



## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic  
EDITOR ICA NEWS  
Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

CARTOGRAPHY & CHILDREN  
jesus@map.elte.hu  
tbandrova@abv.bg

DIGITAL TECHNOLOGIES & CARTOGRAPHIC HERITAGE  
livier@topo.auth.gr

EDUCATION & TRAINING  
david.fraser@rmit.edu.au

GENERALISATION & MULTIPLE REPRESENTATION  
william.mackness@ed.ac.uk  
sebastien.mustiere@ign.fr

GEOSPATIAL ANALYSIS & MODELLING  
bin.jiang@hig.se

GEOSPATIAL DATA STANDARDS  
acooper@csir.co.za

GEOVISUALIZATION  
gennady.andrienko@iais.fraunhofer.de

HISTORY OF CARTOGRAPHY  
elni@worldonline.co.za

MANAGEMENT & ECONOMICS OF MAP PRODUCTION  
philippe.demaeyer@ugent.be  
erkki-sakari.harju@karttakeskus.fi

MAP PROJECTIONS  
dstrebe@mapmathematics.com

MAPPING FROM SATELLITE IMAGERY  
xyang@tsu.edu

MAPS AND GRAPHICS FOR BLIND & PARTIALLY  
Sighted People  
dan.jacobson@ucalgary.ca

MAPS & SOCIETY  
chris.perkins@manchester.ac.uk

MAPS & THE INTERNET  
mpeterson@unomaha.edu

MARINE CARTOGRAPHY  
pcarrasco@shoa.cl

MOUNTAIN CARTOGRAPHY  
karel.kriz@univie.ac.at

NATIONAL & REGIONAL ATLASES  
peter.jordan@oeaw.ac.at

PLANETARY CARTOGRAPHY  
kirash1@yasevno.ru

THEORETICAL CARTOGRAPHY  
alexander.wolodtschenko@tu-dresden.de

UBIQUITOUS MAPPING  
morita@k.hosei.ac.jp

UNDER-REPRESENTED GROUPS AND CARTOGRAPHY  
zyszkowska@geogr.uni.wroc.pl

USE & USER ISSUES  
elzakker@itc.nl

WG ART & CARTOGRAPHY  
scaquard@connect.carleton.ca

WG CENSUS CARTOGRAPHY  
timothy.f.trainor@census.gov

WG EARLY WARNING & CRISIS MANAGEMENT  
konecny@geogr.muni.cz

WG GIS & SUSTAINABLE DEVELOPMENT  
tikunov@geogr.msu.ru

WG MAPPING AFRICA FOR AFRICA  
dclarke@sl.wcape.gov.za

WG OPEN DATA ACCESS & IPR  
lovison@eps.harvard.edu

WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES  
suchith.anand@nottingham.ac.uk

WG TOURIST CARTOGRAPHY  
karta\_spb@mail.ru

## A Truly 3D Cartographic Future

From 24th to 28th August 2009 the International Cartographic Association (ICA) held its first international symposium on 'True-3D in Cartography', intended as a multi-Commission meeting, in Dresden, Germany. Supported by the European Chapter of the International Society for Optical Engineering (SPIE Europe), the event was organised by the German Cartographic Society (DGfK) on behalf of ICA. The initiator and chairman of the symposium, Professor Manfred Buchroithner, director of the Institute for Cartography at TU Dresden, was able to welcome a total of 91 attendees from 22 countries and all continents, both experts and those interested in applying the new technologies presented.

### VISUALISATION

The symposium was opened by Prof. Harold Moellering from Ohio State University on behalf of ICA president Prof. William Cartwright. Professor Moellering also presented the keynote address 'Perspectives on 3D Visualisation of Spatial Geodata and Future Prospects', putting past, recent and possible future developments into a historical context. The event objectives were also strongly supported by the Visualisation Group of TU Dresden's Centre for Information Services and High Performance Computing (through Dr Bernd Hetze), which presented various aspects of (auto-) stereoscopic and steric geodata visualisation.

### SESSION TOPICS

In the space of four days participants attended 32 presentations covering the whole spectrum of true-3D, up to the most recent developments in stereo web cartography. Ten sessions dealt with topics such as Flat Auto-Stereoscopic Hardcopies and



Visualisation of glacier retreat using the Dresden system.

Screens, Data and Techniques for True-3D Geovisualisation, Globes, True-3D in Geophysics and Geology, True-3D for Urban and Rural Landscape Visualisation, Non-Planar Optical Projections, Topographic and Thematic Geovisualisation Go True-3D, and Tactile Maps. Invited presentations were given by Wolf-Dieter Rase on Creating Physical 3D Maps Using Rapid Prototyping Techniques, Toni Mair on Handmade Geomodels: Revival of an Ancient Art or Outdated Technology?, Andreas Riedl on State-of-the-Art of Tactile Hyperglobes, and finally by Gunter Weiss, vice-president of the International Society for Geometry and Graphics (ISGG), who addressed the question of How True is True-3D? – Geometry between Single Image Stereograms and Lenticular Foils.

### DEMONSTRATIONS

Completing the symposium were three scientific-technical excursions to places of particular interest in Dresden, and a commercial and scientific exhibition with exhibitors from Europe and European companies who demonstrated their installations. Among the most acclaimed demonstrations was one by Wolfgang Pusch and Toni Mair, the latter probably being the leading living landscape sculptor in the world. This session, entitled 'The Art

of Manually Producing Landscape Models', was more like a workshop, proving the goal of the symposium chairman has been reached: to trigger a sort of revival of this classical art form. The spontaneous idea to follow up this symposium with another was enthusiastically embraced by our Spanish colleagues, who volunteered to organise the second ICA Symposium on this dynamically developing topic in 2011.

The ICA Working Group on Use and User Issues linked their participation at the Symposium with a Group Meeting at TU Dresden.

A volume of abstracts is currently available online, accessed via the homepage of the Dresden Institute for Cartography (1). By the middle of 2010 the symposium proceedings will be published in book form as *Springer Lecture Notes on Geoinformation and Cartography* (LNGC).

Prof. Manfred Buchroithner, IfK,  
TU Dresden

### MORE INFORMATION

- 1 <http://kartographie.geo.tu-dresden.de/>
- 2 [www.icaic.org](http://www.icaic.org)



**EXECUTIVE MEMBERS****PRESIDENT**

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

**VICE-PRESIDENTS**

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

**PAST-PRESIDENT**

Milan Konecny, Masaryk University, Czech Republic

**EDITOR ICA NEWS**

Igor Drecki, University of Auckland, New Zealand

**COMMISSIONS CHAIRS****CARTOGRAPHY & CHILDREN**

jesus@map.elte.hu

tbandrova@abv.bg

**DIGITAL TECHNOLOGIES & CARTOGRAPHIC HERITAGE**

livier@topo.auth.gr

**EDUCATION & TRAINING**

david.fraser@rmit.edu.au

**GENERALISATION & MULTIPLE REPRESENTATION**

william.mackness@ed.ac.uk

sebastien.mustiere@ign.fr

**GEOSPATIAL ANALYSIS & MODELLING**

bin.jiang@hig.se

**GEOSPATIAL DATA STANDARDS**

acooper@csir.co.za

**GEOVISUALISATION**

gennady.andrienko@iais.fraunhofer.de

**HISTORY OF CARTOGRAPHY**

elri@worldonline.co.za

**MANAGEMENT & ECONOMICS OF MAP PRODUCTION**

philippe.demaeyer@ugent.be

erkki-sakari.harju@karttakeskus.fi

**MAP PROJECTIONS**

dstrebe@mapthematics.com

**MAPPING FROM SATELLITE IMAGERY**

xyang@tsu.edu

**MAPS AND GRAPHICS FOR BLIND & PARTIALLY SIGHTED PEOPLE**

dan.jacobson@ucalgary.ca

**MAPS & SOCIETY**

chris.perkins@manchester.ac.uk

**MAPS & THE INTERNET**

mpeterson@unomaha.edu

**MARINE CARTOGRAPHY**

pcarrasco@shoa.cl

**MOUNTAIN CARTOGRAPHY**

karel.kriz@univie.ac.at

**NATIONAL & REGIONAL ATLASES**

peter.jordan@oeaw.ac.at

**PLANETARY CARTOGRAPHY**

kirash.I@yasenevo.ru

**THEORETICAL CARTOGRAPHY**

alexander.woldtschenko@tu-dresden.de

**UBIQUITOUS MAPPING**

morita@k.hosei.ac.jp

**UNDER-REPRESENTED GROUPS AND CARTOGRAPHY**

zyszkowska@geogr.uni.wroc.pl

**USE & USER ISSUES**

elzakker@itc.nl

**WG ART & CARTOGRAPHY**

scaquard@connect.carleton.ca

**WG CENSUS CARTOGRAPHY**

timothy.f.trainor@census.gov

**WG EARLY WARNING & CRISIS MANAGEMENT**

konecny@geogr.muni.cz

**WG GIS & SUSTAINABLE DEVELOPMENT**

tikunov@geogr.msu.ru

**WG MAPPING AFRICA FOR AFRICA**

dclarke@slc.wcape.gov.za

**WG OPEN DATA ACCESS & IPR**

lovison@eps.harvard.edu

**WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES**

suchith.anand@nottingham.ac.uk

**WG TOURIST CARTOGRAPHY**

karta\_spb@mail.ru

## Worksheet for Education

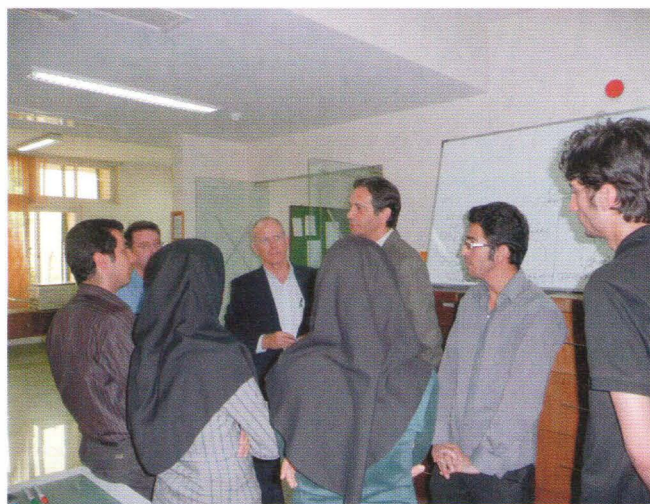
The ICA Commission on Education and Training is an active group of cartographers with wide-ranging interest in ensuring the successful passing on of knowledge to the next generation and maintaining the professional development of current cartographers. It must therefore have a firm grasp on contemporary issues and good ideas about how efficiently to communicate them.

To meet these requirements an ambitious list of twenty projects (in bold below) for the Commission to address has been published on its well-maintained website (1). The Commission welcomes further input from any interested bodies.

One priority is the development of modules for the existing web-based internet cartography teaching programme. The Commission website shows a range of material sourced from institutions and forming the basis for a comprehensive programme. Listing of international courses for undergraduates is also kept updated on the site.

The outreach activity of the Commission is reflected in proposed regional workshops and seminars for developing countries; the accompanying illustration shows participants in such a workshop in Iran in May 2009. These target current and potential cartographers, whilst developing mapping awareness competitions for young cartographic enthusiasts is another potential Commission project.

Organisational interaction ensures collaboration with other ICA Commissions and Working Groups, as well as establishing links with education committees of sister



Colin Arrowsmith (second left); David Fraser, chair, ICA CET (fourth left); Babak Shamei (centre) and students at the ICA Educational Workshop on Cartography, Teheran, Iran, May 2000. (Photo courtesy: Laszlo Zentai.)

societies in the survey and mapping disciplines. Commission members from broadly participating nations expect themselves to develop and promote joint projects. Maintaining an up-to-date mailing list is a prerequisite for much such activity and the creation and maintenance of a virtual forum for sharing ideas and views is a logical progression. The Commission will also ensure its work is guided by the ICA Research Agenda, which addresses the role of education in research.

Methodologies in education and training should be examined, acknowledging in particular the role of emerging technologies, as might the potential for encouraging the interests of emerging cartographic educators and trainers. The Commission will develop and maintain its repository of academic papers on education and training.

Further publishing outreach is reflected on the website, which lists Cartographic Resources including regular e-newsletters. The

Commission regularly reports back in the pages of *GIM International* and *ICA New*, and there is a calendar of events relevant to cartographic educators. 'Resources' also covers the potential creation of a package (workbook, CD) of cartographic teaching and learning resources for developing countries.

There is clearly much work to do in continuing ICA educational commitment, and a willing and able Commission resolved to do it.

### MORE INFORMATION

1 <http://lazarus.elte.hu/cet/>

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





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic

## EDITOR ICA NEWS

Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elte.hu  
tbandrova@abv.bg

## DIGITAL TECHNOLOGIES &amp; CARTOGRAPHIC HERITAGE

livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackness@ed.ac.uk

sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iis.fraunhofer.de

## HISTORY OF CARTOGRAPHY

alri@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demaeyer@ugent.be

arkki-sakari.harju@karttakeskus.fi

## MAP PROJECTIONS

lstrebe@mapmathematics.com

## MAPPING FROM SATELLITE IMAGERY

yang@tsu.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY

ighted People

an.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

iris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

peterson@unomaha.edu

## MARINE CARTOGRAPHY

arrrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

rel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

ter.jordan@oeaw.ac.at

## NATURAL CARTOGRAPHY

ash1@yasevno.ru

## THEORETICAL CARTOGRAPHY

xander.wolodtschenko@tu-dresden.de

## TOPOGRAPHIC MAPPING

rita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zkowska@geogr.uni.wroc.pl

## WEB &amp; USER ISSUES

kker@itc.nl

## ART &amp; CARTOGRAPHY

guard@connect.carleton.ca

## CENSUS CARTOGRAPHY

thy.f.trainor@census.gov

## DISASTER WARNING &amp; CRISIS MANAGEMENT

cny@geogr.muni.cz

## GIS &amp; SUSTAINABLE DEVELOPMENT

iov@geogr.msu.ru

## MAPPING AFRICA FOR AFRICA

ke@si.wcape.gov.za

## OPEN DATA ACCESS &amp; IPR

in@eps.harvard.edu

## OPEN SOURCE GEOSPATIAL TECHNOLOGIES

th.anand@nottingham.ac.uk

## JURIST CARTOGRAPHY

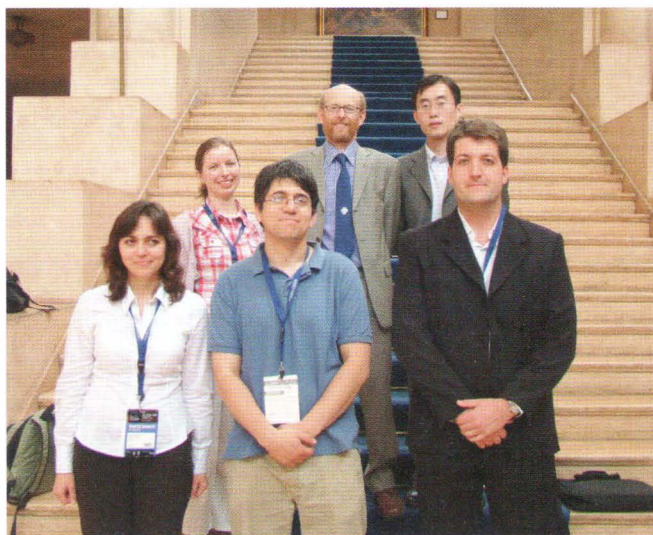
\_spb@mail.ru

## World Travel

The International Cartographic Association has long been aware of its responsibilities in assisting developments of the discipline of cartography in all communities. The Commission on Underrepresented Groups and Cartography, a successor to the Commission on Gender and Cartography (last reported in this column in November 2005), is committed to encouraging 'all under-represented groups to participate in all ICA activities'. Included are those from the developing world and young cartographers.

The ICA considers the latter two categories when making its biennial Travel Awards, offering young and financially under-resourced cartographers the opportunity to participate in International Cartographic Conferences. The scheme gave seven cartographers the chance to travel to the 2009 ICC in Santiago, Chile (report in last month's GIM).

The successful candidates submitted full papers and agreed to present their work in oral sessions. Małgorzata Wieczorek, a student at the University of Wrocław in Poland, presented 'Werenskiold Glacier (SW Spitsbergen) – Morphometric Characteristics'. Victoria Molochko, from the State Scientific and Production Enterprise 'Kartographia' in Kiev, Ukraine gave a richly illustrated account of 'The System of Educational Geographical Atlases in Ukraine'; and Maria Alves de Castro, a geography graduate from the Universidad Nacional de Centro de la Provincia de Buenos Aires, described a practical project entitled 'Nitrates Pollution at the Hurlingham District Waters: Spatial Analysis with Geographic Information Systems'.



ICA Travel Award winners in Santiago, Chile, November 2009. (Back row:) Małgorzata Wieczorek, Poland; David Fairbairn, ICA secretary-general and treasurer; Wang Tao, China. (Front:) Victoria Molochko, Ukraine, Rodrigo Mora, Chile; Marco Schmidt, Brazil. Not present: Diallo Ngagne, Senegal, and Maria Alves de Castro, Argentina.

This map-based exercise examined underground water pollution and its effect on quality of life in the Buenos Aires suburb. Also from South America, Marcio Schmidt, of the Federal University of Paraná, Curitiba, Brazil examined an 'Expert System to Classify Semantic Information', aiming to assist the casual user in building maps according to correct design principles. Rodrigo Mora, who has studied in Santiago and in London, presented 'Retrieving Hierarchical Information from Maps: The Role of Metric and Configurational Variables', which looked at the role of maps in urban navigation.

Tao Wang, from the Chinese Academy of Surveying and Mapping, gave the 'Semantics of Contour Lines' Spatial Relation', an account of contour-line adjacency on the map face and its use in terrain analysis. Diallo Ngagne, a GIS

specialist with the Cadastre in Senegal, submitted 'A Diachronic Study on the Urban Growth of Dakar, 1988, 1998 and 2007', describing orthophoto-based mapping of the evolution of the urban capital of Senegal.

The Travel Awards represent a significant financial outlay for ICA, but their importance is clear; the future of the discipline depends on these world travellers.

MORE INFORMATION

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





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic  
EDITOR ICA NEWS  
Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elte.hu  
tbandrova@abv.bg

## DIGITAL TECHNOLOGIES &amp; CARTOGRAPHIC HERITAGE

livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackness@ed.ac.uk

sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iis.fraunhofer.de

## HISTORY OF CARTOGRAPHY

elri@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demaeyer@ugent.be

erki-sakari.harju@karttakeskus.fi

## MAP PROJECTIONS

dstrebe@mapmathematics.com

## MAPPING FROM SATELLITE IMAGERY

xyang@su.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY

Sighted People

dan.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

chris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

mpeterson@unomaha.edu

## MARINE CARTOGRAPHY

pcarrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

karel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

peter.jordan@oeaw.ac.at

## PLANETARY CARTOGRAPHY

kirash1@yasenevo.ru

## THEORETICAL CARTOGRAPHY

alexander.wolodtschenko@tu-dresden.de

## UBIQUITOUS MAPPING

morita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zyszkowska@geogr.uni.wroc.pl

## USE &amp; USER ISSUES

elzakker@itc.nl

## WG ART &amp; CARTOGRAPHY

scaquard@connect.carleton.ca

## WG CENSUS CARTOGRAPHY

timothy.f.trainor@census.gov

## WG EARLY WARNING &amp; CRISIS MANAGEMENT

konecny@geogr.muni.cz

## WG GIS &amp; SUSTAINABLE DEVELOPMENT

tikunov@geogr.msu.ru

## WG MAPPING AFRICA FOR AFRICA

dclarke@sli.wcape.gov.za

## WG OPEN DATA ACCESS &amp; IPR

lovison@eps.harvard.edu

## WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES

suchith.anand@nottingham.ac.uk

## WG TOURIST CARTOGRAPHY

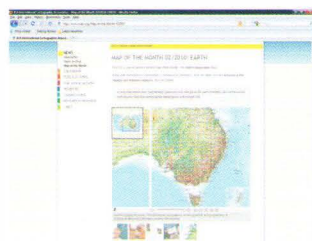
karta\_spb@mail.ru

## ICA Website

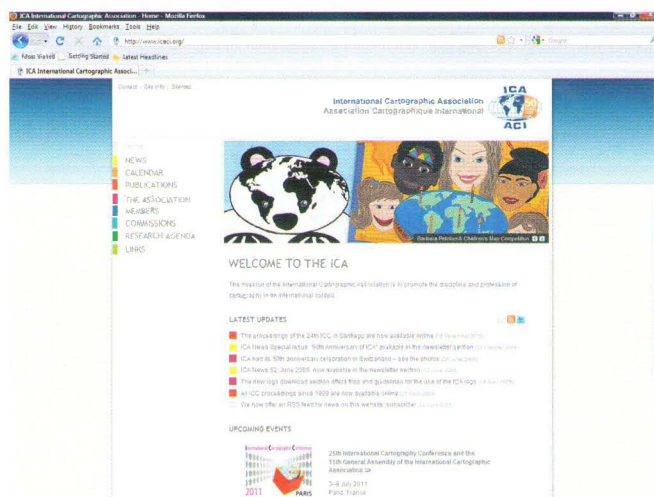
Previous mention of the ICA website (GIM, August 2009) informed readers of the appearance on the site of Proceedings of all International Cartographic Conferences, from the nineteenth (Ottawa, 1999) to the twenty-third (Moscow, 2007). These are now joined by Proceedings of our most recent 2009 ICC in Santiago. The website itself is a dynamic resource and the premier advertisement of ICA to the world: the site is regularly updated to effectively communicate ICA work and output. It is hosted on behalf of ICA by the Cartography Research Group, part of the Institute of Geoinformation and Cartography at the Technical University of Vienna, Austria, where ICA vice-president Professor Georg Gartner and his excellent team of webmasters, Felix Ortig and Manuela Schmidt, are responsible for the outstanding design and maintenance of the site.

## RECORD-KEEPER

The website functions as a repository of standard information about ICA, both for those new to it (the Home page details the ICA mission and recent and forthcoming activities) and those interested in the minutiae of its organisation (Statutes, Strategic Plan and other documentation listed under The Association tab). Acting as Association record-keeper, the website News section holds every



ICA Map of the Month webpage.



ICA website.

copy of *ICA News* (the Association's biannual newsletter) since the start of the millennium, along with an archive of news items. One recent innovation to grace the News section is the Map of the Month, which provides a showcase for cartographic products of excellence. Map of the Month items will initially comprise prizewinning entries from the International Map Exhibition held at each ICC: maps from the 2009 Santiago ICC are currently being selected. However, the range of products displayed may be expanded to include those created by ICA Affiliate Members, important supporters of ICA whose section of the website has been expanded to allow them to further promote themselves.

## HISTORY AND RESEARCH

The History of ICA is also well represented, particularly celebrations for the fiftieth anniversary in 2009: photographs of this event may be found under The Association, History tab. The website has recently also added further items relating to ICA activities. The

Association's Research Agenda (described in GIM, July 2009) is now available for inspection and, as this document is intended to be dynamic and interactive, there is now a facility for commenting on the Agenda; such is welcome.

## INTERACTIVITY

A further example of interactivity embedded in the website is email subscription to news items, establishment of *icawebsite* on Twitter, and RSS feeds; all enabling communication of website updates to interested viewers. ICA is grateful for the high-quality work undertaken by the staff at TU Vienna; their efforts truly show the way in which information about cartography can be disseminated using standard and advanced web tools.

MORE INFORMATION

1 www.icaci.org





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic

## EDITOR ICA NEWS

Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elte.hu  
tbandrova@abv.bg

## DIGITAL TECHNOLOGIES &amp; CARTOGRAPHIC HERITAGE

livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackness@ed.ac.uk

sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iaais.fraunhofer.de

## HISTORY OF CARTOGRAPHY

elri@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demaeyer@ugent.be

erkki-sakari.harju@karttakeskus.fi

## MAP PROJECTIONS

dstrebe@mapmathematics.com

## MAPPING FROM SATELLITE IMAGERY

xyang@tsu.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY

Sighted People

dan.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

chris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

mpeterson@unomaha.edu

## MARINE CARTOGRAPHY

pcarrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

karel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

peter.jordan@oeaw.ac.at

## PLANETARY CARTOGRAPHY

kirash1@yasenevo.ru

## THEORETICAL CARTOGRAPHY

alexander.wolodtschenko@tu-dresden.de

## UBIQUITOUS MAPPING

morita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zyszkowska@geogr.uni.wroc.pl

## USE &amp; USER ISSUES

elzakker@itc.nl

## WG ART &amp; CARTOGRAPHY

scaquard@connect.carleton.ca

## WG CENSUS CARTOGRAPHY

timothy.f.trainor@census.gov

## WG EARLY WARNING &amp; CRISIS MANAGEMENT

konecny@geogr.muni.cz

## WG GIS &amp; SUSTAINABLE DEVELOPMENT

tikunov@geogr.msu.ru

## WG MAPPING AFRICA FOR AFRICA

dclarke@slc.wape.gov.za

## WG OPEN DATA ACCESS &amp; IPR

lovison@eps.harvard.edu

## WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES

suchith.anand@nottingham.ac.uk

## WG TOURIST CARTOGRAPHY

karta\_spb@mail.ru

## CPD in Cartography

ICA, as part of its international remit, recognises there may be many cartographers in member nations who are not exposed to the educational and training facilities and opportunities appropriate for professional certification and development. The ICA Commission on Education and Training (CET) has developed guidelines for a Continuing Professional Development (CPD) programme which allows individuals to accumulate professional development points, potentially leading to national certification. Such a programme could help people gain employment or promotion, and show that a cartographer has been actively involved in improving his/her cartographic education and skills despite lack of a formal programme.

Cartographic activity is often undertaken by individuals who would not consider themselves cartographers, whilst many who identify themselves as cartographers are employed in different areas of the geographic information sciences industry. So, before engaging in curriculum design, it is important to define the scope of the programme: this has been set wide-ranging, embracing workers in fields as diverse as hazard mapping and multimedia, data capture and network analysis, marine charting and community services.

The specific objectives are to initiate CPD as a valid activity, formalise activities, serve ICA member nations and maintain the leading role of ICA; this would supply a template, along with advice from an ICA representative



Meeting of CET members in Santiago, Chile, November 2009.

before and during programme development and implementation. CET wants to ensure that each national CPD programme is relevant to contemporary cartographic practice and satisfies international standards and criteria; note, CPD programmes would be managed by member nations, the majority of activities provided by national government, academia and private organisations and widely publicised nationally to ensure acceptance.

CET has identified competencies contributing to the continuing professional development of a cartographer, and devised a tentative scheme of activities and credit-points allocation. The 'continuing' component is stressed; point scores at varying levels need to be renewed over a rolling two-year period. Contributory activities may include conference attendance/organisation, awards and prizes, attaining formal qualifications, participation in seminars/training programmes, publications, holding office in ICA,

research or industry projects, and technical visits.

From the participant's point of view, the CPD programme should be seen as reward for maintaining a personal professional development programme. Continual upgrading of knowledge and skills will ensure national recognition for the competent practicing cartographer, a certificate to this effect being awarded every two years. Perceived benefits include this acknowledgment of lifelong education and training, and commitment to maintaining and improving professional status. Plus meeting the needs of professionals, the industry in general, and ensuring the leading role of ICA.

David Fraser

**MORE INFORMATION**   
<http://lazarus.elte.hu/cet/>



**EXECUTIVE MEMBERS****PRESIDENT**

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

**VICE-PRESIDENTS**

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

**PAST-PRESIDENT**

Milan Konecny, Masaryk University, Czech Republic

**EDITOR ICA NEWS**

Igor Drecki, University of Auckland, New Zealand

**COMMISSIONS CHAIRS****CARTOGRAPHY & CHILDREN**

jesus@map.ette.hu  
tbandrova@abv.bg

**DIGITAL TECHNOLOGIES & CARTOGRAPHIC HERITAGE**

livier@topo.auth.gr

**EDUCATION & TRAINING**

david.fraser@rmit.edu.au

**GENERALISATION & MULTIPLE REPRESENTATION**

william.mackness@ed.ac.uk  
sebastien.mustiere@ign.fr

**GEOSPATIAL ANALYSIS & MODELLING**

bin.jiang@hig.se

**GEOSPATIAL DATA STANDARDS**

acooper@csir.co.za

**GEOSUALIZATION**

gennady.andrienko@iais.fraunhofer.de

**HISTORY OF CARTOGRAPHY**

elri@worldonline.co.za

**MANAGEMENT & ECONOMICS OF MAP PRODUCTION**

philippe.demaeyer@ugent.be

erikki-sakari.harju@karttakeskus.fi

**MAP PROJECTIONS**

dstrebe@mapmathematics.com

**MAPPING FROM SATELLITE IMAGERY**

xyang@tsu.edu

**MAPS AND GRAPHICS FOR BLIND & PARTIALLY**

Sighted People

dani.jacobson@ucalgary.ca

**MAPS & SOCIETY**

chris.perkins@manchester.ac.uk

**MAPS & THE INTERNET**

mpeterson@unomaha.edu

**MARINE CARTOGRAPHY**

pcarrasco@shoa.cl

**MOUNTAIN CARTOGRAPHY**

karel.kriz@univie.ac.at

**NATIONAL & REGIONAL ATLASES**

peter.jordan@oeaw.ac.at

**PLANETARY CARTOGRAPHY**

kirash1@yasenevo.ru

**THEORETICAL CARTOGRAPHY**

alexander.wolodtschenko@tu-dresden.de

**UBIQUITOUS MAPPING**

morita@k.hosei.ac.jp

**UNDER-REPRESENTED GROUPS AND CARTOGRAPHY**

zyszkowska@geogr.uni.wroc.pl

**USE & USER ISSUES**

elzakker@itc.nl

**WG ART & CARTOGRAPHY**

scaquard@connect.carleton.ca

**WG CENSUS CARTOGRAPHY**

timothy.f.trainor@census.gov

**WG EARLY WARNING & CRISIS MANAGEMENT**

konecny@geogr.muni.cz

**WG GIS & SUSTAINABLE DEVELOPMENT**

tikunov@geogr.msu.ru

**WG MAPPING AFRICA FOR AFRICA**

dclarke@slu.wcape.gov.za

**WG OPEN DATA ACCESS & IPR**

lovison@eps.harvard.edu

**WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES**

suchith.anand@nottingham.ac.uk

**WG TOURIST CARTOGRAPHY**

karta\_spb@mail.ru

## Le Monde Cartographique

ICA activities continue worldwide, as reported in this column, with its international remit ensuring the global nature of cartography is reflected in meetings, courses and conferences. The major ICA International Conference is held biennially, with the official General Assembly, the decision-making forum for all national ICA members, held alongside every four years. Reports appeared here of the most recent International Cartographic Conferences in Moscow (2007) and Santiago de Chile (2009).

**ICA IN PARIS**

In the midst of our globalisation agenda it's always a good idea to keep in touch with our roots, and the celebration of ICA's fiftieth anniversary in Bern, Switzerland in June 2009 (see *GIM International*, September 2009) helped us commemorate eminent cartographers of the past. Following

on founding of the ICA in 1959 was the first General Assembly, at which member nations drafted its formal statutes and operating conventions. This took place in Paris in 1961, so that fifty years later it is highly appropriate that the next International Cartographic Conference and General Assembly will again be in Paris. The important role of the French language in the development of international cartography will be reflected in the bilingual nature of the conference and General Assembly (with simultaneous translation, of course). Along with its historical significance, we look forward confidently to this 2011 conference offering a further example of ICA's progressive agenda.

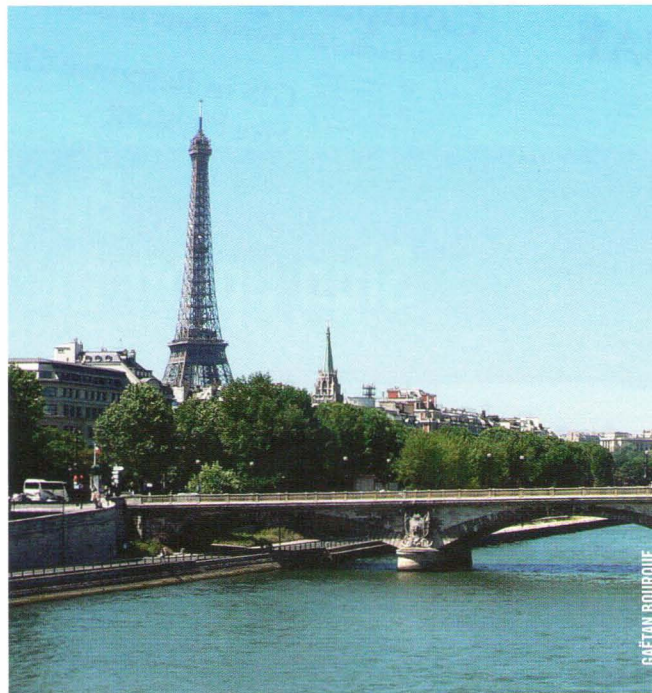
**ENLIGHTENED**

ICA is delighted to accept the invitation of the French national cartographic committee (le Comité

Français de Cartographie) to meet in the Palais de Congrès in the heart of Paris from 3<sup>rd</sup> to 8<sup>th</sup> July 2011. This will provide an excellent opportunity for world cartographers and geographic information scientists to gather and present their 'Enlightened view on Cartography and GIS': the conference maxim. Prospective participants are asked to visit [1](#) for details of the conference, associated workshops and visits, an extensive technical exhibition, and the usual exhilarating shows of contemporary map products and children's map drawings. Thematic diversity is the aim of this year's conference programme, high-quality contributions and up-to-date content appealing to researchers, engineers, students, data producers and software suppliers.

**DEADLINES**

Please note the deadlines: 4<sup>th</sup> October 2010 for submission of papers and posters for presentation. Registration opens in November 2010. This conference ICA is introducing its full refereeing procedure. Content will be wide-ranging, covering all aspects of the collation, analysis, presentation and handling of geospatial data, as listed under the Call for Papers on the website. In addition, a variety of social events is planned in one of the most exciting cities in the world. Note the date for your diary and bienvenue à Paris en 2011!



The ICA 2011 International Cartographic Conference will take place in Paris.

**MORE INFORMATION**

1. [www.icc2011.fr](http://www.icc2011.fr)

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





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic

## EDITOR ICA NEWS

Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elfe.hu  
tbandrova@abv.bg

## DIGITAL TECHNOLOGIES &amp; CARTOGRAPHIC HERITAGE

livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackness@ed.ac.uk  
sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iais.fraunhofer.de

## HISTORY OF CARTOGRAPHY

elri@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demayer@ugent.be

erik-sakari.harju@kairtakeskus.fi

## MAP PROJECTIONS

dstrebe@mapthematics.com

## MAPPING FROM SATELLITE IMAGERY

xyang@fsu.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY

Sighted People

dan.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

chris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

mpeterson@unomaha.edu

## MARINE CARTOGRAPHY

pcarrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

karel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

peter.jordan@oeaw.ac.at

## PLANETARY CARTOGRAPHY

kirashi@yasenevo.ru

## THEORETICAL CARTOGRAPHY

alexander.wolodtschenko@tu-dresden.de

## UBIQUITOUS MAPPING

morita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zyszkowska@geogr.uni.wroc.pl

## USE &amp; USER ISSUES

elzakker@itc.nl

## WG ART &amp; CARTOGRAPHY

scaquard@connect.carleton.ca

## WG CENSUS CARTOGRAPHY

timothy.f.trainor@census.gov

## WG EARLY WARNING &amp; CRISIS MANAGEMENT

konecny@geogr.muni.cz

## WG GIS &amp; SUSTAINABLE DEVELOPMENT

tikunov@geogr.msu.ru

## WG MAPPING AFRICA FOR AFRICA

dclarke@sls.wcape.gov.za

## WG OPEN DATA ACCESS &amp; IPR

lovison@eps.harvard.edu

## WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES

suchith.anand@nottingham.ac.uk

## WG TOURIST CARTOGRAPHY

karta\_spb@mail.ru

## Cartografía de la Nación

**'Cada hombre es el hijo de sus propios trabajos' – 'every man is the son of his own works', from *Don Quixote* by Cervantes.**

Works of Spanish cartography, as reflected in the National Report 2007-2009, show overall excellence in organisation, precision, appearance and utility. The report, compiled by the Spanish Society for Cartography, Photogrammetry and Remote Sensing and presented to the international community at the 24<sup>th</sup> International Cartographic Conference (ICC) in Santiago de Chile in November 2009, is a richly illustrated account of significant achievement in cartography (1). The structure of cartographic activity at national and regional levels is presented, with strong emphasis on the production of maps and spatial databases.

### SHOWING THE WAY

The highlights of an active period (2007-2009) are described in detail: the National Plan for Aerial Orthophotography (PNOA) now has continuous coverage of Spain in 50cm or 25cm resolution colour orthophotography, and the national Land Cover and Land Use Information System (SIOSE) is also complete. A national Digital Terrain Model at 5m grid interval and the National Topographic Database, BTN25 at scale 1:25,000 are complete and continuously updated. The Spanish Spatial Data Infrastructure (IDEE) is an OGC- and ISO-compatible collaboration of governmental resources at all levels, with the assistance of private companies, universities and local citizens, and is showing the whole of Europe how to develop its INSPIRE programme. The National Atlas of Spain, winner of an ICA



*The windmills of La Mancha, Spain.*

award in 2009, is now available on the web, CD-ROM/DVD, and in six volumes.

### PRODUCTIVE POLICIES

It is clear that policy issues are guiding much development in Spanish cartography: decentralisation has led to the maturing of outstanding regional cartographic institutes in Catalonia and Andalusia, also described in detail in the report; university education in cartography and geomatics is well-supported in many places; and a range of topographic map series, specific thematic maps and extensive geospatial databases have been developed to contribute to socio-economic and scientific management.

### WORLD STAGE

Spanish cartographers have always been highly engaged with the international community. The report outlines this, as illustrated in international competitions and awards. It also notes the contribution to NATO mapping and the global nature of hydrographic, oceanographic and earth-sciences mapping. In addition to map and

geodatabase production, activities such as research, archiving, cadastral records, GPS and image data handling, and commercial publishing are all presented. This report is an excellent summary of the extensive scope of the *proprios trabajos* of Spanish cartography, of which the country may be proud.

### MORE INFORMATION

1 www.icaci.org/national-reports



**EXECUTIVE MEMBERS****PRESIDENT**

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

**VICE-PRESIDENTS**

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

**PAST-PRESIDENT**

Milan Konecny, Masaryk University, Czech Republic  
EDITOR ICA NEWS  
Igor Drecki, University of Auckland, New Zealand

**COMMISSIONS CHAIRS****CARTOGRAPHY & CHILDREN**

jesus@map.elte.hu  
tbandrova@abv.bg

**DIGITAL TECHNOLOGIES & CARTOGRAPHIC HERITAGE**

livier@topo.auth.gr

**EDUCATION & TRAINING**

david.fraser@rmit.edu.au

**GENERALISATION & MULTIPLE REPRESENTATION**

william.mackness@ed.ac.uk  
sebastien.mustiere@ign.fr

**GEOSPATIAL ANALYSIS & MODELLING**

bin.jiang@hig.se

**GEOSPATIAL DATA STANDARDS**

acooper@csir.co.za

**GEOVISUALIZATION**

gennady.andrienko@iais.fraunhofer.de

**HISTORY OF CARTOGRAPHY**

elri@worldonline.co.za

**MANAGEMENT & ECONOMICS OF MAP PRODUCTION**

philippe.demaeyer@ugent.be  
erikki-sakari.harju@karitakeskus.fi

**MAP PROJECTIONS**

dstrebe@mapthematics.com

**MAPPING FROM SATELLITE IMAGERY**

xyang@tsu.edu

**MAPS AND GRAPHICS FOR BLIND & PARTIALLY SIGHTED PEOPLE**

dan.jacobson@ucalgary.ca

**MAPS & SOCIETY**

chris.perkins@manchester.ac.uk

**MAPS & THE INTERNET**

mpeterson@unomaha.edu

**MARINE CARTOGRAPHY**

pcarrasco@shoa.cl

**MOUNTAIN CARTOGRAPHY**

karel.kriz@univie.ac.at

**NATIONAL & REGIONAL ATLASES**

peter.jordan@oeaw.ac.at

**PLANETARY CARTOGRAPHY**

kirashl@yasenevo.ru

**THEORETICAL CARTOGRAPHY**

alexander.wolodtschenko@tu-dresden.de

**UBIQUITOUS MAPPING**

morita@k.hosei.ac.jp

**UNDER-REPRESENTED GROUPS AND CARTOGRAPHY**

zyszkowska@geogr.uni.wroc.pl

**USE & USER ISSUES**

elzakker@itc.nl

**WG ART & CARTOGRAPHY**

scaquard@connect.carleton.ca

**WG CENSUS CARTOGRAPHY**

timothy.f.trainor@census.gov

**WG EARLY WARNING & CRISIS MANAGEMENT**

konecny@geogr.muni.cz

**WG GIS & SUSTAINABLE DEVELOPMENT**

tikunov@geogr.msu.ru

**WG MAPPING AFRICA FOR AFRICA**

dclarke@sii.wcape.gov.za

**WG OPEN DATA ACCESS & IPR**

lovison@eps.harvard.edu

**WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES**

suchith.anand@nottingham.ac.uk

**WG TOURIST CARTOGRAPHY**

karta\_spb@mail.ru

## Have Your Say

The pursuit of ICA's mission statement to 'ensure that geospatial information is employed to maximum effect for the benefit of science and society through promotion and representation of the discipline and profession of Cartography and GIScience internationally' is directed by common goals and aspirations agreed at governing-body level, the General Assembly. The mission statement is included in the Association's *Strategic Plan 2003-2011*, approved by the General Assembly in Durban, South Africa, in August 2003.

**FOCUS AND VISION**

This plan, available from the ICA website at [www.icaci.org](http://www.icaci.org), is a comprehensive document addressing a range of issues, including the early development of ICA, which determined our current context; the challenges of contemporary cartography, which define the main 'operating environments' of science, society, education, professional practice and art within which cartography operates; a 'SWOT' analysis exploring strengths, weaknesses, opportunities and threats to the Association; and ways of converting these ideas into action. The *Strategic Plan 2003-2011* has guided the policy and management of ICA for a significant while and ICA has garnered many benefits from adopting the focus and vision of its authors and the input of those GA delegates who discussed and approved it.

**NEW STRATEGIC PLAN**

The time is right for a new Strategic Plan to cover 2011-2019. The ICA Executive Committee will table this at the 15th GA meeting at the



ICA General Assembly meets to approve the Strategic Plan, Durban 2003.

International Cartographic Conference in Paris in July 2011. However, the intention is to give all ICA members and interested parties the opportunity to contribute, so that the new plan can be considered in advance of the meeting. The Executive Committee is therefore keen to receive suggestions from anyone interested in the progress of the Association, whether tabled by individuals or via delegation to the GA.

**STATUTES AND PRACTICE**

The GA also offers an opportunity to modify the *ICA Statutes*, and a small working party has been set up to examine whether changes are needed. The statutes (also available from [www.icaci.org](http://www.icaci.org)) dictate policy, and modification must be approved by the GA; again, the Executive Committee seeks your suggestions concerning possible changes. Finally, it is clear that the ongoing work of ICA from a practical, day-to-day perspective relies among other things on maintaining successful conferences, effective commission and working-group structures, a viable research agenda, a generous travel-awards scheme, authoritative cartographic competitions for children's and production cartography, and a

dynamic web presence. Documents describing ICA practice in these areas are available from the website ([www.icaci.org](http://www.icaci.org)) and it is expected that many of these too will be revised over the coming year; all suggestions and contributions most welcome. Please make your views known to the secretary-general.

David Fairbairn, ICA secretary-general & treasurer  
[dave.fairbairn@newcastle.ac.uk](mailto:dave.fairbairn@newcastle.ac.uk)

**MORE INFORMATION**

1. <http://icaci.org/strategic-plan>
2. <http://icaci.org/ica-statutes>
3. <http://icaci.org/Documents>





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic  
EDITOR ICA NEWS  
Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elte.hu  
tbandrova@abv.bg

## DIGITAL TECHNOLOGIES &amp; CARTOGRAPHIC HERITAGE

livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackaness@ed.ac.uk

sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iais.fraunhofer.de

## HISTORY OF CARTOGRAPHY

elri@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demaeyer@ugent.be

erkki-sakari.harju@karttakeskus.fi

## MAP PROJECTIONS

dstrebe@mapthematics.com

## MAPPING FROM SATELLITE IMAGERY

xyang@tsu.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY SIGHTED PEOPLE

dan.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

chris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

mpeterson@unomaha.edu

## MARINE CARTOGRAPHY

pcarrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

karel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

peter.jordan@oeaw.ac.at

## PLANETARY CARTOGRAPHY

kirash1@yasenevo.ru

## THEORETICAL CARTOGRAPHY

alexander.wolodtschenko@tu-dresden.de

## UBIQUITOUS MAPPING

morita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zyszkowska@geogr.uni.wroc.pl

## USE &amp; USER ISSUES

elzakker@itc.nl

## WG ART &amp; CARTOGRAPHY

scaquard@connect.carleton.ca

## WG CENSUS CARTOGRAPHY

timothy.f.trainor@census.gov

## WG EARLY WARNING &amp; CRISIS MANAGEMENT

konecny@geogr.muni.cz

## WG GIS &amp; SUSTAINABLE DEVELOPMENT

tikunov@geogr.msu.ru

## WG MAPPING AFRICA FOR AFRICA

dclarke@slh.wcape.gov.za

## WG OPEN DATA ACCESS &amp; IPR

lovison@eps.harvard.edu

## WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES

suchith.anand@nottingham.ac.uk

## WG TOURIST CARTOGRAPHY

karta\_spb@mail.ru

## Talking Atlases in SE Asia

The ICA Commission on National and Regional Atlases last reported in these pages in May 2008, when discussion centred on the creation of a 'cookbook' for national and regional atlas editors, the importance of effective geographic name handling (both within and outside the atlas arena), and the role of the national atlas as a portal, possibly to contemporary formal SDIs.

## WORLDWIDE REMIT

The Commission clearly has a worldwide remit; over recent years it has organised meetings in a number of places, including Romania, Algeria and Chile. In co-operation with the Faculty of Geography, University of Gadjah Mada, Yogyakarta, Indonesia, and other Indonesian institutions, the Commission will hold its next workshop in Yogyakarta, Indonesia from 20<sup>th</sup> to 23<sup>rd</sup> October 2010, where presentation will take place of Part II of *The National Atlas of Indonesia*. The workshop will be devoted to two main topics: recent directions in national atlas cartography; and national, regional, city and school atlases as the expression and carriers of space-related identity. ICA recognises the significant impact of national and regional atlases on national identity, but also on nationaleconomic, environmental and social development. The role of cartography in the wider world is clearly apparent through this form of mapping and this meeting will help develop such ideas further.

## IDENTITY AND SELF-IMAGE

The second topic relies on the assumption that not only national and regional, but also city and school atlases provide both a means of communication and instruction, and represent and



Typical cultural identity of Indonesia.

provide a vehicle for space-related identity, that is to say the self-image of nations, regions or cities. Atlases assist in space-related image building through the selection and sequence of themes and by highlighting special aspects of great significance to a country, region or city. But also very indicative in this respect is the layout of an atlas, its furnishing with national and regional symbols, and even the use of languages in titles, legends and texts and place names. The workshop will investigate historical and more recent atlases and whether they deviate from the usual thematic scope of regional geography by presenting maps and place-specific themes, stressing typical identities. Subtopics to be addressed are:

- internal and external views of space-related identity building via editorial concepts
- effect of external demands (licensing authorities, financiers) on space-related identity building
- comparative surveys of national

- atlases as regards space-related identity building
- enhancing space-related identity building using atlas cartography and other editorial means
- nation-building and regional identity in national atlases
- other issues: branding and decentralisation as reflected in national, regional and city atlases.

## LEARN MORE

Social and cultural events in this exciting location will be offered. Updated information about contributing to and participating in the workshop can be obtained from the Commission website (1) or by contacting the Commission chair, peter.jordan@oeaw.ac.at.

Peter Jordan

## MORE INFORMATION

- 1 [www.univie.ac.at/cnra](http://www.univie.ac.at/cnra)
- 2 [www.icaci.org](http://www.icaci.org)





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic

## EDITOR ICA NEWS

Igor Drecek, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elte.hu

tbandrova@abv.bg

## DIGITAL TECHNOLOGIES &amp; CARTOGRAPHIC HERITAGE

livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackness@ed.ac.uk

sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iia.fraunhofer.de

## HISTORY OF CARTOGRAPHY

eln@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demaeyer@ugent.be

erkki-sakari.harju@karttakeskus.fi

## MAP PROJECTIONS

dstrebe@mapthematics.com

## MAPPING FROM SATELLITE IMAGERY

xyang@tsu.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY SIGHTED PEOPLE

dan.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

chris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

mpeterson@unomaha.edu

## MARINE CARTOGRAPHY

pcarrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

karel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

peter.jordan@oeaw.ac.at

## PLANETARY CARTOGRAPHY

kirashl@yasenevo.ru

## THEORETICAL CARTOGRAPHY

alexander.wolodtschenko@tu-dresden.de

## UBIQUITOUS MAPPING

morita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zyszkowska@geogr.uni.wroc.pl

## USE &amp; USER ISSUES

elzakker@itc.nl

## WG ART &amp; CARTOGRAPHY

scaquard@connect.carleton.ca

## WG CENSUS CARTOGRAPHY

timothy.f.trainor@census.gov

## WG EARLY WARNING &amp; CRISIS MANAGEMENT

konecny@geogr.muni.cz

## WG GIS &amp; SUSTAINABLE DEVELOPMENT

tikunov@geogr.msu.ru

## WG MAPPING AFRICA FOR AFRICA

dclarke@sl.wcape.gov.za

## WG OPEN DATA ACCESS &amp; IPR

lovison@eps.harvard.edu

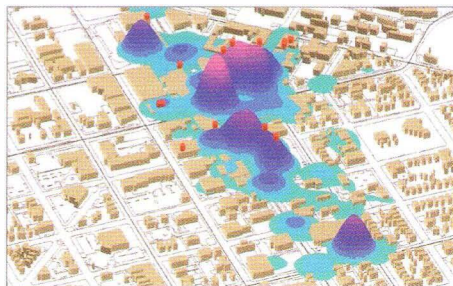
## WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES

suchith.anand@nottingham.ac.uk

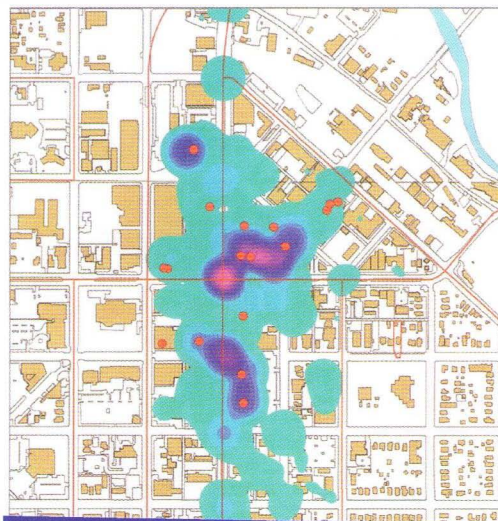
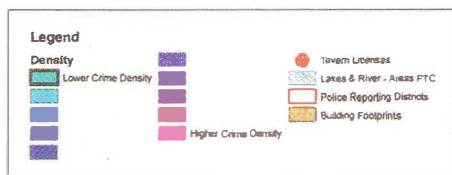
## WG TOURIST CARTOGRAPHY

karta\_spb@mail.ru

## Crime Mapping



Non-Traffic Arrest Density Within Downtown Reporting Districts



MARCUS BODIG

*Cartographic techniques are used by police forces around the world for analysing and predicting crime.*

ICA promotes and supports research work across every field of cartography, primarily through the work of its Commissions and Working Groups (listed in the column here left). ICA Commissions are approved and monitored by the General Assembly of member nations, whilst the ICA Executive Committee is empowered to set up shorter-term Working Groups addressing specific issues of cartographic interest not covered by Commissions. In 2009 the EC approved establishment of a Working Group on Crime Mapping, with special consideration for the role of cartography in recording and combating crime, and for forensic purposes to ensure successful prosecution of perpetrators.

### HIGH STANDARD

Crime mapping is a form of geospatial analysis and modelling, and a prime example of visual analytics. Visualisation is used to assist in decision making with regard to crime prevention activities, and also for forensic evidence in court cases. Map

production is crucial in crime mapping, since maps are displayed on internet sites and in general reports as well for court evidence; they should be of a standard sufficient to ensure they are easily understood by persons in court without a background in geography. For mapping of crime patterns spatial data mining is required, along with spatial analysis such as pattern, surface and network processing. Spatiotemporal modelling of criminal activity can be carried out to assess the effectiveness of policing or to predict possible crime incidents to assist in apprehending the criminal.

### FORENSIC RIGOUR

As well, therefore, as being a cross-cutting discipline, crime mapping is used practically worldwide by law enforcement agencies. It is the variable use of such mapping which provides focus for the new Working Group; one of its primary aims is thus to establish a set of guidelines to ensure forensic rigour of maps used in court cases. Other aims are incorporated in the Terms of

Reference of the Group, which further includes recognition of the need to sketch out a broad research agenda for all aspects of crime mapping. Further objectives involve collaboration with other ICA Commissions and Working Groups, joint meetings with other organisations active in crime-mapping research, the holding of Working Group meetings in conjunction with the timetable of ICA conferences, and co-ordination of international activity in the field among ICA member nations. The Group also intends to widely publish research findings. Vice-chair Peter Schmitz, of CSIR Built Environment, South Africa, would be pleased to hear from anyone interested in any aspect of crime mapping and map design for specific legal purposes.

*Peter Schmitz (pschmitz@csir.co.za)*

**MORE INFORMATION**   
[www.icaci.org](http://www.icaci.org)





## EXECUTIVE MEMBERS

## PRESIDENT

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

## VICE-PRESIDENTS

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

## PAST-PRESIDENT

Milan Konecny, Masaryk University, Czech Republic  
EDITOR ICA NEWS  
Igor Drecki, University of Auckland, New Zealand

## COMMISSIONS CHAIRS

## CARTOGRAPHY &amp; CHILDREN

jesus@map.elte.hu  
tbandrova@abv.bg  
DIGITAL TECHNOLOGIES & CARTOGRAPHIC HERITAGE  
livier@topo.auth.gr

## EDUCATION &amp; TRAINING

david.fraser@rmit.edu.au

## GENERALISATION &amp; MULTIPLE REPRESENTATION

william.mackness@ed.ac.uk

sebastien.mustiere@ign.fr

## GEOSPATIAL ANALYSIS &amp; MODELLING

bin.jiang@hig.se

## GEOSPATIAL DATA STANDARDS

acooper@csir.co.za

## GEOVISUALIZATION

gennady.andrienko@iaais.fraunhofer.de

## HISTORY OF CARTOGRAPHY

elri@worldonline.co.za

## MANAGEMENT &amp; ECONOMICS OF MAP PRODUCTION

philippe.demaeyer@ugent.be

erikki-sakari.harju@karttakeskus.fi

## MAP PROJECTIONS

dstrebe@mapmathematics.com

## MAPPING FROM SATELLITE IMAGERY

xyang@fsu.edu

## MAPS AND GRAPHICS FOR BLIND &amp; PARTIALLY SIGHTED PEOPLE

dan.jacobson@ucalgary.ca

## MAPS &amp; SOCIETY

chris.perkins@manchester.ac.uk

## MAPS &amp; THE INTERNET

mpeterson@unomaha.edu

## MARINE CARTOGRAPHY

pcarrasco@shoa.cl

## MOUNTAIN CARTOGRAPHY

karel.kriz@univie.ac.at

## NATIONAL &amp; REGIONAL ATLASES

peter.jordan@oeaw.ac.at

## PLANETARY CARTOGRAPHY

kirash1@yasenevo.ru

## THEORETICAL CARTOGRAPHY

alexander.wolodtschenko@tu-dresden.de

## UBIQUITOUS MAPPING

morita@k.hosei.ac.jp

## UNDER-REPRESENTED GROUPS AND CARTOGRAPHY

zyszkowska@geogr.uni.wroc.pl

## USE &amp; USER ISSUES

elzakker@itc.nl

## WG ART &amp; CARTOGRAPHY

scaquard@connect.carleton.ca

## WG CENSUS CARTOGRAPHY

timothy.f.trainor@census.gov

## WG EARLY WARNING &amp; CRISIS MANAGEMENT

konecny@geogr.muni.cz

## WG GIS &amp; SUSTAINABLE DEVELOPMENT

tikunov@geogr.msu.ru

## WG MAPPING AFRICA FOR AFRICA

dclarke@sli.wcape.gov.za

## WG OPEN DATA ACCESS &amp; IPR

lovison@eps.harvard.edu

## WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES

suchith.anand@nottingham.ac.uk

## WG TOURIST CARTOGRAPHY

karta\_spb@mail.ru

## Kartografija i Geoinformacije

The ICA page in this magazine twelve months ago described the significant number of cartographic events and developments taking place in Eastern Europe. Under the spotlight here is one output, the excellent journal of cartography produced by the Croatian Cartographic Society.

## HIGH QUALITY

With a formal ISSN number (1333-896X) and regular schedule of high-quality publication, the journal *Kartografija i Geoinformacije* (Cartography and Geo-information) is a well established and impressive contribution to the cartographic literature. The journal was published annually from 2002 to 2006, and since then two issues have appeared per annum. The success of *Kartografija i Geoinformacije* can be attributed to the strong editorial board, to the designer and translators, to the Ministry of Science in Croatia who sponsor the printing, and above all to the editor-in-chief, Prof. Miljenko Lapaine.

## WIDE-RANGING

The content is a mix of advanced scientific papers, book and journal reviews, announcements of student activity, reports from meetings, historical interpretation, comment, profiles of institutions, software reports, and remembrances of eminent Croatian cartographers. This means that the members of the Croatian Cartographic Society are well served by the journal, and the international community can rely on the high quality of the science reported in its pages.

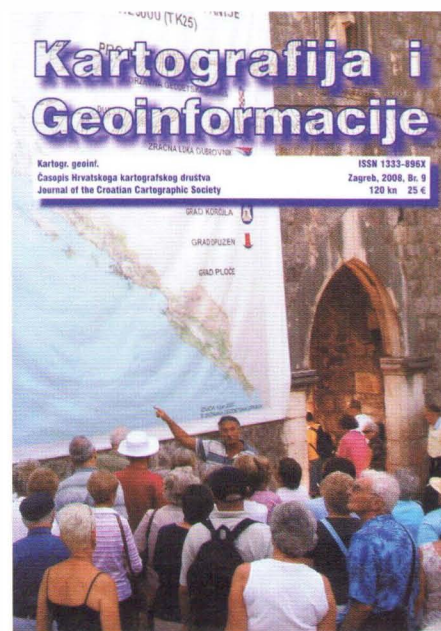
## CURRENT ISSUE

The content of the current issue (Vol. 9, No. 13, June 2010) typically presents a wide range of

cartographic interests. For example, a paper entitled 'Determination of Visibility Polygon as a Real Estate Valuation Factor in Urban Area on the Basis of a Vector 3D Space Model' shows a sophisticated method of 3D modelling in the urban environment in relation to property and prices, while 'Böttner's Inventory and Other Finding Aids for the Grimani Maps Collection from the State Archive in Zadar' is a specific account of the use of formal archives to assess an historic map collection.

## PAPERS FROM 2009

Further examples showing the breadth of cartographic subjects covered include papers from 2009: 'Applications of Seafloor Mapping Using Precise Sonars', 'Usability Improvements of City Plan in PDA', 'Optimal Conformal Polynomial Projections for Croatia According to the Airy/Jordan Criterion', 'Improve-ment of National Spatial Data Infrastructure as a Public Project of Permanent Character', 'Area Preserving Cartographic Line Generalization', 'State Base Map for GIS – New Digital Topographic Map of the Republic of Macedonia', and 'Lumbarda Psephisma, the Oldest Document about the Division of Land Parcels in Croatia from the Beginning of the 4<sup>th</sup> or 3<sup>rd</sup> Century BC.



*Kartografija i Geoinformacije* front cover (June 2008) showing the largest map ever printed on display in Dubrovnik, Croatia.

## SHINING EXAMPLE

There is clearly much for the international cartographic community to admire in this journal. The content of both the current and archive issues is available online at [www.kartografija.hr/kig](http://www.kartografija.hr/kig) but the standard of production is so high that the paper copy is well worth seeking out. Completely bilingual (Croatian/English) and in full colour, with a crisp and effective design, this journal is a shining example of what a relatively small cartographic society can do.

## MORE INFORMATION

1. [www.kartografija.hr/kig](http://www.kartografija.hr/kig)
2. [www.icaci.org](http://www.icaci.org)



**EXECUTIVE MEMBERS****PRESIDENT**

William Cartwright, RMIT University, Australia  
Secretary General & Treasurer  
David Fairbairn, Newcastle University, UK

**VICE-PRESIDENTS**

Derek Clarke, Surveys and Mapping, South Africa  
Georg Gartner, Technische Universität Wien, Austria  
Pablo Gran, Instituto Geográfico Militar, Chile  
Menno-Jan Kraak, ITC, Netherlands  
Zhilin Li, Hong Kong Polytechnic University, China  
Anne Ruas, Institut Géographique National, France  
Timothy Trainor, Census Bureau, USA

**PAST-PRESIDENT**

Milan Konecny, Masaryk University, Czech Republic  
EDITOR ICA NEWS  
Igor Drecki, University of Auckland, New Zealand

**COMMISSIONS CHAIRS****CARTOGRAPHY & CHILDREN**

jesus@map.elte.hu  
tbandrova@abv.bg

**DIGITAL TECHNOLOGIES & CARTOGRAPHIC HERITAGE**

livier@topo.auth.gr

**EDUCATION & TRAINING**

david.fraser@rmit.edu.au

**GENERALISATION & MULTIPLE REPRESENTATION**

william.mackness@ed.ac.uk  
sebastien.mustiere@ign.fr

**GEOSPATIAL ANALYSIS & MODELLING**

bin.jiang@hig.se

**GEOSPATIAL DATA STANDARDS**

acooper@csir.co.za

**GEOVISUALIZATION**

gennady.andrienko@iais.fraunhofer.de

**HISTORY OF CARTOGRAPHY**

elri@worldonline.co.za

**MANAGEMENT & ECONOMICS OF MAP PRODUCTION**

philippe.demaeyer@ugent.be  
erkki-sakari.harju@karttakeskus.fi

**MAP PROJECTIONS**

dstrebe@mapthematics.com

**MAPPING FROM SATELLITE IMAGERY**

xyang@fsu.edu

**MAPS AND GRAPHICS FOR BLIND & PARTIALLY SIGHTED PEOPLE**

dan.jacobson@ucalgary.ca

**MAPS & SOCIETY**

chris.perkins@manchester.ac.uk

**MAPS & THE INTERNET**

mpeterson@unomaha.edu

**MARINE CARTOGRAPHY**

pcarrasco@shoa.cl

**MOUNTAIN CARTOGRAPHY**

karel.kriz@univie.ac.at

**NATIONAL & REGIONAL ATLASES**

peter.jordan@oeaw.ac.at

**PLANETARY CARTOGRAPHY**

kirash1@yasenevo.ru

**THEORETICAL CARTOGRAPHY**

alexander.woldtschenko@tu-dresden.de

**UBIQUITOUS MAPPING**

morita@k.hosei.ac.jp

**UNDER-REPRESENTED GROUPS AND CARTOGRAPHY**

zyszkowska@geogr.uni.wroc.pl

**USE & USER ISSUES**

elzakker@itc.nl

**WG ART & CARTOGRAPHY**

scaquard@connect.carleton.ca

**WG CENSUS CARTOGRAPHY**

timothy.f.trainor@census.gov

**WG EARLY WARNING & CRISIS MANAGEMENT**

konecny@geogr.muni.cz

**WG GIS & SUSTAINABLE DEVELOPMENT**

tikunov@geogr.msu.ru

**WG MAPPING AFRICA FOR AFRICA**

dclarke@sl.wcape.gov.za

**WG OPEN DATA ACCESS & IPR**

lovison@eps.harvard.edu

**WG OPEN SOURCE GEOSPATIAL TECHNOLOGIES**

suchith.anand@nottingham.ac.uk

**WG TOURIST CARTOGRAPHY**

karta\_spb@mail.ru

## Sharing Centre Stage

We may well be seeing an imminent slow-down in the number of national and international conferences and meetings in the field of geomatics, as recessionary measures are invoked by governments and economies throughout the world. More restricted travel budgets for academics, reductions in vendors' exhibition expenses, and general deceleration in the business world will inevitably lead to lower conference attendance in the near future. It would seem sensible, therefore, for international organisations to collaborate and/or to use the opportunities for simultaneous meetings at large, successful events which will attract many visitors. Thus the biggest conferences might offer 'fringe' meetings, associated workshops, venues for joint courses, and so broaden opportunities for the impoverished delegate seeking value for money.

**AUTOCART IN ORLANDO**

AutoCarto 2010 in Orlando, Florida, last month provided such a venue. This was the eighteenth in a long list of successful conferences initially addressing computer-assisted cartography and now covering a full range of geospatial-data handling methods and applications. Strongly supported from the start in 1974 by American organisations in the field of surveying, mapping, cartography and GIS, AutoCarto has an international reputation for showcasing state-of-the-art technologies and concepts. The International Cartographic Association took the opportunity in Orlando of organising a number of activities simultaneously with AutoCarto 2010. The Executive Committee held its late 2010



*The skyline of Orlando, Florida.*

meeting from 18<sup>th</sup> to 20<sup>th</sup> November, with the major agenda items relating to the forthcoming General Assembly in Paris in 2011. In addition, several ICA Commissions and Working Groups decided to meet.

**JOINT MEETINGS**

The Commission on Map Projections chaired by Daan Strebe (USA) held an open meeting, as it had at the last AutoCarto in 2008. Similarly, the Working Group on Cartography for Early Warning and Crisis Management, which had met in Shepardstown in 2008, now offered a meeting in Orlando under the chairmanship of Milan Konecny, Czech Republic. The continuing range of natural disasters and the mapping community's response to these provides opportunity enough for extensive discussion. The Commission on Maps and the Internet got together with the Working Group on OpenSource Geospatial Technologies to offer a workshop 'Online Maps with APIs and Mapservices' and develop ideas for future book production. Another joint grouping, the Commission on Mapping from Satellite Imagery, along with the Commission on

Geospatial Analysis and Modelling, promoted its workshop 'Advances in Sensors and Algorithms for Topographic and Thematic Mapping', addressing remote sensors and information extraction techniques. The Working Group on Census Cartography held an open meeting entitled 'Cartographic Advances in Census Data Collection and Dissemination', whilst the meeting of the Commission on Management and Economics of Map Production considered the management of geographic information and map production.

**DIARY DATES**

Clearly there is evidence of significant activity under the auspices of the ICA, and the opportunity to meet once more in North America has been taken up by a number of its groups. Such gatherings are well worth making a note of in the discerning conference-goer's diary!

**MORE INFORMATION**   
[www.icaci.org](http://www.icaci.org)