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sara.fabrikant@geo.uzh.ch

## Map Design

kfield@esri.com

## Art &amp; Cartography

scaquard@gmail.com

## History of Cartography

elri@worldonline.co.za

## Map Projections

mlapaine@geof.hr

## Theoretical Cartography

qydu@whu.edu.cn

## Data Quality

chenxy@ecit.cn

## Atlases

peter.jordan@oeaw.ac.at

## Mapping from Remote Sensor Imagery

xyang@tsu.edu

## Geospatial Analysis and Modeling

bin.jiang@hig.se

## Geovisualisation

gennady.andrienko@iais.fraunhofer.de

## Maps and the Internet

rcammack@mail.unomaha.edu

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arikawa@csis.u-tokyo.ac.jp

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livier@topo.auth.gr

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hhargitai@gmail.com

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karel.kriz@univie.ac.at

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s.l.chilton@mdx.ac.uk

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acoll@utem.cl

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chris.perkins@manchester.ac.uk

## Use and User Issues

elzakker@itc.nl

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jesus@map.elte.hu

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dave.fairbairn@newcastle.ac.uk

## GI for Sustainability

vstikunov@yandex.ru

## Map Production and Geobusiness

philippe.demaeyer@ugent.be

## Cartography in Early Warning and Crises Management

undatra@yahoo.com

## Geoinformation Infrastructures and Standards

acooper@csir.co.za

## GIM CORRESPONDENT

David Fairbairn, Newcastle University, UK

## The Wide Scope of Geovisualisation

The ICA Commission on Geovisualisation has always been active in engaging with researchers and practitioners in the wider fields of information visualisation and visual analytics. As the oldest discipline concerned with visualising knowledge, cartography has a central place in the 'infovis' community, and contributes to its development as a mature scientific activity.

A successful workshop entitled 'GeoVisual Analytics, Time to Focus on Time' was held in September 2012 in conjunction with the GIScience 2012 conference in Columbus, Ohio, USA. A range of papers were presented (all available at [1]), with the focus on the use of geovisual analytics approaches for exploring and analysing large datasets with both spatial and temporal components. The importance of time in visualisations of spatial phenomena was stressed, and nine papers dealing with this topic were chosen to form a special issue of the *Information Visualization* journal.

Two further workshops are planned by the Commission for 2013. The first, on 6-8 March, will take place in Hamburg [2], following the tradition of biennial GeoVis meetings in that city. Subtitled 'Interactive maps that help people think', it will address the computational and cognitive challenges associated with the analysis and synthesis of messy, large datasets (typical of contemporary spatial data handling) to produce meaningful insights about phenomena and processes. Papers from this meeting will be directed towards a special issue of IJGIS. The Hamburg workshop will be



*GeoVis2013 will take place in Hamburg, Germany.*

held in collaboration with the ICA Commission on Cognitive Visualisation.

The second commission workshop of 2013 will be a similar joint meeting, and will also involve the Commission on Use and User Issues. Held a couple of days before the main international cartographic conference in Dresden, Germany, in late August, the topic of this two-day workshop will be eye-tracking in cartography and geovisualisation. From 23 to 24 August, at the Technical University of Dresden, researchers and practitioners from the three commissions will address a range of common issues, but will concentrate particularly on an eye-tracking data analysis challenge. Full details will be released on the commissions' websites in due course, along with three real eye-tracking datasets and associated analytical tasks.

The Commission also once again had significant impact during the annual IEEE VisWeek event, held

this year in Seattle, USA. Involving the annual InfoVis (Information Visualisation), the annual VAST (Visual Analytics Science and Technology) and the SciVis (Scientific Visualisation) streams, a number of geovis-related papers were presented. Those cartographers present – and presenting – ensured that the contribution of mapping and mapping-related insights to the broader field of visualisation remains at a high level. ◀

## MORE INFORMATION

[www.icaci.org](http://www.icaci.org)

1. [http://geoanalytics.net/GeoVA\(t\)2012/](http://geoanalytics.net/GeoVA(t)2012/)

2. [www.geomatik-hamburg.de/geoviz/](http://www.geomatik-hamburg.de/geoviz/)



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**Geoinformation Infrastructures and Standards**

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**GIM CORRESPONDENT**

David Fairbairn, Newcastle University, UK

## The Conference Bonus

It is customary that, whenever the world's cartographers meet at the biennial International Cartographic Conferences (ICC), related activities also take place immediately before and after, taking advantage of the concentrated presence of experts and practitioners in one location. Most of these activities are organised under the auspices of the Commissions of ICA, and demonstrate the vibrancy of the international research community in cartography and its urge to meet whenever possible.

Such extra meetings tend to be more informal (presentations may not be refereed, for example), may be more free-format (as workshops or practical activities, for example) and may be cheaper (registration fees may be waived), but they will always take the work of Commissions forward and result in important progress.

In Paris, in 2011, for example, an extraordinary range of such activities (listed at [31](#)) covered a wide spread of Commissions. Among the many events were: a walking tour by the Working Group (WG) on Art and Cartography, 'Patterns of a city exploring the invisible borders between the arrondissements of Paris'; a joint 2-day symposium, 'Looking to the future: Children, education and internet', organised by Commissions on Cartography & Children, Maps & the Internet, and Education & Training, Planetary Cartography, and WG on Cartography of Early Warning & Crisis Management, which resulted in a significant book publication (*Maps for the Future: Children, Education and Internet*, Eds. Laszlo Zentai and Jesus Reyes Nunez); a one-day practical workshop on 3D



*The Commission on Use and User Issues will present a workshop on eye-tracking in August 2013.*

scanning of historical globes and deformed maps offered by the Commission on Digital Technologies in Cartographic Heritage; and an intensive 2-day brainstorming colloquium offered by the Commission on Generalisation & Multiple Representations. Many other similar meetings were held.

This August in Dresden, Germany, similar activities will be held in addition to the main ICC. There are already plans for a joint symposium involving Commissions on Cartography & Children, Education & Training, Maps & Graphics for Blind & Partially Sighted People, and Planetary Cartography, on 23 August. Further, the Commission on Use & User Issues, with the Commissions on Cognitive Visualisation, and on Geovisualisation, have announced a workshop on 'Working with Eye-Tracking' on 23-24 August. The workshop includes a Data Challenge, for which data can be accessed through the Commission website at [32](#). In addition, the

active Commission on Generalisation & Multiple Representations has announced an ambitious programme for its 2-day workshop, also on 23-24 August. The following topics have been presented as the focus of this event: User- or data-driven approaches?; Application-dependent delivery of variable data; Generalisation in support of integrating NMA data with other data; Service-Oriented Architecture approaches to rendering variable scale data; Characterising and reasoning about geographic phenomena; The role of web services in sharing algorithms; New IT methods to promote Service-Oriented Mapping; Quality assurance in generalisation; and Cartographic generalisation of 3D objects. ◀

**MORE INFORMATION**

1. [www.icc2011.fr/scientific-programme/workshop-and-tutorials/](http://www.icc2011.fr/scientific-programme/workshop-and-tutorials/)
2. [www.icaci.org](http://www.icaci.org)





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## Cartography in Early Warning and Crises Management

undatra@yahoo.com

## Geoinformation Infrastructures and Standards

acooper@csir.co.za

## GIM CORRESPONDENT

David Fairbairn, Newcastle University, UK

## Open to Open Source Initiatives

Since May 2009, when the topic of open source issues and cartography was last addressed in this column, there has been significant activity on the part of the ICA Commission on Open Source Geospatial Technologies. Confirmed as a full commission of ICA in 2011, one of its first important activities was to sign a Memorandum of Understanding (MoU) with OSGeo, the major co-ordinating body for developing and promoting open source solutions in geospatial data handling. The prime purpose of the link has been to ensure adoption of open source geospatial software in the cartographic community, particularly in education.

Many one-off events, meetings, joint workshops and established conference series have resulted from this linkage. A further tangible expression has been the establishment of open source geospatial laboratories and research centres for developing open-source geospatial software technologies, training and expertise, and building up momentum in open source GIS education and research worldwide.

The first of such laboratories was established at Nottingham University, UK, under the leadership of Suchith Anand, who is chair of the ICA Commission on Open Source Geospatial Technologies. The lab has developed best practices for supporting UK government organisations in evaluating and making use of the open source geospatial technologies that are emerging globally. The group also encouraged the foundation of the first OSGeo lab in Asia at the Nottingham University campus in Malaysia, where Tuong Thuy Vu is coordinating research and development.



Professor Georg Gartner (left), president of ICA, and Arnulf Christl, (now emeritus) president of OSGeo, shake hands after signing the Memorandum of Understanding between the two organisations in September 2011.

In a step to establish similar labs across the world, October 2012 saw the launch of the first African initiative at the University of Pretoria, South Africa. Serena Coetzee and her colleagues promoted two workshops to mark the occasion: the first on MapServer was led by the president of OSGeo, Jeff McKenna, who had travelled from Canada to highlight the importance of this launch; the second was facilitated by local expert Gavin Fleming, who introduced attendees to open source data for African mapping projects and open source software.

October also saw the formal creation of the first OSGeo lab in North America at the University of North Carolina under the dynamic leadership of Helen Mitasova, while in November 2012, the Czech Technical University in Prague, Czech Republic, also established its OSGeo research and education lab, managed by Martin Landa, Department of Mapping and Cartography.

Further schemes in Europe were put in place in 2012 at the University of Girona, Spain, and at Newcastle

University, UK, where both teaching and research benefit from an open source approach to geospatial data handling, which is being developed further under the direction of Phil James. South America has not been left behind in this initiative: the Federal University of Paraná, Brazil, is where Silviana Comboin has been active in promoting the new educational and research lab, building on its cartographic education programmes.

These initial institutions have created impetus for further developments, and there are at least eight further centres worldwide which are close to formal recognition as OSGeo labs. The current situation, along with details of other activities, can be found on the Commission website, which is edited by joint chair Thierry Labard (Canada), at [ica-opensource.scg.ulaval.ca](http://ica-opensource.scg.ulaval.ca).

## MORE INFORMATION

1. <http://ica-opensource.scg.ulaval.ca>  
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sara.fabrikant@geo.uzh.ch

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peter.jordan@oeaw.ac.at

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xyang@isu.edu

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bin.jiang@hig.se

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undatra@yahoo.com

## Geoinformation Infrastructures and Standards

acooper@csir.co.za

## GIM CORRESPONDENT

David Fairbairn, Newcastle University, UK

## Maps and Graphics for Blind and Partially Sighted People: Commission Update

The ICA Commission on Maps and Graphics for Blind and Partially Sighted People has been revitalised since its renewal at the 2011 ICA General Assembly, under the leadership of professor Alejandra Coll Escanilla (Universidad Tecnológica Metropolitana de Chile (UTEM), Santiago). The work of this Commission, notably in Latin America, highlights the importance within ICA of this sector of map producers and users.

A progress meeting, held at UTEM in August 2012, heard about a new book soon to be published: *Tactile Cartography and Disability*, by authors Teresa Barrientos and sociologist Victor Ramirez from UTEM's Center for Tactile Cartography (CECAT). The meeting also formed the IV International Meeting of the research project entitled 'Generation touch mapping and learning materials for the understanding of global warming and its relation to natural events', sponsored by PAIGH (Pan-American Institute of Geography and History) and attended by researchers from Argentina, Brazil, Chile and Peru.

Also in 2012, researchers and practitioners from the Commission developed a workshop for 37 blind and partially sighted children and their teachers at the 26<sup>th</sup> Children's Book Fair in Santiago de Chile. Later, the Commission conducted a training activity called 'Tactile Cartography, Geography: Pupils with special educational needs', attended by professionals in kinesiology, psychology, history, geography, special education and pedagogy in technology, representing many educational establishments. The participants discussed challenges of



Waldirene Ribeiro (Brazil), Commission Vice Chair, presents aluminium-based tactile maps.

disabilities and engaged in exercises and knowledge-sharing, helping to develop training programmes using the latest generation of maps which had been crafted in aluminium and then thermoformed. The Commission, through CECAT, also organised a workshop on 'Signs and Activities with Books with Textures' at the 17<sup>th</sup> Conference of Education, part of the 32<sup>nd</sup> International Book Fair in Santiago.

In October 2012, CECAT, the UTEM School of Design and the National Public Library System (SNBP) held a seminar with Philippe Claudet (France), academic educator of children with visual impairments and founder of the Les Doigts qui Révent association. He presented educational material developed by his association and facilitated an exchange of educational experiences and research concerning tactile book production, illustrated with tactile images, for children with visual impairments.

During 2012, CECAT received specialised equipment ('tíflotécnico') through co-operation between the Spanish Ministry of Education, the ONCE Foundation for Latin America, the Organization of Ibero-American

States for Education, Science and Culture (OEI), and the Chilean Ministry of Education. This consisted of Text Impact Printer Braille machines, with converters and software, contributing to the Education Resource Center for People with Visual Impairment, co-ordinated and managed by CECAT and members of the Commission: this will support the specialised production of Braille and large-print textbooks for all levels of education, and of resources for geographical research, mapping training, technology transfer and outreach.

For 2013, plans include a training workshop entitled 'Teaching Geography through Maps: Tactile teaching materials for teachers of pupils with SEN in Latin America' to be held in Central America and further afield. The Commission will also participate in a pre-conference Symposium in August 2013 in Dresden, Germany.

Alejandra Coll Escanilla,  
Commission chair

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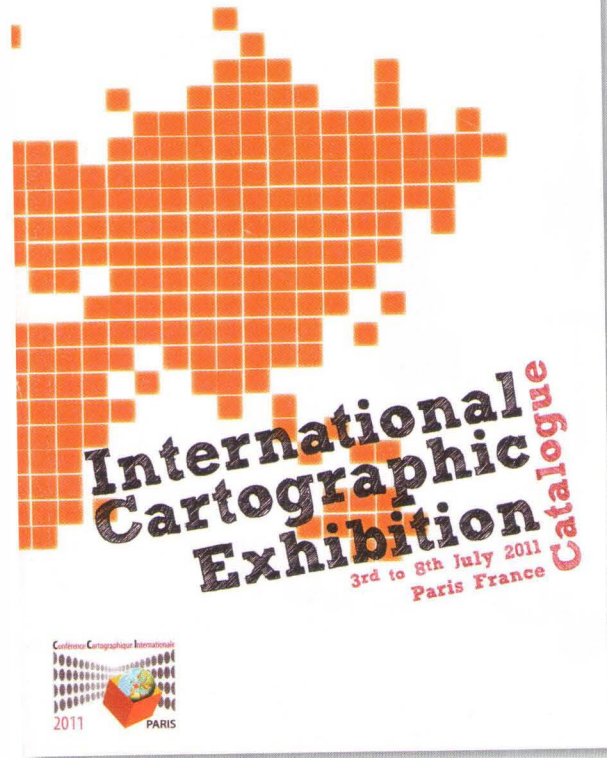
David Fairbairn, Newcastle University, UK

## Exhibiting Our World

The biennial International Cartographic Conference is characterised by a host of activities and events in addition to the main presented sessions in the conference rooms. Keynotes and parallel sessions are a major part of the conference programmes, but many other scheduled activities are incorporated, along with events which are worthy of attendance at any time during the week. Among the latter are the exhibitions, long associated with these occasions, which offer the best of cartography to the world. A technical exhibition is one highlight, as is the presentation of maps and atlases sourced from all over the world for the International Cartographic Exhibition. This exhibition is always a spectacular demonstration of the skill, endeavour and creativity of cartographers across the globe. In 2011, at the Paris ICC, an excellent setting in the centre of the main foyer in the Palais des Congrès saw 35 countries display over 600 map and atlas items between them. One of the benefits of affiliate membership of ICA for commercial companies and educational institutions is that they also can exhibit mapping products at each ICC.

Conference participants receive a fully descriptive catalogue of the International Cartographic Exhibition, which was available in Paris in both digital and hard-copy format. The catalogue is a record of achievement in the field of world cartography with details of scale, publisher, dimensions, language, media, description and other information for each exhibit. The digital nature of contemporary cartographic products is also reflected in the possibilities of

### 25th INTERNATIONAL CARTOGRAPHIC CONFERENCE



Front cover of the 140-page catalogue produced by the organisers of the Paris 2011 ICC.

showing dynamic and movie-based mapping in an effective manner.

The exhibition is judged by an international jury of cartographic experts and a series of prizes are awarded for the best maps on display. For the past three ICCs, the jury has operated under the distinguished leadership of Corné van Elzakker (The Netherlands) who has ensured that the highest quality of cartographic output was recognised and rewarded. The prize winners contribute to the regular 'Map of the Month' feature on the ICA website, yielding further publicity for the best maps.

The Dresden ICC in August this year will continue the impressive sequence of International Cartographic Exhibitions, in the stunning setting of the International Congress Center Dresden. National cartographic committees will be selecting maps to represent the best of cartography in their own countries over the course of the next few weeks. One thing is for sure: the quality will be high, and the experience of viewing the exhibition should not be missed.

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## Geovisualisation

gennady.andrienko@iais.fraunhofer.de

## Maps and the Internet

rcammack@mail.unomaha.edu

## Ubiquitous Cartography

arikawa@csis.u-tokyo.ac.jp

## Digital Technologies in Cartographic Heritage

livier@topo.auth.gr

## Open Source Geospatial Technologies

suchith.anand@nottingham.ac.uk

## Generalisation and Multiple Representation

dirk.burghardt@tu-dresden.de

## Planetary Cartography

hhargitai@gmail.com

## Mountain Cartography

karel.kriz@univie.ac.at

## Neocartography

s.l.chilton@mdx.ac.uk

## Maps and Graphics for Blind and Partially Sighted People

acoll@utem.cl

## Maps and Society

chris.perkins@manchester.ac.uk

## Use and User Issues

elzaker@itc.nl

## Cartography and Children

jesus@map.elte.hu

## Education and Training

dave.fairbairn@newcastle.ac.uk

## GI for Sustainability

vstikunov@yandex.ru

## Map Production and Geobusiness

philippe.demaeyer@ugent.be

## Cartography in Early Warning and Crises Management

undatra@yahoo.com

## Geoinformation Infrastructures and Standards

acooper@csir.co.za

## GIM CORRESPONDENT

David Fairbairn, Newcastle University, UK

## Cartography for the Young

The last ICA column in this magazine discussed the exhibitions associated with each International Cartographic Conference (ICC), including the ICC 2013 to be held in Dresden this August. Among the exhibitions are entries for the biennial 'Childrens Map' contest, organised by the ICA Commission on Cartography and Children, and named the 'Barbara Petchenik Competition' after the late ICA vice-president and eminent American cartographer.

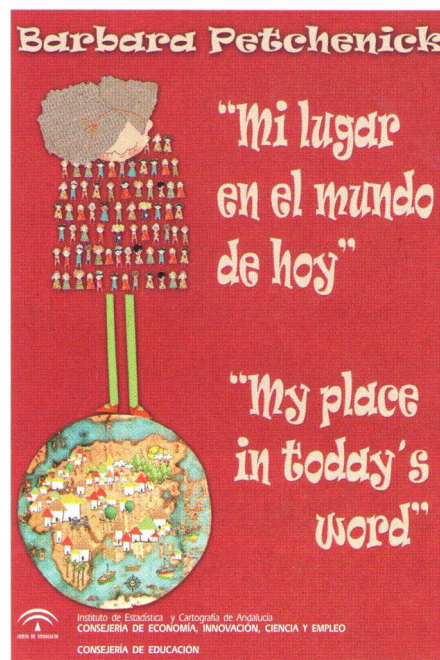
This year, ICA celebrates the 20<sup>th</sup> anniversary of the first Barbara Petchenik Competition which was organised in Cologne, Germany, to coincide with the ICC 1993. The decades since then have revealed an extraordinary depth of artistic talent, scientific awareness and geographical knowledge in young people from all over the world who have contributed their maps of our planet to the competition. Two book volumes of *Children Map the World* have been published by ESRI Press (one in 2005 and the second in 2009), reproducing the highlights and award winners from the past 20 years. Although the entries are expected to be maps of the whole world, the theme varies from one competition to the next: recently, children have interpreted 'Many Nations-One World' and 'Living in a Globalized World', while this year's theme is 'My Place in Today's World'. Entries have already been received from countries around the globe which organise national contests themselves before sending representative samples to the international coordinators, Peter van der Krogt and Ferjan Ormeling (The Netherlands).

There are specific rules for the competition and, under the direction

of Commission chair Jesus Reyes (Budapest, Hungary), continuity and rigour in the difficult administration and judging of the prestigious awards has been maintained. Professor Reyes, assisted by vice-chair Diah Kresnawati (Indonesia), also maintains the high profile of the Commission in other areas. Outreach to other international organisations has been notable in recent months, with participation in the European Association of Geographers

(EUROGEO) 2012 Symposium in Dublin, Ireland, and interaction with IGU Commission on Geographical Education, at the symposium held in Freiburg last August just before IGU's 32<sup>nd</sup> congress.

The Commission is active in promoting its other work, with its dedicated website containing useful materials for the Childrens Map competition, including advice on running national competitions, a parental permission form for entrants, resource material written by Henry Castner (USA) and a collection of 32 different blank graticules that can be used by teachers and children for map drawing. Outreach using social media is also a characteristic of the group, with a Facebook profile [1] established in 2012, facilitating contact between members and engaging with a wider spectrum of people. Its success is underlined by



Promotional poster for the 2013 Barbara Petchenik Childrens Map Competition, Spain.

the detailed statistical analysis which Facebook site owners can access: for example, the most 'likes' come from Hungary and Brazil, but in 3<sup>rd</sup> and 4<sup>th</sup> places are Tunisia and Egypt, two countries that are not yet national members of ICA.

The Commission is leading the organisation of 'Sharing Knowledge', a joint ICA Symposium to be held at Dresden University of Technology on 23 August 2013, prior to the main ICC 2013. Details are available at [2].

## MORE INFORMATION

[www.icaci.org](http://www.icaci.org)

1. [www.facebook.com/icaccc](https://www.facebook.com/icaccc)

2. <http://lazarus.elte.hu/jointsymposium2013/>





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sara.fabrikant@geo.uzh.ch

## Map Design

kfield@esri.com

## Art &amp; Cartography

scaquard@gmail.com

## History of Cartography

elri@worldonline.co.za

## Map Projections

mlapaine@geof.hr

## Theoretical Cartography

qydu@whu.edu.cn

## Data Quality

chenxy@ecit.cn

## Atlases

peter.jordan@oeaw.ac.at

## Mapping from Remote Sensor Imagery

xyang@fsu.edu

## Geospatial Analysis and Modeling

bin.jiang@hig.se

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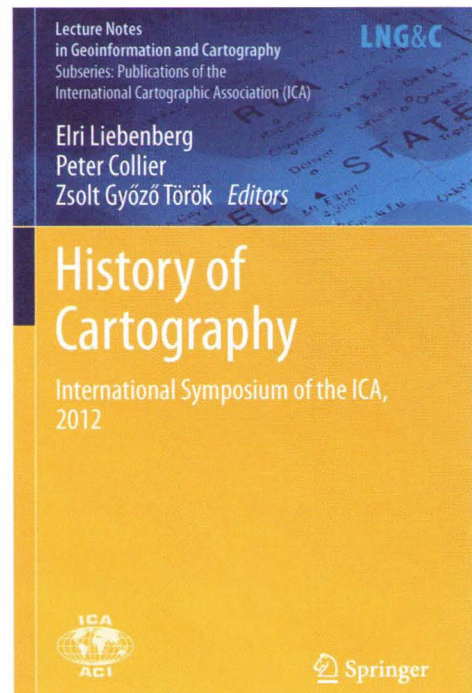
## Examining the Past

As the international organisation responsible for the study of all aspects of spatial data and mapping, ICA has long been interested in the discipline of cartography's rich history. Its Commission on the History of Cartography has existed since 1972, and has established specialist expertise in a number of areas and periods of cartographic development since then. In recent years, the Commission and its subject matter have contributed significantly to the biennial International Cartographic Conferences, and also to the quadrennial International Conferences on the History of Cartography. Furthermore, the Commission itself has organised regular biennial symposia in recent years. Meetings in Utrecht (2006), Portsmouth (2008), Arlington, Texas (2010) and most recently Budapest (2012) have demonstrated the depth of scholarship of Commission members and the importance of the history of cartography to the worldwide cartographic community.

The most recent symposium in June 2012 was attended by over 50 participants from Europe (Austria, Belgium, Croatia, Czech Republic, France, Germany, Hungary, Romania, Switzerland and UK) as well as others from as far afield as the USA, Brazil, Japan and South Africa. The general theme of the symposium was 'Exploration, Discovery, Cartography'. Although the Commission is primarily interested in cartographic endeavours during the 19<sup>th</sup> and 20<sup>th</sup> centuries, cartographic activities during earlier centuries have usually formed the background for later developments and are also considered important. A total of 24 papers organised into eight sessions were presented, and

the edited *Proceedings of the Symposium* were subsequently published by ICA publisher Springer-Verlag (ISBN 978-3-642-33316-3).

Sample titles from the contents page of this volume exemplify the detailed and international nature of research undertaken by members of the Commission. Madalina Veres (History, University of Pittsburgh) examined 'Redefining Imperial Borders: Marking the Eastern Border of the Habsburg Monarchy in the Second Half of the Eighteenth Century' and in a similar part of the world, Zsolt Torok and Domonkos Hillier (Cartography and Geoinformatics, Eötvös Lorand University) considered 'Exploring and Mapping the Danube: Reading László Vörös' Hydrographic and Topographic Map of Buda and Pest (1833)'. Some aspects of the history of geodetic work in Europe were presented by Jana Moser – Leibniz Institute for Regional Geography, Leipzig ('Saxony's Role in the Measurement of the Central European Meridian Arc as an International Geodetic Project since 1862'), and by Mirela Altic – Institute of Social Sciences, Croatia ('Exploring along the Rome Meridian – Roger Boscovich and the Production of the First Modern Map of the Papal States'). Further afield, Sri Handoyo (Bakosurtanal, Indonesia) wrote a 'Brief History of the Boundary Mapping between Indonesia and Timor-Leste', and the



The latest publication in the ICA subseries of the Lecture Notes in Geoinformation and Cartography (Springer), sourced from the Symposium Proceedings of the Commission.

chapter by Wu, Chia-Jung (Geography, National Taiwan University) addressed 'Colonial Mapping and Naming of the Pacific Islands – a Case Study of Orchid Island, Taiwan'.

Under the active leadership of the chair, Elri Liebenberg (University of South Africa), and vice chairs Imre Demhardt (University of Texas, Arlington) and Peter Collier (University of Portsmouth), the Commission continues its investigations into the important and fascinating annals of the discipline of cartography. ◀

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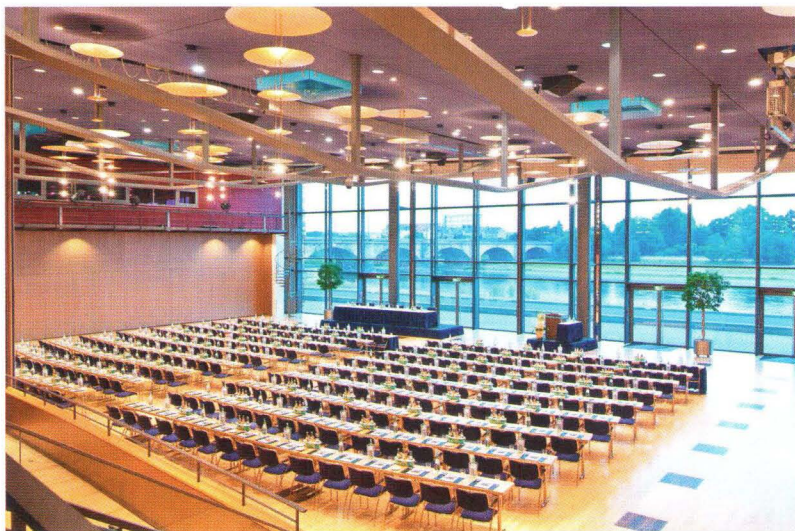
David Fairbairn, Newcastle University, UK

## Mapping a Summer Visit to Saxony

A couple of months ago, the heroic efforts of individuals and communities around Dresden, Germany, saved the city's historic centre from a repeat of the severe flooding seen in 2002. The city is 'open for visitors' as usual this summer, and a large group of international cartographers will be among them when the 26<sup>th</sup> International Cartographic Congress (ICC) is held in Dresden's International Congress Center (25-30 August). This biennial meeting will bring together cartographers and GI science specialists from around the world, and will provide a forum for the presentation of scientific papers illustrating the research community's efforts, for professional papers describing the cutting-edge methods employed by mapping organisations, for meetings of the ICA Commissions and Working Groups helping them to further their international collaborative efforts to advance knowledge and techniques in cartography, for map exhibitions, and for the opportunity to meet colleagues and friends.

The ICC is returning to Germany after a 20-year absence and the International Cartographic Association (under whose auspices this conference is delivered) is especially delighted to be visiting Dresden, the home of educational and research institutions that have progressed the theoretical and practical elements of cartography and GI science over many years.

The conference website [1] displays a comprehensive programme which comprises over 400 papers presented in eight parallel sessions during five action-packed days. Posters, exhibitions (of



*The International Conference Center, Dresden.*

technical cartography, map design and production, and children's mapping activity), social events, PhD speed presenting, sessions on FOSS solutions, workshops for national mapping agencies, and interesting keynote speakers will all contribute to the usual high quality and stimulating ambience of an ICC. In addition, a wide range of fringe meetings are being organised by ICA commissions to take place before the main conference. These are also listed on the conference website, and they will address contemporary activity in aspects of cartography ranging from education to network analysis and from eye-tracking in map use to generalisation research.

Each ICC addresses the full range of cartography and GI science, and there will be something to interest all those with a connection to mapping and geomatics. This year the conference motto is 'From Pole to Pole', showing that the focus is on cartography and its development throughout the whole world. As usual, the conference activity will be

reported and promoted through the three officially recognised ICA journals, the journal *Kartographische Nachrichten*, the Springer-published conference book, and the standard proceedings available on CD. Associated with the international conference, the national German Cartographic Society (Deutsche Gesellschaft für Kartographie) will present the '61. Deutschen Kartographentag' (61<sup>st</sup> German Cartographic Symposium) over three days during the week. This German-language meeting will address topics such as atlas cartography and crowdsourcing for contemporary mapping, and will integrate with the main ICC for several events. The development of cartography in both Germany and the rest of the world will be enhanced by the activities of the Dresden meetings: you are encouraged to attend and contribute to that development! ◀

## MORE INFORMATION

1. [www.icc2013.org](http://www.icc2013.org)  
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William Cartwright, RMIT University, Australia

## EDITOR ICA NEWS

Igor Drecki, University of Auckland, New Zealand

## COMMISSION CHAIRS

## Cognitive Visualisation

sara.fabrikant@geo.uzh.ch

## Map Design

kfield@esri.com

## Art &amp; Cartography

scaquard@gmail.com

## History of Cartography

elri@worldonline.co.za

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mlapaine@geof.hr

## Theoretical Cartography

qydu@whu.edu.cn

## Data Quality

chenxy@ecit.cn

## Atlases

peter.jordan@oeaw.ac.at

## Mapping from Remote Sensor Imagery

xyang@fsu.edu

## Geospatial Analysis and Modeling

bin.jiang@hig.se

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gennady.andrienko@iia.fraunhofer.de

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chris.perkins@manchester.ac.uk

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## Map Production and Geobusiness

philippe.demaeyer@ugent.be

## Cartography in Early Warning and Crises Management

undatra@yahoo.com

## Geoinformation Infrastructures and Standards

acooper@csir.co.za

## GIM CORRESPONDENT

David Fairbairn, Newcastle University, UK

## The New Mapping Paradigm

The ICA Commission on Map Production and GeoBusiness (chair Philippe de Mayer, Belgium, vice chair Markus Jobst, Austria) has been recently addressing its Terms of Reference related to contemporary business practices in production and the impact of new communications and service-oriented production environments. Map production, as a human activity, has changed radically since the turn of this century. It was previously characterised by large agencies (both commercial and governmental), using standard flowlines of production and distributing hard-copy products to specific market sectors. Today, small businesses can compete effectively in the marketplace, map products are flexible in terms of their appearance and format and can be created much more quickly, and applications of mapping can be extended by adding value to such products in a large number of ways.

One of the most important innovations in recent years has been the development of the concept of Service Oriented Architectures (SOA), which help to model and establish new flowlines. The convergence of intelligent GIS, maturing spatial data infrastructures and the handling of big data has led to a need to consider the marketplace for, and effectiveness of, map products. In particular, web technologies have had an enormous impact on the distribution, production, embedding and user acceptance of cartographic products and data.

A highlight has been the recent publication of the book *Service Oriented Mapping 2012*, which is the record of proceedings of a major

symposium (SOMAP 2012) in Vienna, Austria, in November 2012. This volume [1] is an essential examination of the latest developments in service-oriented mapping issues and challenges. The contents are derived from the 50 presentations delivered at the symposium and consider the wider implications of service-oriented architectures for the established mapping agencies, infrastructure providers, software developers and individual cartographers. The first introductory section highlights the importance of standards, and the possibilities of SOA in augmented reality and mobile mapping. The next, on 'The Diversity of Service Oriented Map Production', explains the main principles of SOA, which require clearing houses and geospatial process-management methods. Use cases are then described, including applications such as creating a European topographic reference dataset, PHP and KML for thematic map production, examples of service-oriented maps, e.g. crime mapping, experiences in using open-source geospatial technologies for peri-urban development analysis, integration of map services for the living environment, and the current state of implementation of the European Union's INSPIRE geoportal. Advanced perspectives include 'good design', effectiveness of web-delivered mapping products for location-aware visualisation, intelligent GIS, the standardised collection and processing of environmental data, accessing of large archives of Earth observations and spatiotemporal visualisation and simulation. These are followed by a section on 'Geobusiness Considerations and Perspectives' covering some non-technological



Chair Philippe de Maeyer and vice chair Markus Jobst at the SOMAP 2012 symposium.

issues such as licensing, procurement and audits. Finally, the scientific presentations of the symposium are extended with a 'Cookbook on Webmapping and Geo Web Services'.

The themes of, and examples given in, this book demonstrate evocative improvements and changes based on the paradigm of SOA in the domain of cartography and geoinformation management for the coming years. ◀

## MORE INFORMATION

1. <http://somap.cartography.at>  
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sara.fabrikant@geo.uzh.ch

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David Fairbairn, Newcastle University, UK

## Reporting on a Nation's Cartography

In addition to the diverse activities and outcomes of the biennial international cartographic conferences, several of which (exhibitions, fringe meetings, formal conference proceedings) have been discussed recently in this column, the production of National Reports by member nations of the International Cartographic Association is worthy of note. These official records of national cartographic activity are published every four years for submission to the General Assembly of ICA. ICA Statutes indicate that "the task of each national member organisation is to facilitate and co-ordinate, within its nation, the study and development of the different aspects of cartography and GI science". National reports are a major method for doing this, with the current set covering the period from 2007 up to the General Assembly in Paris in 2011. Many of them are accessible on the ICA website [1] and it is also possible to examine a selective archival set of reports from past General Assemblies.

These reports vary considerably in format, in level of detail and in content. Some reports are not held on the ICA archive, as they are formal commercial publications (e.g. the UK's regular well-documented reports are disseminated as special issues of *The Cartographic Journal*), whilst others may have been developed as dedicated websites rather than presented in traditional style, or distributed as DVD or CD products to a limited number of recipients.

Those documents which can be found on the ICA website, however, give a useful and comprehensive overview of cartographic activity on a worldwide basis. From Chile to Russia, from Canada to Japan and



*Geological map of Mexico.*

from New Zealand to Malaysia, there are some excellent examples promoting the cartographic community and outputs of member nations. The report from Iran is typical, presenting, in a written 33-page document, information about all types of map output – topographic, atlas, thematic, cadastral, geological, navigational charts etc; the organisation of geodetic and mapping activity in the country, including practical observation and data collection, government ministries, and user groups; the development of national digital databases – SDI, DEMs, geographic names; and the way in which education in cartography is organised. Like several of the reports there is, unfortunately, no sample mapping or illustrations included; this is a distinct contrast to many reports which do show the range of cartographic activity in the nation in a visually appealing manner. The National Report of the Netherlands, for example, presents 20 pages, with one innovative and strikingly well-designed example of cartography on each, addressing a wide range of applications from visualisation of GIS

analysis to student work, from historical map documents to innovative map projections. The National Reports from Switzerland, Spain, Hong Kong, and Bulgaria, to mention a few more, are also richly illustrated with map extracts and images. The Finnish report is a cleverly designed populist journal with much information incorporated. Perhaps the most impressive is the detailed, wide-ranging and spectacularly illustrated account of cartographic activity presented in the Mexican national report.

In all cases, the ICA member nations are fulfilling a fundamental requirement of membership, the duty to record and present cartographic activity in their country, and are promoting the discipline of cartography by highlighting its value to their nation state. ◀

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suchith.anand@nottingham.ac.uk

## Generalisation and Multiple Representation

dirk.burghardt@tu-dresden.de

## Planetary Cartography

hhargitai@gmail.com

## Mountain Cartography

karel.kriz@univie.ac.at

## Neocartography

s.l.chilton@mdx.ac.uk

## Maps and Graphics for Blind and Partially Sighted People

acoll@utem.cl

## Maps and Society

chris.perkins@manchester.ac.uk

## Use and User Issues

elzakker@itc.nl

## Cartography and Children

jesus@map.elte.hu

## Education and Training

dave.fairbairn@newcastle.ac.uk

## GI for Sustainability

vstikunov@yandex.ru

## Map Production and Geobusiness

philippe.demaeyer@ugent.be

## Cartography in Early Warning and Crises Management

undatra@yahoo.com

## Geoinformation Infrastructures and Standards

acooper@csir.co.za

## GIM CORRESPONDENT

David Fairbairn, Newcastle University, UK

Kiváló Térképészek<sup>1</sup>

Last month's column concentrating on the valuable collection of National Reports on cartographic activity, prepared by ICA member countries and archived on the website [1], did not specifically mention Hungary, a long-standing member of the ICA family of nations. Its lengthy (72-page) account of governmental and private mapping activities has many useful illustrations and statistics, and extraordinarily extensive details of cartographic and geodetic practices and products. Specific topics range from the work of the state border surveyors to the nationwide ragweed risk-mapping project, and from the national vineyard GIS to the creation of a fascinating (and highly recommended) Virtual Globes Museum on the web [2].

Although ICA has member nations rather than individual members, this column highlights three notable cartographers connected with Hungary, and mentions others who have contributed to Hungary's distinguished history within ICA.

**Professor István Klinghammer** is an Honorary Fellow of the ICA, a distinction awarded in 2003 to commemorate his long association with the modernisation of cartographic education in Hungary and worldwide. He has welcomed ICA to formal meetings in Budapest over many years, including the memorable 14<sup>th</sup> International Cartographic Conference in the summer of 1989, precisely when the borders were opening across Eastern Europe. Then, he was a staff member in the Department of Cartography at the Eotvos Lorand University in Budapest, and from 2000 to 2006 he was the rector of the University. His experience in higher education has recently led to him to be called out of retirement to become the

State Secretary for Higher Education in the Hungarian government, a notable accolade.

An earlier Hungarian cartographic personality, Dr Árpád Papp-Váry, head of mapping at the National Office of Lands and Mapping in Budapest, was actually the main organiser of the 1989 conference, served ICA for two terms as vice-president (1987-1995), and was also awarded an Honorary Fellowship in 1995.

Klinghammer's successor as head of the Department of Cartography and Geoinformatics from 2005 has been **Professor Laszlo Zentai**. Zentai continues Hungary's strong commitment to ICA, working with several Commissions, becoming chair of the Education and Training Commission in 2003, and currently as secretary-general and treasurer, a role to which he was elected in 2011. He is also an active orienteer, so is experienced in using cartographic products in practice, and sits on the executive committee of the International Orienteering Federation, having previously been the chair of its Map Commission.

The honouring of the third cartographer distinguished in this column has previously been reported in the August 2013 issue of *GIM International* which noted the award of an honorary doctorate by the Eötvös Loránd University to **Professor Ferjan Ormeling**, a long-standing friend of Hungarian cartography and eminent international cartographer. Ormeling first visited Budapest in 1971 and has collaborated on an annual basis with the university department there for over 40 years.

The prominent profile of Hungary within ICA can be seen in the current National Report, but has been high



*Hungarian cartographers at the 2009 ICC: (L to R) Jesus Reyes, Bela Pokoly, Laszlo Zentai and Henrik Hargitai.*

during most of its history: earlier personalities such as Sandor Rado and Erno Csati have been succeeded by contemporary leaders such as Jesus Reyes (chair, ICA Commission on Children and Cartography) and Henrik Hargitai (chair, ICA Commission on Planetary Cartography). ◀

<sup>1</sup> Hungarian for 'Outstanding cartographers'.

## MORE INFORMATION

1. <http://icaci.org/national-reports>
2. <http://terkeptar.elte.hu/vgm>  
[www.icaci.org](http://www.icaci.org)



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**COMMISSION CHAIRS****Cognitive Visualisation**

sara.fabrikant@geo.uzh.ch

**Map Design**

kfield@esri.com

**Art & Cartography**

scaquard@gmail.com

**History of Cartography**

elri@worldonline.co.za

**Map Projections**

mlapaine@geof.hr

**Theoretical Cartography**

qydu@whu.edu.cn

**Data Quality**

chemy@ecit.cn

**Atlases**

peter.jordan@oeaw.ac.at

**Mapping from Remote Sensor Imagery**

xyang@fzu.edu

**Geospatial Analysis and Modeling**

bin.jiang@hig.se

**Geovisualisation**

gennady.andrienko@iais.fraunhofer.de

**Maps and the Internet**

rcammack@mail.unomaha.edu

**Ubiquitous Cartography**

arikawa@csis.u-tokyo.ac.jp

**Digital Technologies in Cartographic Heritage**

livier@topo.auth.gr

**Open Source Geospatial Technologies**

suchith.anand@nottingham.ac.uk

**Generalisation and Multiple Representation**

dirk.burghardt@tu-dresden.de

**Planetary Cartography**

hhargitai@gmail.com

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karel.kriz@univie.ac.at

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acooper@csir.co.za

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David Fairbairn, Newcastle University, UK

## Looking Back on ICC 2013

The organisers of the International Cartographic Conference (ICC) 2013, held in Germany during late August, did a great job. The biennial ICCs, presented by ICA but organised locally, are hosted around the globe, and it would be difficult to find a more comfortable and efficient location than the congress centre on the banks of the River Elbe in Dresden.

The content of the conference was, as usual, a stimulating mix of presented research, opinion, description and prediction in our broad-ranging discipline. The scope of the presentations was enormous: there were well over 100 sessions with intriguing titles: 'Mapping emotions', 'Rock depiction and relief representation', 'Ontologies and standards in SDI', 'Hydrological extreme events', 'Historical surveying and mapping', 'Map perception', etc. Some of ICA's new Commissions, approved at the last General Assembly, had a notable impact on the programme. Hence, 'map design' was a prominent theme, as was 'web services-oriented geobusiness'. Other new Commissions promoted sessions on their topics in areas such as 'Cognitive visualisation', 'Art and cartography', 'Data quality', 'Open source geospatial technologies', 'Neocartography', 'GI for sustainability', and 'Cartography in early warning and crisis management.'

In addition, ICCs feature general sessions designed to inform, intrigue and enthuse the delegates. The speakers chosen for the opening ceremony, along with the plenary speakers who started each day of the conference, did just that. Starting with the Interior Minister of



*Students from the international masters in cartography course met the Conference chairman and the ICA president at the Dresden ICC.*

Saxony in the opening ceremony, the conference was able to detect what the outside world thinks of, needs from and can contribute to cartography. From Jack Dangermond's vision of how maps can tell stories to address serious global challenges, through Eric Loubier's masterful overview of the role of interoperability for effective map data handling, to Chris Board's highly personal account of a career which helped mould the current shape of ICA and cartographic research, all seven keynote speakers had valuable messages to convey.

Further aspects of the Dresden ICC which contributed to its success included the spacious and well-planned technical and map exhibition displays, a vibrant poster exhibition, the Young Scientists' sessions, and the Children's Map competition. The awarding of prizes to outstanding map products is a highlight of any ICC, and this year the standard of cartography remained very high. Awards were also presented to individual cartographers of distinction, and to

student travel-bursary winners.

The hosts of the ICC, from the students working as support staff to the Conference president, were cheerful, enthusiastic and above all helpful, ensuring that each one of the 1,400 delegates was made welcome and able to extract maximum benefit from their visit. The lasting memory of Dresden ICC 2013 will be the sheer breadth of cartographic activity, research and curiosity, reflected in a stimulating programme, demonstrating the scope and skill of cartographers from all over the world. The ICA president, in his opening address, encouraged us all by saying, "It's OK to be a cartographer"; by the end of the conference, we all acknowledged that it is not only OK, but also an undoubted privilege and an exciting challenge to be a cartographer. ◀

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[www.icaci.org](http://www.icaci.org)