

# CARTOCON 2014

OLOMOUC, CZECH REPUBLIC  
25-28 FEBRUARY

MAPS & ATLASES  
MAPS & INTERNET  
USE & USERS  
COGNITION & VISUALIZATION  
CARTOGRAPHY & STATISTICS

*Map it, live it!*

## Preliminary program



european  
social fund in the  
czech republic



EUROPEAN UNION



MINISTRY OF EDUCATION,  
YOUTH AND SPORTS



OP Education  
for Competitiveness

INVESTMENTS IN EDUCATION DEVELOPMENT

# Tuesday Feb 25 2014

9.00–9.15	Opening			
9.00–15.30	ICA Executive Committee meeting (Lunch 12.30–13.30)			
14.00–15.30	ICA Commission on Cognitive Visualization meeting	ICA Commission on Use and User Issues meeting	ICA Commission on Atlases meeting	ICA Commission on Map and the Internet meeting
15.30–16.00	Coffee break			
16.00–17.30	EC & commissions joint meeting			
17.30–19.00	Dinner			
19.30–21.30	"The Charm of Old Maps" Exhibition			

Conference venue:

NH HOTELES

address: Legionářská 1311/21, 779 00 Olomouc, Czech Republic

Registration:

open from Feb 25, 9 a.m. till the end of the conference

# Wednesday Feb 26 2014

9.00–9.15	Opening
9.15–9.30	ICA president welcome
9.30–10.15	<b>Keynote paper:</b> A. Griffin: Emotional cartographies: understanding experiences with maps

10.15–10.45	Coffee break
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10.45–11.30	<b>Keynote paper:</b> A. Pucher: Cartographic Atlas Products – Learning from the Past
11.30–12.15	<b>Keynote paper:</b> R. Sieber: Challenges in Digital Atlas Cartography

12.15–13.30	Lunch
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13.30–15.30	<b>Cognitive Visualization</b> 1	<b>Use and User Issues</b> 1	<b>Atlases</b> 1	<b>Map and the Internet</b> 1	<b>General Cartography</b> 1
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<b>Cognitive Visualization 1</b> Chair: U. Demsar					
S. Christophe: Current Issues about Perception and Cognition in Map Design Processes					
B. Weninger: A Framework for Color Design for Digital Maps – On an Example of Noise Mapping					
F. Dhee: The Colour-blind and Cartography: The Difficulty of Accessing Information					
A. Ruas: From a Phenomena to Its Perception: Models and Methods to Represent and Explore Phenomena on GIS					
J. M. Stirnemann: Viewpoint – the World in Perspective					
M.-J. Kraak: The Design of Time Line Cartograms – the Visualization of the Narrative of Events					

<b>Use and User Issues 1</b> Chair: R. Roth					
C. van Elzakker: Use, User and Usability Research Challenges in Cartography and Geo-Information Processing					
J. Brus, V. Pechanec: The User Centered Framework for Visualisation of Spatial Data Quality					
J. Vilser, J. Měříčková: Digital Aeronautical Charts: Survey of 64 Czech Air Force Pilots					
Z. Štěrba, Č. Šašinka, Z. Stachoň, P. Kubiček, S. Tamm: Methodology of Mixed Usability Research in Cartography: Combination of Qualitative and Quantitative Approaches					
D. Clarke: Map Literacy: The Third Element					
J. Leitgebová: The Use of Maps in the Fire Rescue Service					

**Atlases 1**  
**Chair: P. Sánchez-Ortiz**

H. Asche: A Rule-based Process for the Generation, Distribution and Use of Map Products in Cartographic Modelling Quality from Geospatial Databases
R. Sieber, R.Schnürer, A. Çöltekin: The Next Generation of Atlas User Interfaces for Desktop Devices – A User Study with Digital Natives
B. Köbben: Middleware Services for Atlases as Part of Spatial Data Infrastructures
A. Vondráková: Non-technological Aspects in Atlas Cartography
S. Martha: Updating Geospatial Information on National Atlases through Remotely Sensed Imageries (Indonesian Case)
V. Voženílek: Aspects of the Thematic Atlas Content Compilation

**Maps and the Internet 1**  
**Chair: R. Cammack**

M. Arikawa, K. Tsuruoka, M. Lu: User-generated Geotagged Audio Tours for Mobile Uses with Egocentric Route Maps
G. Gartner: Crowdsourcing Emotional Responses to Space for Adaptive Location-based Services
B. Hofer, T. J. Lampoltshammer, M. Belgiu: Demography of Twitter Users in the City of London – An Exploratory Spatial Data Analysis Approach
L. Zentai: The Evolution of Digital Cartographic Databases (State Topographic Maps) from the Beginnings to Cartography 2.0: the Hungarian Example
P. Duda: Interpretation and Cartographic Representation of the Environmental Noise Data from Mobile Phones
Z. Hynek: Drugs, Guns and Sex – Mapping Crime in the Czech Republic and Incredible Story about How the Czech Crime Project was built

**General Cartography 1**  
**Chair: A. Buckley**

F. Ormeling: Cartography as Intentional Distortion
D. Fairbairn: Mapping Disorder: an Exploratory Study
J. Šmída, D. Vrbík: Community Mapping in the City Space in Example of USE-IT Maps
J. D. Bláha: Maps for Publication “Anthropology and Melanesia”: not only Black & White Cartography
J. Burian, A. Brychtová, A. Vávra: Proposal of Urban Plan Symbology Standardization: Olomouc Region Case Study
V. Talhofer, V. Kovařík, M. Rybanský, A. Hofmann, M. Hubáček, Š. Hošková-Mayerová: Terrain Analysis for Armed Forces

15.30–16.00	Coffee break
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16.00 – 17.30	<b>Cognitive Visualization 2</b>	<b>Use and User Issues 2</b>	<b>Maps and the Internet 2</b>	<b>General Cartography 2</b>
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**Cognitive Visualization 2  
Chair: S. Christophe**

S. Maggi, S. Fabrikant:  
Assessing Animated Air Traffic Control Displays

J. Schiewe:  
Physiological and Cognitive Aspects of Sound Maps for Representing Quantitative Data and Changes in Data

A. Robinson:  
Exploring Class Discussions from a Massive Open Online Course (MOOC) on Cartography

J. Caha, A. Vondráková, P. Fisher:  
Innovative Concepts for Cartographic Visualization of Uncertainty

**Use and User Issues 2  
Chair: D. Schobesberger**

R. Roth, Ch. Quinn, D. Hart:  
A Competitive Analysis of Online Water Level Visualization Tools

J. Komárková, P. Sedlák, M. Hub:  
Comparison of Usability Evaluation Methods Used for Analogue Maps Evaluation

W. Cartwright:  
Practicalities of Developing Cartographic Standards to Meet Visual Impairments

I. Košková, M. Modrý:  
By Dry Feet Walking along the Maps – the Confrontation of Cartographic Products Provided by the Public Administration and the Real Needs of End Users during Flood Situations

**Maps and the Internet 2  
Chair: M. Peterson**

R. Cammack:  
Student Storytelling Through Maps: Omaha Today

L. Herman, A. Kýnová, J. Rusnák, T. Řezník:  
Comparison of Standard- and Proprietary-Based Approaches to Detailed 3D City Mapping

P. Hájek, K. Jedlička, M. Kepka, R. Fiala, M. Vichrová, K. Janečka, V. Čada:  
3D Cartography as a Platform for Reminding Important Historical Events - The example of the Terežín Memorial

R. Nétek:  
On-screen Editing of Map Content via Web Browser in Real Time

D. Kozhukh:  
Design of 'Thematic Atlas' Web Map Atlas as a Synthesis between Classic Paper Atlas and Modern GIS Web-client

**General Cartography 2  
Chair: C. Brewer**

L. Marek, V. Pászto, P. Tuček:  
Bayesian Mapping of Medical Data

N. Khan:  
Identification and Assessment of Livestock Resource for Development of Poor in Developing Countries through Maps: A Study in Cartography

J. Richter:  
Berliner Gartenkarte – A Collective Mapping Initiative

V. Pászto, A. Brychtová, L. Marek:  
On Shape Metrics in Cartographic Generalization – A Case Study of the Building Footprint Geometry

J. Hovad, J. Komárková:  
Creation of the Accurate Raster Driven Polygonal Environment for the 3D Surface Models Based on the LIDAR Technology

19.00–...	Galadinner
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# Thursday Feb 27 2014

9.00–9.30	ICA block
9.30–10.15	<b>Keynote paper:</b> M. Haklay: User-centred and Participatory Cartography

10.15–10.45	Coffee break
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10.45–11.30	<b>Keynote paper:</b> D. Forrest: Usability of Open Source Data for National and Regional Atlas Mapping
11.30–12.15	<b>Keynote paper:</b> P. Jordan: The Role of National and Other Atlases in Space-Related Identity Building

12.15–13.30	Lunch
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13.30–15.30	<b>Cognitive Visualization</b> join session	<b>Use and User Issues</b> on Eye-Tracking	<b>Atlases</b> 2	<b>Map and the Internet</b> 3	<b>General Cartography</b> 3
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<b>Cognitive Visualization &amp; Use and User Issues: join session on Eye-Tracking</b>					
<b>Chair: S. Fabrikant</b>					
U. Demsar, A. Çoltekin: Investigating Eye-hand Coordination in Use of Spatial Visual Interfaces					
A. Reinermann-Matátko: Mapping a local budget plan: why and how?					
A. Brychtová: Exploring the Influence of Color Distance and Legend Position on Choropleth Maps Readability					
S. Popelka, J. Doležalová: Non-photorealistic 3D Visualization in Maps of the Cities: an Eye-tracking Study					
Z. G. Török, Á. Bérces: 10 Bucks Eye Tracking Experiments: The Hungarian MapReader					
A. Incoul, K. Ooms, P. De Maeyer: Comparing Paper and Digital Topographic Maps using Eye Tracking					

<b>Atlases 2</b>					
<b>Chair: H. Asche</b>					
P. Sánchez-Ortiz, J. J. Alonso, N. Peréz, C. Iván, A. Del Campo: National Atlas of Spain New Projects for the Twenty-first Century					
A. Wolodtschenko: Mini-atlases for Google Maps: Why not Really?					
L. Yaolin, A. Tinghua: Design and Implement of E-National Atlas of People's Republic of China					
H. Kilianová, M. Morris, J. Svobodová: Atlas of Development Hranicko Microregion as a Tool to Increase Awareness of the Local landscape					
Q. Qi: Design of National Economic Atlas of China (New Century Version)					
Z. Dobešová, S. Ganbaatar: Tool for Automatic Classification of Data by the Triangular Graph					

**Maps and the Internet 3**  
**Chair: M. Arikawa**

M. Peterson:

Evaluating Mapping API

J. Pánek, L. Marek, V. Pászto:

Crisis Mapping via Internet in Disaster Management of the Czech Republic

D. Bhattacharya, P. Pasquali, J. Komárková, P. Sedlák, A. Saha:

Interlinking Opensource Geo-spatial Datasets For Optimal Utility in Ranking

R. Augustýn, R. Makovec, T. Vacek:

Is It Time for "Free and OpenSource for Geospatial"?

O. Čerba:

Accessibility of Buildings in the University of West Bohemia – the Example of a Thematic Map on the Internet

M. Vichrová:

Cartographic Means Expressions for Maps of the Third Military Survey in Scale 1:25 000, 1:75 000 and 1:200 000

**General Cartography 3**  
**Chair: F. Ormeling**

P. Menezes, M. Fernandes, S. Lima:

Campos Basin Environmental Oil Spill Mapping

J. Pacina, J. Cajthaml:

Historical Data Processing, Modeling, Reconstruction, Analysis and Visualization of Historical Landscape in the North–West Bohemia Region

J. Miřijovský, M. Šulc-Michálková:

Spatial-temporal Evolution of the Unique Preserved Meandering System in Central Europe

J. Pastwa, S. Popelka, V. Voženílek:

Space Time Visualization of Local Hazards

M. Kocáb:

Large Scale Cartographic Products and Their Integration to the Uniform Information System

J. Langr, J. Lux:

The Cartographic Production of the Base Maps in the Czech Republic

15.30–16.00	Coffee break
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16.00 – 17.30	<b>Cognitive Visualization</b> 3	<b>Use and User Issues</b> 3	<b>General Cartography</b> 4	<b>Demonstration</b>
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**Cognitive Visualization 3**  
**Chair: F. Dickmann**

D. Edler, A.-K. Bestgen, L. Kuchinke, F. Dickmann:

Spatial Distortions in the Recall of Learned Map Information: An Improvement Caused by Grids?

A. Hall, P. Ahonen-Rainio:

Analysis of Basic Relations within Insights of Spatio-temporal Analysis

L. Friedmannová, K. Staněk, P. Červenka, M. Hanousková:

The Concept of Space: near, far, in front of, alongside ...

A. Jakobi, B. Lengyel:

Geovisualisation of Unequal Spatial Distribution of Online Social Network Connections: A Hungarian Example

**Use and User Issues 3**  
**Chair: K. Ooms**

D. Schobesberger:

Improving the Usability of Web-mapping Applications - A Methodological Framework for Integrating User and Usability Research in Application Design and Web-mapping Design Guidelines

P. Kubíček, R. Bačová, Z. Stachoň:

Multivariate Data Visualization and Usability – Preliminary Rotes

P. Kettunen, L.T. Sarjakoski, K. Putto, C. M. Krause, V. Gyselinck:

Perception and Recall of Landmarks for Personal Navigation in Nature at Night Versus Day

J. Stehlíková, H. Řezníková, H. Kočová, Z. Stachoň:

The Visualization Issues of Worldwide Map Portals

**General Cartography 4**  
**Chair: M.-J. Kraak**

P. Závodník, J. Barteska:

Residential Structure of the Olomouc Region

P. Vahalík, P. Janata:

Alteration of Graphical Part of Local Flood Management Plans Using Geoinformatics - Scottish and Czech Approaches

V. Hejlová:

Visualization of Spatial Distribution of Wireless Sensor Nodes in Urban Environment

A. Vávra:

Spatial Aspects and Visualization of Phenological Observation in the Experimental Site

V. Blažek, V. Hájek, L. Ličík, B. Nižnanský, K. Popková:

Changes in Urban Area Discovered by Analysis of Chosen Places in Old Maps of Liberec

**Demonstration**

J. Průša:

3D printing talk with demonstration

18.30–19.15	Organ concert
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# Friday Feb 28 2014

## Cartographic Day in Olomouc

9.00–9.30	Welcome
9.30–10.00	T. Schulz: The State of Official Statistical Mapping in Switzerland and Other European Countries
10.00–10.30	T. Trainor: Cartographic Challenges for Data Dissemination: Small Geographic Areas and Statistical Grids
10.30–11.15	Coffee break
11.15–11.45	J. Kraus: Disaggregate Methods for Georeferencing of Population with Unknown Place of Residence (at a Specific Address Level) according to the Results of the Census 2011
11.45–12.15	A. Vondráková, V. Voženílek: Enormous Opportunities and Minor Use of Czech Statistical Data in Their Geovisualization
12.15–13.00	<b>CZECH MAP OF THE YEAR 2013</b> Award ceremony
13.00–14.00	Final discussion and closing