

Technical Sessions

Oral Presentations

This programme has been made with the Abstracts accepted for the Oral Presentations in Technical Sessions. It may be altered in the final programme.

THEME 1: THEORETICAL CARTOGRAPHY

SESSION 1

- "FROM WHERE DOES THE CONTENT OF A CERTAIN GEO-COMMUNICATION COME? SEMIOTICS IN WEB-BASED GEO-COMMUNICATION."
Lars Brodersen (Denmark)
- "AN INFORMATION MODEL FOR MAPS: TOWARDS CARTOGRAPHIC PRODUCTION FROM GIS DATABASES"
Aileen Buckley (USA), Charlie Frye and Barbara Buttenfield
- "CARTOGRAPHY IS STILL SUPREME"
Michael Wood (United Kingdom)
- "USING FMRI IN CARTOGRAPHIC RESEARCH"
Amy Lobben (USA), Judy M. Olson and Jie Huang

SESSION 2

- "IN SEARCH FOR MODELS OF CARTOGRAPHIC REPRESENTATION"
Dr. Giedre Beconyte (Lithuania) and Dr. Michael Govorov
- "MAPPING BETWEEN MAPS – ASSOCIATION OF DIFFERENT THEMATIC CONTENTS USING SITUATION THEORY"
Eleni Tomai (Greece) and Marinos Kavouras
- "DASYMETRIC MAPPING FOR DISAGGREGATING COARSE-RESOLUTION POPULATION DATA"
Jeremy Mennis (USA) and Torrin Hultgren
- "SEMIOSIS OF WEBGIS: THE CONSTRUCTION OF A PLURAL PLACE"
Emanuela Casti (Italy) and Francesca Cappennani

SESSION 3

- "INTEGRATION OF CARTOGRAPHY, GEOINFORMATICS AND REMOTE SENSING AND GEOIMAGES OF THE FUTURE"
A.M. Berlyant (Russia)
- "THE GENERAL THEORY OF CARTOGRAPHY UNDER THE ASPECT OF SEMIOTICS"
Nikolay N. Komedchikov (Russia)

- "THE LAW OF CONSERVATION OF MAP SPACE FOR PORTRAYAL AND GENERALISATION"
Alistair Edwardes (Switzerland)
- "CARTOGRAPHY AND SPATIAL COGNITION: COGNITIVE MAPPING OF THE GEOGRAPHICAL SPACE KNOWLEDGE"
Linda Issmael (Brazil) and Paulo Menezes

SESSION 4

- "THE CARTOGRAPHIC RECOGNIZING METHOD IN THE LIGHT OF THE LINGUISTIC CONCEPTION OF THE MAP LANGUAGE"
Pavel Neytchev (Poland)
- "SEMIOTICS AND GENERALIZATION: FACTS, DECISION, AND ACTION SPACES"
Horst Kremers (Germany)
- "THE INFLEXIBILITY OF THE CARTOGRAPHIC SPACE"
Fonseca, Fernanda (Brazil)
- "ONE-VARIABLE VERSUS TWO-VARIABLE CHOROPLETH MAPS. AN EXPERIMENTAL RESEARCH"
Anna Leonowicz (Poland)
- "AUTOMATED LABEL PLACEMENT FOR GROUPS OF ISLANDS"
Tim Schlechter (The Netherlands) and Marc van Kreveld

THEME 2: MAP PROJECTIONS

SESSION 1 "MAP PROJECTION TRANSFORMATION"

- "MULTI MAP PROJECTION IN MODERN CARTOGRAPHY"
Hossein Helali (Israel), Ali A. Alesheikh and Majid Hamrah
- "THE DESIGN AND IMPLEMENTATION OF MAP PROJECTION TRANSFORMATION COMPONENT BASED ON COM"
Maojun Huang (China) and Qingyun Du
- "CONFORMAL TRANSFORMATION OF CO-ORDINATES IN NIGERIA"
Dr. Matthew E. Ufuah. (Nigeria) and Surv. Joseph G. Adesina

- "PECULIARITIES OF THE UTM PROJECTION: CHANGING THE UTM ZONE THEORY AND ITS APPLICATION CHARACTERIZED IN SIGNIFICANT STAGES."
Professor Rafael Ferrer Torío (Spain), B. Piña Patón, J. Sánchez Espeso, J.M. de Luis Ruiz, M.L. Ruiz Bedia, R. Pereda García, E. Castillo López and V. Bayarri Cayón
- "ON-DEMAND PROJECTING LARGE RASTER DATASETS IN GIS"
Hong Xu (USA) and Xiuguang Zhou

SESSION 2 "MAP PROJECTION DISTORSION"

- "A NEW APPROACH FOR DESIGNING ORTHOPHANCIC WORLD MAPS"
Frank Canters (Belgium), Roel Deknopper and William De Genst
- "THE ROLE OF MAP PROJECTION IN COGNITION OF GEOGRAPHIC AREA"
Sarah E. Battersby (USA)
- "CONFORMAL PROJECTION WITH MINIMAL DISTORTIONS"
Pawel Pedzich (Poland)
- "USING MAP PROJECTIONS WITHOUT CHANGING THE WORLD"
Peter Mekenkamp (The Netherlands)

THEME 3: MAP DESIGN AND PRODUCTION

SESSION 1

- "THE COMPARISON OF ESTIMATION'S RESULTS OF CARTOGRAPHICAL IMAGES OBTAINED BY DIFFERENT METHODS"
Tamara Nyrtsova (Russia) and Igor Strizhkin
- "DEVELOPMENT OF SMALL-SCALE STANDARD DIGITAL MAP PRODUCTS BASED ON NATIONAL FUNDAMENTAL GEOGRAPHIC INFORMATION DATABASE"
Haiqing Wang (China); Xiaoyan Ji and Xiaogan Wu
- "GENERATING OF THE MEDIUM – SCALE STATE MAP SERIES DERIVED FROM GIS IN THE CZECH REPUBLIC"
Jaroslava Borkovcova (Czech Republic) and Danuse Svobodova

- “CONCEPTUAL CONSIDERATIONS FOR A NEW MAP SERIES 1:100.000 OF AUSTRIA”
Ditz Robert (Austria)

SESSION 2

- “ARCGIS TOOLS FOR PROFESSIONAL CARTOGRAPHY”
Makram A. Murad-al-Shaikh (USA)
- “STRUCTURE AND DEVELOPMENT OF A KNOWLEDGE BASE FOR CARTOGRAPHIC COMPOSITION”
Lysandros Tsoulos (Greece) and Konstantinos Stefanakis
- “AUTOMATED PLACEMENT OF STREET NAMES ON A CITY MAP”
Guo Qing Sheng (China); Liu Xiao Li and Jia Zhi Ge
- “EFFECTIVE PRODUCTION ENVIRONMENT FOR GEOGRAPHIC DATABASE MAINTENANCE AND MAP PRODUCTION”
Frederik Davidsson, M.Sc. (Sweden)

SESSION 3

- “CROSS-BORDER MAPPING – EXPERIENCES WITH GEODATA AND GEONAMES”
Sabine Witschas (Germany)
- “INTERNATIONAL BORDER DEMARCATION: TOPOGRAPHIC MAP SERIES ON SHORTEST DEMAND AND WITH HIGHEST QUALITY”
Ralf Schroth (Germany) and Hans-Dieter Arnold
- “AUTOMATED SELECTION OF TOPOGRAPHIC BASE INFORMATION FOR THEMATIC MAPS.”
Rosene Kannish (United Kingdom)
- “A FULLY INTEGRATED INFORMATION SYSTEM TO MANAGE CARTOGRAPHIC AND GEOGRAPHIC DATA AT 1:25,000 SCALE”
Antonio F. Rodriguez Pascual (Spain) and Lorenzo García Asensio

SESSION 4

- “DESIGNING POINT MAP SYMBOLS: THE EFFECT OF PREATTENTIVE ATTRIBUTES OF SHAPE”
Evanthia Michaelidou (Greece), Anna Petropoulou and Vasiliki Filippakopoulou

- “AN EFFICIENT GENETIC ALGORITHM APPROACH FOR AUTOMATED MAP LABELLING”
Fan Hong (China); Liu kaijun and Zhang Zuxun

- “TOPODESIGN – A NEW APPROACH TO TOPOGRAPHIC MAPPING”
Drazen Piskor (Croatia) and Hrvoje Halapija
- “SUPPORTING INTERACTIVE EDITING OF CARTOGRAPHIC REPRESENTATIONS IN GIS SOFTWARE”
Cory Eicher (USA) and Marc-Olivier Briat

SESSION 5

- “AUTOMATIC METRO MAP DESIGN TECHNIQUES”
Jonathan M. Stott (United Kingdom) and Peter Rodgers
- “TOPICAL MAP DESIGN FOR RESEARCH, EDUCATION AND PRODUCTION WITH DESKTOP-PUBLISHING-SYSTEM EXTENSIONS”
Ernst Hutzler (Switzerland) and Marion Werner
- “DEVELOPING THE ILLUSTRATED WORLD ATLAS”
Sarah Anderson (Australia) and William Cartwright
- “THE EVRS AND NEED FOR CONTOUR UPDATING IN NATIONAL TOPOGRAPHIC MAPS”
Mr Juha Oksanen (Finland) and Prof. Tapani Sarjakoski

SESSION 6

- “CARTOGRAPHIC DESIGN PRINCIPLES FOR 3D MAPS: A CONTRIBUTION TO CARTOGRAPHIC THEORY”
Christian Haerberling (Switzerland)
- “THE QUALITY ASSESSMENT OF THE CARTOGRAPHIC VISUALIZATION OF THEMATIC MAPS IN ATLASES: AN APPROACH FOR DEFINING PARAMETERS.”
Vansteenvoort Liesbeth (Belgium) and De Maeyer Philippe
- “COMPARISON OF GIS AND GRAPHICS SOFTWARE FOR ADVANCED CARTOGRAPHIC SYMBOLIZATION AND LABELING”
Cynthia A. Brewer (USA) and Charlie Frye
- “PRACTICAL MAP RHETORIC”
Mark Denil (USA)

SESSION 7

- “NATIONAL MAPPING ORGANISATIONS IN NATIONAL DEVELOPMENT”
Dr. Prithvish Nag (India)
- “DESIGN OF PORTABLE PAPER MAPS ENABLING LONGITUDINAL ACCES”
Koryo Miura (Japan)
- “THE ROLE OF MODERN CARTOGRAPHY IN ORDNANCE SURVEY (GB)”
Bob Lilley (United Kingdom)
- “REDESIGN OF THE SWISS NATIONAL MAP SERIES”
Novit Kreiter (Switzerland)

THEME 4: EDUCATION AND TRAINING IN CARTOGRAPHY. INTERNET COURSES.

SESSION 1 “eLEARNING”

- “USING CONCEPT MAPPING TO DESIGN REUSABLE LEARNING OBJECTS FOR e-EDUCATION IN CARTOGRAPHY AND GIS”
David DiBiase (USA)
- “DEVELOPMENT OF AN INTERACTIVE E-LEARNING AND E-TESTING TOOL FOR TECHNICAL ASPECTS IN GEO-SCIENCES”
Brondeel Marijke (Belgium); De Wolf Nele; Verbeke Joris; Antrop Marc; De Maeyer Philippe
- “VIRTUAL LANDSCAPES: AN INTERACTIVE E-LEARNING ENVIRONMENT”
Christiane Katterfeld (Germany)
- “E-LEARNING COURSES IN CARTOGRAPHY AND GIS.”
Konstantinidis Alexandros (Greece); Dimitrios, Ramnalis; Georgios Vergos; Panagiotis Kazakis

SESSION 2 “DISTANCE/WEB-BASED LEARNING”

- “DEVELOPMENT OF THE ICA-SPONSORED INTERNET CARTOGRAPHY TEACHING PROGRAMME”
Dr. David Fraser (Australia) and László Zentai

Technical Sessions

Oral Presentations

- “TEACHING GI STANDARDS IN HIGHER EDUCATION – EXAMPLES FROM DISTANCE AND CLASSROOM TEACHING”
Wolfgang Reinhardt (Germany)

- “COMPUTER ASSISTED LEARNING IN CARTOGRAPHY AND GIS FIELDS”
Constantin Nitu (Romania)
- “WEB BASED EDUCATION IN CARTOGRAPHY AND GI SCIENCE – TOWARDS AN OPEN-CONTENT SOLUTION”
Marion Werner (Switzerland), Susanne Bleisch and Joel Fisler

SESSION 3 “PROJECT BASED LEARNING”

- “CARTOGRAPHIC PRODUCTION: LEARNING THROUGH A REAL PROJECT.”
Eloina Coll (Spain), Jesús Irigoyen, Jose-Carlos, Martinez and Elena Velasco
- “PROJECT-BASED CARTOGRAPHIC LEARNING IN AN ADVANCED TECHNOLOGY CLASSROOM”
Brian P. Bailey (USA)
- “RESEARCH IN THE FIELD OF TOPOGRAPHIC MAPPING AND THE USE OF TOPOGRAPHIC MAPS IN CARTOGRAPHIC TRAINING”
Victor P. Savinykh (Russia), Tamara V. Vereshchaka, Irina E. Kurbatova and Andrey M. Portnov
- “GAME OF ORIENTATION USING CARTOGRAPHY IN OUR NATURAL PARK IN ALCALA DE HENARES, MADRID (TEACHERS AND STUDENTS FROM “ISIDRA DE GUZMAN SECONDARY SCHOOL”)”
Elena Zapatero Cabañas (Spain)

SESSION 4 “SPATIAL DATABASE APPLICATIONS”

- “AWARENESS AND EDUCATION IN SPATIAL DATA USE-NEED OF THE HOUR”
Brigadier M.V. Bhat (India)
- “DEVELOPING CARTOGRAPHIC SKILLS THROUGH PROGRAMMING ON GeoVRML”
Gómez Lahoz, Javier (Spain); Nilda Sánchez Martín, Benjamín Arias Pérez, Diego González Aguilera
- “THE DIGITAL MAP LIBRARY”
Ulf Hedlund (Sweden) and Bengt Rystedt

SESSION 5 “COUNTRY BASED PERSPECTIVES ON CARTOGRAPHIC EDUCATION”

- “GIS CROSSING NATIONAL BOARDERS - GIS A2E, A EUROPEAN UNION CORPORATE GIS TRAINING PROGRAM (GEOGRAPHICAL INFORMATION SYSTEM AND AGRICULTURAL EDUCATION IN EUROPE)”
Mats Söderberg (Sweden)
- “INFORMATION SYSTEMS AND DIGITAL CARTOGRAPHY FOR SPATIAL PLANNING IN POLAND”
Krzysztof Korelski (Poland)
- “CARTOGRAPHIC EDUCATION IN INDIA : A MAJOR STEP IN NEW MILLENIUM”
Prof. Aahok Oraon (India) and Dr. K.p. Singh
- “GIS EDUCATION IN POLAND POPULARISATION OF THE GENERAL GEOGRAPHIC DATABASE”
Adam Iwaniak (Poland) and Robert Olszewski

THEME 5: DIGITAL CARTOGRAPHY AND GIS FOR SUSTAINABLE DEVELOPMENT OF TERRITORIES.

SESSION 1 “RURAL LANDSCAPE”

- “APPLICATION OF GIS FOR THE DESIGN OF A MULTI-PURPOSE GREENWAYS NETWORK IN OLEIROS (A CORUÑA, SPAIN)”
Juan Ortiz Sanz (Spain), Andrés López Rodríguez and Eduardo Corbelle Rico
- “APPLICATION GEOGRAPHICAL INFORMATION SYSTEM (GIS) IN THE DEFINITION OF RESIDENTIAL APTITUDE OF THE RURAL LANDSCAPE”
Fernando Pino Silva (Chile) and Enrique Zárata Campaña
- “GIS METHODOLOGY TO ESTIMATE FOREASTAL BIOMASS: A CASE IN NORTH EAST ITALY”
Giovanni Mauro (Italy)

- “A SEMI AUTOMATED APPROACH FOR GIS BASED ON GENERATION OF TOPOGRAPHIC ATTRIBUTES FOR LANDFORM CLASSIFICATION”
Graciela Metternicht (Australia), Bernhard Klingseisen and G. Paulus

SESSION 2 “LAND MANAGEMENT (1)”

- “THE USE OF A GIS FOR ANALYSE DUNE SYSTEMS, THE CASE OF PLATAMONA-MARRITZA (NORTHERN SARDINIA, ITALY)”
Ileana Balduzzi (Italy), Alessandra Bozzano, Nicola Corradi and Roberta Ivaldi
- “GIS APPLICATION TO EVALUATE THE EROSION OF THE LIGURIAN COAST”
Marco Ferrari (Italy), Silvia bolens, Alessandra Bozzano and Corinna Artom
- “MAPPING THE PAST AND PRESENT OF OUR HERITAGE: CARTOGRAPHIC REPRESENTATION OF TRADITIONAL MEDITERRANEAN IRRIGATION SYSTEMS”
Jorge Hermosilla (Spain) and Juan Pascual

SESSION 3 “LAND MANAGEMENT (2)”

- “OPEN SOURCE SPATIAL DECISION SUPPORT SYSTEM FOR SUSTAINABLE WATER MANAGEMENT”
Sibylle Niederer (Austria), Karel Kriz and Alexander Pucher
- “THE USE OF CARTOGRAPHY AND GIS TECHNOLOGIES TO IMPROVE THE MANAGEMENT OF NON-GOVERNMENTAL ORGANIZATIONS. THE «RED DEPORTE Y COOPERACIÓN» CASE STUDY.”
Rufino Pérez (Spain)
- “URBAN LAND EVALUATION MODEL AND ITS INFORMATION SYSTEM DESIGN IMPLEMENTATION”
Liu Yaolin (China) and Liu Yanfang
- “SPATIAL DATABASES APPLIED TO THE DYNAMIC CHARACTERIZATION OF THE CLIMATE”
José Julio Zancajo Jimeno (Spain) and Teresa Mostaza Pérez
- “THE NEED FOR COLLABORATION IN MAPPING IN NIGERIA: THE EXAMPLE OF CITY MAP UPDATE”
Dr. Felicia O. Akinyemi (Germany)

SESSION 4 "LAND MANAGEMENT (3)"

- "DYNAMIC STUDY OF THE HYDRIC EROSION OF SOIL. APPLICATIONS TO THE PROVINCE OF ALMERIA (SPAIN)"
José Julio Zancajo Jimeno (Spain) and Teresa Mostaza Pérez
- "GEOLOGICAL MAPPING OF THE BARENTS SEA USING GIS"
Inna Suetova (Russia), Ludmila Ushakova and Polina Lemenkova
- "SPATIAL DATA BASED SYSTEM FOR COASTAL PLACER CONCENTRATION: A CASE STUDY AT KALLAR – VEMBAR COAST, TAMILNADU"
M. Rajamanickam (India) and G. Victor Rajamanickam
- "THE RELEVANCE OF GEOINFORMATICS IN AGRICULTURAL DEVELOPMENT: THE CASE OF NIGERIA"
Momoh Lawal Rilwani (Nigeria)
- "PROJECT «IMPROVING CARTOGRAPHICAL SYSTEMS OF COLOMBIAN TERRITORY»"
Ing. MSc Alberto Boada Rodríguez (Colombia)

SESSION 5 "LAND MANAGEMENT (4)"

- "EVOLUTION OF URBAN DEVELOPMENT AND PROTECTION OF NATURAL SPACES IN THE LITTORAL OF VALENCIAN COMMUNITY (SPAIN): CARTOGRAPHIC STUDY BY A GEOGRAPHIC INFORMATION SYSTEM"
Vicent Altur (Spain) and José Andrés Sanchís
- "3D MULTI-TEMPORAL GIS FOR THE MANAGEMENT OF ENVIRONMENTAL RESOURCES"
Eva Savina Malinverni (Italy), Eliana Paola Tonelli and Luigi Mussio
- "PLANNING SUSTAINABLE AGRICULTURE IN THE CARIBBEAN HUMID TROPICS OF COSTA RICA USING GIS"
Mario A. Giraldo (USA)
- "CONCEPTUAL MODEL OF THE SPANISH LAND COVER AND USE INFORMATION SYSTEM USING UML (UNIFIED MODELING LANGUAGE)"
Nuria Valcárcel Sanz (Spain)

SESSION 6 "LAND INFORMATION"

- "CONSTRUCTION AND APPLICATION OF CHINESE ELECTRONIC GOVERNMENT BASED ON GIS"
Qingpu Zhang (China)
- "GEOMADRID PROJECT"
Iñigo Sáenz De Pipaón y Mengs (Spain)
- "A COMMON DESIGN FOR OFFICIAL TOPOGRAPHIC MAPS IN EUROPE?"
Anja Hopfstock (Germany)
- "CROATIAN TOPOGRAPHIC INFORMATION SYSTEM (CROTIS)"
Dragan Divjak (Croatia), Ivan Landek and Igor Vilus

SESSION 7 "SUSTAINABLE DEVELOPMENT"

- "DIGITAL CARTOGRAPHY AND GIS, DECISION TOOLS FOR SUSTAINABLE DEVELOPMENT IN CUENCA PROVINCE (CENTRAL SPAIN)"
Javier Martínez-Vega (Spain), Pilar Martín and Raúl Romero-Calcerrada
- "CADASTRAL MAPS AND GIS FOR SUSTAINABLE ECONOMIC DEVELOPMENT OF KOSOVA"
Prof. Dr. sc. Murat Meha (Serbia & Montenegro)
- "SUSTAINABLE FUTURES THROUGH INTEGRATED DATA COLLECTION"
Maree Platt (Australia)
- "GEO-INFORMATION FOR SUSTAINABLE MANAGEMENT OF LAND RESOURCES IN CROATIA"
Stjepan Husnjak (Croatia) and Vladimir Kusan
- "GIS AND TELEDETECTION AS FOCALIZING INSTRUMENTS FOR SOCIAL INVESTMENT"
Ruben Luis Aguglino (Argentina), Agustina Fernández, Sergio Martínez and Silvia Fernández

SESSION 8 "TECHNOLOGICAL DEVELOPMENTS"

- "STRATEGIC PLANNING IN TERRITORIAL MANAGEMENT"
José Manuel Peña Penabad (Spain) and Rubén Cid Fernández

- "THE SPANISH OFFICIAL 1:25.000 CARTOGRAPHY: MILESTONES, ACHIEVEMENTS AND NEXT LEAPS FORWARD"
Lorenzo García Asensio (Spain)

CARTOGRAPHIC STUDY OF SPATIAL STRUCTURE OF PHENOMENA USING FRACTAL GEOMETRY"
Halina Klimczak (Poland)

- "gvSIG. OPEN SOURCE, CARTOGRAPHY AND NEW MARKETS"
Alvaro A. Anguix (Spain)
- "AN INTEGRATED APPROACH TO BUILD A SUSTAINABLE LAND INFORMATION MANAGEMENT SYSTEM-THE INDIAN EXPERIENCE"
Brigadier M.V. Bhat (India)

SESSION 9 "TERRITORIAL APPLICATIONS"

- "A GEOGRAPHIC VISUALIZATION OF THE GROWTH OF SUBURBANIZATION IN THESSALONIKI VIA MULTIVARIATE THEMATIC CARTOGRAPHY."
Prof. Myron Myrdis (Greece), Nikolaos Karanikolas and Dimitrios Ramnalis
- "DASYMETRIC POPULATION DENSITY MAP OF POLAND"
Bielecka Elzbieta (Poland)
- "THE CHANNEL MAINTENANCE MANAGEMENT SYSTEM BASED ON GIS"
He Zongyi (China) and Zhang Lin
- "APPLICATION OF GEOGRAPHICAL INFORMATION SYSTEM TO THE PROCESS OF THE COMBINED AGRARIAN INSURANCE"
Guillermo Parra Galant (Spain), Jose Fco. García Gonzalez and Jose Cordero Gracia

SESSION 10 "TERRITORIAL APPLICATIONS (1)"

- "COMMON DIGITAL BOUNDARY BETWEEN NORWAY AND SWEDEN"
Inger Persson (Sweden) and Karsten Lien
- "«NEGATIVE» AND «POSITIVE» SPATIAL PLANNING APPROACHES BY MEANS OF GIS"
Suman Rana (Switzerland) and Diego Salmeron

Technical Sessions

Oral Presentations

- “A STUDY OF URBAN LAND IN THE METROPOLITAN AREA OF GUADALAJARA: THE EXPANSION OF THE PERIPHERY BETWEEN 1970 AND 2000; USING DIGITAL MAPPING AND GIS”
Dr. Heriberto Cruz Solís (Mexico), Dra. Edith Jiménez Huerta, Dr. J. Jesús Rábago Anaya
- “POLITICAL ADMINISTRATIVE EVOLUTION OF RIO DE JANEIRO STATE - BRAZIL”
Paulo Marcio Leal de Menezes (Brazil), Bruno Costa, Luis Fragoso and Veronica Lepore

THEME 6:

SPATIAL DATA INFRASTRUCTURES (NSDI, GSDI AND SDI). DEVELOPMENT, STANDARDS, PRICES AND COPYRIGHT.

SESSION 1 “CONCEPTUAL MODELLING AND SDI DEVELOPMENT”

- “DEVELOPING A MODELLING FOR THE SPATIAL DATA INFRASTRUCTURE”
Jan Hjelmager (Denmark), David Danko, Antony Cooper, Michel Huet, Tatiana Delgado, Henri Aalders, Alexander Martynenko and Harold Moellering
- “RELATIONSHIPS OF CARTOGRAPHY, GEOGRAPHIC INFORMATION SYSTEMS AND THE MEXICAN SPATIAL DATA INFRASTRUCTURE (IDEmex)”
Francisco A. Hansen (Mexico)
- “HOW THE MAPPING SCIENCE COMMITTEE SUPPORTS THE NSDI IN THE USA”
David J. Cowen (USA)

SESSION 2 “METADATA ELEMENTS AND PROCESSING”

- “CATALOGUING GEOGRAPHICAL DATA PROCESSING TOOLS- CONCEPTION AND EXPLOITATION OF A METADATA MODEL”
Yann Abd-el-Kader (France)
- “CHINA PROFILE OF THE INTERNATIONAL STANDARD: GEOGRAPHIC INFORMATION - METADATA”
Prof. JIANG Jingtong (China) and Ms. Liu Ruomei

- “MODELLING HETEROGENEOUS AND DISTRIBUTED SPATIAL DATASETS IN AN UPDATE CONTEXT”
Pierkot Christelle (France), Sebastien Mustiere, Anne Ruas, Abdelkader Hameurlain and Laurent Raynal
- “INTEGRATED HIERARCHICAL METADATA PROPOSAL: SERIES, LAYER, ENTITIES AND ATTRIBUTES”
Alaitz Zabala (Spain) and Joan Masó

SESSION 3 “QUALITY ELEMENTS FOR SDI PRODUCTS”

- “QUALITY ELEMENTS FOR CARTOGRAPHIC DATA PRODUCTS”
Kirsi Verrantaus (Finland) and Kati Korhonen
- “AUTHENTICATION, CHARACTERIZATION, AND CONTROL METHODS FOR CARTOGRAPHIC DATA”
Matt Rice (USA)
- “EUROPEAN REFERENCE DATASETS FOR EUROPEAN SPATIAL DATA INFRASTRUCTURE - STATE OF THE ART AND DEVELOPMENT OF COMMON SPECIFICATIONS”
Antti Jakobsson (Finland)

SESSION 4 “NATIONAL SDI DEVELOPMENTS-1”

- “NEW VISIONS OF SPATIAL INFORMATION SERVICE FRAMEWORK”
Jiang Zhijun (China), Li Deren, Yi Huarong and Wang Wei
- “IDEE: THE NATIONAL SPATIAL DATA INFRASTRUCTURE OF SPAIN.”
Sebastián Mas Mayoral (Spain)
- “GEOSPACIAL SERVICES IN NORTHERN GERMANY – ALL IN ONE”
Ekkehard Matthias (Germany)
- “NATIONAL SPATIAL DATA INFRASTRUCTURE FOR INDIA”
Dr. R. Siva Kumar (India)
- “IS ALIGNMENT THE SAME AS MATCHING: INTEGRATION FROM A CARTOGRAPHIC PERSPECTIVE”
Francis Harvey (USA)

SESSION 5 “NATIONAL SDI DEVELOPMENT-2”

- “NAVARRRE SPATIAL DATA INFRASTRUCTURE (IDENA)”
Roberto Clerigué (Spain), Susana Fontano, Carlos Sabando and Fernando Lacunza
- “THE IDEE (SPANISH NSDI) GEOPORTAL: TECHNICAL ASPECTS OF AN EMERGING REALITY”
Antonio F. Rodríguez Pascual (Spain), Emilio López Romero, Paloma Abad Power and Alejandra Sánchez Maganto
- “THE CUBAN SPATIAL DATA INFRASTRUCTURE AS THE BACKBONE OF THE NATIONAL GEOGRAPHICAL PORTAL.”
Tatiana Delgado Fernández (Cuba)
- “SURVEY OF INDIA PROVIDES FRAMEWORK SPATIAL DATA ESSENTIAL FOR DEVELOPING - NATIONAL SPATIAL DATA INFRASTRUCTURE”
Brig. Girish Kumar (India)

SESSION 6 “DATA COLLECTION FOR SDI IMPLEMENTATION”

- “EUROGEONAMES – THE VISION OF INTEGRATED GEOGRAPHICAL NAMES DATA WITHIN A EUROPEAN SDI”
Zaccheddu, Pier-Giorgio (Germany) and Joern Sievers
- “3D CARTOGRAPHIC DATA COLLECTION FOR GIS ENVIRONMENTS”
Caprioli Mauro (Italy)
- “AUTOMATIC DEM GENERATION FROM VECTORIZED CONTOUR LINES”
Bokuro Urabe (Japan), Mitsuhiro Shibata and Shoichi Oki
- “MANAGEMENT OF GEOGRAPHICAL INFORMATION FOR LOCAL ADMINISTRATIONS”
Elena Velasco (Spain), Jose Carlos Martínez, Jesús Irigoyen and Eloína Coll

SESSION 7 “SDI DATA POLICY FOR DATA SHARING”

- “NEW MARKETS; NEW WAYS TO SALE AND COPYRIGHTS IN THE SDI FRAMEWORK”
Jordi Guimet (Spain)
- “GEODATA POLICY IN AUSTRIA”
Wolfgang Kainz (Austria)

- “PRICING, CHARGING AND ECONOMIC VALUE FOR GEOGRAPHIC INFORMATION”
Roger Longhorn (USA) and Prof. Michael Blakemore
- “ESTABLISHING THE ENVIRONMENT FOR SHARING GEOGRAPHIC INFORMATION IN CHINA”
Ms. LIU Ruomei (China) and Prof. Jiang Jingtong

SESSION 8 “EMERGING SDI COMPONENTS”

- “SPATIAL MODELS OF TERRAIN: NEW STATE STANDARD OF RUSSIAN FEDERATION”
Alexander Martynenko (Russia)
- “EUROROADS – A PAN-EUROPEAN ROAD DATA SOLUTION”
Mia Wallberg (Sweden)
- “OPENSOURCE COMPONENTS FOR GEOSPATIAL PORTAL.”
Miguel-Angel Manso (Spain) and Miguel-Angel Bernabé
- “CORRECTION OF RELIEF INVERSION EFFECT IN WEB MAP SERVER IMAGES”
Miguel-Angel Bernabe (Spain) and Miguel-Angel Manso

THEME 7: DATA CAPTURE AND QUALITY ASSESSMENT OF SPATIAL DATA.

SESSION 1

- “GEOMETRIC CORRECTION OF THE QUICKBIRD HIGH RESOLUTION PANCHROMATIC IMAGES”
Manuel A. Aguilar (Spain), Fernando Aguilar, Fernando Carvajar, Francisco Agüera and Jaime Sánchez
- “CLASSIFICATION OF FEATURES IN HIGH-RESOLUTION AERIAL PHOTOGRAPHS USING NEURAL NETWORKS”
Witold Paluszynski (Poland), Adam Iwaniak, Tomasz Kubik and Przemyslaw Tymkow
- “DETECTION, CONFIRMATION AND VALIDATION OF CHANGES ON SATELLITE IMAGE SERIES. APLICATION TO LANDSAT 7”
Lucas Martínez (Spain), Mar Joaniquet, Vicenç Palà and Roman Arbiol

- “EVALUATION OF THE GEOMETRICAL QUALITY OF THE SATELLITE CARTOGRAPHY WITH LANSAT 7 BASE.”
Eduardo Goldar (Argentina) José Luis Gulota, Walter Daniel Costa and Carlos Alfredo Gutierrez

SESSION 2

- “PROPAGATION OF DEM UNCERTAINTY: AN INTERVAL ARITHMETIC APPROACH.”
Gil Gonçalves (Portugal) and Jorge Santos
- “GRID DIGITAL ELEVATION MODELS ACCURACY. ANALYSIS AND MODELIZATION”
Fernando J. Aguilar (Spain), Manuel A. Aguilar, Francisco Agüera, Fernando Carvajal and Jaime Sánchez
- “METHODOLOGY FOR THE DEVELOPMENT OF A SAMPLING RECOMMENDATION WHEN USING LINEAR ELEMENTS FOR POSITIONAL QUALITY CONTROL”
Francisco J. Ariza López (Spain) and Antonio T. Mozas Calvache
- “POSITIONAL ACCURACY CONTROL USING ROBUST ESTIMATORS”
Alan D.J. Atkinson Gordo (Spain), Francisco J. Ariza López and José L. García-Balboa

SESSION 3

- “THE MAF/TIGER ENHANCEMENT PROGRAM: THE MECHANICS AND MAINTENANCE OF A LARGE-SCALE NATIONAL SPATIAL DATABASE”
Timothy Trainor (USA)
- “THE NATIONAL AERIAL ORTOPHOTO PROGRAM IN SPAIN”
Antonio Arozarena Villar (Spain) and Guillermo Villa Alcázar
- “A NATIONAL DATABASE TO BE PROUD OF”
Iain Greenway (Ireland), Colin Bray and Peter Hallahan
- “WORLDWIDE DECIMETRE ACCURACY”
Mr. Cor de Kuijper (The Netherlands)

SESSION 4

- “UNCERTAINTIES IN GIS WITH A USER’S PERSPECTIVE”
Mats Söderberg (Sweden)
- “UNCERTAINTY RASTER-MAP ESTIMATION BY MEANS OF STOCHASTIC SIMULATION: A NEW SPATIAL METADATA APPROACH”
Ángel M. Felicísimo (Spain) and Aurora Cuartero

- “DEALING WITH UNCERTAINTY IN LARGE-SCALE URBAN AND CADASTRAL DATABASES”
Igor Drecki (New Zealand) and Iwona Maciejewska
- “OPTIMIZATION OF VECTOR DATA CAPTURE AND QUALITY ASSESSMENT”
Marcos Iribas (Spain), Alvaro Huarte, Xabier Velasco and Roberto Clerigué
- “THE PROPAGATION OF POSITIONAL ERROR INDUCED BY LI-OPENSRAW ALGORITHM”
Shiyuan Mei (China) and Nan Jiang
- “INTEGRATING DATA LAYERS TO SUPPORT THE NATIONAL MAP OF THE UNITED STATES”
E. Lynn Usery (USA)

SESSION 5

- “ABOUT QUALITY OF SPATIAL DATA IN A NEW DIGITAL LAND COVER HIGH SCALE MAP OF GALICIA (SPAIN)”
Chantada Acosta, José Ramón (Spain), M. Cascciani, A. Caamaño, C. Alvarez, P. Fernandez and A. Lopez
- “QUALITY ASSESSMENT OF THE CORINE LAND COVER 2000 DATA BASE IN SPAIN”
Mónica Ruiz Bustos (Spain), Isabel del Bosque González, Guillermo Villa Alcázar and Antonio Arozarena Villar
- “THE QUALITY CONTROL OF VECTOR MAP DATA”
Wu Fanghua (China), Liu Pingzhi and Jincheng
- “QUALITY FUNCTION DEPLOYMENT: AN EXAMPLE OF THE APPLICATION OF THE HOUSE OF QUALITY (HOQ) TO CARTOGRAPHY”
Francisco J. Ariza López (Spain), José L. García-Balboa and Paz Fernández Oliveras
- “THE PROCESSES OF CONTROL OF QUALITY OF THE GEOGRAPHIC AND TERRITORIAL INFORMATION”
Bernardo Pizarro Hernández (Spain)

SESSION 6

- “GEOMOBIL: ICC LAND BASED MOBILE MAPPING SYSTEM FOR CARTOGRAPHIC DATA CAPTURE”
Ramon Alamús (Spain), Anna Baron, Ernest Bosch, Joan Casacuberta, Maria Pla, Santiago Sánchez, Albert Serra and Julià Talaya

Technical Sessions

Oral Presentations

- “ON THE USE OF AIRBORNE LASER SCANNING DATA TO VERIFY AND ENRICH ROAD NETWORK FEATURES”
Carsten Hatger (Germany)
- “A NEW APPROACH TO RELIEF REPRESENTATION”
J. Raul Ramirez (USA)
- “ANALYSIS OF SLOPE TO STUDY EROSION”
M.I. Ramos Galán (Spain), F.R. Feito Higuera and A.J. Gil Cruz
- “LITTO 3D”
Laurent Louvart (France), Axel Ehrhold and Christophe Gâteau

THEME 8: INCREMENTAL UPDATING AND VERSIONING OF SPATIAL DATA BASES.

SESSION 1

- “TOPOGRAPHIC FACTORS AS A USABLE TOOL FOR RIGHT MODELLING OF CONTINUOUS FEATURES MEASURED IN POINT”
Joanna Bac-Bronowicz (Poland)
- “INCREMENTAL UPDATE OF CARTOGRAPHIC DATA IN A VERSIONED ENVIRONMENT”
Marc-Olivier Briat (USA), Jean-Luc Monnot and Thierry Kressmann
- “RE-GENERALISATION AND CONSTRUCTION – TWO ALTERNATIVE APPROACHES FOR AUTOMATED INCREMENTAL UPDATING IN MRDB”
Matthias Bobzien (Switzerland), Dirk Burghardt and Ingo Petzold
- “UPDATING OF GEOSPATIAL DATA: A THEORETICAL FRAMEWORK”
J. Raul Ramirez (USA)
- “CREATION OF THE SYSTEM OF DISTRIBUTED SHAREABLE GEOGRAPHICAL DATA BASES FOR CARRYING OUT COMPLEX RESEARCHES OF TERRITORIES”
Irina K. Lourie (Russia), Ali R. Alioutdinov and Dmitrii V. Michailov

THEME 9: CARTOGRAPHIC GENERALIZATION AND MULTIPLE REPRESENTATION.

SESSION 1

- “ANALYTIC GENERALIZATION OF TOPOGRAPHIC DATA”
Eli Itzhak (Israel), Pinhas Yoeli and Yerach Doytsher
- “SPATIAL STRUCTURES TO SUPPORT AUTOMATIC GENERALISATION”
Dr Nicolas Regnaud (United Kingdom)
- “PROPAGATION OF THE DISPLACEMENTS AND DEFORMATIONS DURING A GENERALISATION PROCESS”
Cécile Duchêne (France) and Cristel Legrand
- “AUTOMATING GENERALIZATION – TOOLS AND MODELS”
Dan Lee (USA) and Paul Hardy

SESSION 2

- “THE USE OF EPSILON-CONVEX AREA FOR ATTRIBUTING ‘BENDS’ ALONG A CARTOGRAPHIC LINE”
Vasilis Mitropoulos (Greece), Andoniki, Xydia and Byron, Nakos
- “USAGE OF PRINCIPAL COMPONENT ANALYSIS IN THE PROCESS OF AUTOMATED GENERALISATION”
Dirk Burghardt (Switzerland) and Stefan Steiniger
- “USING ARTIFICIAL NEURAL NETWORKS AND MOMENT INVARIANTS FOR THE EVALUATION AND CLASSIFICATION OF GENERALIZED OBJECTS”
Adam Iwaniak (Poland)
- “PROPAGATING UPDATES BETWEEN LINKED DATASETS OF DIFFERENT SCALES”
Jan-Henrik Hauernt (Germany) and Monika Sester

SESSION 3

- “EXTENDING PERKAL’S PROPOSAL TO THE GENERALIZATION OF TERRAIN MODELS”
Albert H.J. Christensen (USA)

- “THE U.S. CENSUS BUREAU’S GENERALIZATION CONCEPTS IN A MODERNIZED DATA STRUCTURE ENVIRONMENT”
Deanna Fowler (USA)
- “METHODOLOGY FOR DEVELOPING A DATABASE OF GEOMETRIC PATTERNS TO BETTER SUPPORT ON-THE-FLY MAP GENERALIZATION”
Mamane Nouri Sabo (Canada), Yvan Bédard, Eveline Bernier and Abraham Cardenas
- “A SYSTEM FOR AUTOMATED GENERALISATION OF TOPOGRAPHIC MAPS”
Haowen Yan (China) and Zhilin Li

SESSION 4

- “GENERALISATION WITHIN NMO’S IN THE 21st CENTURY”
Jantien Stoter (The Netherlands)
- “MAP GENERALIZATION OF ROAD NETWORKS: CASE STUDY FROM NORWEGIAN SMALL SCALE MAPS”
Jan Terje, Bjørke (Norway) and Espen, Isaksen
- “3D BUILDING GENERALIZATION”
Martin Kada (Germany)
- “ROAD LINE CLASSIFICATION FOR CARTOGRAPHIC GENERALIZATION: A NEURAL NET APPROACH”
José L. García Balboa (Spain) and Francisco J. Ariza López

SESSION 5

- “GENERALISING OS MASTERMAP® TOPOGRAPHIC BUILDINGS AND ITN ROAD CENTRELINES TO 1:50 000 SCALE, USING A SPATIAL HIERARCHY OF AGNETS, TRIANGULATION AND TOPOLOGY”
Patrick Revell (United Kingdom), Nicolas Regnaud and Stuart Thom
- “A METHODOLOGY FOR AUTOMATED GENERALIZATION OF GEOLOGICAL AND SOIL MAPS”
Stefan Steiniger (Switzerland) and Robert Weibel
- “MODELLING RELATIONS FOR CATEGORICAL MAPS”
Moritz Neun (Switzerland) and Stefan Steiniger

- “THE CREATION OF A NATIONAL MULTISCALE DATABASE FOR THE UNITED STATES CENSUS.”
Robert B. McMaster (USA), Martin Galanda, Jonathan Schroeder and Ryan Koehnen

SESSION 6

- “UTILISATION OF ARTIFICIAL INTELLIGENCE METHODS AND NEUROFUZZY ALGORITHMS IN THE PROCESS OF DIGITAL ELEVATION MODEL GENERALISATION”
Robert Olszewski (Poland)
- “GRAPH BASED APPROACH FOR RECOGNITION OF PATTERNS AND IMPLICIT INFORMATION IN ROAD NETWORKS”
Frauke Heinzle (Germany), Monika Sester and Karl-Heinrich Anders
- “A STUDY ON INCREMENTAL OBJECT-ORIENTED MODEL AND ITS SUPPORTING ENVIRONMENT FOR CARTOGRAPHIC GENERALIZATION IN MULTI-SCALE SPATIAL DATABASE”
Fan Wu (China), Lina Dang, Xiuqing Lu and Weiming Su
- “AN APPROACH TO INTELLIGENT SELECTION OF SETTLEMENTS BASED ON ROUGH SET AND CLUSTERING”
Ying SONG (China)

SESSION 7

- “A COMBINED AUTOMATED GENERALIZATION MODEL BASED ON THE RELATIVE FORCES BETWEEN SPATIAL OBJECTS”
Jacqueleen Joubran Abu Daoud (Israel) and Yerah Doytsher
- “THE APPLICATION OF MATHEMATICAL MORPHOLOGY AND PATTERN RECOGNITION TO BUILDING POLYGON”
Wang Huilian (China), Wu Fang, Deng Hongyan, Qian Haizhong, Huang Qi and Zhang Linlin
- “GENERALIZATION OF URBAN CITY-BLOCK (BUILT-UP AREAS) MAPS IN RASTER MODEL”
Manuel Antonio Ureña Cámara (Spain) and Francisco Javier Ariza López
- “CARTOGRAPHIC GENERALIZATION USING PRIMITIVES AND CONSTRAINTS”
Claus Brenner (Germany) and Monika Sester

SESSION 8

- “LINE SIMPLIFICATION WITH CONFLICT RESOLUTION”
Zeshen Wang (USA)
- “RURAL AND URBAN ROAD NETWORK GENERALIZATION DERIVING 1:250,000 FROM 1:1250”
Omair Chaudhry (United Kingdom) and William A. Mackaness
- “THE AUTOMATIC GENERALIZATION OF POINT CLUSTER BASED ON THE SPATIAL KNOWLEDGE ACQUEST”
Ying Liu (China) and Jing-sheng Zhai

THEME 10:

CARTOGRAPHY AND SATELLITE IMAGERY FOR THE MANAGEMENT OF NATURAL RESOURCES AND THE ENVIRONMENT.

SESSION 1

- “MULTI-TEMPORAL SPATIAL MODELLING OF NOXIOUS WEEDS DISTRIBUTION USING HISTORICAL REMOTE SENSING IMAGERY”
Graciela Metternicht (Australia) and Todd Robinson
- “THE APPLICATION OF REMOTE SENSING TO INFORMATIVE STUDIES ON LINEAR WORKS”
Fernando Rodríguez (Spain), Ángel González and David Mariñas
- “FEASIBILITY OF THE INTERNATIONAL RADIOASTRONOMY CENTRE OF VENTSPILS UNIVERSITY COLLEGE FOR SUPPLYING SATELLITE IMAGES IN LATVIA”
Ilze Bargamp (Latvia) and Viesturs, Veckalns
- “DEVELOPING A METHODOLOGY FOR MONITORING ANTHROPOGENIC PRESSURES ON NATURE CONSERVATION SITES”
Gerard Hazeu (The Netherlands) and Sander Mucher
- “ADECUATION OF NATIONAL GEOSTATISTICAL FRAMEWORK OVER IMAGES OF SATELLITE OF YEAR 2003”
Mario R. Chavarría Espinosa (Mexico)

SESSION 2

- “HYPERSPETRAL DATA CLASSIFICATION BY OBJECT-ORIENTED APPROACH FOR THE MANAGEMENT OF URBAN LANDSCAPE”
Andrea Galli (Italy) and Eva Savina Malinverni
- “OBJECT-ORIENTED IMAGE CLASSIFICATION OF COMPLEX URBAN AREAS USING HIGH RESOLUTION SATELLITE IMAGERY”
Jorge Recio Recio (Spain), Luis A. Ruiz and Alfonso Fernández Sarría
- “RURAL BUILDINGS STUDY AND CHARACTERIZATION THROUGH QUICKBIRD SATELLITE IMAGES ANALYSIS”
Julia Armesto González (Spain), M^a Luz Gil Docampo and Ignacio Cañas Guerrero
- “ANALYSIS OF LANDSCAPE STRUCTURE DYNAMICS ON TROPICAL SAVANNAS USING LANDSAT IMAGES AND FACTORIAL ANALYSIS.”
Luis M. Santana (Colombia) and Francisco J. Salas

SESSION 3

- “USING MACHINE LEARNING ALGORITHMS FOR LAND COVER CLASSIFICATION OF IKONOS IMAGERY”
Francesca Albanese (Italy), M. Caprioli and Eufemia Tarrantino
- “APPLICATION OF A HYBRID CLASSIFIER TO DISCRIMINATE MEDITERRANEAN CROPS AND FORESTS. DIFFERENT PROBLEMS AND SOLUTIONS.”
Pere Serra (Spain), Gerard Moré and Xavier Pons
- “CONTRIBUTION OF CLASSICAL AND ROBUST PRINCIPAL COMPONENT ANALYSIS TO DEPTH ESTIMATION IN COASTAL ENVIRONMENTS.”
Elena Castillo López (Spain), V. Bayarri, E. Castillo, R. Ferrer, R. Pereda, J. Sánchez, J.M. de Luis Ruiz and M. Ruiz

SESSION 4

- “ASSESSING THE SUCCESS OF WATERSHED REHABILITATION PRACTICES IN THE RIO LAJA BASIN, MEXICO”
Andrew Tofflemire (Canada) and Janet E. Mersey

Technical Sessions

Oral Presentations

- “DEVELOPMENT OF A 3D GEOREFERENCED GROUNDWATER MODEL FOR SALINITY MANAGEMENT”
Dr. David Fraser (Australia) and Mr. David (Hyun Jong) Lee
- “M3FLOOD: AN INTEGRATED SYSTEM FOR FORECASTING, ALERTING AND MANAGING HYDRAULIC EMERGENCY”
Manuel Erena Arrabal (Spain), Fernando Toledano, Leonared Tireli, Salomon Montesinos, Pedro García, Stefania Mazzeo, Lara Fernández and Jonathan Peter Cox
- “LAND USE AND COVER CARTOGRAPHY IN GALICIA”
José Marcial Díaz Manso (Spain), Berta Barcia Noia, Amparo Martín Rosón and Dominique Aller González

SESSION 5

- “RAPID CARTOGRAPHY FOR HUMANITARIAN AID”
L.M. González (Spain)
- “CONTRIBUTION OF REMOTE SENSING TO THE STUDY OF THE FRACTURING MOUNTS OF THE TRARAS, ORANIE NORTH-WESTERN.”
Ahmed Zine Éddine (Algeria) Saad and Mohamed Zerga
- “USING GIS TECHNIQUES TO MAP ENVIRONMENTAL ZONES IN MOUNTAIN FRAGILE AREAS LOCATED AT THE CUESTAS LANDFORMS OF BRAZIL: A CASE STUDY AT SAO PEDRO COUNTY, SAO PAULO STATE.”
Leonardo Rios (Brazil) and Marta Felícia Marujo Ferreira
- “ETHNOCARTOGRAPHY APPLIED TO ENVIRONMENTAL ISSUES”
Regina Araujo de Almeida (Vasconcellos) (Brazil), Renato Gavazzi and Antonio Luis Andrade Carvalho

SESSION 6

- “REMOTE SENSING IN AFRICA: MAPPING APPROACH AND PERSPECTIVES”
Tchindjang Mesmin (Cameroon), Jean Pierre Nghonda, Jean Sylvestre Makak, Marcellin Nziengu, and Mesmin Edou

- “CARTOGRAPHY AND MONITORING OF THE FIVE WORLD HERITAGE SITES OF THE DEMOCRATIC REPUBLIC OF CONGO USING SATELLITE IMAGERY”
De Maeyer Philippe (Belgium), Leen de Temmerman, Pierre Defourny, Carlos Dewasseige, Stijn Van Coillie and Liesbeth Vansteenvoort
- “INTEGRATION OF RMM (RAIN MONITORING BY METESSAT) AND SVNC VEGETATION MONITORING BY NOAA/NDVI TROLS IN EVALUATING AGRO-PASTORAL SEASONS AND ZONES AT RISK IN THE SAHELIAN ECOLOGICAL ZONE OF NORTHNIGERIA”
Taiwo Olatunji Qudus (United Kingdom)
- “MAPPING OF PROTECTED AREAS EVOLUTION IN CAMEROON FROM THE BEGINNING TO 2000: LESSON TO LEARN AND PERSPECTIVES. Tchindjang Mesmin (Cameroon), Appolinaire Nankam, Clair René Banga and Jean Sylvestre Makak
- “ASSESSMENT OF ENVIRONMENTAL DEGRADATION IN SOUTHEASTERN NIGERIA USING NIGERIASAT-1 SATELLITE IMAGE DATA”
Dr. Joel I. Igboke (Nigeria) and Ms. Valerie C. Nnodu

SESSION 7

- “INTEGRATING ECOLOGICAL TOOLS WITH GIS: MODELLING ANIMAL DISPERSAL”
Chekuimo Georges Herbert (Cameroon)
- “DEVELOPMENT OF DIGITAL CARTOGRAPHIC DATABASE FOR MANAGING OF THE ENVIRONMENT AND NATURAL RESOURCES IN THE REPUBLIC OF SERBIA”
Dragutin Protic (Serbia) and Ivan Nestorov
- “LOOKING INTO THE HEART OF A MOUNTAIN – A GEOLOGICAL STUDY USING GIS AND REMOTE SENSING”
Gideon Brunson (South Africa) and Dr. P.W.K. Booth
- “INTEGRATION OF ENVIRONMENTAL DATA ON SATELLITE ORTOIMAGES”
Alfonso López-Pantoja Lamarca (Spain), José Vega Montilla and Santiago Leal Eizaguirre

THEME 11: MAPS AND THE INTERNET.

SESSION 1 “MAPS AND THE INTERNET: WEB MAPPING SERVICES & SVG”.

- “WEB MAPPING SERVICES: A TOOL FOR THEMATIC MAPS”
Rex G. Cammack (USA)
- “ADDING FUNCTIONALITIES TO WMS-WCS CLIENTS: DOWNLOAD AND ANIMATION”
Joan Maso (Spain) and Xavier Pons
- “A GEOGRAPHICAL INFORMATION SYSTEM FOR SPATIAL DATA ANALYSIS BASED ON THE SCALABLE VECTOR GRAPHICS STANDART”
Igor Pinheiro De Sales Cabral (Brazil), Jorge Henrique Fernandes and Luiz Marcos Garcia Goncalves
- “SVG IN ENVIRONMENTAL APPLICATIONS”
Igor Pinheiro De Sales Cabral (Brazil), Luiz Marcos Garcia Goncalves, Juliana Pegado de Medeiros and Ricardo Farias do Amaral

SESSION 2 “MAPS AND THE INTERNET: APPLICATIONS”

- “MAPPING WATER RESOURCE DATA”
Craig Feuerherdt (Australia)
- “WEB MAP SERVER AS DSS TOOL FOR TERRITORIAL PLANNING OF THE AIRPORTS SURROUNDING AREAS”
Maurício Ruiz (Spain), Joana M. Seguí Pons, Jeronia Ramon Molinas, Juana Eva Marti Penas and M. Rosa Martínez Reynés
- “THE USE OF THE INTERNET TO PUBLISH GEOINFORMATION FROM COFFEE ENVIRONMENTS OF BRAZIL”
Vanessa Cristina Oliveira De Souza (Brazil), Tatiana Grossi Chquilloff Vieira, Helena Maria Ramos Alves and Mário Luiz Rodrigues Oliveira
- “WEB-BASED KNOWLEDGE INFORMATION SYSTEM FOR ABORIGINAL LAND MANAGEMENT”
Liman Mao (Canada) , Mele Rakia and Darka Mioc.

SESSION 3 "MAPS AND THE INTERNET: USER ISSUES"

- "MAPS AND GEOINFORMATION ON THE INTERNET OR HOW DO PEOPLE FEEL ABOUT E-DEMOCRACY?"
Hanne Brande-Lavridsen (Denmark)
- "A CARTOGRAPHIC VISUALISATION INTERFACE FOR SPATIAL INFORMATION RETRIEVAL"
Ross Purves (Switzerland), Awase Khirni Syed, Bisheng Yang and Robert Weibel
- "REGIONAL INTERNET SERVICE FOR SPATIAL INFORMATION"
Malgorzata Gajos (Poland) and Krzysztof Maczewski
- "REACHING THE CITIZEN THROUGH INTERNET CARTOGRAPHY: THE CASE OF LA CORUÑA"
Jaume Royo Llobet (Spain) and José Manuel Peña Penabad

SESSION 4 "MAPS AND THE INTERNET: INTEGRATED SYSTEMS"

- "A SYSTEM FOR INTERNET-ENABLED GEOSPATIAL DATA ACCESS"
Andrew Nierman (USA)
- "GEOGRAPHIC IR SYSTEMS: USER REQUIREMENTS AND EVALUATION"
Bucher Benedicte (France), Paul Clough and Ross Purves
- "LIMITATIONS AND POTENTIALS OF REAL-TIME TRAFFIC VISUALIZATION"
Kirk Goldsberry (USA) and Sara Irina Fabrikant
- "REAL TIME PRECISE POSITIONING APPLIED TO CARTOGRAPHY FOR PDA."
Israel Quintanilla (Spain), Juliá Talaya, Berne Valero, Joel Grau and Daniel Gómez

SESSION 5 "MAPS AND THE INTERNET: THEORY"

- "MAPS FOR PUBLIC INFORMATION: DOES INTERNET MAPPING MEET USER NEEDS AND ACHIEVE GOOD CARTOGRAPHIC STANDARDS?"
David Forrest (United Kingdom)

- "GEO-COMMUNICATION AND WEB-BASED INFRASTRUCTURE. GEO-COMMUNICATION UNDER THE INFLUENCE OF AN INFRASTRUCTURAL ENVIRONMENT."
Lars Brodersen (Denmark)
- "CARTOGRAPHIC INFORMATION ARCHITECTURE – DESIGNING ONLINE PRESENTATION OF CARTOGRAPHIC INFORMATION TO FACILITATE USER UNDERSTANDING"
Alexander Pucher (Austria)
- "WEB CARTOGRAPHY WEB-ENABLED GEOGRAPHIC INFORMATION SYSTEMS (GIS) – NEW POSSIBILITIES, NEW CHALLENGES"
Michael Black (Australia) and William Cartwright
- "THE ROLE OF CARTOGRAPHY WITHIN DISTRIBUTED SOFTWARE SYSTEMS: WHAT CAN WE CONTRIBUTE? HOW CAN WE PROSPER?"
Michael Cooper (Switzerland)

SESSION 6 "INTERNET MAPS AND GIS"

- "REALIZATION OF THE «DIGITAL JAPAN» CONCEPT AND CHALLENGE FOR NEW BUSINESS MODELS"
Norishige Kubo (Japan), Hiroyuki Ohno, Noriyuki Takakuwa, Hidenori Fujimura and Takayuki Ishizeki
- "WEB COVERAGE AND GEOREFERENCED IMAGE SERVICE FOR THE SPATIAL DATA INFRASTRUCTURE OF THE REPUBLIC OF CUBA"
José Luis Capote Fernández (Cuba), Rafael Cruz Iglesias, Guillermo González Suárez, Osmani, Herrera González and Liset Becerra Lugones
- "SIGTPI: A GIS BASED ON WEB TO THE MANAGEMENT OF PUBLIC TELEPHONY"
Rafael Cruz Iglesias (Cuba), José Luis Capote Fernández, Guillermo González Suárez, Osmani, Herrera González and Liset Becerra Lugones
- "WebEIEL: A WEB-BASED GIS FOR THE E.I.E.L."
Miguel R. Luaces (Spain), Nieves R. Brisaboa, José R. Paramá and José R. Viqueira

SESSION 7 "MAPS AND THE INTERNET: CYBERCARTOGRAPHY- THE NEXT STEP"

- "A DECADE OF MAPS AND THE INTERNET"
Michael P. Peterson (USA)
- "CYBERCARTOGRAPHY: THEORY AND PRACTICE"
D. R. F. Taylor (Canada), Brian Eddy, Peter Pulsifer and Tracey Lauriault
- "EXPLORING REFLEXIVITY IN MAPS AND MAPPING: A CYBERCARTOGRAPHIC PERSPECTIVE"
Caquard Sebastien (Canada), Peter Pulsifer, Brian Eddy and D.R. F. Taylor
- "CYBERCARTOGRAPHY AND HUMAN-COMPUTER INTERACTION: NEW WINE IN OLD BOTTLES?"
Avi Parush (Canada)

THEME 12: INTERNET LOCATION-BASED SERVICES, MOBILE MAPPING AND NAVIGATION SYSTEMS.

SESSION 1

- "THE GEOPORTAL IN LOCAL ADMINISTRATION"
Jorge-Gaspar Sanz (Spain), Eloina Coll, José-Carlos Martínez and Jesus Irigoyen
- "MOBILE GEOSPATIAL DATA COLLECTION – CONCEPTS AND FIRST EXPERIENCES"
Wolfgang Reinhardt (Germany), Admire Kandawasvika, Stephan Mäs and Fei Wa
- "GEOMOSSES – CARTOGRAPHIC REQUIREMENTS FOR LBS ON RIVER CRUISING"
Hubert Asamer (Austria) and Andreas Riedl

SESSION 2

- "A KNOWLEDGE-BASED MAP SPECIFICATION APPROACH FOR MOBILE MAP SERVICES"
L. Tiina Sarjakoski (Finland), Tommi Koivula and Tapani Sarjakoski
- "THE PRESENT SITUATION OF VEHICLE NAVIGATION TECHNIQUES IN CHINA AND THE MULTI-TOPOLOGICAL FORMATION AND ROUTE COMPUTING OF NATIONAL NAVIGATION MAP"
Zhang Dong (China), Liu Ailong, Zhang De

Technical Sessions

Oral Presentations

- “INTEGRATION OF GPS, PDA AND DIGITAL CAMERA TO LOOK FOR GEODETICS REFERENCE POINTS”
Israel Quintanilla (Spain), Berne Valero, Aurea Gallego and Antonio Sierra
- “PARSING WALKING DIRECTIONS USING SIDEWALK NETWORKS”
Kouzou Noaki (Japan) and Masatoshi Arikawa

SESSION 3

- “FROM MAP USE RESEARCH TO USABILITY RESEARCH IN GEO-INFORMATION PROCESSING”
Corné P.J.M. van Elzakker (The Netherlands)
- “THE IMPORTANCE OF BEING RELEVANT”
Tumasch Reichenbacher (Germany)
- “THE MANY DIMENSIONS OF MAP USE”
James R. Carter (USA)
- “A WORKING CONCEPTUAL FRAMEWORK OF UBIQUITOUS MAPPING”
Takashi Morita (Japan)

SESSION 4

- “ASSESSING TWO APPROACHES TO A WAY FINDING TASK USING A MOBILE DEVICE”
Mr. Daniel Armich (USA), Dr. Joaquin Vila-Ruiz and Dr. James R. Carter
- “EXTENT AND EFFECTIVENESS OF MAP ABSTRACTION FOR COMMUNICATING ROUTES IN A LBS”
Georg Gartner (Austria) and Verena Radoczky
- “GRAPH BASED METHODS FOR LOCALISATION BY A SKETCH”
Matthias Kocpzyński (Germany)
- “SCHEMATIC MAP GENERATION FROM LARGE SCALE DIGITAL DATASETS FOR LOCATION BASED SERVICE APPLICATIONS”
Suchith Anand (United Kingdom), J. Mark Ware and George Taylor

SESSION 5

- “A CASE STUDY OF COMBINED TEXT AND ICON PLACEMENT”
Lars Harrie (Sweden), Peter Ringberg and Qingnian Zhang

- “ADAPTING MAP ICONS FOR MOBILE USERS”
Annu-Maaria Nivala (Finland) and L. Tiina Sarjakoski
- “A WEB BASED AND TIME DEPENDENT VISUALISATION OF AN EVENT CALENDAR”
Mark Hampe (Germany), Katrin Hose, Carsten Hatger and Christiane Katterfeld
- “NECESSARY CONDITIONS FOR CARTOGRAPHIC COMMUNICATION AND NAVIGATION WITH GUIDE MAPS”
Yoshiki Wakabayashi (Japan)

SESSION 6

- “A USER ASSESSMENT FOR DEVELOPING OPTIMAL CARTOGRAPHIC REPRESENTATION MODELS WITHIN AN AUSTRALIAN MOBILE LOCATION-BASED SERVICES TRAVEL APPLICATION.”
Karen Wealands (nee Urquhart) (Australia), Assoc. Prof. William Cartwright and Dr. Suzette Miller
- “A TOOL FOR THE DESIGN OF ADAPTATION MECHANISMS FOR MOBILE CARTOGRAPHIC SYSTEMS”
Lysandros Tsoulos (Greece) and Eugenios Goulimis
- “THE CITYINFO PEDESTRIAN INFORMATION SYSTEM – AN EXPERIMENT WITH CONTENT CREATION AND PRESENTATION TECHNIQUES”
Volker Paelke (Germany), Birgit Elias and Mark Hampe
- “TWO METHODS FOR VISUALIZING AND REFRESHING IN MOBILE MAPS FOR PEDESTRIANS”
Chaode Yan (China), Jun Chen, Xuesheng Zhao, Jie Jiang and RenLiang Zhao

THEME 13:

MARINE CARTOGRAPHY, NAVIGATION AND OCEAN MAPPING.

SESSION 1

- “NEW EXPERIENCES IN NAUTICAL CHART PRODUCTION IN THE INSTITUTO HIDROGRÁFICO DE LA MARINA”
Angel Chans (Spain) and José Millan

- “NAUTICAL CHARTING IN SMALLER COUNTRIES WITH SHORT COASTLINE – TROUBLES AND ADVANTAGES”
Igor Karnicnik (Slovenia) and Dalibor Radovan
- «UNLOCKING THE MARINE DATA TREASURE CHEST»
John Pepper (United Kingdom)
- “THE USE OF RADAR SAR DATA FOR OIL SPILL DETECTION AND MAPPING”
Samy Bouchaib (Italy), Youcef Smara, Luca Salvatori, Fabio del Frate and J. Lichtenegger

SESSION 2

- “ENC AND SDI: CONVERGENCE ISSUES”
Tatiana Delgado Fernández (Cuba) and Michel Huet
- “ELECTRONIC NAVIGATIONAL CHARTS – PROGRESS AND OBSTACLES TO WORLDWIDE COVERAGE”
Rear Admiral Kenneth Barbor (IHB Monaco)
- “THE NEXT EDITION OF IHO TRANSFER STANDARD S-57 (EDITION 4.0)”
Dr. Lee Alexander (USA) and Michel Huet
- “MULTISCALE ENC DATA MANAGEMENT ON EASTERN COAST OF THE ADRIATIC SEA AS AN ARCHIPELAGIC SEA AREA”
Tea Duplancic Leder (Croatia) and Miljenko Lapaine

SESSION 3

- “SOME SEMIOTICAL ASPECTS OF SYMBOLS CONSTRUCTION IN NAUTICAL NAVIGATIONAL CHARTS (AT THE EXAMPLE OF UKRAINIAN LARGE-SCALE NNC)”
Anton Gordyeyev (Russia) and Oleg Martschenko
- “THESES OF UKRAINIAN DELEGATION SPEECH AT THE XXII INTERNATIONAL CARTOGRAPHIC CONFERENCE (ICC 2005)”
Oleg Marchenko (Ukraine)
- “MULTILINGUAL LEXICON OF UNDERSEA FEATURE TYPES”
Mátyás Márton (Hungary) and András Dutkó
- “THE POLITICAL PROBLEM OF BI- AND MULTILINGUAL MARITIME AND LACUSTRINE NAMES IN MAPS”
Prof. Naftali Kadmon (Israel)

THEME 14:

NATIONAL AND REGIONAL ATLASES. ELECTRONIC ATLASES. THEMATIC AND MULTIMEDIA CARTOGRAPHY.

SESSION 1 "HEALTH & SOCIAL DATA"

- "THE DESIGN OF AN INTERACTIVE ATLAS FOR SOCIAL ASSISTANCE IN THE STATE OF PARANA - BRAZIL"
Luciene Delazari (Brazil) and Jorge Pimentel Cintra
- "VISUALIZING AND ANALYZING PUBLIC HEALTH DATA USING VALUE-BY-AREA :"
James B. Holt (USA) and Daniel Z. Sui
- "ATLAS OF NATURAL AND TECHNOLOGICAL HAZARDS AND RISKS OF EMERGENCIES IN THE TERRITORY OF THE RUSSIAN FEDERATION"
Nikolay N. Komedchikov (Russia)

SESSION 2 "LAND AND ENVIRONMENT"

- "HYDROGEOLOGICAL ATLASES OF THE GEOLOGICAL AND MINING INSTITUTE OF SPAIN"
Leticia Vega (Spain) and Miguel del Pozo
- "MULTIMEDIA ATLAS OF ECOLOGICAL ENVIRONMENT IN FUJIAN: DESIGN AND IMPLEMENTATION"
Shulei Zheng (China) and Yufen Chen
- "ATLAS OF THE LANDS OF RUSSIA: CONCEPT, METHODS OF REALISATION, CONTENT"
A.V. Melnikov (Russia), U.D. Samratov, L.N. Poroshina, A.M. Berlyant and P.F. Loiko
- "LANDSCAPE, CLIMATE, NATURAL EXTREMES – THREE THEMES FOR ATLAS PROJECTS BUT THOUSANDS OF SIMILARITIES AND DIFFERENCES"
Vit Vozenilek (Czech Republic)

SESSION 3 "CENSUS AND DEMOGRAPHY"

- "THE NATIONAL HISTORIC GEOGRAPHIC INFORMATION SYSTEM"
Robert B. McMaster (USA), Mark Lindberg and John S. Adams

- "RURAL TOURISM ATLAS OF CASTILLA LA MANCHA"
Sancho Comíns, José (Spain) and Miguel Panadero Moya
- "OVERVIEW OF THE CENSUS ATLAS OF THE UNITED STATES"
Trudy A. Suchan (USA), Cynthia A. Brewer and Alex Tait
- "DEMOGRAPHIC ATLAS OF ALBANIA: PILOT PROJECT FOR A NATIONAL ATLAS INFORMATION SYSTEM IN A SOUTH EAST EUROPEAN TRANSFORMATION COUNTRY"
Hartmut Asche (Germany), Dhimiter Doka, Arqile Berxholi and Julia Siemer

SESSION 4 "NATIONAL ATLAS (1)"

- "ATLAS INFORMATION SYSTEM AUSTRIA – AN ONLINE ATLAS CONCEPT UTILISING A CARTOGRAPHIC "RESTRICTIVE FLEXIBLE" APPROACH"
Gartner Georg (Austria), Karel Kriz and Christian Spanning
- "PRACTICE FOR ELECTRONIC ATLAS PROJECTS IN CHINA"
Ren Fu (China) and Du Qingyun
- "THE ATLAS OF CANADA AFTER 100 YEARS – USER-CENTRED DEVELOPMENT AND EVOLUTION"
R. Eric Kramers (CANADA)
- "THE THIRD NATIONAL ATLAS OF BELGIUM"
De Maeyer, Philippe (Belgium), Jean-Paul Donnay, Micheline Lambrecht, Isabelle Thomas, Herman van der Haegen, Bogdan van Doninck, Etienne van Hecke and Sven Vrielinck

SESSION 5 "NATIONAL ATLAS (2)"

- "ANEXXI: THE XXI CENTURY NATIONAL ATLAS OF SPAIN"
Alfredo del Campo García (Spain) and José María García-Courel y de Mendoza
- "TECHNICAL ASPECTS OF THE OBJECT GENERATION PROCESS IN THE SISTEMA DE INFORMACIÓN DEL ATLAS NACIONAL DE ESPAÑA (SIANE)"
Juan José Alonso (Spain) and Alfredo del Campo García
- "GERMANY IN MAPS – A MULTIPURPOSE TOOL BOX"
Christian, Hanewinkel (Germany) and Sabine Tzschaschel

- "DESIGNING A NEW CULTURAL ELECTRONIC ATLAS OF GREECE."
Prof. Myron Myrdis (Greece), Lecturer Pery Lafazani, Nikolaos Karanikolas and Dimitrios Ramnalis
- "ATLAS BOOKS + GIS = GKS, 'GEOGRAPHICAL KNOWLEDGE SYSTEM' – NEW INTERACTIVE WEB SERVICE LAUNCHED BY THE NATIONAL ATLAS OF SWEDEN"
Mathias Cramér (Sweden) and Ulla Arnberg

SESSION 6 "METHODOLOGICAL APPROACHES"

- "LANGUAGE AND PLACE NAMES IN NATIONAL AND REGIONAL ATLASES. METHODOLOGICAL CONSIDERATIONS AND PRACTICAL USE EXEMPLIFIED BY NEW ATLASES FROM THE EASTERN PART OF EUROPE"
Peter Jordan (Austria)
- "SMART LEGEND – SMART ATLAS!"
Sieber René (Switzerland), Christoph Schmid and Andreas Wipf
- "THE CONCEPT "DURABILITY" ON THE NATIONAL ATLASES"
Dr. Eng. Fernando Aranaz del Río (Spain)
- "METHODOLOGY FOR THE ESTABLISHMENT OF INDICATORS OF QUALITY IN THE ATLASES"
Julio Manuel de Luis Ruiz (Spain), Rafael Ferrer Torio, Pereda García and María Luisa Ruiz Bedia

SESSION 7 "GIS AND ATLAS DATA"

- "SIGpaS – AN ELECTRONIC HEALTH ATLAS FOR THE DOMINICAN REPUBLIC"
Dr. Wieland Kunzel (Spain)
- "DATA WAREHOUSING IN MAPPING AND GIS"
J. Raul Ramirez (USA)
- "MODEL OF DATA FOR THE ELABORATION OF THEMATIC CARTOGRAPHY: MAP OF FORMS OF THE RELIEF"
Miguel Ángel Mejías Vera (Spain) and José Ramón Vera Galván
- "THE ATLAS AS A PORTAL FOR DATA DISCOVERY IN THE GDI: PROSPECTS AND DEVELOPMENTS"
Trias Aditya (The Netherlands) and Menno-Jan Kraak

Technical Sessions

Oral Presentations

SESSION 8 "OTHER ATLAS"

- "THINKING MODULAR – THE «PLUGGABLE ATLAS»"
Huber, Stefan (Switzerland), Patrik Jeller and Marianne Rueggsegger
- "DATA SUPPLY POLICY IN THE NATIONAL ATLAS OF SPAIN"
Concepción Romera (Spain) and Alfredo del Campo
- "A CARTOGRAPHIC DATABASE MODEL FOR MULTI-MODAL HISTORICAL ATLASES"
Brandon Plewe (USA)
- "THE ATLAS OF CANADA. 100 YEARS AND MORE"
Donna Williams (Canada)
- "THE UNIFORM EUROPEAN UNION AS A MOSAIC OF UNEQUAL REGIONS. GEOGRAPHIC APPROACH – CARTOGRAPHIC DOCUMENTATION."
Prof. Myron Myridis (Greece), Lecturer Pery Lafazani, Nikolaos Karanikolas and Dimitrios Ramnalis

THEME 15:

VIRTUAL MODELS, VISUALISATION, ANIMATION AND CARTOGRAPHY.

SESSION 1 "VISUALIZATION TO SUPPORT PLANNING & DECISION-MAKING"

- "COMMUNITY COLLABORATIVE DECISION-MAKING TOOLS: DETERMINING THE EXTENT OF "GEOGRAPHICAL DIRTYNESS" FOR EFFECTIVE DISPLAYS"
William Cartwright (Australia), Chriss Pettit, Anitra Nelson and Mike Berry
- "MODELING AND VISUALIZING POPULATION DENSITY FOR THE FIRE AND RESCUE SERVICES IN HELSINKI, FINLAND"
Krisp, Jukka (Finland), Riika Henriksson and Anke Hilbig
- "GEOVISUALISATION METHODS FOR PARTICIPATORY SPATIAL PLANNING"
Marek Baranowski (Poland) and Maria Andrzejewska

- "INTERACTIVE WEB-BASED VISUALIZATION OF GEOSPATIAL INFORMATION FOR SUSTAINABLE DEVELOPMENT DECISION MAKING"
Dr. Eva Siekierska (Canada) and Peter Williams

SESSION 2 "VISUALIZATION SYSTEMS AND STANDARDS"

- "SHARING GEOVISUALIZATION TOOLS AND SHARING GEOVISUALIZATION RESULTS: SOME NEW DIRECTIONS BASED ON OPEN SYSTEMS AND OPEN STANDARDS"
Mark Gahegan (USA), James Macgill and Jamison Conley
- "MODEL-DRIVEN CONTENT MANAGEMENT FOR WEB-BASED 3D GEOINFORMATION SERVICES"
Stephan Nebiker (Switzerland), Stephan Schuetz and Thomas Wuest
- "AN APPLICATION FRAMEWORK FOR INTERACTIVE VISUALIZATION OF EARTH PHENOMENA"
Neilor F. Camargo (Brazil) and Carlos A P de Carvalho
- "USABILITY TESTS AND RENDERING METHODS IN REAL-TIME 3D GEOVISUALISATION"
Anette Nielsen (Denmark)

SESSION 3 "HUMAN-CENTERED GEOVISUALIZATION"

- "CAN YOU SEE WHAT I SEE? HELPING INDIVIDUALS BENEFIT FROM THE INSIGHTS OF INTERDISCIPLINARY COLLABORATION"
Amy L. Griffin (Australia)
- "VISUAL REPRESENTATION OF GEOSPATIAL METADATA IN THE PROCESS OF SELECTING DATASETS"
Paula Ahonen-Rainio (Finland)
- "GEOVISUALIZATION DESIGN FOR EPIDEMIOLOGY: A FRAMEWORK"
Anthony C. Robinson (USA)
- "EXPLORATION OR COMMUNICATION: DEFINING EFFECTIVE VISUALISATIONS FOR SPATIAL DATA"
Xiaogang Chen (Australia) and Ian D. Bishop

- "THEMATIC RELEVANCE AND PERCEPTUAL SALIENCE OF DYNAMIC GEOVISUALIZATION DISPLAYS"
Sara Irina Fabrikant (USA) and Kirk Goldsberry

SESSION 4 "VR 2 –SYSTEM AND TECHNOLOGY"

- "ADVANCE IN MULTI-MEDIA MAPPING"
J. Raul Ramirez (USA)
- "THE POTENTIAL OF 3D-DISPLAYS FOR THE VISUALISATION OF GEO-VIRTUAL ENVIRONMENTS"
Alexander Schrott (Austria) and Andreas Riedl
- "VIRTUAL MODELS COMBINING CARTOGRAPHY AND HIGH-RESOLUTION TEXTURE MAPPED AND RANGE DATA"
Pedro Ortiz (Spain) and Hector Sánchez
- "VISUALIZATION THROUGH GEOVRML: A COMPROMISE BETWEEN MEASUREMENT AND REPRESENTATION"
Gonzalez Aguilera, Diego (Spain), Javier Gómez Lahoz, Benjamín Arias Pérez and Nilda Sánchez Martín

SESSION 5 "NAVIGATING AND EXPLORING 3D SCENES"

- "REAL-TIME VISUALIZATION OF GEOSPATIAL FEATURES THROUGH THE INTEGRATION OF GIS WITH A REALISTIC 3D TERRAIN DYNAMIC VISUALIZATION SYSTEM"
Luis Hernández (Spain), Javier Taibo, Antonio Seoane, Rubén López, Alberto Jaspe and Alberto Varela
- "MOVING BEYOND NOVELTY: CREATING EFFECTIVE 3D FLY-OVER MAPS"
Dr. Mark Harrower (USA) and Benjamin C. Sheesley
- "INSTITUTIONAL CARTOGRAPHY VISUALIZER OF THE NATIONAL GEOGRAPHICAL INSTITUTE OF SPAIN"
Manuel Carbajo (Spain) and Alfredo del Campo
- "INTERACTIVE REAL-TIME VR CARTOGRAPHY"
Manfred F. Buchroithner (Germany), Matthias Gindele, Klaus Habermann and Bernd Hetze

SESSION 6 "SPACE-TIME VISUALIZATION"

- "DYNAMIC VISUALIZATION VARIABLES IN ANIMATION TO SUPPORT MONITORING OF SPATIAL PHENOMENA"
Connie A. Blok (The Netherlands)
- "SEMANTIC AND PRAGMATIC ASPECT OF THE TRANSMITTING INFORMATION BY ANIMATED MAPS"
Tomasz Opach (Poland)
- "GEO-VISUALIZATION FOR THE ANALYSIS OF SPATIAL TIME SERIES:FILLING GAPS IN THE TASK SPACE COVERAGE"
Gennady Andrienko (Germany) and Natalia Andrienko
- "ENTITIES-CARTOGRAPHIC METHOD OF SELECTION OF STATIC AND DYNAMIC VARIABLES FOR TEMPORAL CARTOGRAPHIC ANIMATIONS"
Dariusz Dukaczewski (Poland)

SESSION 7 "EXPLOITARY GEOVISUALIZATION"

- "VISUALIZING THE ICA: A CONTENT-BASED APPROACH"
Andre Skupin (USA) and Charles de Jongh
- "APPROACHES OF USER-SPECIFIC EXPLORATIVE GEOVISUALISATION"
Swienty, Olivier (Germany)
- "INTERACTIVE CARTOGRAPHIC ANIMATIONS – ANALYSIS FUNCTIONALITY IN A WEB ENVIRONMENT"
Terje Midtbø (Norway) and Roman Boros
- "GEOVISUALIZING THE SWARMING CITY: A BOUQUET OF ALTERNATIVES BASED ON GIS"
Arnaud Banos (France), Bruno Jobard and Julien Lesbegueries

SESSION 8 "VR 1 – APPLICATIONS"

- "TOURING «GREAT ROADS» OF HUMAN ACTIVITY: USING GEOGRAPHIC VISUALIZATION TO EXPLORE HISTORICAL LANDSCAPES"
R. Maxwell Baber (USA) and James S. Brown
- "ON SOME 4-D VISUALIZATION STRATEGIES IN ELECTRONIC MAP"
Qingyun Du (China) and Wenping Jiang

- "WEB3D TECHNIQUES AND THEIR CARTOGRAPHICAL SUITABILITY."
Wolfgang Henebichler (Austria)
- "EXPLORING FUTURE LANDSCAPES USING VIRTUAL ENVIRONMENTS"
Craig Feuerherdt (Australia) and William Cartwright
- "ALTERNATIVE 3D VISUALISATION METHODS IN VIRTUAL CARTOGRAPHY: THE CASE OF ANCIENT TEMPLE OF POSEIDON, SOUNIO, GREECE"
Lazaros Dinakis (Greece), Panagiotis, tziaxris and Nicolas Karanikolas

SESSION 9 "3D – THEORY, METHODS & IMPLEMENTATION"

- "EXPRESSIVE VIRTUAL 3D CITY MODELS"
Juergen Doellner (Germany) and Henrik Bucholz
- "A VISUALIZATION METHOD BASED ON FOVEATION"
Arzu Coltekin (Finland)
- "USING COMPUTER GAMING TECHNOLOGY TO EXPLORE HUMAN WAYFINDING FOR NAVIGATING URBAN LANDSCAPES"
Tim Germanchis (Australia), William Cartwright and Christopher Pettit
- "YTHANVIEW' VISUALIZING AND ESTUARY AND VIRTUAL FIELDWORK AT THE YTHAN ESTUARY, SCOTLAND, UK"
David R. Green (United Kingdom) and Katarzyna Bojar
- "COMMUNICATING FLOOD RISKS TO THE PUBLIC USING A DIGITAL VISUALIZATION PROCESS"
Fatima Basic (Australia), William Cartwright and John Handmer.

THEME 16: HISTORY OF CARTOGRAPHY.

SESSION 1

- "ARTHUR H. ROBINSON AND THE FABRIC OF CARTOGRAPHY"
Judy M. Olson (USA)
- "TWO HUNDRED YEARS OF CARTOGRAPHY OF CATALONIA MADE IN FRANCE: INTENTIONS AND OUTCOMES (1633-1835)"
Carme Montaner (Spain)

- "NATIONAL TOPOGRAPHIC MAPPING IN THE DIGITAL TRANSITION"
Dalia Varanka (USA)
- "THE HISTORY OF MAPPING OF KYOTO-BETWEEN PICTURE AND SURVEY"
Koji Hasegawa (Japan)

SESSION 2

- "POTENTIAL OF VIRTUAL 3D-FACSIMILES – EXEMPLIFIED BY THE EARTH GLOBE OF GERARD MERCATOR (1541)"
Florian Hruby (Austria), Irmgard Plank and Andreas Riedl
- "THE LEGACY OF COLONIALISM ON MAPPING IN AFRICA: WITH FOCUS ON NIGERIA."
Dr. O. Olomo (United Kingdom)
- "NEW DATA ON RUSSIAN USE OF CAPTAIN MALASPINA'S EXPEDITION(1791-1793) MATERIALS FOR IMPROVING OF THE MAPS IN THE ATLAS OF THE SOUTHERN SEA (KRUZENSHTERN, 1823-1826)"
Alexey Postnikov (Russia)
- "MAPPING OF CZECH LANDS DURING THE 18TH CENTURY"
Miroslav Miksovsky (Czech Republic) and Ruzena Zimová

SESSION 3

- "WOMEN IN MARINE CARTOGRAPHY OF RUSSIA"
Valentin G. Smirnov (Russia)
- "THE EARLIEST MAPS OF THE CAMINO DE SANTIAGO"
Prof. Dr. Agustin Hernando (Spain)
- "THE HISTORICAL EVOLUTION OF THE WAYS IN SPAIN: A CARTOGRAPHIC ANALYSIS BASED IN GIS"
Manzano-Agugliaro, Francisco (Spain) and Gil Manzano-Agugliaro
- "GROWTH AND DEVELOPMENT OF INDIAN CARTOGRAPHY IN HISTORICAL PERSPECTIVE"
Dr. K.P. Singh (India) and Dra. Asha Singh

SESSION 4

- "THE HISTORY OF CARTOGRAPHY IN BRAZIL: A FIELD OPEN TO RESEARCH"
Maria do Carmo Andrade Gomes (Brazil)

Technical Sessions

Oral Presentations

- "THE ORIGIN FOR LONGITUDE AS PART OF THE ORBIS TERRARUM AND JUBA II'S EXPEDITION TO THE FORTUNATE ISLANDS" Antonio Santana Santana (Spain) and Trinidad Arcos Pereira
- "A MAP AND ITS COPY OF SIMON VAN DER STEL'S EXPEDITION TO NAMAQUALAND (1685): AN ENQUIRY INTO THEIR VISUAL VALUES" Estelle Alma Maré (South Africa) and Pascal Dubourg Glatigny
- "THE "ALBUM ROYAUME DE NAPLES": A EXAMPLE OF THE SPANIARD MILITARY CARTOGRAPHY IN THE EARLY 18TH CENTURY" San Antonio, Carlos de (Spain)

SESSION 5

- "THE CARTOGRAPHY IN THE STATE OF THE RIO GRANDE DO SUL; FIVE HUNDRED YEARS OF HISTORY" Sergio Florencio de Souza (Brazil), Jorge Luiz Barbosa da Silva, Ronaldo dos Santos da Rocha and Vivian da Silva Celestino
- "A «CARTOGRAPHICAL» RECONSTRUCTION OF SPAIN IN THE XVI CENTURY FROM THE COSMOGRAPHY OF HERNANDO COLON" Dr. Eng. Fernando Aranaz del Río (Spain)
- "THE ATLAS OF EL ESCORIAL" Antonio Crespo Sanz (Spain)
- "THE HISTORY OF FORMING AND STUDY OF THE CARTOGRAPHIC COLLECTIONS OF THE RUSSIAN STATE LIBRARY" Liudmila Zinchuk (Russia) and Natalia Kotelnikova
- "BRITISH MILITARY SURVEYORS IN PALESTINE AND SYRIA, 1840-1841" Goren, Haim (Israel).

THEME 17: WORLD AND AERONAUTICAL CARTOGRAPHY AND MILITARY MAPPING.

SESSION 1

- "PROGRESS TOWARDS THE COMPLETION OF GLOBAL MAP: A NEW INTERNATIONAL MAP OF THE WORLD" D. R. Fraser Taylor (Canada)

- "CARTOGRAPHIC DEVELOPMENTS FOR MILITARY SITUATION AWARENESS" Ferland, Yaïves (Canada)
- "GEOGRAPHIC SUPPORT DURING OPERATIONS" Miguel C. Cortés (Spain)

SESSION 2

- "CARTOGRAPHIC VISUALIZATION OF MILITARY MAPS AT MID-SCALE" Abdulvahit Torun (Turkey) and Ali Ulubay
- "THE QUALITY OF NEWSPAPER CARTOGRAPHY IN WARTIME: THE UNITED STATES OF AMERICA AGAINST IRAQ." Nele De Wolf (Belgium), Wannes Van der Gucht, Liesbeth Vansteenvoort, Marijke Brondeel and Philippe De Maeyer
- "THE MAP MAKING OF THE FORMER JAPANESE ARMY WITH AIR PHOTOGRAPHS IN ASIA- PACIFIC AREAS" Shigeru KobaYashi (Japan), Rie Watanabe and Kunitada Narumi.

THEME 18: MOUNTAIN CARTOGRAPHY.

SESSION 1

- "TERRAIN ASSESSMENT IN A MOUNTAINOUS ENVIRONMENT – A SWISS AUSTRIAN CONTEMPLATION" Karel Kriz (Austria)
- "PERSPECTIVE VIEWS AND PANORAMAS IN PRESENTATION OF RELIEF FORMS IN POLAND" Waldemar Rudnicki (Poland)
- "INVESTIGATING THE EFFECTS OF 2D AND 3D REPRESENTATIONS ON HUMAN WAYFINDING IN MOUNTAINS" Michael Wood (United Kingdom), David Pearson, David Miller and Colin Calder

SESSION 2

- "MAPPING FOOD SUPPLY AND RURAL ISOLATION IN THE ANDEAN MOUNTAINS OF COLOMBIAN" Mario A. Giraldo (USA)
- "DEVELOPMENT OF A WEB-MAPPING EXPERT TOOL FOR HAZARD ASSESSMENT IN ALPINE VALLEYS" Jorg Trau (Switzerland), Boris Stern, Radu Gogu and Lorenz Hurni

- "PHOTGRAMMETRIC METHODS FOR THE OBTAINING OF DETAILED CARTOGRAPHY IN ACTIVE MOUNTAIN GLACIERS." José Juan de Sanjosé Blasco (Spain), Alan D.J. Atkinson Gordo, Nuria Andrés de Pablo and Ferran Salvador Franch
- "GEOWARN - A WEB-BASED ATLAS INFORMATION SYSTEM FOR VOLCANIC MONITORING" Lorenz Hurni (Switzerland), Radu Gogu, Bernhard Jennym Andrea Terribilini and Helen Freimark

THEME 19: TOURIST CARTOGRAPHY.

SESSION 1 "HIKING MAPS"

- "EVOLUTION OF THE TOURIST CARTOGRAPHY IN PERU" Maria Luisa Mori Segura (Peru) and Jose Barreda Sandoval
- "PLANNING HIKES VIRTUALLY – HOW USEFUL ARE REALISTIC 3D VISUALIZATIONS?" Susanne Bleisch (Switzerland)
- "INTERACTIVE HIKING MAP OF YOSEMITE NATIONAL PARK" Juliana Williams (Switzerland)
- "DESIGN OF THE OPTIMUM CONTENT AND THE SYMBOL CODE OF BIKING MAPS" Emil Kudrnovsky (Czech Republic); Ales, Letal and Pavel, Sedlak

SESSION 2 "NEW DEVELOPMENTS"

- "TOURISTIC CARTOGRAPHY OF I.C.V." Margarita Caletrio Arcos (Spain)
- "DESIGN AND IMPLEMENTATION OF TOURIST WEBGIS BASED ON J2EE" Wang Jizhou (China) and Li Chengming
- "NEW DEVELOPMENT ON TOURIST CARTOGRAPHY" Bin Li (China) and Ji-ping Liu
- "TOURISTIC MAPS. THE CHALLENGE OF USING ART IN THE DIGITAL ERA" Sergio Ricardo Fiori (Brazil)

SESSION 3 "IMAGES FOR TOURIST MAPS"

- "REMOTE SENSING DATA APPLIED TO REALISTIC TERRAIN DEPICTION ON TOURIST MAPS." Jacek Drachal (Poland)

- “THE ESSENTIAL IMAGE IS THE GUIDE”
Richard D. Ingalls
- “THE SCIENTIFIC FUNDAMENTALS OF
CREATING THE ROAD MAPS FOR TOURIST’S
APPOINTMENT.”
Tamara V. Vereshchaka (Russia) and Nina A.
Larichkina
- “GIS OF THE CROATIAN CITIES AT THE
ADRIATIC COAST”
Stanislav Franges (Croatia) and Mr. Sc.
Robert Zupan

THEME 20: CARTOGRAPHY AND CHILDREN. EDUCATIONAL PRODUCTS.

SESSION 1 “NEW CHALLENGES FOR CARTOGRAPHY AND CHILDREN”

- “CARTOGRAPHIC VISUALIZATION AND THE
TEACHING OF GEOGRAPHY”
Celia Regina Fernandes Vianna (Brazil) and
Paulo Marcio Leal de Menezes
- “IDENTIFYING SPATIAL COMPETENCE
OUTCOMES FOR SOUTH AFRICAN SECONDARY
SCHOOLS”
Lorraine Innes (South Africa)
- “AGENDA 21, CARTOGRAPHY AND CHILDREN
IN A CHANGING WORLD”
Jacqueline M. Anderson (Canada)
- “CARTOGRAPHIC LANGUAGE AND
PRODUCTION OF KNOWLEDGE: TEACHING
LOCAL GEOGRAPHY WITH A MUNICIPAL
SCHOOL ATLAS”
Rosângela Doin de Almeida (Brazil)

SESSION 2 “GIS, NEW CARTOGRAPHIC TECHNOLOGY AND CHILDREN”

- “BRINGING GIS TO SCHOOLS – CHALLENGE
OR CHILDS PLAY?”
Ann Olivier (South Africa)
- “PRIMARY CHILDREN’S COLLABORATIVE
CARTOGRAPHY: COMMUNICATION AND
MAPPING PROCESSES.”
David Owen (United Kingdom)

- “CARTOGRAPHY AND CHILDREN.
EDUCATIONAL PRODUCTS. USING MOBILE
PHONES AND POCKET PCS FOR CREATING,
DELIVERING AND RETRIEVING CONTENT ON
THE FLY BASED ON MOBILE WEB
BROWSERS.”
Daniel Weiss (Spain)
- “VISUALIZATION OF AN URBANIZING AND
GLOBALIZING WORLD WITH THE CITYSCAPE
METAPHOR”
Kaori Ito (Japan), Hiroshi Ota, Tomohiko
Okabe and Keisuke Fukushima
- “TEACHERS’ OPINIONS OF THE
INCORPORATION OF GIS IN THE UPPER
SECONDARY SCHOOLS IN FINLAND”
Ilkka Ratinen (Finland) and Tino Johansson

SESSION 3 “EDUCATIONAL CARTOGRAPHY”

- “LEGIBILITY AND LEARNING EFFECTIVENESS
OF THE “NATIONAL ATLAS OF ISRAEL FOR
SCHOOLS»”
Mrs. Tamar Soffer (Israel), Prof. Arie
Shachar and Shaul Tzionit
- “USING OPEN SOURCE TECHNOLOGIES TO
PROVIDE A TEMPLATE FOR PUBLISHING
SCHOOL ATLASES ON THE WEB”
Cristhiane da Silva Ramos (Brazil), William
Cartwright and Rosângela Doin de Almeida
- “EDUCATIONAL CARTOGRAPHY: MAPPING A
THEORETICAL FRAMEWORK”
Patrick Wiegand (United Kingdom)
- “CHILDREN’S CARTOGRAPHY: PAST, PRESENT
AND FUTURE”
Karen M. Trifonoff (USA)
- “«MULTIMEDIA GEOGRAPHIC SCHOOL ATLAS”
BUILDING CITIZENSHIP AMONG CHILDREN
AND YOUTH”
Herben Kally de Almeida Rex (Brazil),
Helena Kyioe ito and Wagner Fontes Barreto

SESSION 4 “TEACHING AND LEARNING WITH MAPS”

- “CHILDREN’S PREFERENTIAL MODES OF
SPATIAL COMMUNICATION”
Tammy Kwan (Hong Kong) and Ms. Eva Chan

- “READING THEMATIC MAPS IN ARGENTINE
AND HUNGARIAN SCHOOLS: EXPERIENCES
IN BOTH COUNTRIES”
José Jesús Reyes Nuñez (Hungary),
Juliarena de Moretti, Cristina Esther, Ana
María Garra, Erika Gallé, María Victoria Alves
de Castro and Anabella Soledad Dibiasi
- “ARGENTINE LITERATURE THROUGH MAPS: A
NEW DIDACTIC STRATEGY”
Ana María Garra (Argentina), Cristina E.
Juliarena de Moretti and Carmen Alicia Rey
- “A CONTROLLED MAPPING EXPERIMENT ON
TEACHING EARTH SCIENCE CONCEPTS”
Shimshon Livni (Israel) and Varda Bar
- “GEOGRAPHY EDUCATION AND THE MAP-
MAKING IN THE ELEMENTARY SCHOOL”
Prof. Sonia María Vanzella Castellar – PhD
(Brazil)

THEME 21: GENDER AND UNDER- REPRESENTED GROUPS AND CARTOGRAPHY.

SESSION 1

- “GENDER COMPARISON OF UNDERSTANDING
AND INFORMATION EXTRACTING FROM
SCHOOL ATLASES IN BULGARIAN SCHOOLS”
Temenoujka Bandrova (Bulgaria)
- “TWO BARRIERS TO CARTOGRAPHICAL
PRESENTATION OF “UNDER-REPRESENTED”
GROUPS WITHIN THE GLOBAL POPULATION”
Ewa Krzywicka-Blum (Poland)
- “WOMEN IN CARTOGRAPHY (BOTSWANA
CASE)”
Ms Lucy Mmasepatela Phalaagae
(Botswana)

SESSION 2

- “COMMUNITY MAPPING: CHANGING
LIFESYLES THROUGH PARTICIPATION”
Chris Perkins (United Kingdom)
- “THE ROLE OF THE WOMAN IN THE
NATIONAL ATLAS OF SPAIN”
M^a Dolores Abad (Spain) and Pilar
Sánchez-Ortiz

Technical Sessions

Oral Presentations

- “THE RESEARCH ON REPRESENTATION OF WOMEN MAP”
YuDongmei (China), DongLuohai and ZhangLiguo

THEME 22: MAPS FOR THE BLIND AND VISUALLY IMPAIRED.

SESSION 1 “TACTILE MAPS: USE AND PRODUCTION”

- “FEELING OUR WAY: TACTILE MAP USER REQUIREMENTS- A SURVEY”
Jonathan Rowell (United Kingdom) and Simon Ungar
- “LANDMARKS FOR NAVIGATORS WHO ARE VISUALLY IMPAIRED”
Bruce Tsuji (Canada) and Dr. Gitte Lindgaard
- “NEEDS OF THE TACTILE MAP MAKERS”
Amy Lobben (USA)
- “TACTILE MAPS FOR PRESCHOOL CHILDREN WITH VISUAL IMPAIRMENT: THE CURRICULUM”
Helinä Hirn (Finland)
- “TACTILE MAP PRODUCTION FOR THE VISUALLY IMPAIRED USER: EXPERIENCES IN LATIN AMERICA”
Carla Cristina Reinaldo Gimenes de Sena (Brazil) and Waldirene Ribeiro do Carmo

SESSION 2 “TACTILE MAPPING: PERCEPTUAL & COGNITIVE APPROACHES”

- “‘TACTUALIZATION’ OF SPATIAL INFORMATION: TOWARDS A PERCEPTUAL-COGNITIVE APPROACH TO MAP DESIGN”
Simon Ungar (United Kingdom), Jonathan Rowell, Sandra Jehoel and Don McCallum
- “A SCIENTIFIC APPROACH TO TACTILE MAP DESIGN: USING CARTOGRAPHIC SKELETONS TO PROVIDE A QUICK OVERVIEW OF A MAP.”
Sandra Jehoel (United Kingdom), Jonathan Rowell and Simon Ungar

- “THE UNIQUENESS OF SYMBOL PROFILE AS A DESIGN VARIABLE IN TACTILE CARTOGRAPHY”
Snir Dinar (United Kingdom) and Jonathan Rowell
- “OBTAINING GEOGRAPHICAL INFORMATION FROM A VIRTUAL MAP WITH A HAPTIC MOUSE”
Gunnar Jansson (Sweden) and Patrik Pedersen
- “MAPS FOR THE BLIND AND VISUALLY HANDICAPPED”
Brig V Singhal (India)

SESSION 3 “TACTILE MAPPING: TECHNOLOGICAL INNOVATION”

- “PRODUCTION OF COMPUTER-AIDED TACTILE MAPS FOR THE BLIND”
Servet Ozagac (Turkey)
- “A MAP-READER SOFTWARE FOR VISUALLY IMPAIRED PEOPLE”
Carlos Busnadiego Gutiérrez (Spain)
- “USING VIRTUAL SPATIALIZED OUTPUT TO AUGMENT AND IMPROVE THE USER INTERFACE OF GPS NAVIGATION SYSTEMS FOR PEOPLE WHO ARE BLIND.”
James R. Marston (USA), Jack M. Loomis, Reginald G. Golledge and Roberta L. Klatzky
- “EXTENDING TACTILE MAP DISPLAYS INTO MULTIMODAL AUDITORY AND HAPTIC INTERFACES”
R. Dan Jacobson (Canada)

THEME 23: PLANETARY CARTOGRAPHY.

SESSION 1 “PLANETARY MAPS AND THEIR REVISION”

- “PRECISE TOPOGRAPHIC AND THEMATIC MAPS OF PLANET MARS”
Prof. Dr.-Ing. Joerg Albertz (Germany), G. Neukum, Stephan, Harmut and Marita Wählisch

- “EXPERIENCE WITH SHAPE-FROM-SHADING FOR THE REFINEMENT OF SPATIAL DATA FOR MARS CARTOGRAPHY FROM MARS EXPRESS HRSC IMAGERY”
Egon Dorrer (Germany), Helmut Mayer, Alexey ostrovskiy, Sergiy Reznik, Joerg Renter and Gerhard Neukum
- “PHOBOS AND DEIMOS – A NEW MAP IN THE SERIES OF MULTILINGUAL RELIEF MAPS OF TERRESTRIAL PLANETS AND THEIR MOONS”
Kira B. Shingareva (Russia), Bianna V. Krasnopevtseva, Sergei M. Leonenko, Maria E. Fleis, Manfred F. Buchroithner, O. Waelder and Philip Stooke
- “REMAPPING PHOBOS USING MARS EXPRESS HRSC / SRC IMAGES”
Thomas C. Duxbury (USA), Harald Hoffman, Juergen Oberst, Bernd Giese, R. Kirk and G. Neukum

SESSION 2 “PLANETARY THEMATIC MAPPING”

- “GEOLOGIC MAPPING OF VOLCANIC AND AEOLIAN FEATURES ON MARS USING THEMIS DATA”
James R. Zimbelman (USA) and Kelly M. Shockey
- “DATA AND METHODOLOGY USED ON THE GEOLOGICAL CARTOGRAPHY OF THE ELYSIUM REGION, MARS.”
Miguel Angel de Pablo (Spain), James Dohm and Álvaro Márquez
- “NEW ELEMENTAL ABUNDANCE MAPS INTEGRATING OPTICAL AND GEOCHEMICAL DATA ON THE LUNAR SURFACE”
Vadym Kaydash (Ukraine), Yuriy Shkuratov, Vitaliy Omelchenko and Dmitry Stankevich
- “ANALYSIS OF MERCURIAN CRATERS BY MEANS OF CARTOGRAPHIC METED”
Kozlova Ekaterina Anatolyevna (Russia), Sitnikov B.D., Rodionova J.F. and Shevchenko V.V.

SESSION 3 “GIS FOR PLANETARY MAPPING AND EDUCATION”

- “GIS «SOLAR SYSTEM PLANETS» CASE STUDY OF THE ARCGIS PLANET DATA MODE”
Elena Cherepanova (Russia), S. M. Leonenko, I.P. Karachevtseva and K.B. Shingareva

- “ARCGIS AND GRASS GIS FOR MARS DATA”
Peter Saiger (Germany), Marita Wählisch, Frank Scholten, Klaus Gwinner and Ralf Jaumann
- “COMPILATION OF A GLOSSARY OF INTERNATIONAL TERMS RELATED TO PLANETARY CARTOGRAPHY”
Kira Shingareva (Russia), James R. Zimbelman and Egon Dorner
- “PLANETARY MAPS IN EDUCATION”
Henrik Hargitai (Hungary), Sz. Bérczi and K. Shingareva

THEME 24:

RESEARCH AND DEVELOPMENT: NEW PRODUCTS AND CARTOGRAPHIC SYSTEMS.

SESSION 1

- “INTEROPERABILITY GPS AND GALILEO: WHERE WE ARE? NEEDS AND BENEFITS FOR CARTOGRAPHY.”
Santiago Hernández Ariño (Spain) and Daniel Cocho González
- “LIDAR APPLICATIONS TO ROCK FALL HAZARD ASSESMENT IN ALL DE NÚRIA”
Antonio Ruiz (Spain), María Navarro and Georgina Arnó
- “USING CAC AND GIS TO MAP THE PREVALENCE OF POVERTY AND ACCESS TO BASIC SERVICES ACROSS THE REGION OF THE WESTERN CAPE PROVINCE”
Rajendran Pillay (South Africa)
- “TOWARDS A GEOGRAPHIC INFORMATION SYSTEM ENVIRONMENT FOR MAPPING THE WORLDS WATER RESOURCES”
Gernot Katzlberger (Austria), Alexander Pucher and Karel Kriz
- “CARTOGRAPHY DATABASE AND GIS: NOT ENEMIES, BUT ALLIES!”
Paul Hardy (USA) and Thierry Kressmann.

SESSION 2

- “A MATCHING APPROACH FOR THE INTEGRATION, CHANGE DETECTION AND ADAPTATION OF HETEROGENEOUS VECTOR DATA SETS”
Guido von Goesseln (Germany)

- “WEB MAPSERVER DEVELOPMENT IN CONSIDERATION OF OGC STANDARDS”
Peter Sykora (Switzerland) and Hansruedi Bär
- “THE APPROPRIATENESS OF A MAP INTERFACE FOR MEDIASCAPE AUTHORING TOOLS”
Constance Fleuriot (United Kingdom), Lucy Wood, Morris Williams, Clodagh Miskelly, Owain Jones and Kirsten Carter
- “DTM GENERATION FROM LIDAR DATA FOR HIDRAULIC MODELS”
Alfonso Gómez (Spain), Javier Serrano, Daniel Casalprim

SESSION 3

- “THE MAKING OF A NATIONAL CORE GEO-INFORMATION DATASET. FROM CONCEPT TO VISUALISATION AND ONLINE DELIVERY”
Nico J. Bakker (The Netherlands)
- “AUTOMATED DERIVATION OF TOWN PLANS FROM LARGE SCALE DATA IN A CARTOGRAPHIC PRODUCTION SYSTEM”
Ingo Petzold (Switzerland), Dirk Burghardt and Matthias Bobzien
- “CARTA DIGITAL. SPANISH MILITARY GIS”
Julio Palacio (Spain)
- “NEW CARTOGRAPHIC PRODUCTS IN ENGINEERING APPLICATIONS”
Serafin López-Cuervo y Medina (Spain)

SESSION 4

- “GEOSPATIAL COMPONENT IN COGNITIVE GIS (CYBERCARTOGRAPHIC ASPECTS IN HUMAN-IN-THE-LOOP INTERACTIVE SYSTEMS)”
Gennady Gienko (Fiji Islands), Eugene Levin and Aleksander Zarnowski
- “MENTAL MAPPING OR “SOFT-GIS” IN URBAN PLANNING. GIS-BASED CARTOGRAPHIC INSPIRATION FOR PHYSICAL PLANNING”
Janos Szegö, PhD (Sweden)
- “MAPPING ON THE FLY: THE INTEGRATION OF USER-DEFINED MAP PROJECTION WITHIN DIFFERENT EXISTING PROJECTIONS IN AN OVERNATIONAL CONTEXT”
Luciano Surace (Italy), Virgilio Cima and Renzo Maseroli
- “THE MAPBEAN PROJECT”
Frank Hardisty (USA)

- “DIGITAL GLOBES – FROM VIRTUAL TO REAL”
Andreas Riedl (Austria)

SESSION 5

- “CARTOGRAPHIC SYMBOLS FOR LANDMINE HAZARDS AND HUMANITARIAN DEMINING”
John C. Kostelnick (USA), Jerome E. Dobson, Stephen L. Egbert and Matthew D. Dunbar
- “NAVIGATION IN SPACE, TIME AND TOPIC – INTERDEPENDENCIES OF SPATIAL, TEMPORAL AND THEMATIC NAVIGATION IN TWO DIMENSIONAL INTERACTIVE MAPS”
Andreas Neumann (Switzerland)
- “MAP SYMBOL BREWER – A NEW APPROACH FOR A CARTOGRAPHIC MAP SYMBOL GENERATOR”
Olaf Schnabel (Switzerland)
- “AN APPROACH TO COMPREHENSIVE FLEET MANAGEMENT BY MEANS OF A WEB SERVICES PLATFORM”
Antonio Hernández (Spain)

THEME 25:

HISTORY OF COLONIAL CARTOGRAPHY IN THE 19TH AND 20TH CENTURIES.

SESSION 1

- “COLONIAL CARTOGRAPHY OF THE NETHERLANDS EAST INDIES 1816-1942”
Ferjan Ormeling (The Netherlands)
- “SUMATRA UNVEILED. THE CONTRIBUTION OF THE GEOGRAPHICAL SOCIETY OF THE NETHERLANDS IN THE MAPPING OF SUMATRA, 1877-1879”
Dr. Paul van den Brink (The Netherlands)
- “«PETERMANN'S GEOGRAPHISCHE MITTEILUNGEN» AND THE HIGH MOUNTAIN MAPPING OF ASIA IN THE 19TH CENTURY”
Imre Josef Demhardt (Germany)
- “AUSTRALIAN PLATES IN JOHN ARROWSMITH'S LONDON ATLAS OF UNIVERSAL GEOGRAPHY”
Mrs Dorothy Prescott (Australia)

Technical Sessions

Oral Presentations

SESSION 2

- “HENRY MORTON STENLEY – EXPLORATION AND MAPPING OF THE CONGO RIVER (1874-1877)- SOLVING THE LAST GREAT MYSTERY OF AFRICAN CONTINENT-“
PhD Mirela Slukan Altic (Croatia)
- “BOUNDARY SURVEYS IN THE LATE 19TH AND EARLY 20TH CENTURIES”
Peter Collier (United Kingdom)
- “THE EVOLUTION OF THE CARTOGRAPHY OF KATANGA (D.R.CONGO) DURING THE BELGIAN COLONIAL PERIOD.”
De Maeyer, Philippe (Belgium), Vanoutrive Thomas, Liesbeth Vansteenvoort, Cristophe Collard and De Temmerman Leen
- “MAPPING OF MAIN ARTERY NETWORK AND COLONIAL PORTERAGE IN CAMEROON (1900-1940)”
Tchindjang Mesmin (Cameroon), Joseph Tanga Onana, Zephania Nji Fogwe, Athanase BopdaCornelius Mbifung Lambi and David Esseck

SESSION 3

- “THE ARROWSMITH AND S.D.U.K. MAPS OF SOUTH AFRICA OF 1834 – SOURCE MATERIAL AND CARTOGRAPHICAL SIGNIFICANCE”
Elri Liebenberg (South Africa)
- “THE IMPERIAL MAP CAPE COLONY AND LATER MILITARY MAPS OF THE CAPE COLONY, SOUTH AFRICA.”
Dr Christopher Board (United Kingdom)
- «RETHINKING THE CARTOGRAPHY OF THE SOUTH AFRICAN REPUBLIC, 1850-1899»
Lindsay Frederick Braun (USA)
- “MAPPING THE NAMIB-DESERT: THE “BERGRECHTSKARTE” OF 1920”
Jana Moser (Germany)

THEME 26:

OTHER THEMES: CARTOGRAPHY AND ADVERTISING, MAPS IN THE MEDIA, CENSUS CARTOGRAPHY, CADASTRAL MAPS, THREE DIMENSIONAL MAPPING, NEW CONCEPTS IN CARTOGRAPHIC SYMBOLOGY, SPACE AND TIME IN GIS, TOPONYMY.

SESSION 1 “TOPONYMY AND MAPS”

- “TOPONYMY THESAURUS . ITS CARTOGRAPHIC INTEGRATION IN A BILINGUAL REGION”
Antón Santamarina Fernández (Spain), Gonzalo Navaza Blanco, Xermán García Cancela and Fernando García Pazos
- “AUTOMATIC INFORMATION SEARCHING SYSTEM OF THE STATE CATALOG OF GEOGRAPHICAL NAMES.”
Vladimir Zhukovsky (Russia) and Vladimir Boginsky
- “TOPONYMIC DATABASES ON DIGITAL CARTOGRAPHY. TOOLS AND UTILITIES.”
Miquel Parella (Spain)
- “TOPONYMY STRUCTURATION FOR MEANING RETRIEVAL”
Ferland, Yaïves (Canada)
- “THE THEMATIC MAPS DERIVED OF THE MICROTOPYMY AS GEOGRAPHIC INFORMATION SOURCE.”
Raquel Rodríguez Gomila, (Spain) and Miquel Grimalt Gelabert

SESSION 2 “TIME AND MAPS”

- “GEOREFERENCING THE 1930’S FLIGHT OF RUIZ DE ALDA OVER THE SEGURA RIVER BASIN”
Blanca Urmeneta (Spain) and Arturo Barberena
- “MAPPING THE LAST FORTY YEARS OF SWEDISH URBAN DEVELOPMENT”
Janos Szegö, PhD (Sweden)

- “VISUALIZATION OF EVENTS IN TIME-SERIES OF REMOTE SENSING DATA”
Ulanbek Turdukulov (The Netherlands) and Menno-Jan Kraak
- “TIMELINES, TEMPORAL RESOLUTION, TEMPORAL ZOOM AND TIME GEOGRAPHY”
Menno-Jan Kraak (The Netherlands)

SESSION 3 “CENSUS AND BOUNDARIES”

- “CENSUS CARTOGRAPHY; A CASE STUDY OF KENYA CENSUS TAKING”
Odhiambo E.A (Kenya) and Matheka Ndilinge
- “BOUNDARIES. FIELDWORKS AND GIS MANAGEMENT.”
Marc Torres (Spain)
- “MAP IMAGES IN AMERICAN POLITICAL RHETORIC”
Robert M. Edsall (USA)
- “FROM THEORY TO PRACTICE: GIS TECHNOLOGY IN THE POPULATION CENSUSES CARTOGRAPHY DEVELOPMENT”
Alicia Abayian (Uruguay)

SESSION 4 “GEOPHYSICAL AND GEOLOGICAL MAPS AND TOPOGRAPHICAL NETWORKS”

- “GEOPHYSICAL MAPS OF SPAIN”
Martínez Solares, J.M. (Spain), A. Gil, I. Socías, J. Mezcuca, A.J. Martín Martín and V. Marín
- “SPANISH GEOLOGICAL MAPPING AT SCALE 1:50.000: FROM THE PAPER TO THE GEOINFORMATICS.”
María J. Iniesto Alba (Spain)
- “CHARACTERISTICS OF SPANISH TOPOGRAPHICAL AIRPORT NETWORK”
Alfonso López-Pantoja Lamarca (Spain), Manuela Suárez Suárez and Teresa Aranda Molina
- “THE CONSTRUCTION OF THE NATIONAL IMAGERY BANK”
Ing. Douglas Alberto Cristancho V (Colombia)
- “A NEW APPROACH FOR REFINING THE GLOBAL STRATIGRAPHIC CHART”
J.-M. Pelle (Belgium), Ph. Rossi, Ph. De Maeyer, M. Brondeel

SESSION 5 "PROPERTY MATTERS"

- "THE LAND REGISTRY AS AN INSTRUMENT OF IDENTIFICATION AND PROTECTION OF THE PUBLIC PROPERTY"
Jorge Requejo. (Spain)
- "USE OF DIGITAL HISTORICAL MAPS IN THE PROPERTY FORMATION OF SWEDEN"
Ewa Qvist (Sweden)
- "COMPILING, ORGANIZING, STRUCTURING AND PUBLISHING IN THE INTERNET THE URBAN PLANNING OF THE WHOLE GALICIA REGION"
José Luís Álvarez Vicente (Spain), Alberto Redondo Porto and Josep Fargas
- "FAST AND LIABLE CARTOGRAPHY UPDATE USING EGNOS AND GALILEO"
M. Toledo et al (Spain)
- "SITMUN PROJECT (MUNICIPAL TERRITORIAL INFORMATION SYSTEM)"
Carlos Zañartu Bezanilla (Spain)

THEME 27: ORIENTEERING MAPS.

SESSION 1

- "MAPPING STANDARD FOR SPRINT ORIENTEERING: STANDARDIZED COMPETITION MAPS FOR URBAN, PARK AND FOREST AREAS"
László Zentai (Hungary)
- "ORIENTEERING MAPS IN SLOVENIA"
Dusan Petrovic (Slovenia)
- "THE ORIENTEERING MAPS PRODUCTION: QUALITY CONTROL"
Angel Luis Muñoz Nieto (Spain), Miguel Herrero Matías and Mario Vidal Triquell
- "ORIENTEERING MAPS OF VIENNA – DATA ACQUISITION AND CARTOGRAPHIC DATA MODELLING"
Robert Ditz (Austria) and Georg Gartner

THEME 28: SPATIO-TEMPORAL MODELLING AND VISUALIZATION.

SESSION 1

- "A FRAMEWORK FOR INTERACTIVE SEARCHING AND MAPPING OF PERSONAL SPATIAL INFORMATION"
Yoh Shiraishi (Japan) and Masatoshi Arikawa
- "TIME AND MAPS"
Yedendra Babu Shrinivasan (The Netherlands) and Menno-Jan Kraak
- "MOBLOG BASED MAPPING WITH TRACK-BACKS ON SPATIO-TEMPORAL RELATIONS"
Masatoshi Arikawa (Japan), Hayashi Toru and Sezaki Kaoru
- "CLUSTERING DYNAMIC MAP OBJECTS BASED ON DENSITY MEASURES"
Emmanuel Stefanakis (Greece)

THEME 29: EARLY WARNING AND RISK MANAGEMENT.

SESSION 1

- "PREPARING AN ANSI STANDARD FOR EMERGENCY AND HAZARD MAPPING SYMBOLOGY"
Ute J. Dymon (USA)
- "DISASTERS MAPPING IN ALGERIA AND MANAGEMENT USING G.I.S AND REMOTE SENSING TECHNOLOGIES"
Youcef Smara (Algiers), Aichouche Belhadj-Aissa and Mostefa Belhadj-Aissa
- "USING REMOTE SENSING AND GIS FOR GLOBAL ASSESSMENT OF FIRE DANGER"
Emilio Chuvieco (Spain)
- "MAPS FOR COMPREHENSIVE RISK MANAGEMENT"
Dr. Doris Dransch (Germany) and Dr. Ulrich Walz

SESSION 2

- "ENVIRONMENTAL MAPS' SERVER"
Jiri Hradec (Czech Republic)
- "THE DEVELOPMENT OF A SPATIAL FRAMEWORK TO IMPROVE SERVICE DELIVERY TO ORPHANS AND OTHER CHILDREN MADE VULNERABLE BY HIV/AIDS IN KWAZULU-NATAL, SOUTH AFRICA"
Susan Erskine (South Africa)
- "IMPROVEMENT OF FIRE RISK ASSESSMENT IN TUNISIA BY FLAMMABILITY MAPPING AT A REGIONAL SCALE USING AERIAL PHOTOS AND GIS"
Hedia Chakroun (Tunisia), Z. Lili Chebaane, K. Abdelmoula and A. Bchini
- "A GIS TOOL FOR THE EVALUATION OF THE SEISMIC RISK : APPLICATION TO THE SEISMIC RISKS OF ALGIERS."
Abdat Nadia (Algeria), Zaia Alimazighi, Toufik Allili and H. Beljoudi

SESSION 3

- "HISTORICAL CARTOGRAPHY FOR NATURAL HAZARDS"
Paule-Annick Davoine (France), Jérôme Gensel and Aurélie Arnaud
- "HISTORICAL MAPS PROMOTE RECENT FLOOD RISK RESEARCH –THE CASE OF THE UPPER ELBE RIVER"
Ulrich Schumacher (Germany) and Sabine Witschas
- "POVERTY MAPPING – A CASE STUDY OF KENYA"
Odhiambo Emma A. (Kenya) and Matheka Ndilinge
- "GIS AS KEY TOOL IN THE ENVIROMENTAL DECISION MAKING AT LOCAL LEVEL. THE KEYS OF THE RIVER BASIN OF THE CORBONES"
María del Pilar Joya Reina (Spain)