



**INTERNATIONAL CONFERENCE ON CARTOGRAPHY AND GIS**

**January, 25-28, 2006  
Borovets, BULGARIA**

**[www.datamap-bg.com/conference](http://www.datamap-bg.com/conference); e-mail: [cartography@abv.bg](mailto:cartography@abv.bg)**



**INTERNATIONAL CARTOGRAPHIC ASSOCIATION**



**University of Architecture,  
Civil Engineering and Geodesy**

**UNDER THE AUSPICES OF THE RECTOR OF UNIVERSITY OF ARCHITECTURE, CIVIL  
ENGINEERING AND GEODESY Assoc. Prof. Dr. Penio Penev**

# **PRELIMINARY PROGRAMME**

## **INTERNATIONAL CONFERENCE ON CARTOGRAPHY AND GIS**

**January 25-28, 2006  
Borovets, Bulgaria**

## **International Organizing Committee**

**Assoc. Prof. Dr. Milan Konecny**, *Czech Republic, President ICA*  
**Prof. Dr. Takashi Morita**, *Japan, Chair Commission on Ubiquitous Mapping, ICA*  
**Prof. Dr. Kira Shingareva**, *Russia, Chair Commission on Planetary Cartography, ICA*  
**Dr. Patrick Wiegand**, *United Kingdom, Chair Commission on Cartography and Children, ICA*  
**Prof. Dr. Ewa Krzywicka-Blum**, *Poland, Chair Commission on Gender and Cartography, ICA*  
**Assoc. Prof. Dr. José Jesús Reyes Nuñez**, *Hungary, Vice-Chair Commission on Cartography and Children, ICA*  
**Assoc. Prof. Dr. Necla Ulugtekin**, *Turkey*  
**Dr. Sisi Zlatanova**, *The Netherlands*

## **Local Organizing Committee**

### **President:**

**Assoc. Prof. Dr. Temenoujka Bandrova**, *Bulgaria, University of Architecture, Civil Engineering and Geodesy (UACG), Sofia*

### **Members:**

**Prof. Dr. George Valev**, *UACEG, Sofia*  
**Assoc. Prof. Dr. Boris Davidkov**, *Sofia University*  
**Assoc. Prof. Dr. Boris Kolev**, *Bulgarian Academy of Sciences*  
**Chavdar Dinev**, *DataMap-Europe, Ltd.*,  
**Ivan Petrov**, *Kartografia Ltd.*  
**Evgenia Karadjova**, *ESRI Bulgaria*  
**Col. Toshko Tashkov**, *Military Topographic Service*  
**Col. Assoc. Prof. Dr. Andrej Andreev**, *National Military University "V. Levski", V. Tarnovo*  
**Assoc. Prof. Dr. Rumyna Kusheva**, *Department of Information and In-Service Training of Teachers, Sofia*  
**Assoc. Prof. Dr. Mosko Alajem**, *Technical University, Sofia*  
**Assoc. Prof. Dr. Penka Kastreva**, *Southwest University, Blagoevgrad*  
**Assoc. Prof. Dr. Veneta Kotseva**, *University of Forestry, Sofia*  
**Neli Dimitrova Vutova**, *section Cartography, USLM*

### **Advisory board:**

**Assoc. Prof. Slavejko Gospodinov**, *Dean Faculty of Geodesy, UACEG, Sofia*  
**Assoc. Prof. Dr. Peter Penev**, *Head of Department of Photogrammetry and Cartography, UACEG, Sofia*  
**Assoc. Prof. Dr. Sc. Ivan Choleev**, *Head of Department Cartography and GIS, Sofia University*

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**Tuesday, JANUARY 24, 2006**

Arriving in Sofia and transport transfer Sofia-Borovets

Lion Hotel, Borovets

**11:00 a.m. – 5:00 p.m. Registration**

**Wednesday, JANUARY 25, 2006**

Lion Hotel, Borovets

**09:00 a.m. Registration**

**Conference hall**

**9:30 a.m. OPENING CEREMONY of the 1<sup>st</sup> Conference on Cartography and GIS**

*Greetings:*

- Assoc. Prof. Dr. Penio Penev, Rector of the University of Architecture, Civil Engineering and Geodesy
- Assoc. Prof. Dr. Milan Konecny, President of ICA
- Other guests – Ministers and Members of Parliament

**Official award** for the best drawing in the Barbara Petchenik Children's World Map Competition, 2005 – Bulgarian winner 12 years old Daiana Hadjiiska by ICA President

**10:30 a.m. Keynote speech**

1 214	Milan Konecny	CARTOGRAPHICAL PERSPECTIVES IN SDI WORLD	CZECH REPUBLIC
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**11:00 a.m. Coffee Break**

**11:30 a.m. – 1:30 p.m. Plenary Session 1**

## **GIS TECHNOLOGIES AND RELATED DISCIPLINES**

Chairs: Dr. Georg Gartner, *Austria* and Assoc. Prof. Dr. Slavejko Gospodinov, *Bulgaria*

2 202	Georg Gartner	FROM MOBILE INTERNET MAPPING TOWARDS UBIQUITOUS CARTOGRAPHY	AUSTRIA
3 204	H. Polat Dalkiran, I. Oztug Bildirici	ESTABLISHING TURKISH NATIONAL GEOGRAPHICAL DATABASE AND DATA INTEGRATION PROBLEMS	TURKEY
4 211	J. Martínez-Llario, E. Coll	GIS ANALYSIS USING DIFFERENTS SPATIAL DATABASES	SPAIN
5 236	Lucian Zavate	DELIVERING DATA USING MAP SERVERS	ROMANIA
6 230	A.L.Sinitsyna	ESTIMATION OF ECONOMIC EFFICIENCY BY USING OF THE	RUSSIA

AUTOMATED CONTROL SYSTEM  
TRAFFIC (ACST), CONSTRUCTED  
WITH APPLICATION OF GIS -  
TECHNOLOGIES

**5:30 p.m. – 6:50 p.m. Plenary Session 2**

Chairs: Dr. Eloina Coll, *Spain* and Assoc. Prof. Peter Penev, *Bulgaria*

7	Neli Dimitrova,	TECHNOLOGY FOR CREATING	BULGARIA
309	Stefan Georgiev, Liliana Smilenova	MAPS OF SOFIA MUNICIPALITY IN ARCGIS	
8	K.Mileva, A.	MAPPING URBAN TERRITORY IN	BULGARIA
310	Tzarnelova, L. Smilenova, M. Emilova	SCALE 1:5 000	
9	E. Coll ,J.C.	SIGMUN: A GIS PROJECT OF LOCAL	SPAIN
219	Martinez	GOVERNMENT	
10	Maria Asenova, Ilko	GIS APPLICATION IN	BULGARIA
317	Dobricov	MULTIFUNCTIONAL FOREST MANAGEMENT	

**7:30 p.m. Welcome Reception**

**Thursday, JANUARY 26, 2006**

**9:00 a.m. – 11:00 a.m. Plenary Session 3**

**CARTOGRAPHY AND GIS IN EDUCATION**

Chairs: Dr. José Jesús Reyes, *Hungary* and Dr. Rufino Perez, *Spain*

11	José Jesús Reyes	A GIS SITE FOR HUNGARIAN	HUNGARY
208	Nuñez	PUPILS	
12	Pérez, Rufino	NEW CHALLENGES IN	SPAIN
203		TEACHING CARTOGRAPHY AND GIS IN ENGINEERING ENVIRONMENT	
13	Julian Stanchev	APPROACHES FOR ACTIVE	BULGARIA
329		LEARNING OF AVIATION SPECIALISTS IN GEOGRAPHICAL INFORMATION SYSTEMS	
14	Kira B.Shingareva,	CARTOGRAPHIC MARS GIS	RUSSIA
223	Tatyana Pletneva		
15	Daniela Angelova	EDUCATIONAL ICT WITH GIS	BULGARIA
308		FOR GEOGRAPHY CULTURE DEVELOPMENT AT SECONDARY SCHOOL	

16 315	Penka Kastreva	CARTOGRAPHY AND GIS FOR GEOGRAPHERS AT SOUTH- WEST UNIVERSITY	BULGARIA
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**11:00 a.m. Coffee Break**

**11:30 a.m. – 1:30 p.m. Plenary Session 4**

Chairs: Prof. Ewa Krzywicka –Blum, *Poland* and Ulrich Boes, *Bulgaria*

17 207	J.Balodis,M.Tarasenko, J.Strauhmanis	SYSTEM OF CARTOGRAPHIC AND GIS STUDY SUBJECTS AT THE DEPARTMENT OF GEOMATICS RIGA TECHNICAL UNIVERSITY	LATVIA
18 214	Milan KONEČNÝ, Zbyšek PODHRÁZSKÝ, Zdeněk STACHOŇ, Kateřina TAJOVSKÁ	MULTIMEDIA TEXTBOOK OF CARTOGRAPHY AND GEOINFORMATICS	CZECH REPUBLIC

**SDI: CULTURAL AND SOCIAL ASPECTS**

19 330	Ulrich Boes, Raina Pavlova	SPATIAL DATA INFRASTRUCTURES IN SOUTH- EAST EUROPE	BULGARIA
20 231	Pascal Dubourg- Glatigny, Estelle Alma Maré	“INTER SE NULLI FINES”: THE KHOI IN SEVENTEENTH- CENTURY EUROPEAN REPRESENTATIONS OF THE LAND AT THE CAPE OF GOOD HOPE	FRANCE / SOUTH AFRICA
21 241	Růžena Zimová	HISTORICAL MILITARY MAPPINGS OF THE CZECH LANDS – CARTOGRAPHIC ANALYSIS	CZECH REPUBLIC

**17:30 p.m. – 19:30 p.m. Plenary Session 5**

**ECOLOGY**

Chairs: Prof. Dr. Kira Shingareva, *Russia* and Dr. Karel Stanek, *Czech Republic*

22 242	Vladimír Brůna, Kateřina Křováková	INTERPRETATION OF STABLE CADASTRE MAPS FOR LANDSCAPE ECOLOGY PURPOSES	CZECH REPUBLIC
23 318	Ivan Tcholeev, Anton Popov, Anton Filipov,	RELIEF VISUALIZATION FOR THE NEEDS OF GEOECOLOGICAL ANALYSIS IN SOUTHWEST	BULGARIA

Stelian Dimitrov, BULGARIA  
Alexander Kotsev

## EARLY WARNING AND RISK MANAGEMENT

24	Podolskaya A. S.,	DEVELOPMENT OF	RUSSIA
224	Ershov D.V.	GEOINFORMATION TECHNOLOGY OF THE FOREST ENTERPRISES AND AIR DIVISIONS BORDERS UPDATING FOR THE FOREST FIRE MONITORING SYSTEM TASKS	
25	Karel Stanek, Petr	DYNAMIC GEOVISUALIZATION IN	CZECH
235	Kubicek	EMERGENCY MANAGEMENT	REPUBLIC
26	Serdar BİLGİ,	CREATING BASIC TOPOGRAPHIC-	TURKEY
244	Cengizhan İPBÜKER	SPATIAL OBJECT MODEL FOR ITU- ACDIS	
27	Ivan Kunchev	THE NEW ROLE OF THE SPATIAL	BULGARIA
312		APPLICATION SERVER TO MANAGE AND DISTRIBUTE INFORMATION ABOUT CRISIS	

## FRIDAY, JANUARY 27, 2006

9:00 a.m. – 11:20 a.m. Plenary Session 6

## ELECTRONIC ATLASES

Chairs: Prof. Dr. Takashi Morita, *Japan* and Assoc. Prof. Dr. Janis Strauhmanis, *Latvia*

28	A.Rozentale,	PROJECT OF THE ELECTRONIC	LATVIA
222	J.Strauhmanis	ATLAS OF LATVIA	
29	Joanna Bac-	THE INTERACTIVE SYSTEM OF	POLAND
201	Bronowicz, Halina Klimczak, Ewa Krzywicka –Blum	REGIONAL AND GLOBAL POPULATION MAPS OF UNDER REPRESENTED GROUPS	

## MAP DESIGN AND PRODUCTION

30	Nikolaos	THESSALONIKI BY NIGHT:	GREECE
213	Karanikolas, Peri Lafazani, Myron Myridis, Dimitrios Ramnalis	A DIGITAL CARTOGRAPHIC TOUR	
31	Takashi Morita	HISTORICAL POSITION OF	JAPAN

239		“UBIQUITOUS MAPPING” IN CARTOGRAPHIC STUDIES OF THE ICA	
32	A. Ozgur DOGRU,	CAR NAVIGATION MAP DESIGN IN	TURKEY
233	Necla ULUGTEKIN	TERMS OF MULTIPLE REPRESENTATIONS	
33	Nikolaos	TOURIST CARTOGRAPHY ON THE	GREECE
217	Karanikolas, Dimitris Sarafidis	INTERNET, A PROPOSAL FOR THE CITY OF THESSALONIKI	

**11:20 a.m. Coffee Break**

**11:40 a.m. – 1:20 p.m. Plenary Session 7**

## **CARTOGRAPHIC VISUALIZATION**

Chairs: Dr. Tomaž Podobnikar, *Slovenia* and Prof. Dr. George Valev, *Bulgaria*

34	Aydin Ustun,	AN EVALUATION OF SRTM3 DTM	TURKEY
205	I.Oztug Bildirici, H. Zahit Selvi, Alpay Abbak	DATA: VALIDITY, PROBLEMS AND SOLUTIONS	
35	Dariusz	ENTITIES – CARTOTROPIC	POLAND
215	Dukaczewski	METHOD OF SELECTION OF STATIC AND DYNAMIC VARIABLES FOR TEMPORAL CARTOGRAPHIC ANIMATIONS	
36	Tomaž Podobnikar,	ENHANCING THE USABILITY OF	SLOVENIA
218	Domen Smole, Klemen Zakšek	DIGITAL ELEVATION DATA	
37	George Valev,	PRESENTING THE GLOBE WITH A	BULGARIA
328	Temenoujka Bandrova	REGULAR POLYHEDRON	
38	K.B.Shingareva,	UPDATING AND UPGRADING OF	RUSSIA
225	B.V.Krasnopevtseva	THE DATABASE ON THE PLANETARY NOMENCLATURE	

**7:00 p.m. Gala Dinner**

Visiting of attractive folk-style house in Bulgarian village (with tavern), dinner – no limit of meals and drinks

## **SATURDAY, JANUARY 28, 2006**

**9:00 a.m. – 10:40 a.m. Plenary Session 8**

## **CARTOGRAPHIC VISUALIZATION**

Chairs: Assoc. Prof. Dr. Necla Ulugtekin, *Turkey* and Assoc. Prof. Dr. Veneta Kotseva, *Bulgaria*

39	Alexandra Stadler,	CROSS-MEDIA PUBLISHING OVER	AUSTRIA
234	Mirjanka Lechthaler	THE SCALES	
40	Podolskaya E. S.	RUSSIAN SCIENTIFIC	RUSSIA
228		RESEARCHES ON MAP AND SPACE GENERALIZATION	
41	Veneta Kotseva	ANALYSIS OF REGIONS' MAPS OF	BULGARIA
301		STATES FROM EUROPEAN UNION INCLUDED IN VOLUME "REGIONS: STATISTICAL YEARBOOK 2004" OF EUROSTAT	

### **GPS TECHNOLOGIES**

42	İbrahim Yılmaz,	USING RTK GPS METHOD IN	TURKEY
210	İbrahim Tiryakioğlu, Fatih Taktak, Murat Uysal	CREATION OF DIGITAL TERRAIN MODELS	
43	Martínez José	RESOLUTION OF A GEOSTATISTIC	SPAIN
227	Carlos, Sanz Jorge Gaspar, Coll Eloína	STUDY CASE WITH FREE SOFTWARE	

**10:40 a.m. Coffee Break**

**11:10 a.m. – 1:10 p.m. Plenary Session 9**

### **REMOTE SENSING TECHNOLOGIES**

Chairs: Assoc. Prof. Dr. Lena Halounova, *Czech Republic* and Dr. Rumiana Vatseva, *Bulgaria*

44	Danail Evtimov	GCP SPECIFICATION IN MAP	BULGARIA
320		UPDATING USING HIGH RESOLUTION SATELLITE IMAGERY	
45	Alexander V.	THE CONCEPT OF INFORMATION	RUSSIA
226	Kurpichev	SYSTEM ON RESULTS OF THE SOVIET AND RUSSIAN SPACE PROGRAMS	
46	Lena Halounová, Veronika Tesařová	GIS AND AERIAL PHOTOGRAPHS FOR CHANGE DETECTION AROUND NEW HIGHWAYS IN THE CZECH REPUBLIC	CZECH REPUBLIC
47	Rumiana Vatseva	LAND COVER MAPPING IN THE	BULGARIA
326		SOUTHERN BULGARIAN BLACK SEA COASTAL ZONE USING REMOTE SENSING AND GIS	
48	Elena	GIS DATABASE MODEL AS AN	RUSSIA

237	Cherepanova	EFFECTIVE TOOL FOR THE REMOTE MONITORING MANAGING	
49	Stoyan Nedkov,	LAND COVER CLASSIFICATION IN	BULGARIA
319	Mariyana Nikolova, Timo Kumpula	SINITE KAMANI NATURAL PARK USING SATELLITE IMAGES	

### 1:10 – 1:30 p.m. Closing ceremony

## POSTERS

1	Ivan Tcholeev	SPATIAL ANALYSIS OF THE TOURISM	BULGARIA
316	Maria Vodenska	POTENTIAL IN BOURGAS DISTRICT	
2	J. P. Fernandes, N.	GIS GEOMETRIES IN LACOPE - LANDSCAPE	PORTUGAL/
209	Guiomar, A. P. Soares, E. Tcherkezova, N. Neves	DEVELOPMENT, BIODIVERSITY AND CO- OPERATIVE LIVESTOCK SYSTEMS IN EUROPE	GERMANY
3	T. G. C. VIEIRA; H. M.	ASSESSING CHANGES, IN SPACE AND	BRAZIL
220	R. ALVES; V. C. O. SOUZA; M.A. Bertoldo	TIME, OF COFFEE LANDS OF THE STATE OF MINAS GERAIS IN BRAZIL	
4	Díaz Manso, José	METODOLOGICAL ASPECTS OF LAND	SPAIN
206	Marcial	COVER CARTOGRAPHY IN A VERY COMPLEX LANDSCAPE	
5	Gergana Antova	RAPID PRECISE MAPPING WITH 3D LASER	BULGARIA
321		SCANNING	
6	S.S. Durduran, A. Erdi,	HISTORICAL AND CULTURAL RESOURCE	TURKEY
229	C.T.Okka	DETERMINING AND MONITORING WITH GIS: THE EXAMPLE OF KONYA IN TURKEY	
7	Stanislav Vasilev	CARTOGRAPHICAL SYMBOLIC	BULGARIA
306			
8	H. M. R. Alves; T. G. C.	GEOTECHNOLOGIES FOR THE	BRAZIL
216	Vieira; V. C. O. Souza; M. A. Bertoldo; H. Andrade	ASSESSMENT OF THE RELATIONSHIPS BETWEEN COFFEE AND ENVIRONMENT OF AGROECOSYSTEMS OF THE STATE OF MINAS GERAIS IN BRAZIL	
9	Petar T. Penev	STRUCTURE AND REALIZATION OF	BULGARIA
303		ELECTRONIC ATLASES	
10	Susanne Bleisch,	CREATIVE COMMONS LICENSED E-	SWITZERLAN
212	Marion Werner, Joël Fisler	LEARNING MATERIALS FOR CARTOGRAPHY AND GIS EDUCATION	D
11	Zamorano Chico, C;	UNCERTAINTY ANALYSIS OF THE URDAIBAI	SPAIN
221	Valdés, J.J; Pou Royo, A; Espiago González, J.	BIOSPHERE RESERVE MANAGEMENT CARTOGRAPHY, BY MEANS OF RELATIONAL STRUCTURES IN 3D VIRTUAL REALITY SPACE	
12	Silvia Kirilova, Nikolaj	GIS APLICITION FOR RISK ASSESSMENT IN	BULGARIA
305	Najdenov	A WATER CRISIS SITUATION	
13	Petar T. Penev	INTERNET GIS AND INTERNET MAPPING	BULGARIA
302			
14	Evgeniy Lazarev	USING THE VENUS DATABASE FOR PLANET	RUSSIA
232		SURFACE MORPHOMETRIC INVESTIGATIONS	
15	Ivan Kunchev	EMERGENCY RESPONSE SOLUTIONS –	BULGARIA
313		WHAT TO BEAR IN MIND?	
16	Angel Lukanov	MAPPING OF GULLY NETWORK AND ITS	BULGARIA
314		DYNAMICS IN THE STRAJATA RIDGE	
17	Lyubomir Filipov,	DEVELOPMENT OF NETWORK DATA MODEL	BULGARIA
325	Boris Davidkov	FOR URBAN TRANSPORTATION SYSTEM IN	

18 327	B. Kolev, D. Michalev, D. Zhivkov, N. Miteva	GIS ENVIRONMENT FOR THE CITY OF PLOVDIV, BULGARIA THE GEOGRAPHIC INFORMATION SYSTEM OF SOIL RESOURCE USING FOR SUSTAINABLE AGRICULTURE REALIZATION	BULGARIA
19 322	Anastas Nikolov Madzharov	APPLYING CORRECTIONS FROM THE THEORETICAL MODEL OF THE GEOID WHEN DIFFERENTIAL MODE OF GPS IS USED IN LANDING	BULGARIA
20 323	Anastas Nikolov Madzharov, Stefan Savov Biliderov	THE INFLUENCE OF THE FREE AIR ANOMALY OVER THE STABILITY OF THE VERTICAL CHANNEL IN STRAPDOWN INERTIAL NAVIGATION SYSTEM (SINS)	BULGARIA
21 307	Stanislav Vasilev	A NEW THEORY OF SIGNS IN THE CARTOGRAPHY	BULGARIA
22 304	Nikolaj Najdenov, Hristo Tomov	AUTOMATED MAPPING OF DYNAMIC LINEAR SEGMENTED DATA FROM ROAD NETWORK	BULGARIA
23 324	Yuri Tsenkov	GPS NAVIGATION SOLUTIONS	BULGARIA
24 311	Bernardo Lizama Rivas	CATCHMENT PARAMETERISATION FOR RUNOFF MODELS UTILISING GIS TECHNOLOGIES	BULGARIA

Table Schedule

Time	Tuesday	Wednesday	Thursday	Friday	Saturday
9:00		Registration	PS 3 Posters Exhibition	PS 6 Posters Exhibition	PS 8 Posters Exhibition
9:30		Opening Ceremony			Coffee
10:00		Keynote speech			
10:30		Coffee			
11:00	Transportation: Sofia - Borovets; Registration	PS 1 Posters Exhibition	PS 4 Posters Exhibition	Coffee	PS 9 Posters Exhibition
11:30				PS 7 Posters Exhibition	
12:00					
12:30					
13:00					Closing C.
13:30					
14:00					Visiting of Tzar Palace in Borovets
15:00					
16:00					
17:00					
17:30		PS2 Posters Exhibition	PS 5 Posters Exhibition	Gala Dinner	
18:00					
18:30					
19:00					
19:30		Welcome Reception			
20:00					
21:00					
22:00					

PS – Plenary Session

## EXHIBITIONS:

1. Technical Exhibition
2. Cartographic Exhibition
3. Retrospective Exhibition Barbara Petchenik Children's World Map



Lion Hotel

## Conference place

Rila is the highest mountain in Bulgaria and the Balkan Peninsula (Moussala peak - 2925 m).

Another name of this magnificent mountain is "The Water Mountain". There are the springs of three big Bulgarian rivers: Marica, Iskr and Mesta. Rila has more than 140 brilliantly blue lakes. With its forests, mountain peaks, lakes, valleys and rivers, Rila is an ideal place for hiking, mountain climbing and skiing.

**Only 70 km** from the Bulgarian capital Sofia there is a beautiful mountain ski resort – **Borovets**, situated at **1350 m** above sea level on the northern slopes of the Rila Mountain.

## Map of Borovets

