISON BETWEEN ISOTOPE ENABLED GCM AND OBSERVATIONS (**Invited**)

M. Midhun and R. Ramesh

CHARACTERIZATION OF THE RAINFALL OF CENTRAL MOZAMBIQUE BASED ON ISOTOPES OF WATER

F. Steinbruch

ISOTOPIC AND TRACE ELEMENT GEO-CHEMISTRY IN THE GROUNDWATER RESOURCES OF MAHI - NARMADA INTER STREAM REGION, GUJARAT, INDIA

Sumit Dabral and N. Sharma

ENVIRONMENTAL ISOTOPE INVESTIGATION TO UNDERSTAND THE GROUNDWATER RECHARGE FROM IRRIGATION TANKS IN THIRUMAL AREA, MADURAI

Noble Jacob, Diksha Chawla, Ajay Jaryal and A. Gurunathan

ASSESSMENT OF GROUNDWATER RECHARGE DUE TO MONSOON IN OZAR WATERSHED OF MAHARASHTRA STATE USING ISOTOPIC TECHNIQUE

S. K. Verma, S. P. Rai, M. S. Rao and C. P. Kumar

STABLE ISOTOPE AND GEOCHEMICAL INVESTIGATIONS IN TURAL AND RAJAWADI HOT SPRINGS OF WEST COAST, MAHARASHTRA, INDIA

Sitangshu Chatterjee, Suman Sharma, Md. Arzoo Ansari, Diksha and Upananda Low

DISCHARGE PATTERN IN THE GUNT VALLEY, WESTERN PAMIR, WITH RESPECT TO ^2H , ^{18}O , AND HYDROCHEMISTRY

C. Meier, M. Knoche, M. Brehme, R. Merz and S. M. Weise

IDENTIFICATION OF RECHARGE SOURCES AND ZONES OF SPRINGS USING ENVIRONMENTAL ISOTOPES: CASE STUDIES OF WESTERN HIMALYAN REGION, UTTARAKHAND, INDIA

S. P. Rai and Bhishm Kumar

16.00 - 16.15 Coffee Break (End of Technical Session)

16.15-17.00 KEYNOTE SPEECH

Auditorium 1

17.00-18.00 CLOSING CEREMONY

Auditorium 1

Lecture Hall 2

Monday, October 20th

Parallel Session

SESSION 29: AGRICULTURE, ENVIRONMENT AND ECOSYSTEMS

Convener: Sudip Mitra

10.00 - 11.15 Chairman: *Sudip Mitra*

CROP MODELING AND NATURAL RESOURCES MANAGEMENT UNDER CHANGING ENVIRONMENT (*Invited*).

Himanshu Pathak

GEOGRAPHICALLY WEIGHTED PRINCIPAL COMPONENTS ANALYSIS FOR UNDERSTANDING SPATIAL STRUCTURE IN DATA FOR SUSTAINABLE GRASSLAND AGRICULTURE

Paul Harris, A. Shepherd, R. Orr, B. Griffith and P. Murray

EFFECT OF LAND COVER ON SOIL PARTICLE SIZE AND ORGANIC CARBON IN THE PLOUGH LAYER

Poushali Roy and S. Sreelesh

LONG-PERIOD FLUCTUATIONS (1901-2000) IN RAINFALL AND ITS LINKAGES TO EXTREME MONSOON FLOODS IN BHAGIRATHI-HOOGHLY BASIN (BHB), EASTERN INDIA

Sujay Bandyopadhyay, Subhajit Sinha, Prasanta Kumar Ghosh and Debasis Ghosh

MOLECULAR ADDRESS TO SODICITY HAZARD: A RENEWABLE AND ECONOMICAL ROADMAP

M. Ayoub Kaloo, R. Sunder Raman and J. Sankar

LAND-USE CHANGE AND CONSERVATION OF THE SOUTHERN MINAS GERAIS GRASSLANDS IN BRAZIL

Kamini Barua

11.15 - 12.00 Coffee Break (**POSTER SESSION IV**)

SESSION 29: AGRICULTURE, ENVIRONMENT AND ECOSYSTEMS

Convener: Sudip Mitra

12.00 - 13.15 Chairman: *K J Ramesh*

ECO HYDROLOGICAL RESPONSE DUE TO LAND USE CHANGES AND CLIMATE VARIABILITY IN WESTERN HIMALAYA RIVER BASIN

Ram Nagesh Prasad

LONG TERM IMPACT OF TILLAGE AND RESIDUE MANAGEMENT PRACTICES ON SOIL AGGREGATE STABILITY AND SOIL ORGANIC CARBON

Pooja, Jaakko Heikkinen, Sudip mitra and Kristiina Regina
 PREDICTION OF CROP SUITABILITY OF CERTAIN INDIAN SPICES—A GIS APPROACH
Utpala Parthasarathy, K.V. Saji, D. Prasath and K. Jayarajan
 WATERSHED PROGRAMME IN PRAKASAM DISTRICT OF ANDHRA PRADESH: A STUDY
K. Prabhakar

13.15 - 14.00 Lunch Break

SESSION 29: AGRICULTURE, ENVIRONMENT AND ECOSYSTEMS

Convener: Sudip Mitra

14.00 - 16.00 Chairman: *P S Khillare*

COMPOSITIONAL ANALYSIS OF POTENTIALLY HARMFUL ELEMENTS IN SOILS:
 IMPLICATION FOR EPIDEMIOLOGY AND KIDNEY DISEASE

J. Mc Kinley, U Ofterdinger, S Palmer, C. Floyd, P Atkinson and D Fogarty

RECONSTRUCTION OF ENVIRONMENTAL CHANGES IN LACUSTRINE SEDIMENT; A STUDY
 FROM CHORABARI LAKE, CENTRAL HIMALAYA, INDIA

Tanuj Shukla, DP Dobhal, Manish Mehta and H.C. Nainwal

HEAVY METAL RESISTANCE PATHOGENS STUDY ALONG THE COROMANDEL COAST,
 SOUTHERN INDIA

R. Arthur James, S.Vignesh, M. Santhosh Gokul and K. Muthukumar

FOOD AND AGRICULTURE: THE FUTURE OF SUSTAINABILITY

Pankaj Mehta

16.00 - 16.15 Coffee Break (*End of Technical Session*)

16.15-17.00 KEYNOTE SPEECH

Auditorium 1

17.00-18.00 CLOSING CEREMONY

Auditorium 1

Lecture Hall 3

Monday, October 20th

Parallel Session

SESSION 26: OBSERVED CHANGES IN HIMALAYAN CRYOSPHERE

Conveners: AL Ramanathan and Anil Kulkarni

10.00 - 11.15 Chairman: *Mary Jo Brodzik*

UNDERSTANDING THE GLACIER HEALTH AND MELTWATER DISCHARGES FROM
 CHHOTA SHIGRI GLACIER, LAHAUL-SPITI VALLEY, HIMACHAL PRADESH (**Invited**)

*AL. Ramanathan , Pottakkal George Jose, Virendra Bahadur Singh, Thupsung Anchuk, Naveen Pandey
 and Arindan mandal*

ESTIMATING ICE THICKNESS DISTRIBUTION OF A GLACIER USING SURFACE VELOCITIES
 AND SLOPE

Prateek Gantayat, Anil V Kulkarni and J Srinivasan

AN ANALYSIS OF PATTERN OF CHANGES IN SNOW COVER IN THE UPPER BEAS RIVER
 BASIN, WESTERN HIMALAYA

Seema Rani and S. Sreekesh

THE CHANGING HIMALAYAN CRYOSPHERE AND LIKELY CONSEQUENCES: AN
 OVERVIEW OF CHANDRA BASIN

Parmanand Sharma, Rasik Ravindra, Lavkush Patel, Ajit Kumar and Thamban Meloth

CONTRASTING MASS BALANCE RESPONSE OF TWO NEARBY GLACIERS IN THE COLD-
 ARID SYSTEM, LADAKH RANGE

Renoj J.Thayyen

11.15 - 12.00 Coffee Break (**POSTER SESSION IV**)

SESSION 26: OBSERVED CHANGES IN HIMALAYAN CRYOSPHERE

Conveners: AL Ramanathan and Anil Kulkarni

12.00 - 13.15 Chairman: *R Ramesh*

CHARIS - THE CONTRIBUTION TO HIGH ASIAN RUNOFF FROM ICE AND
 SNOW, PRELIMINARY RESULTS FROM THE UPPER INDUS BASIN, PAKISTAN

Richard Armstrong, Andrew Barrett, Mary Jo Brodzik, Florence Fetterer, Danial Hashmi, Siri Jodha

Singh Khalsa, Adina Racoviteanu, Bruce Raup, Karl Rittger, Mark Williams and Alana Wilson
ESTIMATING GLACIER RETREAT USING GEOSPATIAL TECHNIQUE, IN THE CHANDRA AND BHAGA BASIN OF WESTERN HIMALAYA

Lavkush Kumar Patel, Parmanand Sharma, Rasik Ravindran, Thambon Meloth and Ajit Singh
SPATIAL AND ELEVATIONAL PATTERNS IN CHANGES INGLACIER AREA FROM 1962 TO 2006 IN THE MONSOON-INFLUENCED EASTERN HIMALAYA

Adina Racoviteanu, Y. Arnaud, Mark Williams and William Manley
SNOW COVER VARIABILITY OF BHAGA BASIN FROM 2010-2013 USING AWIFS DATA

Purnesh N. Jani, B. P. Rathore, I. M. Bahuguna, A. S. Rajawat and Anjana Vyas
STREAM FLOW CHANGES AND GLACIER RECESSON IN THE UPPER INDUS BASIN

Nahida Ali and Shakil A Romshoo

13.15 - 14.00 Lunch Break

SESSION 26: OBSERVED CHANGES IN HIMALAYAN CRYOSPHERE

Conveners: AL Ramanathan and Anil Kulkarni

14.00 - 16.00 Chairman: **AL Ramanathan**

VARIATIONS IN RELATIONSHIP BETWEEN AIR TEMPERATURE, SURFACE ABLATION AND MELT-WATER DISCHARGE IN CHHOTA SHIGRI GLACIER CATCHMENT, HIMACHAL PRADESH, INDIA

Jose Pottakkal, AL. Ramanathan, A. Mandal, T. Angchuk and V. B. Singh
HYDROLOGICAL MODELING AND STREAMFLOW CHARACTERIZATION OF GANGOTRI GLACIER

Manohar Arora, Rakesh Kumar, Naresh Kumar and Jatin Malhotra
SURFACE ENERGY AND MASS BALANCE ON THE ABLATION ZONE OF CHORABARI GLACIER, CENTRAL HIMALAYA, INDIA

Kapil Kesarwani, D.P. Dobhal, Alok Durgapal, Indira Karakoti and Manish Mehta
MONITORING THE DECADEAL STATUS OF NUBRA VALLEY GLACIERS FROM 1978 TO 2013 BY USING MULTI-TEMPORAL REMOTE SENSING APPROACH

Snehmani, Krishnanjan Pakrasi, A. Bhardwaj, M Singh, Niti Singh and A. Ganju
MONITORING SNOW COVER USING DIFFERENT ALGORITHMS ON INDIAN REMOTE SENSING DATA

Farjana Sikandar Birajdar, G. Venkataraman and H. P. Samant
STUDY OF PHYSICAL AND DYNAMICAL PROCESSES IN THE IONOSPHERE AT EQUATORIAL ANOMALY CREST REGION DURING MAGNETIC STORM FOR HIGH AND LOW SOLAR ACTIVITY PERIOD

Bornali Chetia, M.K. Barman, M. Devi and A.K. Barbara

16.00 - 16.15 Coffee Break (*End of Technical Session*)

16.15-17.00 KEYNOTE SPEECH

Auditorium 1

Chairman: **M. Sudhakar**

GEOMATHEMATICAL AND GEOINFORMATIC CHALLENGES FOR RESOURCING FUTURE GENERATIONS

Qiuming Cheng (York University, Canada)

17.00-18.00 CLOSING CEREMONY

Auditorium 1

Monday, October 20th

Convention Centre Hall

Plenary Session

POSTER SESSION IV

11.15 - 12.00

SESSION 29: AGRICULTURE, ENVIRONMENT AND ECOSYSTEMS

EFFECTS OF SOIL SUBSTRATE CHARACTERISTICS ON AQUATIC PLANT DISTRIBUTION AT NANNIKITHAELA STREAM STRETCH IN KANNELIYA FOREST

RESERVE

L.N. Wijewardane, H.B. Asanthi and T. G. Dayananda

SOIL HEALTH AND MAIZE YIELD AS AFFECTED BY N FERTILIZATION IN ALLUVIAL SOIL OF ASSAM

Banashree Sarma and Nirmali Gogoi

SPECIES DIVERSITY AND REGENERATION STATUS IN SABAIYA COLLABORATIVE FOREST, NEPAL

Bikash Kumar Mishra and S. C. Garkoti

CONSERVATION AGRICULTURE – A NEW PARADIGM FOR CLIMATE CHANGE MITIGATION IN RAINFED INDIAN AGRICULTURE

G. Pratibha, G.R. Korwar, K.V. Rao, I. Srinivas, B.M.K. Raju, K. Srinivasa rao, D. K. Choudhary and B. Rama Devi

ASSESSMENT OF THE ACUTE TOXICITY OF OIL DISPERSANT TYPE 3 (4 AMINO 12 DITHIOLANE 4 CARBOXYLIC ACID) ON *ABUDEFDUF VAIGIENSIS* UNDER LABORATORY CONDITIONS

W. K. Suwandhahannadi, R. A. Maithreepala and H.B. Asanthi

HEAVY METAL POLLUTION IN SOIL, WATER AND PLANT ALONG THE AGRICULTURAL BELT OF YAMUNA RIVER

P. Ranjan and S. Mitra

SODICITY STATUS OF SALT-AFFECTED SOILS OF ISRANA, HARYANA (INDIA)

Seema and Paulraj R

ATMOSPHERIC AEROSOLS INFLUENCE ON AGRICULTURAL PRODUCTION OVER INDO-GANGETIC PLAIN OF INDIA

Geetika Sonekar and R. K. Mall

LATITUDINAL DISTRIBUTION OF FAUNAL DIVERSITY

Joyjeet Sen, Sabyasachi Mandal, Souvik Sen

SESSION 26: OBSERVED CHANGES IN HIMALAYAN CRYOSPHERE

MULTIDECADAL PRECIPITATION PATTERNS IN A DENSELY GLACIATED REGION OF WESTERN HIMALAYA: A POINTER TO OROGRAPHIC CONTROL AND LARGE SCALE METEOROLOGICAL PHENOMENA

Arindan Mandal, AL. Ramanathan, Thupstan Angchuk and Jose George Pottakkal

VARIATION OF BLACK CARBON ACROSS ALTITUDINAL, CLIMATIC AND LATITUDINAL GRADIENTS IN KASHMIR HIMALAYA, INDIA

Mudasir Ahmad Bhat, Shaki A Romshoo, Mohammd Rafiq and Irfan Rashid

MONITORING THE CHANGES OF ENVIRONMENTAL ISOTOPIC COMPOSITION: MELT WATER IN CHHOTA SHIGRI GLACIERISED REGIME (HP) INDIA

Naveen Kumar, AL. Ramanathan, Virendra B. Singh and Josh G. Pottakkal

MASS BALANCE OF PATSIO GLACIER, LAHUAL-SPITI, HIMACHAL PRADESH, WESTERN HIMALAYA

Thupstan Angchuk, AL. Ramanathan and Arindan Mandal

GLACIAL RESPONSE TO ENVIRONMENTAL CHANGE IN THE RAVI BASIN, HIMACHAL PRADESH

Pritam Chand and Milap Sharma

SESSION 23: REMOTE SENSING AND GEO-INFORMATICS FOR NATURAL RESOURCES MANAGEMENT

CLIMATE CHANGE VULNERABILITY INDEX MAPPING OF NEPAL USING NASA EOS DATA

F.M. Tuladhar

DEVELOPMENT OF TECHNIQUE TO CHARACTERIZE TROF USING LISS III AND GOOGLE EARTH IMAGES

Vidit Mohan, Ashwin P Ramesh and Anirudh Toshniwal

A COMPARATIVE MORPHOMETRIC ANALYSIS OF THE ALAKNANDA AND BHAGIRATHI BASINS

Vikas Kamal, Ritesh Sipolya, Rajesh Kumar and S. Mukherjee

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