



## president's report



### Dear Colleagues

In my report I would like to focus on two significant projects: the **Journal** and the **International Map Year**.

In respect to publications I am most happy to be able to

announce that ICA will start its own scientific journal! This decision is based on a long process, including analysis of the existing publication landscape of cartographic journals, discussion with the Commissions, assessment of demands and needs of academia and scientific organisations, and the overall acknowledgement of the importance of a scientific journal for a major international organisation, such as ours.

The journal will be called the *International Journal of Cartography*. The Editors-in-Chief will be William Cartwright and Anne Ruas, and Taylor & Francis will be our professional publication partner. The editorial and publishing teams are already working hard to be able to launch the first issue at the beginning of 2015.

The overall aim of the Journal is:

- to offer more options for those, who wish to publish their scientific work in an internationally recognised journal and, in this way, respond to an increasing demand within academia worldwide for career promotions
- to provide a platform for reporting on new findings, insights and developments concerning scientific cartography and GIScience and thus strengthening the foundation and visibility of our domain

> 02

## international map year 2015-2016

see page 07

## ica news past editors : part 3

### graciela metternicht

### The ICA News goes Digital

It has been an enjoyable task to act as the Editor of *ICA News*, the newsletter of the International Cartographic Association (ICA) since July 1999. During that time, I oversaw the production of 16 issues of the newsletter, with slight changes to the design of the cover and the online availability of all the issues (from No 33, 1999 to No 48, 2007).

My initial goal was to keep the high standards that Chris Board had in place and build upon them; I thought that it would be nice if we could afford the introduction of some colour in the making of the newsletter, and a digital format of delivery complementary to the hard copies we produced at the time. A timely production of the newsletter was foremost to keep the readerships well informed of the Association's work. I enlisted a good graphic designer from Perth, Western Australia, and produced 'my first' newsletter. We managed a timely delivery of the newsletter, both



as hard copies and in a digital format, the latter shortening significantly the time span for our members to access information. The first issue of the New Millennium, No 34, inaugurated the digital era of the newsletter, with ICA website hosting a PDF version. In that issue I also introduced a Special Feature section with short contributions from colleagues around the world that could be of interest for the cartography community worldwide.

> 04

Graciela Metternicht, former Editor ICA News; currently Professor and Director of the Institute of Environmental Studies, University of New South Wales, Australia

## in this issue

president's report :: 01

ica news past editors : part 3

graciela metternicht :: 01

from the editor :: 02

### ica news

25 years ago... :: 03

ica executive committee :: 04

ica news contributions :: 04

ica and nautical cartography standards :: 05

ica survey on definitions :: 07

editor sought for cagis :: 18

icc 2015 :: 05

international map year :: 07

### profiles

positionit :: 09

sociedad española de cartografía, fotogrametría y teledetección :: 09

jan brus :: 10

indian national cartographic association :: 10

### reports

ica commissions :: 11

cartographic meetings and events :: 18

calendar :: 19

ica affiliate members :: 19

children's map gallery :: 20

ICA Workshop on WebMapping and OpenSource Technologies in Sint-Maarten: (from left) Markus Jobst, Nadine Brown, Valrie Grant and Georg Gartner | Image courtesy of Georg Gartner



Recently I redesigned and improved the University of Auckland Campus map taking advantage of large scale surveys of the University buildings and very detailed geospatial data obtained from the local council. These new data are so detailed that I ran out of time to assess and incorporate all of the potentially useful information into the map (something I will need to address for the next edition). Soon after publication I was bombarded with numerous requests for customised products based on the new design. Interestingly it was not the number, but the various subjects of these requests that surprised and delighted me immensely! From maps showing accommodation, services and facilities around the University for our international students to those highlighting illuminated paths after dark. Maps showing recreational opportunities in the nearby parks and reserves, or those showing individual trees, flower beds and paths carefully managed by the University grounds team. These requests are becoming bolder and more demanding, they are intriguing and cartographically challenging and they engage and test our creativity.

I think we are doing something right! Cartography is reaching out, touching our daily lives, challenging our understanding of the world, illuminating what was previously hidden, and generally becoming more appreciated. People are after sophisticated, well researched, aesthetically pleasing modern maps that precisely address their needs. It is truly exciting news, especially for us cartographers!

The International Map Year is a major event in the up-and-coming ICA calendar and you are invited to contribute to the celebrations planned for 2015-2016. An illustrated outcome of the recent ICA survey on definitions concerning our domain is also presented in this issue. Graciela Metternicht shares her story of *ICA News* editorship, while President Georg Gartner announces the establishment of our own International Journal of Cartography.

Thank you for your wonderful contributions and continuous support.

Igor Drecki | Editor *ICA News* | ICA ●

The **ica news** is published by the International Cartographic Association (ICA).

President: **Georg Gartner** | Technische Universität Wien | *Austria*

Secretary General & Treasurer: **László Zentai** | Eötvös Loránd University | *Hungary*

Editor *ICA News*: **Igor Drecki** | The University of Auckland | *New Zealand*

Assistance of the **Hong Kong Polytechnic University** with the production and distribution of *ICA News* is gratefully acknowledged.

© International Cartographic Association (ICA) 2014

02 | number 62 | june 2014

## president's report cont...

- to cater for the entire ICA community, by publishing work on topics ranging from service-oriented cartography, web mapping, geovisualization and generalisation, all the way to the history of cartography, cartographic heritage, maps and society, and art and cartography
- to equally address two pillars of the ICA – cartography and GIScience

We hope to attract authors doing research in cartography and GIScience to publish in a journal of cartography and GIScience rather than in any journal of whatever domain (and there are many). A scientific domain is very much defined by its main output media. Thus strengthening those will help to contribute to enlarge the discipline and make it more visible again.

How can this development be related to the existing journals affiliated with the ICA? While there are many journals all over the world that address the 'home market' and publish papers primarily in their national language, the three prime English speaking journals – *Cartographica*, *Cartography and Geographic Information Science*, and *The Cartographic Journal* – have a long standing and most successful history of being close partners of ICA. This partnership will continue and ICA is interested in making this cooperation even more fruitful. The special issues being produced by these three journals at recent ICCs are a good indicator for this.

Will the new journal be a threat to this partnership? The EC and I personally are strongly convinced that establishing a new journal will be rather a good opportunity. It seems, there is no shortage of papers in our disciplines in general. When you look at journals of our neighbouring disciplines, you might find a number of papers which could have been published in a cartographic journal. For many academics, one of the deciding factors here is the 'impact factor' of a particular journal and its international standing, e.g. from *Scopus*. There are many papers related to cartography and GIScience that are currently being published in journals not affiliated to ICA, simply because of this fact. By establishing a journal which should fulfil these criteria as quickly as possible, the existing journals will benefit in a sense; through cross referencing papers their 'impact factor' might go up. Or, to say informally, we need to make the 'bowl' bigger, if we want our discipline to be noticed and recognized. By launching a new journal, we make that 'bowl' bigger and thus our discipline larger. Instead of remaining silent to the ongoing marginalisation of our domain we take a proactive step by providing a vehicle for new and additional research through publications and relevant outcome.

Will it work out? Here is how you can help. If you have any unpublished scientific work in cartography or GIScience, from now on you might consider publishing it in the *International Journal of Cartography!*

In respect to publications I am also happy to announce that ICA has been offered a regular column in *ArcNews*, the Esri newsletter ([esri.com/arcnews/](http://esri.com/arcnews/)), allowing ICA to address issues of modern cartography directly to many GIS users and developers. The first two columns have already been written by myself and received a positive feedback. Also, the *Geospatial World* magazine ([geospatialworld.net](http://geospatialworld.net)), directed primarily towards readers from the geospatial industry, invited ICA to contribute to a regular column called *ICA Angle*, indicating that the relevance of cartography is increasingly acknowledged. Together with a long standing and most successful partnership with *GIM International* through its ICA regular column, we have now several opportunities to report on issues of interest to cartography, GIScience and ICA, and reach out globally. At this point I would like to highlight the role of Dr David Fairbairn, former Secretary General of ICA, who has been coordinating regular contributions to *GIM International* for several years!

I am happy to report on the ongoing efforts of the ICA Working Group on the International Map Year, chaired by Bengt Rystedt, and consisting of Ferjan Ormeling, Aileen Buckley, Serena Coetzee, Vít Voženilek, Ayako Kagawa and David Fairbairn. The group met several times to discuss concepts and initiatives concerning organisation of the International Map Year under the umbrella of ICA and endorsed by relevant United Nations bodies.

Bengt Rystedt, former President of ICA, says:

*"The International Map Year (IMY) will start on January 1, 2015 and continue through 2016. Organisation of the IMY was proposed by the Swedish Cartographic Society, the ICA national member, at the ICA General Assembly in Paris in 2011. The IMY is supported by the United Nations (UN) and recognised firstly by a resolution of the UN Regional Cartographic Conference in Bangkok in 2012 (see ICA News, No 59, December 2012, p 3 and 18), and secondly by the UN Global Geospatial Information Management (UN-GGIM). The UN-GGIM Director has informed ICA that IMY will be taken up at the meeting in New York in August 2014 and also at the 3rd High Level Forum in Beijing, China October 22-24, 2014. However, the time is too short to get a resolution from the UN General Assembly.*

*The ICA Working Group on IMY has compiled a book "The World of Maps" and worked on establishing guidelines for organising national map days. At the WG meeting in Olomouc, Czech Republic, end of February 2014, the organisation of the IMY was discussed. David Fairbairn wrote a paper on IMY and presented it at a joint ISPRS/ICA Education Seminar in Wuhan, China, in May 2014. The same paper was*

also presented by Ferjan Ormeling at the UNGEGN meeting in New York in April, 2014.

ICA has supported the development of a dedicated IMY website ([internationalmap-year.org](http://internationalmap-year.org)). It is being developed by a team at the Department of Cartography, Eötvös Lorand University in Budapest, Hungary, chaired by ICA Secretary General Prof László Zentai. All material and news about IMY, including how to download the book for free and how to organize national map days, will be available from this website. It is important to understand that the success of the International Map Year is dependent on the engagement of national organizations and societies."

I would like to strongly encourage you all to take this opportunity and actively participate in the International Map Year celebrations!

Let me close with brief reports from other events where ICA was represented. The Tenth Plenary Session of the Group on Earth Observations (GEO-X) Ministerial Summit took place in Geneva, Switzerland, 15-16 January 2014. GEO is an inter-governmental and voluntary organisation with primary focus on earth observation techniques for "integrating observations to sustain our planet", such as remote sensing technologies, and data sharing. Organisations like ICA are welcomed as partners; GEO has currently 90 national members and 67 participating organisations like ours. The discussion about GEO's future plans and the keywords published in the *Geneva Declaration*, such as 'user centred developments', 'communication' etc, highlights a potential role for cartography, which we hope to follow up on.

In February 2014 a High Level Meeting of Caribbean Nations took place in Sint-Maarten. Following the meeting, ICA offered a hands-on Workshop on *WebMapping and OpenSource Technologies*, delivered by Dr Markus Jobst, Co-chair of the ICA Commission on Map Production and Geobusiness. A total of 77(!) participants, representing 16 Caribbean countries, took part in the Workshop making it a big success.

Between 25-28 February 2014, Prof Vít Voženílek and his team from the Palacký University in Olomouc, Czech Republic, organised the most successful CARTOCON 2014 Conference, at which several ICA Commissions organised their meetings. More than 350 participants, including many young colleagues, presented and discussed current topics in cartography and GIScience. The ICA Executive Committee used this event to hold their sixth meeting in the current term.

ICA is one of the stakeholders in the FIG/IHO/ICA International Board for Standards and Competencies (IBSC). A stakeholder seminar in Monaco in March 2014 aimed at synchronizing



IHO President Robert Ward (left) and ICA President Georg Gartner at the IBSC Stakeholder Meeting in Monaco

efforts and directions of this Board (see page 5 to learn more about IBSC).

Following an invitation from InterGEO Eurasia, I represented our Association at a special ICA session at their meeting in Istanbul, Turkey. I would like to highlight the role of Prof Necla Uluğtekin, a perfect host and a perfect ambassador of cartography and ICA in Turkey.

In May, I attended a meeting with UN-OOSA and UN-SPIDER representatives at the UN offices in Vienna, Austria, where issues of further cooperation related to UNGIWG, UN-SPIDER and UN-GGIM were discussed.

Also in May the GeoWorldForum took place in Geneva, Switzerland where I represented ICA as Plenary Session Chair at several business meetings and face-to-face discussions.

I participated in the ISPRS Symposium on Geospatial Databases and LBS in Suzhou, China, where I received an invitation to represent ICA and deliver a keynote address. This meeting created an opportunity to identify and discuss possible fields of cooperation between ISPRS and ICA.

There are also many other ICA activities currently being undertaken, such as the work of numerous ICA Commissions; I encourage you to explore their work via the ICA website ([icaci.org](http://icaci.org)). Recently, ICA endorsed the work towards the *Monumenta Cartographica Moderna* proposed by the ICA Commission on the History of Cartography and coordinated by Imre Demhardt and Elri Liebenberg.

Let me close by saying that our Brazilian colleagues, led by Vice President Prof Paulo de Menezes, are working hard on preparations for the International Cartographic Conference 2015 in Rio de Janeiro. Please mark your calendar, secure funding and prepare your papers – Call for Papers is already out (see p 5)!

Georg Gartner | President | ICA ●

## ica news 25 years ago...

This piece by former ICA President Fraser Taylor reports on the establishment of the Presidential Task Force on Women in Cartography. With time, the Task Force became the ICA Commission on Gender and Cartography, initially led by Eva Siekierska and later by Ewa Krzywicka-Blum. The Commission operated under this name until the 14th ICA General Assembly held in August 2007 in Moscow.

Igor Drecki | Editor ICA News | ICA ●

### ICA Newsletter, No 13, May 1989

#### News from ICA President D.R.F. Taylor

##### PRESIDENTIAL TASK FORCE ON WOMEN IN CARTOGRAPHY

In the closing address of the 8th ICA General Assembly held in October 1987 in Morelia, Mexico, the new President, Dr. D.R.F. Taylor, drew the attention of delegates to the disproportionately low participation of women in the work of the Association. The Presidential Task Force on Women in Cartography was established to address this issue.

The Task Force was created early in 1989 and its initial mandate will be for two years, renewable if necessary, by the ICA President. The members of the Task Force are representatives from nine countries: Australia, Finland, Hungary, Mexico, Norway, the People's Republic of China, Sweden, the United Kingdom and the United States. It is chaired by the representative from Canada.

The main objective of the Task Force is to analyze and to suggest policies to increase the participation of women in the activities of the ICA and its constituent member organizations. The Task Force will focus on two areas:

- 1 The identification of barriers to the more active participation of women in the activities of ICA and suggestions of policies to remove these;
- 2 Suggestions of policies which will encourage more active participation of women in ICA activities.

The results of the study will be documented in a report submitted to the ICA President prior to the 9th General Assembly in Bournemouth 1991. Individuals interested in the work of this Task Force are encouraged to contact the Chair: Dr Eva Siekierska [...]

*D.R.F. Taylor, ICA President / 27 March 1989*



President

**Georg Gartner** | Technische Universität Wien | *Austria*

Secretary General & Treasurer

**László Zentai** | Eötvös Loránd University | *Hungary*

Vice Presidents

**Derek Clarke** | Surveys and Mapping | *South Africa*

**Menno-Jan Kraak** | University of Twente | *The Netherlands*

**Yaolin Liu** | Wuhan University | *China*

**Sukendra Martha** | The Board of Geospatial Information | *Indonesia*

**Paulo Márcio Leal de Menezes** | Universidade Federal do Rio de Janeiro | *Brazil*

**Anne Ruas** | Institut Français des Sciences et Technologie des Transports | *France*

**Timothy Trainor** | US Census Bureau | *USA*

Past President

**William Cartwright** | RMIT University | *Australia*

Editor ICA News

**Igor Drecki** | The University of Auckland | *New Zealand*

ica news contributions

Please send your contributions to

**Igor Drecki** | Editor ICA News | [i.drecki@auckland.ac.nz](mailto:i.drecki@auckland.ac.nz)

Postal Address

School of Environment  
The University of Auckland  
Private Bag 92019  
Auckland  
New Zealand

Submission Deadlines

**15 May** for June editions

**15 November** for December editions

ica news past editors : part 3

cont...

graciela metternicht

One aspect of the ICA Conferences that I always loved was the Barbara Petchenik Children's World Map Competition, and the outstanding entries that it attracted (and continues to attract); regardless of the theme chosen. Children's maps are works of art and fit nicely with the definition of cartography we grew accustomed to – *the art and science of mapmaking*. Cartography is one of few disciplines, if not the only one, that integrates art and science!



Cover of ICA News No 37, December 2001

The December 2001 issue of *ICA News* (No 37) was published with a colour cover, containing two winning entries from the fifth edition of the Barbara Petchenik Children's World Map Award. The back cover contained the listing of the ICA Affiliate members with a minimum of ten subscription units, while the inside back cover – names of international and national scientific and technical organisations with a minimum of two subscription units. At that time I wrote this was needed “to keep apace with this ever evolving discipline, and to better recognise the contributions of ICA's sponsors...”

I recall having introduced a section entitled *Message from the President* and continued highlighting the work of the ICA Commissions. In my view the newsletter's main purpose was to show the highly dynamic work of the Executive Committee and the Commissions. At that time the newsletter was one of the main vehicles (together with the ICA website) to showcase the wonderful work of

these individuals that graciously donate their time to keep the high profile and relevance of cartography and the Association.

During my term as Editor, the *ICA News* was also translated to Spanish (since December 2004), thanks to the effort and dedication of the Mercator Group at the Polytechnic University of Madrid, Spain. The group led by Dr Miguel Angel Bernabé-Poveda, a great advocate of Cartography and Spatial Sciences, was fully aware of the lack of available Spanish-language information about events, meetings, seminars and conferences relating to surveying and cartography. The Mercator Group undertook this huge task, and delivered the newsletter in its Spanish version almost simultaneously to the English version (see also *ICA News*, No 50, June 2008, p 5).

I was Editor of *ICA News* for eight years\*, and feel proud of the work we achieved with the different ICA Executive Committee members and Commission chairs that held office during that period. The quality of the newsletter was, and still is, purely the reflection of the continuous support from the ICA members, providing interesting contributions after each of the Editor's biannual 'calls'. The Association, its Executive Committee and Commissions have continued their hard work to keep Cartography as a prominent discipline; the ICA Commissions have re-shaped and evolved to keep pace and salience with the complex environment we live in, certainly quite different from what it was 50 years ago, at the time the Association was established.

Igor Drecki and the current ICA Webmasters Manuela Schmidt and Felix Ortig, are doing an incredible job in disseminating the work of the Commissions and the Association. Cartography

ICA newsletter 1999-2007 :: Facts and Figures<sup>1</sup>

publication period (1999-2007)	years ::	8	month of publication	
issues published		16	june (nos 34, 36, 38, 40, 42, 44, 46, 48)	8
pages <sup>2</sup>		316	december (nos 33, 35, 37, 39, 41, 43, 45, 47)	8
photographs		262	<b>format</b>	
advertisements		56	210 x 297mm (nos 33-48)	16
tables		13	<b>authors</b>	<b>111</b>
figures		24	ferjan ormeling	contributions :: 30
longest issue (nos 41, 42, 45)	pages ::	24	graciela metternicht <sup>3</sup>	25
shortest issue (nos 33, 34, 35, 36)		16	milan konečný	17
<b>articles and news items</b>		<b>419</b>	ron furness	16
calendar notices		52	alexander wolodtschenko	14
correspondence		1	alberta auringer wood	14
editorial		32	michael p peterson	12
ica awards		4	antony cooper	11
ica news items		71	bengt rystedt	11
ica publications		2	ewa krzywicka-blum	10
miscellany		33	elri liebenberg	10
obituaries		9	vladimir s tikunov	10
profiles		8		
reports: cartographic meetings and events		85		
reports: commissions and working groups		115		
reports: president		7		

<sup>1</sup> Facts and Figures were compiled by Igor Drecki, based on ICA newsletters published between 1999 and 2007 (Nos 33-48).

<sup>2</sup> This category includes unnumbered pages consisting of the front cover, inside front cover, inside back cover and back cover of the newsletters published between December 2001 and June 2007 (Nos 37-48).

<sup>3</sup> The number of Graciela Metternicht's contributions include two pieces written by the Editor. In addition, several other articles were written without author(s) named; most likely they were written by Graciela Metternicht, which would increase her contribution substantially.

# ica news past editors : part 3 cont...

## graciela metternicht

continues to be a critical discipline with significant (although not always fully appreciated) contributions to other areas of research, education and decision making. Nothing like the old adage “*One picture is worth ten thousand words*” highlights the power of maps in all aspects of our life, and – as a powerful tool – assists policy and decision makers in the design and implementation of a sustainable future.

I trust we have educated and trained a new generation to take over from us, and maintain the high standards that we set for the Association and its work.

**Graciela Metternicht** | Editor 1999-2007 | ICA News | *Australia* ●

\* At the International Cartographic Conference in Moscow, Russia, 4-10 August 2007, Graciela Metternicht was awarded an Honorary Fellowship of the International Cartographic Association “for her outstanding service to ICA, especially as editor of ICA News” (for full citation see ICA News, No 49, December 2007, p 5-6).

Graciela Metternicht (*centre*) with the ICA Executive Committee and the Local Organising Committee ICC 2001, at the Executive Committee meeting held in Beijing, 7-9 August 2000 (see ICA News No 35, December 2000, p 1)



## icc 2015



The 27th International Cartographic Conference and the 16th General Assembly of the ICA will take place in Rio de Janeiro, Brazil in

August 2015! The ICC 2015 will provide an opportunity for cartographic and GIScience community to present the latest developments across the globe. This includes innovative cartography, technological advancements and current geospatial research. The event will facilitate a unique opportunity to exchange ideas and encourage collaboration with colleagues from academia, government and industry in general.

### Important Dates

Call for papers opens	22.03.2014
Paper Submission Deadline (full paper and abstracts)	15.10.2014
Registration opens	01.11.2014
Papers acceptance notification	15.02.2015
Final paper submission deadline (oral)	15.03.2015
Authors' registration deadline / Registration fees change	30.03.2015
ICC 2015	23-28.08.2015

**Igor Drecki** | Editor ICA News | *ICA* ●

## ica news ica and nautical cartography standards

### Introduction

In his opening address to the International Cartographic Conference (ICC) 2013 held in Dresden, Germany, Georg Gartner, President of the International Cartographic Association (ICA), outlined a perceived “*confusion about the status, relevance and importance of cartography*”. In presenting arguments describing the relevance of cartography as a discipline, Gartner concluded that “*it is of high importance that cartography and cartographers are actively contributing their skills, knowledge, methods and research to the geospatial domains*”.

One such domain, which the ICA has been actively supporting for in excess of a decade, has been the nautical cartography domain. This support has led, for the first time, to the development of minimum international standards of competence for nautical cartographers.

The genesis of the ICA support for the work of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) came from within the (now demised) ICA

Commission on Marine Cartography and more recently through its high level Memorandum of Understanding with the IHO.

The ICA was invited to contribute to the work of the Board at a meeting held during the ICC 2001 in Beijing, between Rear Admiral Giuseppe Angrisano, then President of the IHO Directing Committee, and the ICA Executive Committee representatives: Bengt Rystedt, then President, and Ferjan Ormeling, then Secretary General. Ron Furness and Prof Lysandros Tsoulos, long-standing advocates of the work and promotion of ICA, became full members of the IBSC, with Tsoulos serving a period of three years as Chairman and Furness presently serving as a Vice Chairman.

### The Board

The Board comprises ten members representing the three constituent organizations: the International Federation of Surveyors (FIG) (4 members); IHO (4); and ICA (2). Its Secretariat is provided by the International Hydrographic Bureau of the IHO. The Board meets annually and is charged with maintaining both the S-5 (Hydrographic Surveying) and S-8 (Nautical

Cartography) standards and considering course curricula submissions against these standards for recognition. Up to now, sixty programmes in Hydrographic Surveying and/or Nautical Cartography have been recognised.

The last decade or so has seen considerable changes in nautical cartography, its practice and technology, and it has been absolutely essential that the ICA voice is heard in the translation of these changes into the now accepted international standards. Thus, in terms of President Gartner’s challenge outlined at ICC 2013, we believe it is most important that ICA continues to support the contribution of cartography in the work of the Board; it is definitely “*OK to be a (nautical) cartographer!*”

### Nautical Cartography Standard

The Board has guided the delivery of education and training for hydrographers since it was formed in 1977, and additionally for nautical cartographers since 2001. The Nautical Cartography Standard (S-8) recognizes two levels of cartographic competence: Category A and Category B. In the hydrographic community, Category A programmes offer a

> 06

broad and comprehensive knowledge in all aspects of the theory and practice of a field. Category B programmes provide the practical comprehension, along with the essential theoretical background, necessary for individuals to carry out the various nautical cartographic tasks. Category A educational programs presently include all the Category B competencies plus additional advanced competencies.

## Programme Recognition

Programmes seeking recognition are submitted by competent educational and formal training bodies by 31 December each year. The Board then reviews each submission and once a programme is recognised, its status remains valid for six years assuming its delivery continues. After six years a new submission is required. The Board does not recognise individuals, but has introduced minimum requirements by which it recognises national or regional schemes, which in turn recognise or accredit individuals. Such schemes typically require qualified persons to remain current through continuing professional programmes.

## New Challenges

New challenges in hydrographic surveying and nautical cartography education and training underpin the need for reviews and a change in focus and expectations. It has become evident to the Board that there is a number of influencing factors that bring to the fore a number of imperatives for change in the way nautical cartographers are educated to meet modern hydrographic offices' practice and products requirements, as well as of the needs of industry.

New uses of the seas have shifted the focus and objectives of hydrographic products from those intended primarily for navigation safety to a wider variety of deliverables, motivated by emergent fields like energy production (wind farms, marine turbines, etc.), marine environment understanding and protection (habitat mapping, coastal erosion monitoring, coral reef mapping, etc.), remote sensing bathymetry (using bathymetric LiDAR, AUVs, ASVs, or satellite data). Field operations are and will be conducted in the near future at a wide variety of scales: from detailed port infrastructure inspection survey to regional satellite bathymetry, and these data variants will impact on nautical cartographic production and products.

To respond to these new challenges, methodologies, equipment and software are becoming more and more sophisticated and automated. We are now dealing with hydrographic systems in the field (being by essence kinematic mapping systems), composed of complex sensors incorporating a high level of technology and embedded software. The increasing amount of collected data need to be processed (cleaned, controlled, generalized),

and integrated in marine geospatial data management systems, while the products are beginning to re-shape perceptions of best practice for nautical cartographers. Data processing and management systems incorporate advanced numerical methods enabling access to high-level models built from multi-sensor raw datasets. While these stretch the knowledge required by hydrographers, they cry out for the presentation and interpretive skills of the nautical cartographer. The profession is now subject to a data management emphasis leading to multiple product outcomes.

The influence of blended, direct and distance learning initiatives is beginning to have an impact. The growing perception now is that modular courses, coupled with intensive time on practical and field work, may offer a solution that combines the desires of both individuals and course providers through a flexible approach to the selection, completion and assessment of course elements.

In view of these new challenges, the Board has decided to strengthen the importance of programme reviews as a process for evaluating and continuously enhancing the quality and currency of the programmes. The evaluation will be conducted through a self-assessment, followed by an on-site consultation by members of the Board. It is believed that such on-site visits by members of the Board will raise the profile of both hydrography and nautical cartography, nationally and regionally.

The ICA's involvement in these significant developments is critical, especially through the contribution of skills, knowledge, methods and research to the nautical geospatial domains as rightly encouraged by President Gartner's entreaty.

## New Standards

The Board is in the process of developing a new structure for both S-5 and S-8 standards that will separate the Category A and Category B programmes as follows:

- Category A hydrographic surveyors and nautical cartographers, with appropriate experience, will be project leaders; they will design and plan the survey or the cartographic product, choosing appropriate technology and scale, and will select and supervise the team undertaking the survey; they should be completely familiar with the underlying physics and mathematics of the survey or cartographic systems employed, and should be able to evaluate results against expectations; Category A professionals will almost certainly have completed a technical degree (surveying, math, physics, computer science, earth science, geosciences, cartography, etc.)
- Category B hydrographic surveyors and nautical cartographers, with appropriate experience, will be watch leaders on a survey vessel or cartographic team leaders; they

may have technical degrees, but it is not essential; technical diploma, business degree, or liberal arts degree with experience might be considered satisfactory in some cases

For both Category A and Category B standards, the ability to conduct or operate hydrographic surveys in the field or utilize hydrographic and/or cartographic databases to compile and produce charts, remains a critical competence, and thus an essential part of education and training through field work and projects.

## The Future

The Board is considering various options on how best it can provide guidance for minimum standards into the future. Anecdotally, at least, it is clear to the Board that the demand for both qualified hydrographic surveyors and nautical cartographers is increasing. Simultaneously, as evidenced partly by the creation and introduction of professional bodies that review, certify and track the competencies of practitioners within the industry, there is an increasing clamour for qualified, competent hydrographic and cartographic personnel.

Many hydrographic contracts, by way of example, now demand evidence of formal and appropriate hydrographic and/or cartographic qualification as a consideration in the evaluation of tender responses. Naturally, this is accompanied by demands from the personnel themselves for opportunities to study and to continue their skills refreshment within accredited and recognized programmes.

## Conclusion

The role of the ICA in this cooperative and collegiate work is considered both formative and imperative. The work is completely in accord with the mission of the ICA which is *"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"*.

It serves to flesh out the specific vision of the Association, which aims at recognising ICA as *"the world authoritative body for Cartography and GIScience"*. Within the hydrographic and nautical cartographic domains, ICA is now seen as making a significant and authoritative contribution.

The support of the International Cartographic Association in the development, maintenance and renewal of the international Standards of Competence for Nautical Cartographers has been influential and positive and, it is hoped, will continue into the future.

**Ron Furness and Lysandros Tsoulos** | FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers | *Australia / Greece* ●



# international map year 2015-2016

## Introduction

The purpose of the International Map Year (IMY) is to illustrate to the general public, as well as decision makers, the importance of making and using maps in a global context. *Cartography is the art, science and technology of making and using maps* (Appendix to *A Strategic Plan for the International Cartographic Association 2003-2011*, 2003, p 17). Maps facilitate understanding of the world in a geographical context. They are important tools in addressing social and environmental problems, for example provision of housing, conservation of natural resources, risk management and transportation network planning. Furthermore, maps assist decision makers in tackling global challenges, such as sustainable development, peace and security.

The celebration of IMY is a joint effort of the International Cartographic Association (ICA) and the United Nations initiative of Global Geospatial Information Management (UN-GGIM). It is also aligned with the Rio+20 Agenda signed by the UN Secretary General.

The International Map Year will be formally launched at the ICA Conference in Rio de Janeiro on 23 August 2015, and continue until the end of 2016. The national events associated with IMY are planned to start at the beginning of 2015.

## Background

Today, maps are being accessed and distributed using variety of media, from paper to Internet, from TV to mobile devices. They are part of many information systems, where they support knowledge building and decision making in spatial context. Maps are used for navigation in the mountains and on the road, in the air and on the water. Historical maps are used to understand urban development through time while planning maps are for understanding future needs and possibilities.

IMY targets four distinctive user groups: the general public, school children, professionals, and local government. It is important to equip general public with a better understanding of how maps are used in modern society and to get more school children interested in cartography and geospatial domains, so that they are better informed about our world.

## Activities

There are many activities planned for the IMY. They include engagement of geospatial professionals and local government. National committees are being established to support local map days to be held in municipalities, schools, universities and libraries. For example, a local map day may consist of:

- exhibitions of current maps produced by the national mapping organisations
- demonstrations of map production and examples of map use
- local mapping programs showcasing urban and infrastructure planning
- demonstrations of map applications for safety by local police or fire brigade
- exhibitions of historical maps of the neighbourhood
- exhibitions of the children's map drawings submitted to the Barbara Petchenik Children's World Map Award
- cartographic activities for children
- short lectures about the use of geospatial information
- demonstrations of GPS technology, orienteering events and geocaching
- demonstrations of how to use historical and current maps for research and investigation
- map use exercises
- self guided, as well as guided explorations of the exhibitions and displays
- map and map use demonstrations

### Activities for children (point g above):

- A web application *Map of my Family*, where children can compile their own family map with grandparents, siblings, uncles, cousins, etc; school teachers could include this activity in the curriculum
- A web application *Map of my Home*, where children can compile a map on any theme of their city/village with vegetation, points of interest, traffic, etc.; teachers could include this activity in the curriculum
- Items of interest broadcast on television or the Web (e.g. YouTube)

**Short lectures** (h): They may consist of say three 15 minute presentations followed by 5 minute breaks. Example of short lectures are:

- The world of maps: key elements of specific aspects of cartography and maps, historic

and contemporary

- Climate change, sustainable development or peace and security: demonstrating global and local problems
- Map-supported research at your location: inviting geographers, archaeologists or geologists to provide locally focused talks and demonstrations
- Spatial planning: utilisation of maps for the actual housing and infrastructure planning and development

## IMY and the United Nations

The objectives of the United Nations resolution concerning the International Map Year are:

- providing recognition by the United Nations and member states of the importance of maps and geospatial information for society
- encouraging member states to encourage national mapping agencies and relevant government offices to take part in the IMY
- encouraging member states on further support in making maps and geospatial information more accessible
- motivating member states to improve the overall knowledge of the general public in the availability of maps in their nation and how to use maps and geospatial information
- providing recognition among cartographic professionals and local governments on the status of their work

This resolution mandates the ICA and UN-GGIM to organise International Map Year during the years of 2015 and 2016.

## Outcomes and Resources

Outcomes from the IMY activities will be reported to the UN-GGIM at the conclusion of IMY in 2016. The ICA Working Group on International Map Year is working on a book *The World of Maps* to be available for free and accessible from the ICA website ([icaci.org](http://icaci.org)). It covers topics on how maps can be used and produced, and how geospatial information can be collected and distributed. The book is a voluntary work of members of the Working Group and written in English. It will be translated into other languages in due course.

**Bengt Rystedt** | Chair | ICA Working Group on International Map Year | Sweden ●

## ica news ica survey on definitions

The most recent ICA's formal definition of **cartography** can be found in the Appendix of *A Strategic Plan for the International Cartographic Association 2003-2011* ([icaci.org/files/documents/reference\\_docs/ICA\\_Strategic\\_Plan\\_2003-2011.pdf](http://icaci.org/files/documents/reference_docs/ICA_Strategic_Plan_2003-2011.pdf)). The Appendix includes

two versions: a short definition and a long one. The short definition reads: "**Cartography is the art, science and technology of making and using maps**", while the long one: "*Cartography is a unique facility for the creation and manipulation of visual or virtual representations*

*of geospace – maps – to permit the exploration, analysis, understanding and communication of information about that space*". I would like to concentrate on the short definition, which derives from a definition given in the Multilingual Dictionary of Technical

Terms in Cartography (1973): “Cartography is the art, science and technology of making maps, together with their study as scientific documents and works of art”.

The short definition given above was written more than a decade ago and the context in which cartography is realised today has changed considerably. The technology has advanced rapidly and became more accessible to all; more ‘mappable’ data is produced; more people make maps: next to professional cartographers we have map makers such as (gi)scientists and the public. The map use environment has gone mobile. The short definition contains several keywords: one of them, without discussion, is **maps**. It is safe to argue that our domain does something with maps. The changes mentioned above are related to the other keywords: **art, science, technology, making and using**. Do these changes require different terms to describe our domain?

During the last International Cartographic Conference in Dresden 2013, ICA launched a survey to gather your thoughts on what to call our domain and how to describe a map. Over 140 responses were received. This report presents your answers graphically without any in-depth analysis (which will be undertaken later). The first three questions relate to our domain. The survey asked the following questions:

**Q1. How should we call our domain?** One keyword was requested and it is obvious from the word cloud that term **cartography** dominates all others (148 responses were given).



Graphic response to Q1: How should we call our domain?

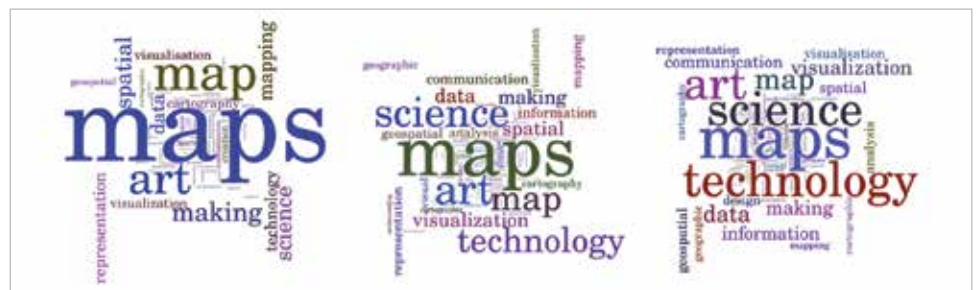
**Q2. What characterises our domain?** Three keywords were allowed; 148, 147 and 138 answers were received respectively. The word **map(s)** dominates as the first keyword. Adding a second and a third keyword creates some nuance, but one could almost make out the short definition of cartography given above!

**Q3. How would you define our domain?** 142 responses were given, and not surprisingly they correspond well with the third (right) word cloud from the previous question.

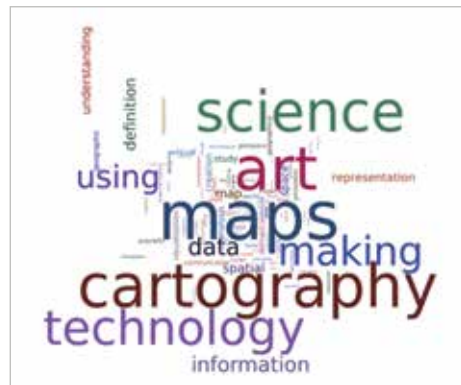
The last two questions were related to the definition of a **map** and the survey contained several examples of contemporary definitions. A *Strategic Plan of the ICA* (2003) describes the map as “a symbolized representation of a geographical reality, representing selected features and characteristics, resulting from the creative effort of its author’s execution of choices, that is designed for use when spatial relationships are of primary relevance”. Another definition states: “A map is a conventional

image, mostly on a plane, of concrete or abstract phenomena which can be located in space” (French Cartographic Society, 1970s). On behalf of the ICA Working Group on Cartographic Definitions, Christopher Board (1990) defined a map as “a representation or abstraction of geographic reality, a tool for presenting geographic information in a way that is visual, digital or tactile”. A more simple definition was given by Robinson and Petchenik (1976) in their book *Nature of Maps*: “Maps are a graphic representation of the milieu”.

**Q4. What keywords should be used in a definition of a map?** Five keywords were allowed; 126, 126, 126, 110, and 80 answers were received respectively. The two word clouds were created using the first and all five keywords respectively.



Graphic response to Q2: What characterises our domain? Word cloud based on the first keyword (left), first two keywords (middle) and all three keywords

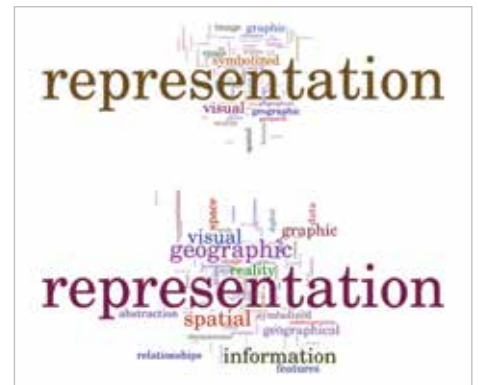


Graphic response to Q3: How would you define our domain?

**Q5. Your own definition: A map is...** The word tree is based on the text of 120 definition provided.

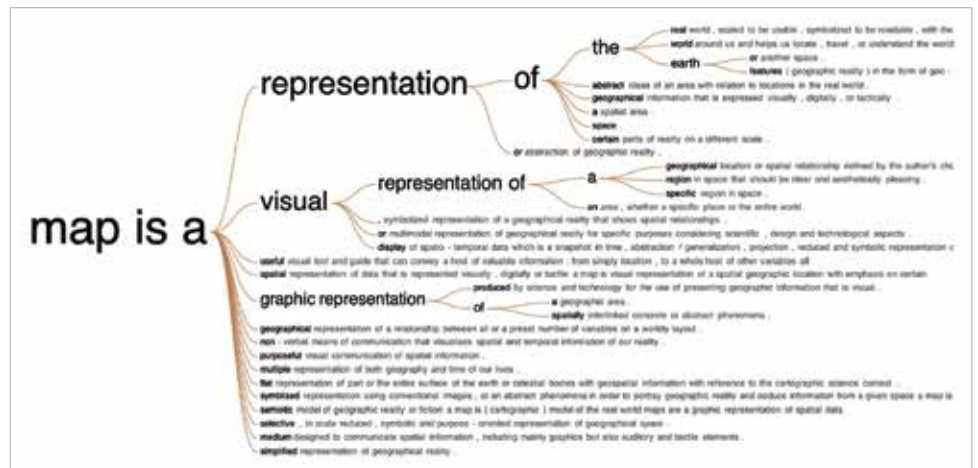
These results need to be interpreted with caution. Since most survey participants were closely linked with ICA, either by participating in the ICC 2013 in Dresden or by browsing the ICA website, it is more an internal view of what we think describes our domain. Adding a question about the age might have helped to establish a difference (if any) between answers given by the younger and older survey participants. Finally, we might have been all influenced by our President Gartner, telling us that “it’s OK to be a Cartographer!”

Menno-Jan Kraak | Vice President of ICA | The Netherlands



Graphic response to Q4: What keywords should be used in a definition of a map? Word cloud based on the first keyword (top) and all five keywords

Graphic response to Q5: Your own definition: A map is... A word tree based on 120 responses





*PositionIT* – the surveying, GIS, remote sensing, mapping, location intelligence and related spatial applications journal for Southern Africa – is a technical and business-to-business publication published by EE Publishers. Its mission is to be the leading journal in its sector and to serve the varied interests of the Southern African geomatics community.

*PositionIT* keeps its readers abreast of new geospatial technologies and developments, legislation and policy developments, and spatial data infrastructure initiatives. The journal also provides a forum for geospatial practitioners across Southern Africa to share their knowledge and experiences through the publication of technical articles and case studies.

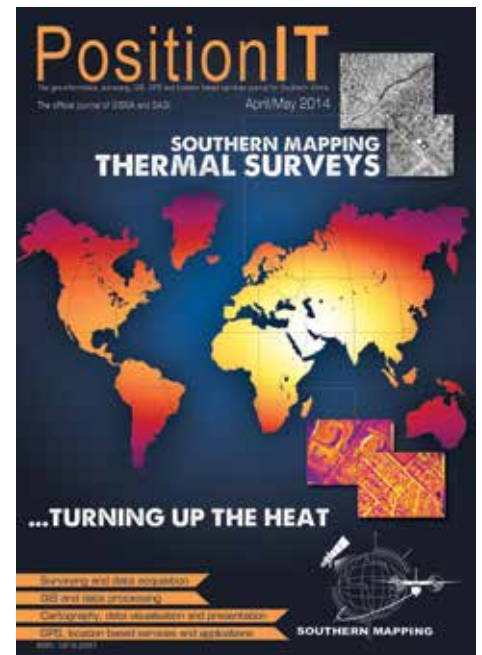
The magazine was originally started by Peter Chaldecott of Technographix in 1998, as *Position*, and was published quarterly, four times a year. In 2004 *Position* was acquired by EE Publishers, and the name changed to *PositionIT* to reflect the growing impact of information technology, in the form of GIS and

location-based services, in the surveying, remote sensing and mapping arenas.

The magazine has gone from strength to strength, and is now published as the official magazine of the Geo-Information Society of South Africa (GISSA) and the South African Geomatics Institute (SAGI). *PositionIT* also provides a voice for the Institute of Mine Surveyors of South Africa (IMSSA) and PLATO, the statutory registration body for surveyors, GIS practitioners and remote sensing professionals.

*PositionIT* is available via a range of multi-media formats, including hardcopy, on-line, e-newsletter, e-Zine, mobile and tablet. The full-colour, A4 print edition is published nine times a year and varies between 76 and 80 pages. Back issues of *PositionIT* are available from the magazine's website.

**Clare van Zwieten** | Editor | PositionIT | South Africa ●



Recent cover of PositionIT

## profiles sociedad española de cartografía, fotogrametría y teledetección



The Sociedad Española de Cartografía, Fotogrametría y Teledetección (SECFT) / Spanish Society of

Cartography, Photogrammetry and Remote Sensing was founded in 1977 with the purpose of integrating a wide range of activities in the field of cartography and photogrammetry into a single society. The SECFT is a non-profit organisation with full legal status and capacity to operate. One of its aims is to provide continuity of the work carried out since 1927 by the then major Spanish cartographic institutions.

Since its beginnings, SECFT is closely linked with the ICA; its members participate in many activities, from representation on the ICA Executive Committee to the work in many ICA Commissions and Working Groups. The Society was involved in the organisation of three International Cartographic Conferences: 7th ICC in Madrid in 1974, 17th ICC in Barcelona in 1995 and 22nd ICC in A Coruña in 2005. Thus Spain is the only country in the world to have hosted three ICA Conferences.

Since its foundation, SECFT is preparing and presenting reports on the activities carried out by Spanish cartographers. These are presented at the ICA Conferences and General Assemblies, as well as other ICA events. The Society also coordinates contributions to the International Cartographic Exhibitions and the Barbara Petchenik Children's World Map Competitions, which – over the years – received many awards. These successes are a testimony to the quality of entries from Spanish cartographers, and cartographic organisations and institutions.

Members of the SECFT promote projects, developments and activities in the field of cartography and geographic information for the benefit of the Spanish cartographic sector at both local and international level. They currently participate in the work of the ICA Commissions such as Atlases, Cartography and Children, and others. As a result of this work, the SECFT informs its members about topics of interest in world cartography and

regularly offers updates related to cartography. In addition, the Society publishes a biannual newsletter *Boletín Informativo de la SECFT*, which is available from the SECFT website.

**Ramón Lorenzo** | President | Spanish Society of Cartography, Photogrammetry and Remote Sensing | Spain ●

Members of the SECFT Executive Committee and Associates: (from left) Juanma Rodríguez (Treasurer), Pilar Sánchez-Ortiz (Secretary General), Francisco Dávila (Associate), Águeda Sauco (Member), Fernando Aranaz (Member of Honor), Dolores Abad (Vice Secretary for Cartography), Carmen Carmona and Alfredo del Campo (Associate) and F Javier G Matesanz (Vice Secretary for Photogrammetry) | Photograph courtesy of Pilar Sánchez-Ortiz



## jan brus



My life has been influenced by the landscape of my family neighbourhood. I grew up in a small village in the Czech Republic and started to discover the surroundings very

quickly. It was at that early age that I came across something called maps which really fascinated me.

Due to my fascination with nature, spatial aspects and informatics I started studying landscape ecology, geoinformatics and cartography. In 2008, I began my doctoral studies at the Department of Geoinformatics, Palacký University in Olomouc. Geoinformation science and maps became my daily routine. During working on my dissertation I had the honour to participate in the implementation of several interesting projects and associated visits. My PhD research focused on evaluation of the basic concepts of visualizing spatial data uncertainty, identification of problems associated with them and extension of the framework for visualizing spatial data quality. Each of the individual sub-concepts was systematically explored in terms of quality components for spatial data quality, quality standards of spatial data and visualization techniques to design an improved visualization concept of uncertainty representations.

During my studies, I helped to initiate the *NeoCartoLink* project. The main idea of the project is to connect professionals, academics and students with the best cartographic institutions around the world and make stronger connections for future collaboration. During the last two years, the project team facilitated a lot of seminars, workshops, internships, and visits, culminating in organising the CARTOCON 2014 Conference. This was certainly a significant milestone of my professional career.

Currently I am working as Assistant Professor at the Department of Geoinformatics, Palacký University, and my research topics focus on the user and cognitive aspects of uncertainty visualisations in environmental applications. Work in the Department provides valuable experience in my personal and academic development.

**Jan Brus** | Department of Geoinformatics | Palacký University | Czech Republic | [jan.brus@upol.cz](mailto:jan.brus@upol.cz)

Development of Olomouc City between 1930-2009 based on analysis of functional areas: Olomouc City Plan from 1999

# profiles indian national cartographic association

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

Indian National Cartographic Association (INCA) is a non-for-profit professional society of cartographers established in 1979. Its aims are:

- to foster cartographic research in India and promote academic interaction within an interdisciplinary framework
- to cooperate with professional organizations of cognate disciplines
- to foster cooperation amongst various organizations for advancement of cartography
- to promote map awareness amongst the public
- to secure for cartography its legitimate place in national life and to strengthen a sense of responsibility and professional efficiency amongst cartographers

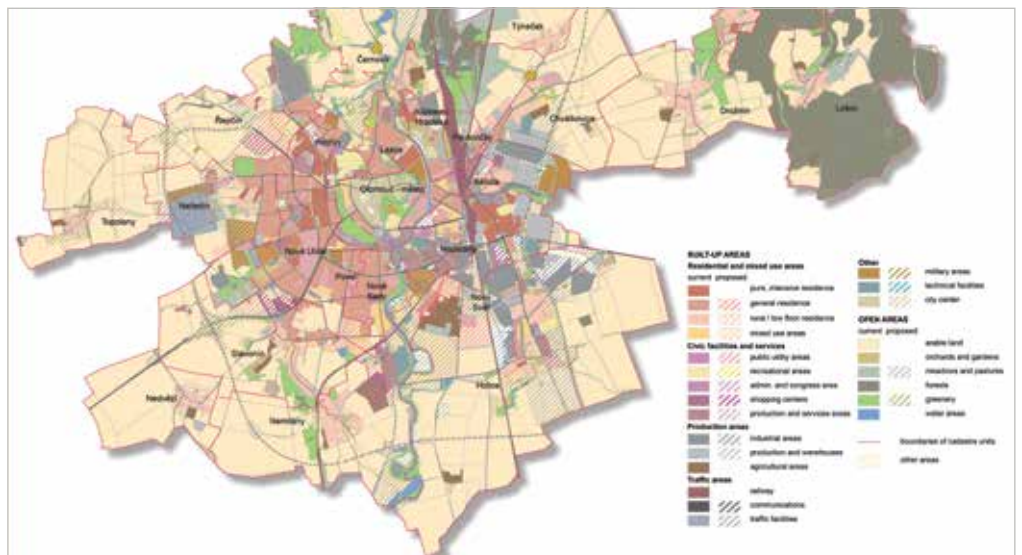
INCA is Affiliate Member of the International Cartographic Association. It organizes national Conferences every year, including Memorial Lectures, Special Lectures and Technical

Sessions, which feature prominently in the programme. Four hundred delegates attended the last Conference at Jodhpur in September 2013, where the Todarmal Memorial Lecture was delivered by Prof V Jayaraman and Prof SP Chatterjee Memorial Lecture was delivered by Prof Ram Gopal.

There are seventeen branches of INCA located at India's state capitals. They are responsible for organizing and coordinating Cartography Day celebrations, workshops for undergraduate students and talks to high school students interested in entering the Map Quiz event. INCA publishes *Indian Cartographer* and a newsletter every year. Four executive committee meetings and one general assembly meeting are held every year to decide the affairs of the Association.

**Amod Srivastava** | Member | Executive Committee of the Indian National Cartographic Association | India

Prof V Jayaraman (*top left*) and Prof Ram Gopal (*bottom left*) deliver Memorial Lectures at the recent INCA Conference in Jodhpur, September 2013; high school students preparing for the Map Quiz | *Images courtesy of INCA*





## Art and Cartography

[artcarto.wordpress.com/](http://artcarto.wordpress.com/)

### Commission Activities

Last May, the ICA Commission on Art and Cartography organized a colloquy in Montréal within the context of the 82nd Acfas Conference (Association francophone pour le savoir). During this two days event (12-13 May 2014), 25 students, professors and researchers from geography, cartography, literature, sociology and anthropology got together to discuss (in French) issues around mapping different kinds of stories such as historical stories, everyday life stories, stories of refugees, stories from films and from novels. The title of the colloquy was *Cartographier les récits : enjeux méthodologiques et technologiques* and the full program is available from [www.acfas.ca/evenements/congres/programme/82/300/310/c](http://www.acfas.ca/evenements/congres/programme/82/300/310/c).

During the last year, we have also been compiling two special issues on the topic of cartography and narratives, that are now in final stage of publication, one in *The Cartographic Journal* (co-edited by Sébastien Caquard and William Cartwright) and one in *NANO – New American Notes Online* (co-edited by Laurene Vaughan and Matthew Bissen). Finally, the collective and experimental “cartomentary” film entitled *MDMD – A Multi Dimensional Mapping Device* developed in collaboration with our Commission has been successfully crowd funded and should be released later this summer. We are now starting to plan the activities of our commission for the ICC 2015 in Rio de Janeiro.

Sébastien Caquard and Barbara Piatti | Chairs  
| ICA Commission on Art and Cartography | *Canada / Switzerland* ●

## Atlases

[www.univie.ac.at/cartography/karto/project/cnra/](http://www.univie.ac.at/cartography/karto/project/cnra/)

### Joint Workshop in Beijing

As a joint event of the International Society for Photogrammetry and Remote Sensing (ISPRS), the International Geographical Union (IGU), the International Cartographic Association (ICA), the Geographical Society of China (GSC) and the Association of American Geographers (AAG), the ISPRS/IGU/ICA Joint Workshop on Borderlands Modelling and Understanding for Global Sustainability took place at the School of Geography of the Beijing Normal University (BNU), China, between 5-6 December 2013. It aimed at promoting research on digital modelling, advanced analysis and comprehensive understanding of borderlands. The Chinese Academician Dahe Qin (IGU Vice President),



Some of the participants of the colloquy on *Cartographier les récits : enjeux méthodologiques et technologiques* that took place in Montréal, 12-13 May 2014 | Photograph courtesy of Sébastien Caquard

Professor Jun Chen (ISPRS President) and Professor Yanhua Liu (GSC President) chaired the Workshop. The Workshop attracted around 80 leading scientists, as well as young researchers from 11 countries. On behalf of the ICA, Peter Jordan, Chair of the ICA Commission on Atlases, welcomed the audience and chaired a cartographic session. Keynotes were presented by Yujing Ouyang, Director of the Department of Boundary and Ocean Affairs, Chinese Ministry of Foreign Affairs; Victor Konrad, President of the Association for Borderlands Studies (ABS); Jun Chen, ISPRS President; Giuliano Bellezza, IGU Vice President and Professor at the University of Rome; Stanley Brunn, Professor at the University of Kentucky; Paul Cheung, former Director of the UN Statistics Division; and Ayako Kagawa, Chief of the Geo Support Unit of the UN Cartographic Section. The Workshop participants stressed the importance of multidisciplinary efforts including cartography, geoinformatics, new technologies in GIS and remote sensing, to promote borderland studies in the future.

Peter Jordan | Chair | ICA Commission on Atlases | *Austria* ●

## Cartography in Early Warning and Crisis Management

[reticah.org/ica/](http://reticah.org/ica/)

### Introduction

Since our last report (*ICA News*, No 60, June 2013, p 10), the ICA Commission on Early Warning and Crisis Management (CCEW&CM) participated in several events, including the International Cartographic Conference (ICC) in Dresden and a Special Seminar in Kuala Lumpur. The Commission also organised Workshops in Wuhan and Novosibirsk. These activities demonstrate global interest in issues relating to early warning and crisis management and showcase our engagement. Our Commission contributed to a book *The Value of*

*Geoinformation for Disaster and Risk Management (VALID)*. The contributing authors were Milan Konečný (Chair), Li Jing and Christophe Lienert (Co-chairs of the Commission).

### Conference in Budapest, Hungary

The Conference and Workshop on Building V4 Network Researching Spatial and Social Aspects of Disaster Management supported by the Visegrád Fund was organised by the Hungarian CASCADOSS Association and took place on 22-23 May 2013 in Budapest, Hungary. The CCEW&CM took an active part in this event by presenting a poster and two articles. Milan Konečný delivered a keynote address *Ubiquitous Mapping for Early Warning and Crisis Management*.

### Conference in Kaifeng, China

On 20 June 2013, Prof Milan Konečný delivered an address and a keynote on *Early Warning and Disaster Management - Challenges for Europe and China: from GIS to VGE*, in Kaifeng, Henan Province, China at the globally respected International Association of Chinese Professionals in Geographic Information Sciences and Geoinformatics Conference. The event attracted Chinese and international specialists from all over the world. Cartography themes were highlighted in the strong geoinformatics sessions. Other keynote speakers included: Prof Xu Guanha, Prof Li Deren, Prof Michel Goodchild, Prof D Sui, Prof Yunfeng Kong, Prof Yeqiao Wan, Dr Gang-Jun Liu, Prof Lin Hui and Prof Fu Pinde.

### Special Seminar in Kuala Lumpur and Putrajaya, Malaysia

In August 2013, Datto Prof Dr Kádir from the Department of Survey and Mapping of Malaysia (JUPEM), invited Prof Milan Konečný and Prof Temenoujka Bandrova (Commission member) to a Special Seminar in Kuala Lumpur devoted to Early Warning and Crisis Management. Discussions led by Hasan Jamil (Deputy Director General) were very wide and addressed the needs of special groups during emergency situations, such as children and elderly). The ICA representatives visited the Malaysian Center for Geospatial Data Infrastructure (MaCGDI), Ministry of Natural Resources and Environment in Putrajaya City, administration headquarter of Malaysian Government. Fuziah Abu Hanifah, Director of MaCGDI introduced ICA representatives to activities undertaken by the Center. Part of the discussion was devoted to application of INSPIRE and GMES in Europe and the role of cartography in this process. Both visits created an opportunity to learn about the current research undertaken in Malaysia, as well as Malaysian experience and expertise that can enrich Commission activities. There is a plan to organize one of the Commission meetings in Malaysia.





(From left) Hasidah Baharuddin, Dr Teng Chee Hua, Prof Temenoujka Bandrova, Prof Milan Konečný, Hasan Jamil, Mohamad Kamali Adimin, Hj Ismail Mohd Yusoff at Special Seminar in Kuala Lumpur, Malaysia | Photograph courtesy of Milan Konečný

## Participation at ICC 2013, Dresden, Germany

The CCEW&CM, in collaboration with the ICC 2013 Local Organizing Committee, organized morning and afternoon paper sessions devoted to early warning and crisis management on 30 August 2013. Milan Konečný opened the morning session with a brief introduction to the Commission's research agenda. It was followed by four papers:

- *Glacier Lake Outburst Floods, a Worldwide Threat for Alpine Areas* by M Buchroithner, J Peters and T Bolch, Austria / Germany
- *Mapping for Crises Management Standards* by T Bandrova and M Konečný, Bulgaria / Czech Republic
- *Cartography in the Communication of Stakeholders in Risk Situations, Disasters and in Civil Protection* by H Kremers, Germany
- *The Emergency Support System: Story of one project* by T. Rezník, Czech Republic

The afternoon session included detailed reports on the past, current and future activities of the Commission and highlighted its Terms of Reference. Both sessions were attended by 85 participants.

## Colloquium in Berlin, Germany

In November 2013, the Berlin-Brandenburg branch of the German Cartographic Society organized a Cartographic Colloquium at the Technical University Berlin. Dr Christophe Lienert delivered a paper on *Methods and Applications in the Real-time Mapping*. Activities of our Commission were also discussed.

## Workshop in Wuhan, China

The International Workshop of the ICA Commission on Cartography and Geoinformatics in Early Warning and Crisis Management was held in Wuhan, China, 3-5 December 2013 ([sres.whu.edu.cn/ICA-Workshop/Home.aspx](http://sres.whu.edu.cn/ICA-Workshop/Home.aspx)). The organizing committee was chaired by Prof Yaolin Liu, Vice President of the ICA,

with Milan Konečný, Li Jing and Christophe Lienert helping in the organization of the Workshop.

Two day program, opened by representatives of the Wuhan University, as well as central and local organizations, included several keynote addresses:

- *China Disaster Management System of Systems* by Li Deren, Academician of CAS and CAE
- *Research Agenda for Risk Management in Big Data Environment* by Milan Konečný, Christophe Lienert and Li Jing, CCEW&CM
- *ICT Applications and Real-Time Decision-Making in Earthquake Disaster Emergency Responses and SAR Operations* by Qu Guosheng, Vice President of TIEMS, China
- *Emergency Management with Information Communication Technology* by Victor Bai, President of IAEM Asia, China
- *Natural Disaster Risk Governance in China: Research and Practice* by Liu Lianyou, Director of Key Laboratory of Environment Change and Natural Disaster, MOE, China
- *Flood Monitoring and Risk Analysis Based on Spatial Model Base* by Li Jing, CCEW&CM

The second day featured a Round Table chaired by Milan Konečný, Liu Yaolin and Li Jing. The opening address was delivered by Christophe Lienert on *Real-Time Mapping Agenda*. An in-depth discussion followed with more than 100 attendees, mainly students from China. Papers from the Workshop are published in the Workshop Proceedings, registered with the Web of Science citation service. The Workshop concluded with an excursion to a government institute that employs 3-D approaches to urban planning in the city of Wuhan.

## Workshop in Novosibirsk, Russia

The most prominent ICA event at the 10th International Exhibition and Scientific Congress InterExpo GeoSiberia 2014 held in Novosibirsk, Russia, 16-18 April 2014 (see report on p 18), was the 5th International Workshop *Early Warning and Crises Management in the Big Data Era* organized by the ICA CCEW&CM, Siberian State Academy of Geodesy (SSGA) and International Society of Digital Earth (ISDE) in cooperation with International EuroAsian Academy of Science (IEAS), International Society for Photogrammetry and Remote Sensing (ISPRS) and International Federation of Surveyors (FIG).

The main themes discussed at the Workshop were: Big Data Theories and Applications in Early Warning and Crisis Management; Emergency Management Information Systems; Modelling and Simulation Based on Multimedia Data; Information Acquisition and Fusion of Big Data; Analytical Modelling and Simulation; Ubiquitous, Adaptive and Context-based Mapping; Determining and Estimating Future Threats; Foresight, Planning, and Risk Analysis

Integration; and Media Effectiveness Analysis of Crisis Response.

The full day Workshop attracted over 60 participants, mainly university students, and delivered 18 presentations. Some of more prominent papers included:

- *Research Early Warning and Crises Management Agenda in Big Data Era: How to Improve Geoinformatics and Cartography Influence for Better Solutions?* by Milan Konečný
- *Big Data Era: Big Data in Geoinformation Environment* by Iryna Wetzels, Hexagon Geospatial
- *Geoinformation Support for Demographic Risk Studies* by Vladimir S Tikunov, MV Lomonosov Moscow State University, Russia
- *Modelling Tsunami Inundation Sensitivity to Land Use and Structural Elements – Phase I* by Ammatzia Peled and Adi Neuman, University of Haifa, Israel
- *Big Data For Effective Crisis Management* by Stanislav Yu Katsko, SSGA
- *GIS-based Analysis of Possible Flooding in Ho Chi Minh City Territory* by Dmitry V Lisitsky and Nguen An Tai, SSGA

Some papers are published in the InterExpo GeoSiberia 2014 Proceedings edited by Milan Konečný, Dmitry V Lisitsky, SS Dysljuk, AV Dubrovskij and EL Kasjanova.

## Participation at GeoForum, Geneva, Switzerland

The Commission was invited to participate in the Geospatial World Forum, Geneva, Switzerland, 5-9 May 2014, organized by Geospatial Media team lead by Sanjay Kumar. Commission members Milan Konečný, Monika Rusnáková, Barbara Gajdošíková, Temenoujka Bandrova prepared a paper on *Discovering of Children Needs and Potentials: Map Support in Emergency Situations*.

**Milan Konečný** | Chair | ICA Commission on Cartography in Early Warning and Crisis Management | Czech Republic ●

## Digital Technologies in Cartographic Heritage

[xeee.web.auth.gr/ICA-Heritage/](http://xeee.web.auth.gr/ICA-Heritage/)

## Strategic Partnership

The European Map Librarians and Map Curators group – Groupe des Cartothécaires – was, until recently, operating within the Association of European Research Libraries (LIBER). At its 19th Conference held at the National and University Library of Slovenia in Ljubljana between 22-24 May 2014, the Group decided to reorganise its structure and work, change its name and join the ICA Commission on Digital Technologies in

Cartographic Heritage. Evangelos Livieratos, Chair of the ICA Commission, participated in the decisive Ljubljana Conference, highlighting the synergies between both groups.

Our Commission received a proposal from the Groupe des Cartothécaires Board to join the Commission with great pleasure. This proposal seemed to be a natural consequence of a long and fruitful collaboration between our respective groups and their members. In addition, the Commission's Terms of Reference encourages and supports close collaboration between our members and map librarians and curators, particularly in Point 2: "Development of methodologies and standards applied on proper two- and three-dimensional digitization of Cartographic Heritage objects, materials and documents", and Point 4: "Digital map libraries and map collections: Archiving, matching, management, networking and accessibility in-situ and in the web".

The Groupe des Cartothécaires, representing Map Librarians and Map Curators from Belgium, Croatia, Czech Republic, Estonia, France, Germany, Hungary, Latvia, Netherlands, Russia, Serbia, Slovenia, Spain, Sweden and the United States, decided to become an international group attracting members from around the globe, including all countries represented in the ICA. They reconsidered and refocused their plans, especially in the area of digital technologies, and changed their name to become the Map and Geoinformation Curator Group, MAGIC in short. They now operate within the ICA Commission on Digital Technologies in Cartographic Heritage, which provides all the possible technical assistance and cooperation and looks forward to organising joint activities in the future.

For information about MAGIC, please contact Carme Montaner ([carme.montaner@icc.cat](mailto:carme.montaner@icc.cat)), Renata Šolar ([renata.solar@nuk.uni-lj.si](mailto:renata.solar@nuk.uni-lj.si)) or Evangelos Livieratos ([livier@auth.gr](mailto:livier@auth.gr)).

## Institutional Support

A number of institutions are closely following and supporting the work of the Commission by keeping in touch with members, actively participating in the Workshops, and publishing in *e-Perimetron* ([www.e-perimetron.org](http://www.e-perimetron.org)), the web journal on science and technology affined to the history of cartography and maps. The supporting Institutions are:

- Institut Cartogràfic i Geològic de Catalunya, Map Library of Catalonia, Barcelona, Spain
- Università IUAV di Venezia, Sistemi dei Laboratori, CIRCE Laboratorio di fotogrammetria, Venice, Italy
- National Library of Scotland, Map Collections, Edinburgh, United Kingdom
- Eötvös Loránd University, Department of Cartography and Geoinformatics, Budapest, Hungary
- Aristotle University of Thessaloniki, School of Rural and Surveying Engineering, Depart-



The Ljubljana Conference participants of the former Groupe des Cartothécaires in front of the National and University Library of Slovenia | Photograph courtesy of Evangelos Livieratos

ment of Cadastre, Photogrammetry and Cartography, Thessaloniki, Greece

In May 2014, the History Department at the Ionian University in Corfu became the newest supporting institution. Any institution interested in joining is welcome.

## Workshop in Budapest

The tradition of the Commission's annual International Workshops *Digital Approaches to Cartographic Heritage* continues in 2014 with the ninth in the series to be held in Budapest, Hungary, 4-5 September. It will be hosted by the National Széchényi Library in cooperation with the Department of Cartography and Geoinformatics, Eötvös Loránd University.

The Workshop sessions address items relating to the Commission's Terms of Reference (2011-2015), such as the concept of cartographic heritage and its multidisciplinary dimension; the transformation of old maps, globes and other cartographic documents into digital form including the critical issue of digitization, and comparison of scanning methods and techniques; state of the art and perspectives of the scanning market; georeferencing and standardization; use of digital techniques for cartographic research, analysis and interpretation of old maps and their geometric and thematic content; testing of analytical processes and visualization; development, management and accessibility of digital map libraries and discoverability by the general public; digital tools to assist networking between map curators, map libraries, archives and collections, as well as in-situ and remote virtual access to cartographic materials; digital support for preservation and restoration of old maps, atlases and globes; the use of ICT, geoinformation and the web for teaching and diffusion of cartographic heritage and maps to the general public. For further information visit the Workshop website at [xeee.web.auth.gr/ICA-Heritage/2011\\_2015/Budapest2014/](http://xeee.web.auth.gr/ICA-Heritage/2011_2015/Budapest2014/).

## Future Plans

The 10th International Workshop on *Digital Approaches to Cartographic Heritage* will be held at Corfu, the UNESCO protected capital city of the historical island in the Ionian Sea. The Workshop is organized in cooperation with the Ionian University at Corfu in the last week of May 2015.

Evangelos Livieratos | Chair | ICA Commission on Digital Technologies in Cartographic Heritage | Greece ●

## Education and Training

[lazarus.elte.hu/cet/](http://lazarus.elte.hu/cet/)

### Commission Activities

The ICA Commission on Education and Training (CET) took part in significant outreach activity in Wuhan, China, recently in May 2014. As the education commission of ISPRS (ISPRS Commission VI) held its mid-term symposium in Wuhan from 19 to 21 May, the CET considered this an excellent opportunity to engage with ISPRS colleagues and associate an informal CET meeting with the formal structure of Commission VI.

The Chair of the symposium was Prof Jianya Gong, Head of the LIESMARS research unit at Wuhan University, academician of the Chinese Academy of Sciences, and President of ISPRS Commission VI. Prof Gong is a member of CET, and we are grateful to him for his willingness to incorporate ICA activity with the symposium. He was assisted greatly by the outstanding organisational work of his colleague Prof Peng Yue and an excellent team of administrative assistants and keen students. A full programme of keynote speeches, plenary sessions and parallel sessions filled the three days. At the opening, welcomes to ICA were made by ISPRS Secretary General Prof Christian Heipke, and Jun Chen, ISPRS President. Prof Yaolin

> 14

Liu, Vice President of ICA (and member of the Wuhan University hosts) presented some remarks in response, showing the importance of education to activities of all international geospatial societies and highlighting the cooperation between ICA and ISPRS at the Joint Board level.

Keynote speeches addressed education in many aspects: overviews of national programmes (Deren Li, China); specific accounts of particular programmes (Uwe Stilla, Technical University of Munich); and subject reviews (Daniel Griffiths, USA). Most of the plenary speakers also covered varied educational topics in their talks: Marguerite Madden (University of Georgia) considered the NASA-associated programme at her university; Lena Halounova (Czech Technical University, Prague) presented a European summary of education in disaster resilience; David Fairbairn (Chair of ICA CET) detailed the International Map Year project being led by ICA, and its educational impact in particular; and Wolfgang Kainz (University of Vienna) outlined the educational programmes in his Faculty of Earth Sciences, Geography and Astronomy.

A number of parallel sessions followed: the Technology Transfer and Capacity Development stream addressed a number of educational activities, from policy considerations on new programme proposal in an era of budget cuts, and marketing of the profession, to the development of an ISPRS initiative on geospatial education and training in North Africa, which ICA has some interest in also. Further sessions addressed technical issues, such as web-based resource sharing and e-delivery, promotion of international collaborative educational programmes, promotion of the profession to young people, and the issues involved in regional cooperation and capacity development. All sessions had much to interest the wide geospatial community in terms of education and outreach. There was also a specific ICA organised session in which Bert Veenendaal (Curtin University, Australia) highlighted the challenges faced over a period of 25 years, developing and finessing the first undergraduate course in GIS anywhere in the world. David Fairbairn (Newcastle University, UK) then discussed a long-neglected subject at the interface between education and employment – the role of manpower planning. Yaolin Liu analysed higher education in GIS across China, considering cartographic aspects of this topic in particular.

A significant number of undergraduate and postgraduate students, both local and those travelling from a distance for the summer school events later in the week, boosted attendance to over 300, and the students rightly had input into the programme in the form of a student activities session, and technical presentations. Clearly, education impacts on the daily lives of all students and

their presence was a constant reminder to those somewhat older that we consider education because we wish to enhance and optimise the experience of the younger geospatial information professional. Students also received tutorial advice from senior academics about research methods, writing and publishing papers. The sponsors of the event were given the opportunity to present their company profiles, and the symposium finished with the directors of the local geospatial data handling company GeoStar inviting delegates to tour their facility, and then join them in an excellent banquet.

The traditional Wuhan University Geoinformatics Summer Camp which followed was supplemented by the titles *11th ISPRS Summer School* and *5th Summer Students Seminar* and proved to be a big success, operating as a 'summer camp' with lectures, practicals, hands-on experiences, team exercises, presentations (and even some prizes for the best students). The main organising team, led by Prof Huayi Wu (Wuhan University, and member of the ICA CET) managed the courses with excellent efficiency and all students, in particular, were delighted with the level of support given to them personally and in the context of the formal classes. Enormous thanks must be extended to Huayi Wu for his wonderful skills in administering this week-long event.

The four courses presented were followed in total by 138 registered students plus over 100 local Wuhan Masters and doctoral candidates. The courses presented included spatial statistics (Daniel Griffiths and Bin Li, USA), geospatial service platform for education and research (Huayi Wu, Peng Yue, Zhipeng Gui and Wei Guo, all from Wuhan University), and mobile laser scanning and mapping (Harri Kaartinen, Xinlian Liang and Antero Kukko, all from the Finnish Geodetic Institute). The fourth course was offered by ICA: titled Open Source Mapmaking Technologies, it was delivered by Jorge Rocha (University of Minho, Portugal) and Zhijie Zhang (Fudan University, China). This course attracted over 35 students from China, Russia, India and the Philippines. During the intensive 5 day programme, which made full use of hands-on exercises and exposure to extensive open source geodata handling using the computing facilities of LIESMARS, the students worked hard and enthusiastically. Introduced to open source GIS packages (primarily QGIS), open source geographic databases including PostGIS, the use of open source software (such as CartoDB and TileMill) to enhance map presentation, and the management of a full map-based web application, the students were able to develop an excellent case study with full interactive querying, data collection and enhanced map editing functionality. By the end of the week, the students were able to write code, test, and

then deploy fully-functional systems based on open source technologies and data. Considerable thanks are due to Jorge and Zhijie for their time and effort in preparing and customising the material for such an international audience. This course can be considered to be an example to the whole ICA community of the possibilities of outreach to young people in the international arena, introducing them to the way in which ICA can enrich their educational experiences. Much credit also goes to another commission within ICA, the Commission on Open Source Geospatial Technologies, whose chair, Suchith Anand, led the search for suitable presenters, coming up with such willing and expert volunteers. This has been a typical ICA exercise involving collaboration among ICA Commissions, and just as the earlier symposium demonstrated international society collaboration (ISPRS-ICA), so the summer school course has shown that the ambitious outreach agenda of ICA can be addressed with inter-Commission activity

David Fairbairn | Chair | ICA Commission on Education and Training | *United Kingdom* ●

## Generalisation and Multiple Representation

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

### New Book on Automated Mapping

Two years of collaborative effort culminated in the publication of a book *Abstracting Geographic Information in a Data Rich World*. The three editors, Dirk Burghardt, Cecile Duchene and William Mackaness, are current and past Chairs of the ICA Commission on Generalisation and Multiple Representation.

The book, published in 2014, focuses on the essential theories, methodological advances and algorithms for automated mapping, rather than on a collection of workshop papers. It includes chapters on generalisation process modelling, integration and generalisation of Volunteered Geographic Information, the ontological modelling that underpins data integration, and ideas of thematic, highly customised mapping (for example delivering maps over mobile devices). The book, with its many case studies, illustrates the maturity of this research field, reflected in the increasing incorporation of automated mapping in the commercial systems used by National Mapping Agencies. The book also illustrates the relevance of this research in the context of 'big data' and the increasing importance of user generated geographical content.

### Future Plans

The 17th ICA Workshop on Generalisation and Multiple Representation will be organised in



cooperation with the Austrian Federal Office for Metrology and Surveying in Vienna, Austria, on 23 September 2014.

The focus of this workshop will be on integration, filtering and abstraction of user generated or multi-source spatial content. The availability of user generated spatio-temporal content has greatly increased in the past few years through the popularity of web-based technologies, mobile applications and social networks. This offers great potential for a large number of spatio-temporal applications, such as crisis mapping, monitoring of epidemics, mobility management, emotional mapping, thematic navigation, landscape planning, etc. The integration of multi-source VGI data, as well as the combination with authoritative data, provides promising opportunities, but also poses new challenges due to data streaming, heterogeneity, differences in spatial granularity and semantic description. More information will be available from the Commission website soon.

**Dirk Burghardt** | Chair | ICA Commission on Generalisation and Multiple Representation | *Germany* ●

## Geospatial Analysis and Modeling

[sites.google.com/site/commissionofica/](http://sites.google.com/site/commissionofica/)

### Commission Activities

Currently, the ICA Commission on Geospatial Analysis and Modeling is working on two projects: a special issue on big data and complexity science with the *International Journal of Geographical Information Science* ([sites.google.com/site/call4papersbigdata/](http://sites.google.com/site/call4papersbigdata/)), and a tutorial with GIScience 2014 on scaling analysis ([sites.google.com/site/giscience-2014tutorial/](http://sites.google.com/site/giscience-2014tutorial/)). We welcome your active participation.

We have finished the forthcoming special issue on street networks and transport with the journal *Geographical Analysis*, and the selected papers are as follows:

- Editorial: *Different ways of thinking for street networks and spatial analysis* by Bin Jiang and Atsuyuki Okabe
- *The evolution and complexity of urban street networks* by Nahid Mohajeri and Agust Gudmundsson
- *The random walk value for ranking spatial characteristics in road networks* by Xuebin Wei and Xiaobai Yao
- *Analysing the configuration of integrated multi-modal urban networks* by Jorge Gil
- *Using space syntax to model pedestrian movement in urban transportation planning* by Yoav Lerman, Yodan Rofè and Itzhak Omer
- *Micro-scale prediction of near-future crime*

*concentrations with street-level geo-surveillance* by Shino Shiode and Narushige Shiode

**Bin Jiang** and **Xiaobai Yao** | Chair / Vice-chair | ICA Commission on Geospatial Analysis and Modeling | Sweden / USA ●

## Map Design

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

### Commission Activities

The ICA Commission on Map Design continues to grow and to gain support which is both welcome and, we feel, illustrates the growing appetite for *quality* as opposed to *quantity* in cartography. One of the intentions of the Commission is to promote the concepts of map design not only within cartography but to the wider community of map-makers.

There is no doubt that the ubiquity of modern mapping we see daily on the Internet and through our mobile devices has brought maps to the fore. We see much more use and also, unfortunately, much more abuse of cartography in the maps we see. One of the main difficulties we face is reversing the trend of aggregators and bots that simply scrape the web for examples of maps, any map, and then re-publish them. Often we see sites that promote work based on little knowledge or experience and the quality of work is often poor. People are consuming this work in huge quantities if you look at the statistics on *sharing* and *liking* and how certain maps become viral. In December 2013 we decided to try and tackle this issue, so committed to collating a gallery of great examples of map design. This is currently a work in progress under the banner MapCarte on our blog.

MapCarte is a daily blog post that showcases an example of great map design, either classic or contemporary. We feature an illustration, or a link to the web map and also provide a short description of why the map is regarded as exhibiting high cartographic quality. This is a big commitment – 365 maps, each with 300 words or thereabouts. We are seeing many people reading the blogs, subscribing to the blog and sharing the links. This is truly bringing the idea of quality map design to the masses and represents the first gallery of maps with a focus on design, with accompanying comments that are curated by cartographers. As you read this in *ICA News* we are about half way through the year of blog posts. Please visit the site at [mapdesign.icaci.org](http://mapdesign.icaci.org) and follow the work we're doing to showcase and promote great cartography. There's also a gallery on Pinterest ([pinterest.com/icamapdesign/mapcarte](http://pinterest.com/icamapdesign/mapcarte)) that collates the images and provides links back to the blog. If you have an idea for a map not yet included then please contact the Commission Chair Kenneth Field.

The Commission is also staging the world's first *Mapathon* in collaboration with the British Cartographic Society. Held at the BCS Symposium in June in the United Kingdom, the *Mapathon* is designed to be a day long event where people collaborate in teams to produce a map that can be used by a non-for-profit organization. For a number of years, the developer community has successfully used the *Hackathon* idea to rapidly create software for a common, often charitable purpose. Here, we're adopting the same principles to generate a high quality, well designed cartographic output. The idea is that our chosen charity, the Commonwealth War Graves Commission, can use the maps produced to reveal previously unseen patterns in the data or use the maps for marketing purposes. Teams or individuals from the cartographic community are invited together to share their ideas, skills and experience for the benefit of others. A full report of the event and the winning maps will feature in the next report of this Commission in *ICA News*.

Please visit our web site and sign up to receive updates on the work of the Commission. If you have any ideas you can contact us through the website.

**Kenneth Field** | Chair | ICA Commission on Map Design | *USA* ●

## Map Production and Geobusiness

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

### Commission Activities

For more than two years the ICA Commission on Map Production and Geobusiness works with renewed Terms of References in order to meet current requirements of service oriented map production, geobusiness and economy. All activities are based on special interests to bring together stakeholders from the academic, business, authoritative, non-government and educational communities. Therefore this Commission makes use of various communication tools, like publications, workshops and symposia, in order to bring service-oriented mapping methodologies to the community.

In 2013, the Commission organised several workshops throughout the year and a business meeting at the ICA Conference in Dresden.

The first Workshop focused on *Preservation of the Geographical Production Process* in response to an initiative by EuroSDR, IGN-B, Ghent University and our Commission. The first step was to organise a roundtable for European NMA's, academic institutions, museums, private companies, ICA representatives, and other interested parties concerned with the preservation of the geographical production processes who were willing to put their

experience and knowledge into a joint project. The aim of the meeting was to create a platform for collaboration and to propose a concrete plan for preservation and opening-up knowledge on the geographical production processes in Europe in the last century(ies). It is our aim to promote such cooperations and present first results in 2014.

At the end of the Workshop, the participants produced a preservation of the geographical production process statement, which covers the following points:

- loss of knowledge on superseded map production processes
- lack of awareness of the importance of the documentation
- duplication of efforts in conservation and recording
- need for professional users to interpret geographic products of the analogue era correctly

To follow up on these activities, please visit [geoweb.ugent.be/eurosdrr/](http://geoweb.ugent.be/eurosdrr/).

The second Workshop was a joint event with the ICA Commission on Generalization and Multiple Representation organised prior to ICC 2013 in Dresden. There were a lot of various presentations covering automatic generalisation, recent developments by established software vendors and general views on service oriented mapping. The program and papers can be accessed from [generalisation.icaci.org/index.php/prevents/11-previous-events-details/76-workshop2013papers/](http://generalisation.icaci.org/index.php/prevents/11-previous-events-details/76-workshop2013papers/).

The third Workshop consisted of a 20-hour tutorial on SQL, geodatabases and services. It is one of the main interest of this Commission to introduce service-oriented methodologies in a very pragmatic, hands-on basis. Therefore the very basic principles of SQL, their usage in actual geodatabases and the embedding of services, were the main subjects of this hands-on Workshop.

In 2014, a hands-on Workshop on *Webmapping and Service-Oriented Architectures* was delivered at the URISA Caribbean Chapter's Regional meeting, 12-14 February. With the support of ICA President Prof Georg Gartner, we were happy to introduce modern ways of webmapping and service-oriented map production to more than 60 participants from Caribbean companies and NMCA's.

All these activities highlight the usage of service-oriented structures in geoinformation and provide evidence that service-oriented map production is widely accepted in geobusiness development.

Where do we stand? Service-oriented mapping gets established throughout the world; geoportals are increasingly popular; open access to geodata, including government data, is evolving and map applications are built on these data more than ever before; people make use of apps in their activities and life in general. At the moment we enmesh these data

and services in our applications and production flows, we try to enhance interoperability and on-the-fly homogenisation for these mesh-ups.

What is the result and further direction, that enables us to facilitate effective and current maps? How to proceed from here? Our Commission seeks expert reports and in-depth, thorough discussions. Our workshops aims at solving, developing and exchanging the best practice in service-oriented mapping. If you would like us to deliver a workshop, please let us know!

## Future Plans

We have planned several activities in 2014, such as focus group meetings, publications and the 2nd Symposium on Service-Oriented Mapping:

- The 2nd Symposium on Service-Oriented Mapping (SOMAP) *Geospatial Processing and Visualisation* will take place at the Vienna University of Technology, 26-28 November 2014, together with LBS 2014 ([somap.cartography.at](http://somap.cartography.at))
- Pre- or post-conference Workshop for UN and NGO's will complement the program of SOMAP 2014; three ICA Commissions on Geovisualisation, Open Source Geospatial Technologies and Maps and the Internet will join the event
- Hands-on Workshop *Cultural Heritage Geospatial Infrastructures – A Fundament for Collaboration and Exchange* will be presented to the archaeology and cultural heritage community at the Conference on Cultural Heritage and New Technologies, 3-5 November 2014 in Vienna ([www.chnt.at/ws-jobst/](http://www.chnt.at/ws-jobst/))
- Workshop on *19th -20th Century Production techniques* at the International Conference on Cartography in Times of War and Peace, 2-6 December 2014 in Ghent and Brussels ([geoweb.ugent.be/histocarto2014/](http://geoweb.ugent.be/histocarto2014/))
- Springer book *Changing Paradigm in Map Production* with best papers from the SOMAP 2012 and 2014 Symposia

We look forward to seeing you at our meetings, participating in our activities and receiving your feedback.

**Markus Jobst** | Vice-chair | ICA Commission on Map Production and Geobusiness | *Austria* ●

## Mapping from Remote Sensor Imagery

[mailer.fsu.edu/~xyang/ica/](mailto:mailer.fsu.edu/~xyang/ica/)

### Commission Activities

The ICA Commission on Mapping from Remote Sensor Imagery has been playing a critical role in a book project with the Springer. The book title is *Monitoring and Modeling of Global*

*Changes: A Geomatics Perspective*. It is edited by Professor Jonathan Li, Vice-chair of the Commission and Professor Xiaojun Yang, Commission Chair. The chapter peer review process has been completed, and the final manuscript is scheduled to be forwarded to the publisher by the end of June 2014. We will provide more details about the book in the December 2014 issue of *ICA News*.

Professor Yifang Ban, Vice-chair of the Commission, from Sweden's Royal Institute of Technology (RIT) and Professor Xiaojun Yang met at the 2014 Annual Meeting of the Association of American Geographers in Tampa, Florida, USA, 7-12 April 2014. They discussed and planned Commission activities, including the 2015 annual symposium of European Association of Remote Sensing Laboratories. This symposium will be hosted by RIT and Professor Ban is playing a critical role in planning and organizing this event.

Finally, Professor Jan Feranec from Slovakian Academy of Sciences and Vice-chair of the Commission, has been involved in a book project entitled *Volume IX, Atlas of Land Use and Land Cover Changes in Selected Regions in the World*. This book was initiated by the Commission on Land Use and Land Cover Change of the International Geographical Union.

**Xiaojun Yang** | Chair | ICA Commission on Mapping from Remote Sensor Imagery | *USA* ●

## Mountain Cartography

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

### Workshop in Banff, Canada

The 9th ICA Mountain Cartography Workshop, Banff, Canada, 22-26 April 2014, was held in Canada for the first time and outside Europe for only the third time. We were blessed with classic spring weather, from overnight lows of 0°C to daytime highs ~12°C. The group had complete use of the Mary Belle building at the HI-Banff Alpine Centre on the edge of Tunnel Mountain, with 30 people spreading out across the 65 bed facility. In addition the sessions were boosted by another 20 local participants. The first evening saw an icebreaker event as we were entertained by John Paczkowski, a local wildlife biologist showing footage from the many wildlife webcams along with distribution maps. The next day (Wednesday) was the designated recreation day and the majority set out using the free local bus service to the Banff Springs Hotel, Cave and Basin (the geothermal reason the Park is here), the Whyte Museum which included a superb special map exhibit by local enthusiast Bob Sandford and finishing off soaking at the Upper Hot Springs.

Thursday 24th was our first full session day; following introductions by Karel 'Charly' Kriz,



Participants of the 9th ICA Mountain Cartography Workshop, Banff, Canada, April 2014 | *Photograph courtesy of Roger Wheate*

Chair of the ICA Commission on Mountain Cartography, and the local organizer Roger Wheate, we enjoyed morning sessions focusing on Parks and Recreation, and Shaded Relief. The former showcased recreational mapping in New Zealand, Canada and Argentina, while the latter examined recent software advances in texture and blended shading. After lunch was a session on Mapping the Rockies and The Yukon, followed by a special live presentation from New Zealand on the recent GPS re-mapping of Aoraki/Mount Cook. The last session of the day featured shorter 10-minute presentations on parks and visualization, showing map and panorama examples. We then prepared ourselves for a 2km walk along Tunnel Mountain Road to the Banff Centre led by their director, Jim Oliver; here we saw some very impressive 3D visualization and the always inspiring introduction film clip to the Best of Banff Film festival (on world tour in 2014).

Friday 25th involved morning sessions on terrain and thematic mapping, and relief depiction, covering National Geographic mapping, snow avalanches, the Atlas of Yellowstone, Ski hill maps, hachures, hypso-metric tints, rock depiction and geomorphometry. After lunch, sessions on photography and LiDAR involved transmission line design, digital monoplotting and time lapse cameras for snowline plotting. The workshop sessions concluded with 10 minute presentations on 3D methods and mapping: true 3D animation, wall maps, flooding the Saint Elias Range and ski area wayfinding. We then headed down to the town for the banquet at the Elk and Oarsman pub/restaurant, to conclude the workshop. However 16 people added on the two day field trip to Jasper and back, along the Icefields Parkway. The weather didn't cooperate the first day, but we had a splendid overnight stay at the Palisades Centre in Jasper. The next day we scaled the grassy hill known as Old Fort Point in glorious sunshine and passed in close contact with five male and then five female Bighorn sheep. The main group drove back to

Banff in better weather that offered great views; those that stayed longer experienced snowy weather that made us realise we had been quite fortunate for the week in Banff.

**Roger Wheate** | Member | ICA Commission on Mountain Cartography | *Canada* ●

## Use and User Issues

[www.univie.ac.at/icacomuse/](http://www.univie.ac.at/icacomuse/)

### Commission Activities

Along with other ICA Commissions and the Executive Committee, our Commission on Use and User Issues was invited by Professor Vit Voženilek from the Palacký University to contribute to the CARTOCON 2014 Conference ([cartocon2014.org](http://cartocon2014.org)). The Conference was held in February 2014 in the beautiful city of Olomouc, Czech Republic. In all respects, this 'mini ICA' Conference was a great success. Many young researchers from Palacký University and other universities in this part of Europe are very much interested in use, user and usability research and the three sessions devoted to these themes, as well as a session on eye-tracking (jointly organized with the ICA Commission on Cognitive Visualization), were very well attended. Commission Vice-chairs Alexander Pucher and David Forrest gave well received keynote presentations and there was a lot of interest in the user theme expressed in many discussions held during this 4-day Conference. Based on a selective review process, papers will be published under the title *Modern Trends in Cartography* in the Springer series Lecture Notes in Geoinformation and Cartography. Professor Vit Voženilek and his team of local organizers, of which we would particularly like to mention Jan Brus, Jitka Doležalová, Alena Vondráková and Alžběta Brychtová, did a really fantastic job in making us feel extremely welcome. They facilitated everything we wanted to do with the

Commission, both socially and professionally. *Map it, live it!* was the theme of the Conference and we definitely lived it! The Department of Geoinformatics of the Palacký University has firmly put itself on the ICA map!

During CARTOCON 2014 opportunities were also created for (joint) Commission business meetings. In one of those meetings our Commission decided to again team up with the ICA Commission on Cognitive Visualization in organizing a pre-ICC 2015 workshop on 21 and 22 August 2015 at the Federal University of Paraná in Curitiba, Brazil. And, of course, the Commission on Use and User Issues will also contribute to the main ICA conference and General Assembly that will be held in Rio de Janeiro thereafter (from 23 to 28 August 2015). Please visit our website before you start making plans for your possible visit to Brazil next year!

During the General Assembly in Rio de Janeiro, a formal decision will have to be made about the continuation of the ICA Commission on Use and User Issues. What is clear is that the current Chair will step down as his two terms finishes in 2015. After 8 years of service, preceded by 2 years of chairmanship of the ICA Working Group on Use and User Issues, it is time for another person (with fresh ideas) to take over. Luckily, during the meetings in Olomouc it became very clear that, on the one hand, there is an obvious need to continue with our successful work in the field of use and user issues, and on the other, there are (young) colleagues available who may want to take the upper hand. It was agreed that young Commission core members Kristien Ooms (Belgium) and Robert Roth (USA) will take the lead in trying to organise a new core team and to review the current Terms of Reference. In case you have any suggestions, please send them to me and I will pass them on to Kristien and Rob.

**Corné van Elzakker** | Chair | ICA Commission on Use and User Issues | *The Netherlands* ●

The local CARTOCON 2014 organizers: Alena Vondráková, Jitka Doležalová, Alžběta Brychtová, Vit Voženilek and Jan Brus | *Photography Viktor Čáp*





# reports cartographic meetings and events

## InterExpo GeoSiberia 2014

The 10th International Exhibition and Scientific Conference InterExpo GeoSiberia 2014 *Geoinformation Technology Applications for Socio-Economic Benefits of Territorial Development* was held in Novosibirsk, Russia, 16-18 April 2014. The Conference, supported by the ICA from its inception, is an open forum for surveyors, cartographers, photogrammetrists, remote sensing specialists and other geoinformation professionals to showcase the importance of contemporary cartography in cooperation with others global organizations. For the last several years, the Conference is also a venue of the ICA Commission on Cartography in Early Warning and Crisis Management (CCEW&CM) meetings (see report from the last meeting on p 12).

The InterExpo GeoSiberia 2014 was attended by 80 companies and 230 organizations from 20 countries, representatives from 25 regions of Russia, as well as by the international higher education community. It was organized by the Siberian State Academy of Geodesy (SSGS) and coordinated by AP Karpik, Rector; VA Serezdovich, Igor Musikhin, both Vice Rectors; Argina Novitskaja and many young volunteers. Rector Karpik welcomed participants from the International Federation of Geodesists (FIG),

including the FIG Executive Committee which held a meeting during the Conference, the International Society for Photogrammetry and Remote Sensing (ISPRS), including its President, International Cartographic Association and Society of German Geodesists (DVW). The Conference materials contained welcome letters from Presidents of the above organizations. As Karpik said, "all these years, our common efforts aimed at developing the professional capacity of a wide range of experts of the international community, which lets you create and implement modern geospatial model of sustainable development areas at the global and local levels".

ICA was represented by Prof László Zentai, Secretary General, Prof Milan Konečný, Chair of the CCEW&CM, Prof Vladimir S Tikunov, Chair of the ICA Commission on GIS and Sustainable Development, and Prof Ammatzia Peled, President of the Israeli Society for Cartography and GIS. At the Opening Plenary session *The Role and Contribution of InterExpo GeoSiberia to Socio-Economic Development of Territories*, Prof Zentai delivered a speech on *Geospatial Information Access and Representation: The ICA's View on Today's Cartography* and Prof Konečný on *Big Data Era - New Challenges for Geoinformatics and Cartography*. In addition, Prof Dr Leonid A Plastinin from National Research Irkutsk State Technical University presented a paper coauthored by VP Stupin on *Cartographic Modeling and Morphodynamical*



Award presentation to Prof Milan Konečný (centre) at the InterExpo GeoSiberia 2014 | Photography László Zentai

*Analysis of the Angarsk Reservoirs' Zone of Influence.*

Professors Zentai, Konečný and Peled also participated as invited experts in the International Workshop on Education and Knowledge Transfer organized by SSGA and ISPRS WG VI/4, in cooperation with DVW, FIG and ICA.

During the Conference dinner, the local organizers acknowledged the support of people who played a critical role in the success of the InterExpo GeoSiberia conferences. Amongst others, Milan Konečný received an award for his participation in all previous events, including the inaugural meeting when he was President of the ICA.

**Milan Konečný and László Zentai** | ICA Commission on Cartography in Early Warning and Crisis Management / ICA Secretary General & Treasurer | Czech Republic / Hungary ●

## ica news editor sought for cagis

The Cartography and Geographic Information Society seeks applications and nominations for an Editor for the journal *Cartography and Geographic Information Science (CaGIS)*. The new editor will be appointed for a three-year editorial term that will commence on 1 October 2014.

*CaGIS* is the official publication of the Cartography and Geographic Information Society. The society supports research, education, and practices that improve the understanding, creation, analysis, and use of maps and geographic information. The society serves as a forum for the exchange of original concepts, techniques, approaches, and experiences by those who design, implement, and use geospatial technologies through the publication of cutting-edge articles and international papers. The role of the *CaGIS* Journal is to facilitate these objectives by disseminating results and reports in these areas of interest.

The *CaGIS* Journal is one of four official journals of the International Cartographic Association (ICA), publishing 5 issues per year. As an international journal, *CaGIS* promotes the advancement of all aspects of cartography, geographic information systems (GIS) and geographic information science (GIScience), particularly those addressing the interface between cartography and GIScience. *CaGIS* is included in Thomson Reuters' Current Contents/Social and Behavioral Sciences® and Social Sciences Citation Index® accessed via the Web of Science®. The *CaGIS* journal, published through Taylor & Francis has been consistently ranked as one of the premier journals that publishes peer-reviewed articles in cartography and GIScience.

The role of editor is to solicit, review, and accept for publication articles, recent literature reviews, and book reviews appropriate for publication in

*CaGIS*. The Cartography and Geographic Information Society expects that the editor will accept manuscripts from across the breadth and depth of intellectual activity in contemporary International cartography and GIScience. Prospective candidates should possess a distinguished record of scholarly achievement, a broad perspective on the discipline of cartography and GIScience, respect and affection for its diversity, and an ability to work constructively with authors and reviewers during the review process using the online system ScholarOne for review and management of the publication process.

The society is receptive to innovative ideas for editorial arrangements such as co-editors that would bring together a strong international group of assistant editors and editorial board members. The editor will be responsible for appointing the journal's assistant editors and editorial board, and to work in coordination with the society and the publisher Taylor & Francis. The society provides a modest stipend to be used for travel and other expenses at the editor's discretion.

A letter of application that addresses both qualifications and a vision for the *Cartography and Geographic Information Science* journal should be accompanied with a complete curriculum vitae. Applications should be received no later than 15 July 2014. Please e-mail applications or letters of nomination to *CaGIS* Executive Editor Scott Friendschuh at [sfriends@unm.edu](mailto:sfriends@unm.edu). For further information or questions, please email Scott or call (505) 277-0058.

**Scott Friendschuh** | Executive Editor | Cartography and Geographic Information Science | USA ●

# calendar

## july

01-04: **GI-Forum 2014** | *Geospatial Innovation for Society* | Salzburg | *Austria* | [www.gi-forum.org](http://www.gi-forum.org)

14-18: **Esri International User Conference** | San Diego | *USA* | [www.esri.com/events/user-conference/](http://www.esri.com/events/user-conference/)

## august

03-07: **XXVI Brazilian Congress of Cartography** | Gramado, RS | *Brazil* | [www.cartografia.org.br/cbc/](http://www.cartografia.org.br/cbc/)

04-06: **International CODATA Workshop on Data for Science and Sustainability in Developing Countries** | Nairobi | *Kenia*

17-19: **IMIA Asia Pacific Conference & Trade Show** | Melbourne | *Australia* | [imiaconferences.com](http://imiaconferences.com)

## september

03: **Meeting of ICA Commission on Cartography and Children** | Budapest | *Hungary*

03: **Annual Meeting of ICA Commission on Planetary Cartography | Planetary Cartography for Children** | Budapest | *Hungary* | [planetcarto.wordpress.com/2014/05/29/2014-meeting-announcement-and-call-for-papers/](http://planetcarto.wordpress.com/2014/05/29/2014-meeting-announcement-and-call-for-papers/)

03-05: **GeoCart'2014 / 3rd ICA Regional Symposium on Cartography for Australasia and Oceania** | *Cartographic Journeys through Space and Time* | Auckland | *New Zealand* | [web.env.auckland.ac.nz/public/geocart2014/](http://web.env.auckland.ac.nz/public/geocart2014/)

04-05: **9th International Workshop on Digital Approaches to Cartographic Heritage** | Budapest | *Hungary* | [xeee.web.auth.gr/ICA-Heritage/2011\\_2015/Budapest2014/](http://xeee.web.auth.gr/ICA-Heritage/2011_2015/Budapest2014/)

23-26: **GIScience 2014 / 8th International Conference on Geographic Information Science** | Vienna | *Austria* | [www.giscience.org](http://www.giscience.org)

## october

06-08: **Joint International Conference on Geospatial Theory, Processing, Modelling and Applications** | Toronto, Ontario | *Canada* | [www.2.isprs.org/2014GeoTPMA/home.html](http://www.2.isprs.org/2014GeoTPMA/home.html)

06-08: **AutoCarto 2014** | Pittsburgh, Pennsylvania | *USA* | [www.cartogis.org/autocarto.php](http://www.cartogis.org/autocarto.php)

07-11: **GéoCongrès 2014 / GeoConference 2014** | Quebec City, Quebec | *Canada* | [www.geocongres2014.ca](http://www.geocongres2014.ca)

10-12: **10th Jubilee International Conference Cartography and Geoinformation** | Zagreb | *Croatia* | [www.kartografija.hr/home-384.en/language/en.html](http://www.kartografija.hr/home-384.en/language/en.html)

## november

02-05: **IMIA Americas Conference & Member Showcase** | Denver, Colorado | *USA* | [imiamaps.org/events/displayevent.php?id=144](http://imiamaps.org/events/displayevent.php?id=144)

03-05: **Geomatics Atlantic 2014 | Geomatics in your Toolbox!** | St. John's, Newfoundland | *Canada* | [geoatlantic.org](http://geoatlantic.org)

# ica affiliate members

**Association of Polish Cartographers** | *Poland* | [www.polishcartography.pl](http://www.polishcartography.pl)  
Attn: Dr Ing Joanna Bac-Bronowicz | [joanna.bac-bronowicz@up.wroc.pl](mailto:joanna.bac-bronowicz@up.wroc.pl)

**Bundesamt für Kartographie und Geodäsie** | *Germany* | [www.bkg.bund.de](http://www.bkg.bund.de)  
Attn: Prof Dr Ing Hansjörg Kutterer | [hansjoerg.kutterer@bkg.bund.de](mailto:hansjoerg.kutterer@bkg.bund.de)

**Centro Argentino de Cartografía** | *Argentina* | [www.centroargentinodecartografia.org](http://www.centroargentinodecartografia.org)  
Attn: Prof Carmen Alicia Rey | [cac@centroargentinodecartografia.org](mailto:cac@centroargentinodecartografia.org)

**Chinese Cartographic Association (Chinese Taipei)** | *Taiwan-China* | [www.ccartoa.org.tw](http://www.ccartoa.org.tw)  
Attn: Dr David Ding | [davidyding@gmail.com](mailto:davidyding@gmail.com)

**Dubai Municipality** | *United Arab Emirates* | [www.dm.gov.ae](http://www.dm.gov.ae)  
Attn: Ali Mohammed Alameri | [aamalik@dm.gov.ae](mailto:aamalik@dm.gov.ae)

**East View Geospatial** | *United States of America* | [www.geospatial.com](http://www.geospatial.com)  
Attn: Kent Lee | [matthew.tanaka@cartographic.com](mailto:matthew.tanaka@cartographic.com)

**Eko-Graf Cartographic Publishing House** | *Poland* | [www.ekograf.pl](http://www.ekograf.pl)  
Attn: Roman Janusiewicz | [ekograf@ekograf.pl](mailto:ekograf@ekograf.pl)

**Esri** | *United States of America* | [www.esri.com](http://www.esri.com)  
Attn: Mark Cygan | [mcygan@esri.com](mailto:mcygan@esri.com)

**Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente** | *The Netherlands* | [www.itc.nl](http://www.itc.nl)  
Attn: Corné van Elzakker | [c.vanelzakker@utwente.nl](mailto:c.vanelzakker@utwente.nl)

**Faculty of Information Engineering, China University of Geosciences** | *China* | [www.cug.edu.cn/](http://www.cug.edu.cn/)  
Attn: Assoc Prof Weihua Lin | [lwhcug@163.com](mailto:lwhcug@163.com)

**Geospatial Information Authority of Japan** | *Japan* | [www.gsi.go.jp](http://www.gsi.go.jp)  
Attn: Secretariat of ISCGM | [sec@iscgm.org](mailto:sec@iscgm.org)

**GeoTechVision Enterprise Limited** | *Jamaica* | [www.techvisionenterprise.com](http://www.techvisionenterprise.com)  
Attn: Valrie Grant | [valrie@techvisionenterprise.com](mailto:valrie@techvisionenterprise.com)

**Indian National Cartographic Association (INCA)** | *India* | [www.incaindia.org](http://www.incaindia.org)  
Attn: Shri Rabindranath Nanda | [secretarygeneralinca935@gmail.com](mailto:secretarygeneralinca935@gmail.com)

**Institut Cartogràfic de Catalunya** | *Spain* | [www.icc.es](http://www.icc.es)  
Attn: Jaume Miranda i Canals | [miranda@icc.es](mailto:miranda@icc.es)

**Institut Géographique National** | *France* | [www.ign.fr](http://www.ign.fr)  
Attn: Dr Sébastien Mustiere | [sebastien.mustiere@ign.fr](mailto:sebastien.mustiere@ign.fr)

**Instituto Geográfico Nacional España** | *Spain* | [www.ign.es](http://www.ign.es)  
Attn: Sebastian Mas Mayoral | [smas@fomento.es](mailto:smas@fomento.es)

**Intergraph** | *United States of America* | [www.intergraph.com](http://www.intergraph.com)  
Attn: Vince Smith | [vince.smith@intergraph.com](mailto:vince.smith@intergraph.com)

**Land Information New Zealand** | *New Zealand* | [www.linz.govt.nz](http://www.linz.govt.nz)  
Attn: Chris Kinzett | [media@linz.govt.nz](mailto:media@linz.govt.nz)

**Moscow State University of Geodesy and Cartography** | *Russia* | [www.miigaik.ru](http://www.miigaik.ru)  
Attn: Prof Vasilij A Malinnikov | [Igm@miigaik.ru](mailto:Igm@miigaik.ru)

**National Hydrographic Office** | *India* | [www.hydrobharat.nic.in](http://www.hydrobharat.nic.in)  
Attn: Rear Admiral SK Jha, NM | [ia-inho-navy@nic.in](mailto:ia-inho-navy@nic.in)

**National Land Survey of Finland** | *Finland* | [www.nls.fi](http://www.nls.fi)  
Attn: Heli Ursin | [heli.ursin@nls.fi](mailto:heli.ursin@nls.fi)

**Navionics Hydrographer** | *Italy* | [www.navionics.com](http://www.navionics.com)  
Attn: Francesco Pezzana | [pezzana@navionics.it](mailto:pezzana@navionics.it)

**Ordnance Survey** | *United Kingdom* | [www.ordnancesurvey.co.uk](http://www.ordnancesurvey.co.uk)  
Attn: Paul Naylor | [paul.naylor@ordnancesurvey.co.uk](mailto:paul.naylor@ordnancesurvey.co.uk)

**Polskie Przedsiębiorstwo Wydawnictw Kartograficznych (PPWK)** | *Poland* | [www.ppwk.pl](http://www.ppwk.pl)  
Attn: Dr Beata Konopska | [copernicus@ppwk.pl](mailto:copernicus@ppwk.pl)

**Regional Centre for Mapping of Resources for Development (RCMRD)** | *Kenya* | [www.rcmrd.org](http://www.rcmrd.org)  
Attn: Dr Hussein O Farah | [rcmrd@rcmrd.org](mailto:rcmrd@rcmrd.org)

**Regional Centre for Training in Aerospace Surveys (Rectas)** | *Nigeria* | [www.rectas.org](http://www.rectas.org)  
Attn: Prof Isi Ikhuoria | [rectas@oauife.edu.ng](mailto:rectas@oauife.edu.ng)

**SuperMap Software** | *China* | [www.supermap.com](http://www.supermap.com)  
Attn: Li Ni | [lini@supermap.com](mailto:lini@supermap.com)

**Surveying and Spatial Sciences Institute (SSSI)** | *Australia* | [www.sssi.org.au](http://www.sssi.org.au)  
Attn: Penny Baldock | [chair.sicc@sssi.org.au](mailto:chair.sicc@sssi.org.au)

**UNIGIS International Association** | *Austria* | [www.unigis.net](http://www.unigis.net)  
Attn: Josef Strobl | [josef.strobl@sbg.ac.at](mailto:josef.strobl@sbg.ac.at)

**Union of Chambers of Turkish Engineers and Architects, Chamber of Surveying and Cadastre Engineers (UCTEA-CSCE)** | *Turkey* | [www.hkmo.org.tr](http://www.hkmo.org.tr)  
Attn: Prof Dr Necla Uluğtekin | [hkmo@hkmo.org.tr](mailto:hkmo@hkmo.org.tr)

**United Nations Cartographic Section** | *United Nations* | [www.un.org/depts/cartographic/english/htmain.htm](http://www.un.org/depts/cartographic/english/htmain.htm)  
Attn: Ayako Kagawa | [kagawa@un.org](mailto:kagawa@un.org)

**United States Geological Survey** | *United States of America* | [cegis.usgs.gov](http://cegis.usgs.gov)  
Attn: Lynn Usery | [usery@usgs.gov](mailto:usery@usgs.gov)

**University of Architecture, Civil Engineering and Geodesy, Department of Photogrammetry and Cartography** | *Bulgaria* | [www.uacg.bg](http://www.uacg.bg)  
Attn: Assoc Prof Peter Penev | [ppenev@gmail.com](mailto:ppenev@gmail.com)

**University of Balamand** | *Lebanon* | [www.balamand.edu.lb/english/GIS.asp](http://www.balamand.edu.lb/english/GIS.asp)  
Attn: Prof Oussama Jadayel | [info@balamand.edu.lb](mailto:info@balamand.edu.lb)

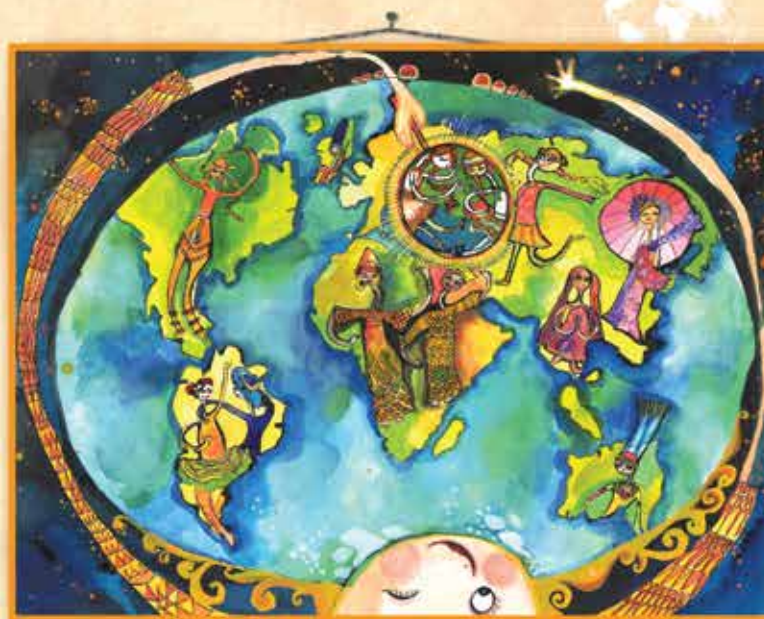
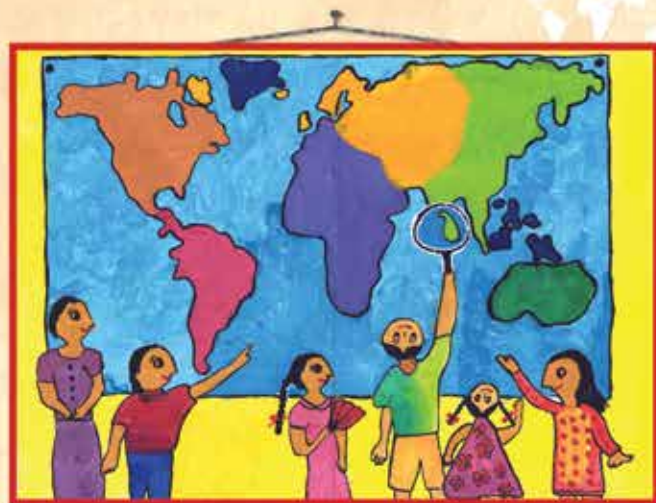
**Wuda Geoinformatics** | *China* | [www.geostar.com.cn/](http://www.geostar.com.cn/)  
Attn: Song Aihong | [songaihong@geostar.com.cn](mailto:songaihong@geostar.com.cn)

ICA welcomes new affiliate members; for more information, please contact:

László Zentai | Secretary General & Treasurer | *ICA* | [sg@icaci.org](mailto:sg@icaci.org) ●



# children's map gallery 2013 winners



Zeva Su'azra  
Malaika | 7 | *Good  
and Bad Sides of  
My Todays World*  
| SD Al-Azhar 5  
Kemondoran |  
Indonesia

Vojitha Heshan Herat | 8 | - | Royal  
International School | Sri Lanka

Ada Maria Ciontu | 9 | *Happy  
Earth is Music to Our Ears* |  
Bucharest | Romania

Saule Sinikovaite |  
3 | *I Am at Home*  
| Jonavos lopšelis-  
darželis 'Dobilas' |  
Lithuania

Nazar Stolyarov | 5 | *The Wide World  
Flies to Me* | Zhytomyr | Ukraine

