



president's report



Cartographic Perspective on the UN Sustainable Development Goals

This year we concluded the International Map Year. During 2016, specific activities were organized at many

places around the world on the **We love maps** theme (see the summary map on page 12-13). It was not just about the love of maps, but also about the role they play. As we all know, as soon as location is involved, maps come into action. They allow us to compare measurable physical phenomena, such as hours of sunshine, or intangible human phenomena, such as levels

of education at different locations. They allow us to see geographical processes evolving over time, such as land use changes. The map has moved beyond the static window to the world, and has become an interactive, mobile, dynamic and collaborative interface between a human or groups of people, and the dynamically evolving environment.

Since the International Map Year was endorsed by the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), ICA considered how to assist UN-GGIM in their activities to support and help realize United Nations' 2030 agenda for sustainable development. The 17 sustainable development goals and their targets should improve economic, social and environmental aspects of humanity and our planet. The

> 02

in this issue

- president's report :: 01
- 28th international cartographic conference 2017 :: 01
- from the editor :: 02
- 17th general assembly of ica :: 02
- ica news
 - children's map awards 2017 :: 03
 - map of the month 2016 *exposé* :: 03
 - 25 years ago... :: 03
 - ica executive committee :: 04
 - ica news contributions :: 04
- icc 2021 :: 05
- profiles
 - peichao gao :: 06
 - national land survey of finland :: 06
 - bulletin du comité français de cartographie :: 07
- reports
 - ica commissions :: 07
 - ica working groups :: 15
 - cartographic meetings and events :: 16
- imy around the world :: 12
- calendar :: 23
- ica affiliate members :: 23
- children's map gallery :: 24

28th international cartographic conference 2017 washington · d.c.

Register now to attend the 28th International Cartographic Conference (ICC) to be held July 2-7, 2017 in Washington, D.C.! The Local Organizing Committee (LOC) warmly invites you to experience the world's largest cartography conference in the family-friendly capital of the United States. The conference promises to deliver something for everyone, from professionals and exhibitors to accompanying persons and children. For full details, visit the conference website at www.icc.org.

Conference Venue

The conference venue is the Marriott Wardman Park Hotel, one of the largest and best-rated hotels in the D.C. area. Located at the Woodley Park/Zoo stop of the Metro Red Line, the venue offers easy access by subway to all of Washington, D.C., including the free Smithsonian Museums and Washington's National Mall, with its historic monuments. Rooms are offered at a reduced conference

> 04



An aerial view of Washington D.C. | Photography courtesy of ICC 2017 LOC

This month marks the conclusion of the International Map Year (IMY) 2015-2016. Since December 2013, *ICA News* has published regular reports from the ICA Working Group on IMY and included highlights of various IMY events held around the world. From June 2014, the IMY website has provided in-depth coverage of meetings, initiatives and special events dedicated to IMY. It has also featured photo posts with members of the ICA community wearing *We love maps* T-shirts in the most interesting, surprising, breath-taking and puzzling places. The summary map (centrefold) tries to encapsulate this celebration of maps and cartography.

Reading the stories on IMY one cannot help but be astonished by the incredible ingenuity of national IMY coordinators and committees in promoting the message of IMY. From national days and workshops to postal stamps and map stands, from exhibitions and posters to wine and chocolates, from fun-filled challenges for children to official events involving government ministers – you name it it's there! The colour and energy of these celebrations was simply contagious and left us all with unforgettable memories. I think IMY achieved something truly special – it strengthened and invigorated various cartographic communities and sparked unprecedented interest of the public in maps and mapping!

On the flip side however, the summary map hardly offers any surprises. Apart from participation of Bangladesh, Nepal and Sudan in the IMY celebrations (wonderful effort!), the 'dots' correspond to a very familiar pattern of long-standing ICA member countries. Has IMY tangibly helped in spreading the word about maps and cartography or have we been preaching to the converted? I sincerely hope the excitement generated by the IMY will eventually help to expand the ICA family.

The very much anticipated ICC 2017 is almost upon us (July) promising a solid programme. We are also reminded about submissions to the Barbara Petchenik Children's World Map Awards. Thanking all contributors for your continuous support.

Igor Drecki | Editor ICA News | ICA ■

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

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

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president's report cont...



Display of ICA posters on UN sustainable development goals at the United Nations Headquarters in New York, 3-5 August 2016 | Photograph courtesy of Menno-Jan Kraak

targets are judged based on over 300 indicators. For instance, one of the targets for the education development goal is to ensure that all children have free and good primary and secondary education. Its success is measured by two indicators: percentage of children proficient in reading and mathematics, and the school completion rate (primary, lower secondary, upper secondary).

How can we cartographers be relevant to society in helping to reach these targets? First, well-crafted maps can effectively visualize the information at hand. Furthermore, an online mapping technology can disseminate this information globally to increase awareness of the current state of affairs. Maps produced in the past can be used as benchmarks, and the maps created in the future can document changes over time. Interactive map dashboards, connected to geographic databases at multiple scales and equipped with space-time analytical functions, will allow decision makers at various decision levels to monitor and compare indicators for policy development and implementation at various geographic scales. However, ICA did not map the goals and their targets based on indicators as such. We have created cartographic posters, one for each sustainable development goal. The poster series tells the story of cartographic diversity, mapping options and multitude of perspectives.

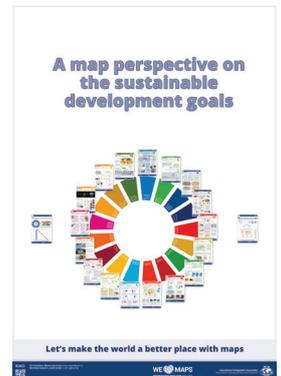
Each of the goals has been mapped from a particular perspective by a different ICA Commission. All posters have a short 'take-home-message' that should make one aware of a particular strengths of the map.

During the sixth session of the UN-GGIM, 3-5 August 2016, the posters created by the ICA Commissions were exhibited in the conference area of the United Nations Headquarters in New York. During the opening session the participants were invited to examine the poster exhibition. In addition, the exhibition catalogue (right) was distributed to all participants. ICA's contribution to the UN sustainable

development goals initiative was well received and appreciated. The posters can be accessed from icaci.org/maps-and-sustainable-development-goals/.

Let's make the world a better place with maps.

Menno-Jan Kraak | President | ICA ■



17th general assembly of ica

According to Article 9 of the Statutes and By-laws of the International Cartographic Association (ICA), the President decided to call an Extraordinary General Assembly (icaci.org/ica-statutes/). It will take place in Washington D.C., USA, on 2 July 2017 at 12pm, and coincide with the 28th International Cartographic Conference. The main business of the 17th

General Assembly of the ICA concerns changes to the ICA Statutes proposed by the Executive Committee. Member countries are asked to send their representatives. More details will follow in due time.

László Zentai | Secretary General & Treasurer | ICA ■



In September 2016, the ICA Commission on Cartography and Children officially began the organization of the Barbara Petchenik Children's World Map Awards 2017. This time, the competition is dedicated to the International Map Year (IMY) and adopts the IMY motto *We love maps* as its theme for 2017 and 2019

editions. All ICA member nations or affiliated members can participate in the competition, sending a maximum of six drawings to any of the four age groups: under 6 years, from 6 to 8 years, from 9 to 12 years and from 13 to 15 years. ICA will award three prizes for each age group and a Public Award. A novelty is the new Creativity Award to be awarded to only one entry in each of the four age groups by a jury organized and formed by members of the ICA Commission on Art and Cartography.

Further information and relevant files are available from the ICA website (icaci.org/petchenik/), as well as from the ICA Commission on Cartography and Children website (lazarus.elte.hu/ccc/ccc.htm) and Commission's Facebook page (www.facebook.com/icaccc/). The deadline for sending the nationally selected entries to the international coordinator is **1 May 2017**. Entries sent to the previous competitions run between 1993 and 2015 can be viewed on the Archive of the Barbara Petchenik Children's Map Competition website maintained by the Carleton University Library (childrensmaps.library.carleton.ca/).

José Jesús Reyes Nuñez | ICA Commission on Cartography and Children | Hungary ■

ica news map of the month 2016 exposé www.icaci.org

january



Graphical and Statistical Atlas of Switzerland 1914-2014 | Federal Statistical Office | Switzerland

february



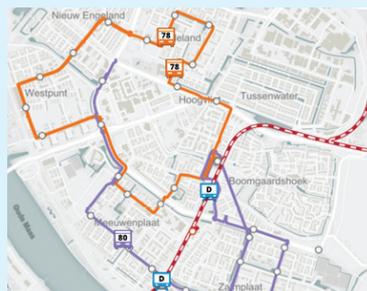
Occupying São Paulo - An Augmented City Map | Research Group on Urbanism and Architecture, University of Leuven | Belgium

march



Geological Textile | Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology | Japan

april



OV-Map | Carto Studio | The Netherlands

ica news 25 years ago...

Included below are three excerpts from Don Pearce's secretarial report presented at the 9th General Assembly of ICA held in Bournemouth, UK. What fascinates me about them is the courage of the Mexicans in organizing the 1987 Cartographic Conference, the never-say-die attitude of the EC in pursuing new members, and the inclusiveness of our Association encapsulated in Don's wish...

Igor Drecki | Editor ICA News | ICA ■

ICA Newsletter, No 18, October 1991

Report of the Secretary General 1987-1991

The period began with the memorable Cartographic Conference in the beautiful city of Morelia, Mexico, a country that had so recently been devastated by a massive earthquake. Despite these odds, the Organizing Committee showed great courage and initiative and produced a great conference in an unforgettable environment. [...]

Membership

The EC actively pursued new members during the period, particularly in the Latin American countries. The results have not as yet been spectacular, but at least an awareness of the Association has been extended. Affiliate Membership has been more successful in that 5 new applications will be submitted to the [9th] General Assembly for approval. Successful approaches were also made to major governmental mapping agencies such as USGS (Washington), IGN (Paris) and INEGI (Mexico). [...]

Conclusion

[...] Despite the growth of ICA during these years, the Association and its work is not generally well known and I believe we could do much more in the marketing area. I also believe that we need to make a concerted effort to provide more help to the developing countries and other countries that may need help in the field of cartography. While our finances remain sound, I would like to see a fund established for this work. [...]

D.T. Pearce, Secretary General / September 1991

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ica news contributions

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Submission Deadlines

15 May for June editions

15 November for December editions

28th international cartographic



Washington D.C.: (clockwise from top right) The White House; Washington Nationals baseball stadium; iconic Ben's Chili Bowl; the Washington Monument

rate of USD 149 plus taxes, with free in-room Wi-Fi. The room block is limited and rooms are going fast, so reserve your room today (icc2017.org/conference-hotel/).

Pre-conference Workshops

Register now for pre-conference workshops organized by a variety of ICA commissions. Workshop details can be found at icc2017.org/preconference-workshops/. Most workshops will be held at the conference hotel, though a couple will be held at George Washington University. Workshops are either free or have a minimal charge.

Technical Tours

A variety of technical tours will be offered so participants can learn about the latest cartographic developments in governmental and private institutions (icc2017.org/technical-tour-information/).

Scientific Program

Over 750 papers and posters will be presented at ICC 2017 covering a wide range of cartographic and geographic information science themes (icc2017.org/conference-themes/). All submissions were reviewed by a up to three members of the scientific program committee (icc2017.org/scientific-program-committee/). Full papers for the online proceedings should be submitted before the **March 1** deadline. Four special keynotes from high-profile presenters will provide deeper insight into diverse cartographic topics.

Social Program

Attend the Opening Reception on Monday night from 6:00-7:30 pm to mingle with other conference-goers and get a sneak peek at the

International Trade Exhibition. The Gala Dinner on Thursday night is authentic Texas-style barbecue complete with food, music, and dancing (space is limited so register now at icc2017.org/attendee-registration-form/). Two special excursions are also planned; one to visit the four meridians that were used historically as prime meridians in the United States and the other to experience the nation's past through a unique tour of the capital's brewpubs and speakeasys. Both these events have very limited spaces, so reserve your spot today!

Exhibitions

Three important exhibits will take place at ICC 2017. The International Cartographic Exhibition allows ICA member countries and affiliate members to display cartographic products of the highest achievement originating in their country (icc2017.org/international-cartographic-exhibition-submission/). The Children's Map Competition promotes creative representation of the world in graphic form by children from around the world (icc2017.org/submitting-to-the-childrens-map-competition/). Both of these exhibitions will be open to the public. The International Trade Exhibition offers an excellent opportunity to connect with over 2,000 leaders and influencers representing government, academia, and international companies from over 80 countries (icc2017.org/wp-content/uploads/2016/06/ICC2017Prospectus.pdf). Commercial companies, government and academic institutions, and NGOs are invited to reserve their space in this exhibition.

Sponsorships

A variety of sponsorship opportunities are available, including premium Global, Hemisphere and Continental level sponsorships and sponsorships of individual events or items

conference 2017 washington · d.c.

ICC 2017 Important Dates

Now	Conference registration is open	icc2017.org/attendee-registration-form/
Now	Conference hotel reservation is open	icc2017.org/conference-hotel/
March 1	Deadline for submission of full papers for Online Proceedings	icc2017.org/abstracts-full-papers-and-posters/
March 1	Deadline for International Cartographic Exhibition submissions	icc2017.org/international-cartographic-exhibition-submission/
March 31	Deadline for Student Assistantship Program applications	icc2017.org/icc-2017-student-assistantship-program-information/
April 1	Recommended latest date to start Visa Application process	icc2017.org/travel-information-visa-request/
May 1	Deadline for early conference registration	icc2017.org/registration-fees-and-deadlines/

(icc2017.org/wp-content/uploads/2016/03/ICC2017Prospectus.pdf). Show your support for the ICC and receive premium billing with a sponsorship for your agency or organization.

Student Assistantships

Current undergraduate and graduate students are invited to apply for and participate as student assistants at the ICC 2017 (icc2017.org/icc-2017-student-assistantship-program-information/). Assistantships include complimentary conference registration and offer flexible hours. This assistance includes complimentary conference registration and lodging. Students should apply now before the **March 31** deadline!

4th of July

Washington, D.C., is the place to be during the America's Independence Day celebration on the 4th of July. From spectacular fireworks to moving musical performances to family-friendly events, there's more than enough fun to keep you entertained on this festive day. Conference events will end early on the 4th allowing everyone to enjoy this commemorative holiday.

Visas and Letters of Invitation

The U.S. requires citizens of many foreign countries to obtain visas to enter the United States, and citizens of some countries can enter through the Visa Waiver Program. The U.S. Department of State is helping to facilitate the acquisition of visas needed by conference participants. Letters of invitation for funding application needs or travel visa application requirements can be requested when you register for ICC 2017 (icc2017.org/travel-information-visa-request/). We recommend that you start your visa application process early – at least 120 days prior to the conference.

The ICC 2017 LOC extends a warm invitation to everyone to participate in an inspiring conference and exhibition of cartography, in addition to visiting an international center of history, culture, and politics and experiencing the celebration of the United States' independence.

Aileen Buckley | Conference Co-director | ICC 2017 Local Organizing Committee | USA ■

Washington D.C.: (clockwise from top left) The Lincoln Memorial; Adams Morgan neighbourhood; Union Station; U.S. Independence Day fireworks



icc 2021

During the ICA Executive Committee meeting in Washington D.C., USA, in October 2016, two very competitive bids for organising the International Cartographic Conference (ICC) in 2021 were considered – one submitted by the Italian Cartographic Association proposing Florence, Italy as the host city and the other submitted by the South African National Committee for International Cartographic Association proposing Cape Town, South Africa. In accordance with Article 14 of the ICA Statutes and By-laws (icaci.org/ica-statutes/), the Executive Committee selected Florence to host the 30th International Cartographic Conference.



ICC 2021 in Florence will present an opportunity to examine state of the art in cartography and related disciplines in both international, as well as uniquely Italian context. The conference theme *Cartography: planning our future from lessons from the past* reflects on aspects of cartography and mapping in which Italy can be considered renowned for.

Florence is one of the most beloved cities in the world – the cradle of Renaissance and the home of Michelangelo's David. Its city centre is a UNESCO World Heritage Site since 1982. Florence is conveniently located in the heart of Italy with excellent flight and train connections from many Italian and European cities.

Provisional dates of ICC 2021 are 19-23 July 2021.

Igor Drecki | Editor ICA News | ICA ■

peichao gao



When I was a child, there were two maps hanging side by side on the wall of my bedroom, placed there by my parents. One was a world map, and the other a map of China. I was too

little to see the maps from the ground, so I got a small stool to stand on. To explore the country and the world, I used to stand on it for a long time and then push it from the front of one map to the other. Although being a little child at that time, I knew the location of all provinces in my country and the names of most countries all over the world.

Maps hanging on the wall of my bedroom opened the door for me to explore the world outside my home. After my graduation from high school, I pursued my bachelor's degree in the city of Chengdu in the Sichuan province, China, which is located 1,000 km away from my home town. I spent four years there and then travelled 1,500 km to Beijing to study towards my master's degree. After each move, I drew a line connecting the origin and the destination on the maps in my bedroom. Interestingly, both degrees I attained are related to maps; my bachelor's degree is in surveying and my master's degree in GIS.

Then I moved another 2,000 km from Beijing to Hong Kong to undertake my doctoral studies. Currently, I am a PhD student in cartography at the Department of Land Surveying and Geo-Informatics at the Hong Kong Polytechnic University. I regard my PhD studies as the formal beginning of my story with maps. Besides, I started here my story with the International Cartographic Association (ICA)! I have a role in helping to distribute *ICA News*, the newsletter of ICA. It is my hope that I can contribute more to the Association and the field of cartography.

Peichao Gao | Hong Kong Polytechnic University
| Hong Kong - China | peichao.gao@connect.polyu.hk

Legend

- freeways
- main streets
- collector streets
- branch streets

Street network map of Chengdu, China. On this map, streets are classified into four groups: freeways, main streets, collector streets, and branch ones (see legend above).

www.maanmittauslaitos.fi/en/

The first official surveying office in Finland was established over 200 years ago. The National Land Survey has now service points in 37 localities across Finland. The number of employees totals approximately 2,000. The organisation consists of a central administration and four operations units, which are Production, General Administration, Centre for ICT Services and Finnish Geospatial Research Institute.

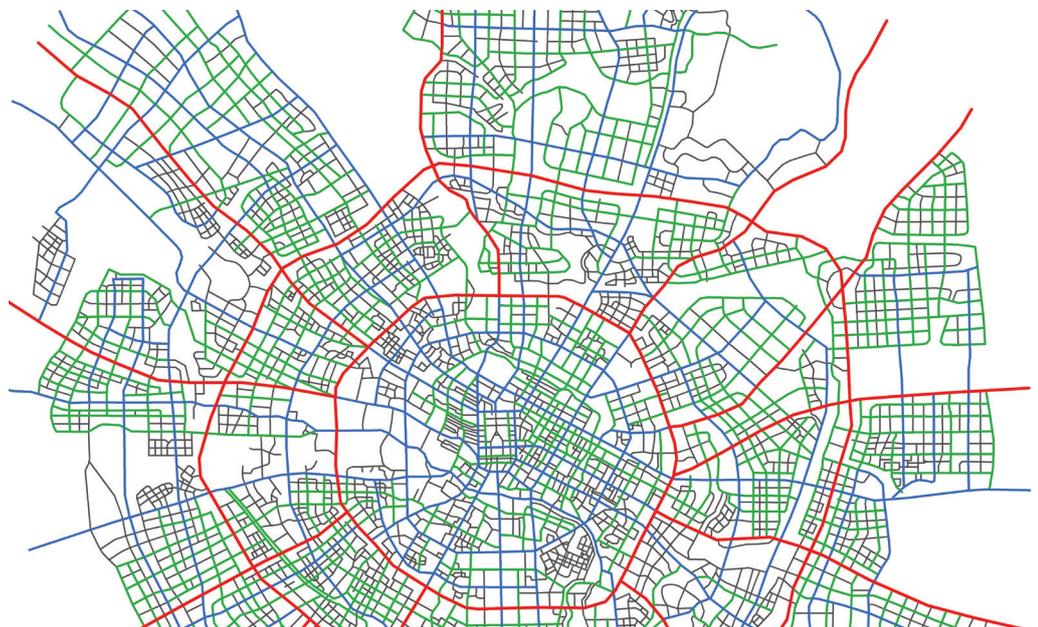
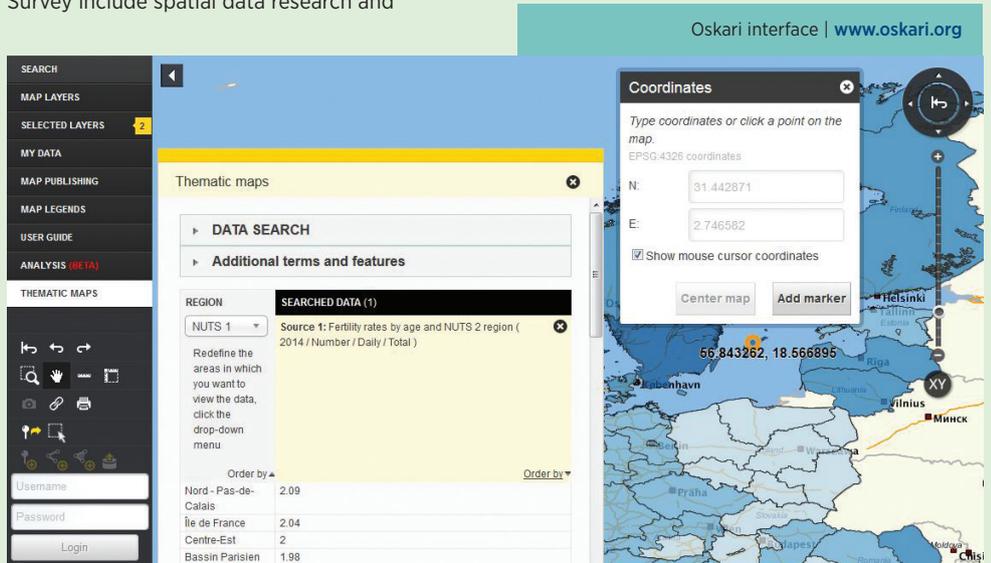
Finland has been one of the leading countries to open up its government data. This process started with the digital topographic database (TDB) in 2012. In 2015 a programme for creating the new National Topographic Database (NTDB) has started.

The National Land Survey safeguards land ownership and credit granting system by maintaining information about mortgages and registrations of property titles, as well as other property information in its registers. Other central tasks performed by the National Land Survey include spatial data research and

application, and data information system development. One of the key systems used is Oskari open source service platform. It provides a tool for creating embedded maps, fully functional map clients run as SAAS service from an Oskari installation. They can be used, for example, in context of eGovernment services where information from different registers needs to be displayed on the map along with map layers from spatial data infrastructure, such as INSPIRE.

At the beginning of 2015, the Finnish Geodetic Institute merged with the National Land Survey. The Finnish Geospatial Research Institute, an operational unit for research, was established giving the National Land Survey a great opportunity to utilise top research for the development of national spatial services.

Heli Ursin | National Land Survey of Finland | *Finland*





www.lecfc.fr/

Soon after its creation in 1957, the French Committee of Cartographic Techniques decided to produce a bulletin to facilitate communication with its members, report on various activities and publish articles on cartography. The first bulletin was issued in March 1958 using the name of the Committee as its title. In June 1962, the name of the Committee and subsequently of the bulletin were changed to French Committee of Cartography (CFC). In 1990, a new cover was introduced.

In March 2002, after 40 years, the CFC changed the design of its bulletin implementing a new cover, to highlight the ever-changing discipline of cartography, and a new title – *Le Monde des Cartes* (*The World of Maps*). It should be noted that CFC was very pleased to see the use of the same title – *The World of Maps* – for a commemorative e-book produced by the ICA for the International Map Year 2015-2016 (mapyear.org/the-world-of-maps-overview/).

The name of the bulletin was changed again in September 2011, following CFC's organization of the 25th International Cartographic Conference in Paris, for the current title – *Cartes & Géomatique* (*Maps & Geomatics*) to reflect the evolution of cartography and related fields, particularly those discussed within the CFC.

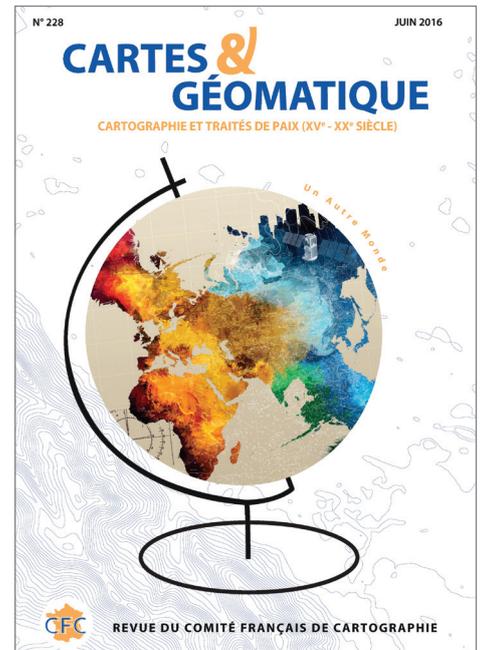
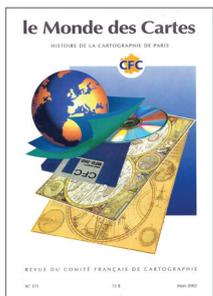
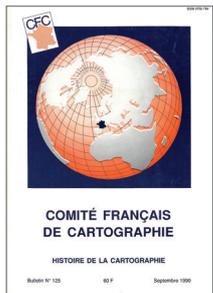
The bulletin publishes proceedings of conferences organized by the various CFC commissions, in particular on the History of Cartography (which organizes an annual conference), Graphic Semiology, Teaching, Communication, and others. Since 1964, the bulletin publishes French National Report to the ICA.

The CFC is currently undertaking a peer review of the articles to increase the quality of the bulletin and its attractiveness, particularly to the scientific community.

The bulletin is published in French, with four issues per year, and distributed to CFC members, as well as made available for purchase by

contacting lecfc@lecfc.fr. After a year, the content is made freely accessible from CFC website www.lecfc.fr.

François Lecordix | Secrétaire Général | Comité Français de Cartographie | France ■



reports ica commissions

Cartographic Heritage into the Digital

cartography.web.auth.gr/ica-heritage/

Commission Activities

Following the 11th Conference on *Digital Approaches to Cartographic Heritage* held in Riga, Latvia, the Commission published 425-page Proceedings from the event (ISSN 2459-3893) with the support from CartoGeo-Lab of the Aristotle University of Thessaloniki. The Proceedings can be ordered from cartography.web.auth.gr/ICA-Heritage/Riga2016/fil/proceedings.html.

The Commission had an opportunity to present its activities and contribute to the 1st International Workshop on the *Origin and Evolution of the Portolan Charts* held at the Navy Museum in Lisbon, Portugal, between 5-6 June 2016. The Workshop was organised by the Inter-university Centre for the History of Sciences and Technologies (ciuhct.org/Events/portmeeting/programme.htm). The Commission actively contributed to the post-graduate/

doctoral workshop *Explorations in Digital Humanities: Case studies and problem-solving*, by delivering an intensive 1-day course *Reading and data mining maps* at the Universidade Nova di Lisboa, Lisbon, Portugal, 6-9 September 2016 (www.cham.fcsh.unl.pt/files/file_001638.pdf).

Within the framework of the International Map Year 2015-2016, the Commission supported and contributed to two major cartographic events hosted by the Museum of Byzantine Culture in Thessaloniki, Greece and attended by ICA President Menno-Jan Kraak. The first event was the ICA-endorsed 14th Hellenic Cartographic Conference *Cartography in a Changing World*, 2-4 November 2016, organised in association with the Hellenic Cartographic Society. The second event was the 1st Seminar *Maps in Libraries* (cartography.web.auth.gr/cartogeolab/lib-seminar/), primarily for librarians and archivists, organised in partnership with the Aristotle University of Thessaloniki Library and Information Centre and CartoGeo-Lab, on 2 November 2016. Members of the Commission from CartoGeoLab, the Institut Cartogràfic i Geològic de Catalunya in Barcelona, the University Library of Utrecht, and the

Swiss Federal Institute of Technology in Zurich lectured in this Seminar.

Future Plans

The Commission is organising an ICC 2017 pre-conference workshop on *Mapping Tools for Non-Mapping Experts: Incorporating Geospatial Visualization Tools in Libraries* (cartography.web.auth.gr/ICA-Heritage/2015-2019/pg/ICC2017.html) to be held in Washington D.C., USA. This workshop will highlight how librarians can easily incorporate user-friendly geospatial visualization tools into their work, whether it involves instruction sessions, workshops for faculty, graduate students or the public, or other projects within libraries. The local organisers of this workshop are the Commission members: Marcy Bidney, American Geographical Society Library, University of Wisconsin-Milwaukee (bidney@uwm.edu) and Nathan Piekielek, Pennsylvania State University (nbp104@psu.edu).

The Commission announced its 12th Conference on *Digital Approaches to Cartographic Heritage* to be held in Venice, Italy, 26-28 April 2017. The Commission's

> 08



Participants of the International Workshop on the *Origin and Evolution of the Portolan Charts* in Lisbon, Portugal | Photographs courtesy of Evangelos Livieratos

supporting institution, the University Institute of Architecture Venice, will host the Venice 2017 Conference. For more information, please visit the Commission website.

Evangelos Livieratos | Chair | ICA Commission on Cartographic Heritage into the Digital | Greece ■

Cartography and Children

lazarus.elte.hu/ccc/ccc.htm

Meeting in Albena, Bulgaria

The first meeting of the ICA Commission on Cartography and Children, following the ICC 2015 in Rio de Janeiro, was held on Tuesday, 14 June 2016, during the 6th International Conference on Cartography and GIS in Albena, Bulgaria. Colleagues from Bulgaria, France, Hungary Poland, Slovakia, Turkey, USA and other countries participated in the meeting, which was chaired by José Jesús Reyes Nuñez from Hungary, Vice Chair of the Commission.

Meeting participants discussed our Commission's involvement in preparation of a cartographic poster on *Education*, one of the themes covered by the United Nations initiative on sustainable development goals, together with the ICA Commissions on Education and Training, and Maps and Graphics for Blind and Partially Sighted People. Next, a report regarding our on-going work was presented. The first activity is another volume of *Children Map the World* publication (in collaboration with EsriPress) on the occasion of the International Map Year 2015-2016. The special character of this book is a selection of drawings sent to the Barbara Petchenik Children's World Map Awards from their start in 1993, presented in a simple, traditional atlas form created by children. The other task involves organization of the children's map competition in 2017, which is

also dedicated to the International Map Year and uses its motto – *We love maps* – as a theme of the current edition.

Meeting in Goiânia, Brazil

The most important event concerning cartography and children in Brazil took place in Goiânia, State of Goiás, between 4-7 October 2016 with the participation of renowned researchers from the area. During the event the national exhibition of children map drawings was held, with some works to be selected for 2017 edition of the Barbara Petchenik competition. The meeting provided an opportunity to present the ICA Commission on Cartography and Children to the audience. Carla Cristina Reinaldo Gimenes de Sena, Commission Chair, explained that the theme of the next competition is *We love maps* – a motto adopted by the International Map Year 2015-2016.

Carla Cristina Reinaldo Gimenes de Sena and José Jesús Reyes Nuñez | Chair / Vice Chair | ICA Commission on Cartography and Children | Brazil / Hungary ■

Cartography in Early Warning and Crisis Management

comcewa.geogr.muni.cz/

Conference in Nanjing, China

The International Conference on Cartographic Visualization of Big Data for Early Warning and Disaster/Crisis Management (www.ew-cm2016.org/index.asp?ID=104) took place at the Nanjing Normal University, Nanjing, China from 27-28 October 2016. The conference was organized by the ICA Commission on Cartography in Early Warning and Crises Management (CCEW&CM), and the School of Geography

Science of Nanjing Normal University. Supporting organizations included Key Laboratory of Virtual Geographic Environment (Ministry of Education), Chinese Academy of Surveying and Mapping, Jiangsu Center for Collaborative Innovation in Geographical Information Resource Development and Application, Jiangsu Association for the Sciences of Remote Sensing and Geographic Information Systems, Jiangsu Society for Geodesy Photogrammetry and Cartography, and Laboratory on Geoinformatics and Cartography of the Masaryk University in Brno, Czech Republic.

The opening ceremony was held at the Jing Wen Library East, Xianlin Campus, in the morning of 27 October 2016 and chaired by Prof Tang Guoan, Dean of School of Geography Science, Nanjing Normal University. The welcome addresses were given by Prof Tian Lixin, Vice President of the Nanjing Normal University; Prof Milan Konečný, Chair of the ICA Commission on Cartography in Early Warning and Crises Management; and Prof László Zentai, Secretary-General of ICA. The conference programme included presentations by:

- Prof Sálvano Briceño, Chair of the Science Committee of Integrated Research on Disaster Risk organization (former President of The United Nations Office for Disaster Risk Reduction) on *Contribution of Big Data and Geo-information to Reducing Disaster Risk*
- Prof László Zentai on *Challenges of Modern Cartography*
- Prof Jiping Liu, Vice Chair of CCEW&CM and Vice President of Chinese Academy of Surveying and Mapping on *Discovery and Integration of Disaster-related Geospatial Data from Web*.

Other experts presenting at the conference included Dr Christophe Lienert, Vice Chair of CCEW&CM; Prof Temenoujka Bandrova, University of Architecture, Civil Engineering and Geodesy in Sofia and President of Bulgarian Cartographic Association; Prof Rajib Shaw, Executive Director of the Integrated Research;

Prof Li Jing, Beijing Normal University and Director of International S&T Cooperation Base of Disaster Reduction and Sustainable Development; Prof Liu Ping, National Institute of Emergency Management / China-EU Institute of Emergency Management; and Dr Bai Tao, Asia Council President and Global Business Director of International Association of Emergency Managers.

Prof Chen Min from Nanjing Normal University chaired the Panel Discussion, where participants had an opportunity to express their views and share experiences. The closing ceremony was chaired jointly by Prof Milan Konečný and Prof Chen Min. In all, 70 experts and scholars from around the world attended the conference, which successfully promoted mutual learning, exchange of ideas and enhanced professional links amongst delegates.

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

Location Based Services

lbs.icaci.org/

LBS 2016 Conference in Vienna, Austria

The 13th International Conference on Location-Based Services, organized by the ICA Commission on Location Based Services and the Research Group Cartography of Technische Universität Wien (TU Wien), took place in Vienna, Austria from 14-16 November 2016. The conference was endorsed by the Association of Geographic Information Laboratories in Europe, International Federation of Surveyors, International Association of Geodesy, and the German Cartographic Society.

More than 120 participants from 23 countries gathered in the historical Celebration Hall of TU

Wien. The conference was opened by Rector Prof Sabine Seidler, Conference Director and ICA Past President Prof Georg Gartner, and AGILE Co-chair Prof Martin Raubal. After the opening, Commission Chair Haosheng Huang presented an update on the LBS research agenda.

A total of 48 oral presentations have been given in 12 single-stream sessions over three days. The conference also featured two interactive sessions, consisting of 4 showcases and 22 posters. These oral presentations, showcases and posters provided a general picture of the recent research activities related to LBS domain. Recent emerging activities were reported on, especially concerning issues of outdoor/indoor positioning, smart environment, spatial modelling, personalization, context-awareness, cartographic communication, novel user interfaces, crowdsourcing, social media, big data analysis, usability and privacy. For the first time, the conference featured a commercial session, in which 4 invited LBS companies and start-ups presented their ongoing research and development related to LBS.

A selection of peer-reviewed full papers has been published in the book *Progress in Location-Based Services 2016* in the ICA sub-series of the Springer Lecture Notes in Geoinformation and Cartography. Work-in-progress submissions are included in the conference proceedings (ISBN 978-1-907075-02-5), which are available online (lbsconference.org/). A special issue of the *Journal of Location-Based Services* is planned as well.

Besides the technical and scientific program, the conference provided several social networking opportunities, including an ice-breaker reception on the first day, a conference dinner in an old traditional Viennese wine cellar on the 2nd day, and a farewell drinks event.

Since their inauguration by Georg Gartner from TU Wien (Austria) in 2002, the LBS conferences have become one of the most

important scientific events dedicated to LBS. The conferences have been held in Vienna (2002, 2004, 2005), Hong Kong (2007), Salzburg (2008), Nottingham (2009), Guangzhou (2010), Vienna (2011), Munich (2012), Shanghai (2013), Vienna (2014), Augsburg (2015), and Vienna (2016). Starting from 2015, the LBS conferences have become the annual event of the newly established ICA Commission on Location Based Services. The next LBS conference has been planned, and will be hosted by Prof Martin Raubal at ETH Zurich (Switzerland) in January 2018. We look forward to meeting you at the next LBS conference.

For more information, please refer to the conference website lbsconference.org/.

Workshop on LBS Research Agenda

The workshop, held on 13 November 2016 in the afternoon, was part of the initiative started by the Commission on Location Based Services, with the aim to develop a cross-cutting research agenda and identify key research questions and challenges that are essential for the LBS development in the next 5 to 10 years. The details of this initiative are available from lbs.icaci.org/research-agenda/.

The first step involved receiving 31 one-paragraph proposals, based on which we have compiled a list of “key problems”. The workshop participants discussed these key issues in detail to refine and improve the list and develop a plan for the LBS research agenda paper.

The workshop was opened by Haosheng Huang and attended by about 25 participants. The format involved dividing participants into groups and discussing the initial list of “key problems”. After discussion, each group summarized and presented their comments and suggestions to the forum.

The workshop gathered lots of feedback, comments, and suggestions, which will serve as input into refining and improving the LBS research agenda. Currently, the Commission

> 10

(From left) Prof Georg Gartner, ICA Past President, addresses the audience during the LBS 2016 opening session; networking at the Ice-breaker reception; group discussion at the Workshop devoted to LBS research agenda | Photographs courtesy of Research Group Cartography, TU Wien



chairs together with several invited experts are compiling and revising the LBS research agenda. The revised list will be then circulated to the LBS research community for further comments and feedback. We aim to publish the research agenda as an open access white paper in the *Journal of Location Based Services* or other relevant journals. We also expect to present the agenda at the next International Cartographic Conference (ICC 2017) in Washington D.C. in July 2017.

Future Plans

Immediately before ICC 2017, our Commission and the ICA Commission on Geospatial Analysis and Modeling are organizing an international symposium on Location-based Social Media and Tracking Data (LSMTD 2017), 1-2 July 2017. The symposium attempts to bring together researchers from various fields and perspectives to share ideas and findings of their research related to location-based social media data or location tracking and sensing data.

Authors of selected abstracts (due 15 February 2017) will be invited to submit full papers for consideration for publication in a special issue of the *International Journal of Geographical Information Science*. Final decisions regarding full paper submissions (due 15 July 2017) will be made following the standard double-blind peer review process.

Please consider submitting your research work to the symposium and to the special issue. Looking forward to receiving your submissions and meeting you in Washington D.C.

Haosheng Huang | Chair | ICA Commission on Location Based Services | *Austria / China* ■

Map Design

mapdesign.icaci.org/

Commission Activities

Workshops were delivered by Commission members at GeoCart'2016 in New Zealand and also at the British Cartographic Society / Society of Cartographers conference in the United Kingdom during August and September 2016. The focus of the workshops, as always, is 'better mapping' with attendees learning some of the ways in which cartographers elevate their maps beyond defaults to make them really sing. Over 100 delegates attended across the two workshops. Guest lectures on the same theme were also delivered to cartography students at RMIT Melbourne.

Chair Kenneth Field was invited to present on map design at the Ramani Huria workshop in Dar es Salaam, Tanzania in November 2016. As a guest of the World Bank, the sessions were designed to explore future collaborative opportunities for the community-mapping

project in Dar es Salaam to build flood resilience. Design of useful and appropriate cartographic products is key to this endeavour. The workshop reached a wide audience across government and international development from Ministers to local and international community leaders.

During the latter half of the year, the Commissions 'style guides' initiative was launched with presentations in New Zealand, the UK and at the NACIS conference in Colorado Springs, USA. Based on an original idea by Daniel Huffman, the ICA Commission on Map Design is picking up the baton to develop a crowd-sourced set of cartographic style guides. Each will bring together a set of ideas, examples and links to resources that will enable the reader to learn about and implement that style more easily in their own work. Why? Because the style guides will be based on expert knowledge and prior (c)art. What has gone before that works? How do different elements hang together? What colour palettes work? What fonts are best suited? How do I render my linework in a particular style?

This goes beyond simply colouring in a basemap but, instead, builds a portfolio of materials that can be used to create coherent, well-balanced and impactful maps. Imagine a set of materials that gave you a head start in creating a map in an Art Deco style...or a neon, firefly, steampunk, celtic, pop art aesthetic etc etc. How can we take design cues from art, furniture, architecture, film and build these out to apply to cartography? We've already seen examples of some of these styles, some we have yet to see. Bringing them together for the benefit of the wider community is the intent, and crowd-sourcing from the experts who have already thought this through will provide a remarkable set of materials.

The launch of the style guides includes a call for participation with further details, examples and templates to view at the Commission web site mapdesign.icaci.org. Please do take a look and consider contributing to the initiative.

Kenneth Field | Chair | ICA Commission on Map Design | *United Kingdom* ■

Map Projections

ica-proj.kartografija.hr/

Meeting in Albena, Bulgaria

The first meeting of the ICA Commission on Map Projections in 2016 was held at the 6th International Conference on Cartography and GIS in Albena, Bulgaria, June 13-17, 2016. The conference was organised by the Bulgarian Cartographic Association and the University of Architecture, Civil Engineering and Geodesy, Sofia, and endorsed by the International Cartographic Association (ICA). Prof Milan Konečný was President of the International Organizing Committee and Prof Temenoujka Bandrova served as President of the Local Organizing Committee.

It was an excellent conference with many participants from all over the world. Several ICA Commission meetings were held at the conference - ICA Commissions on Cartography and Children, Cartography in Early Warning and Crisis Management, Use, User and Usability Issues, and Map Projections. Twenty people attended the Commission meeting. After a welcome and short introduction, Commission Chair Miljenko Lapaine presented his report, including information about the book *Choosing a Map Projection*, which is being prepared. Then, he delivered a lecture on *Airy Map Projection by Balance of Distortions*. Lynn E. Usery concluded the meeting with an announcement about the ICC 2017 to be held in Washington D.C. in July.

Meeting in Albuquerque, New Mexico, USA

Miljenko Lapaine chaired a meeting of the Commission at the AutoCarto 2016 conference in Albuquerque, New Mexico, United States, on 14 September 2016. He welcomed participants and reported on Commission activities. The main part of the Commission meeting consisted of the Workshop on Teaching Map Projections in Cartography and GIS by Keith C. Clarke.

Participants of the ICA Commission on Map Projections meeting in Albuquerque, USA | *Photography Eric Anderson*



Waldo Tobler concluded the meeting with a brief presentation on cartograms. Nine people attended the Commission meeting, including ICA President, Prof Menno-Jan Kraak.

Future Plans

The next meeting of the ICA Commission on Map Projections is planned for ICC 2017 in Washington D.C. We also plan to organize a Workshop on Map Projections on Sunday, 2 July 2017, 9–11 am. The Workshop is going to consist of two parts:

- Part 1: Critical review on using developable surfaces in map projections theory
- Part 2: Standardization in map projections

It is common practice to use developable surfaces in the interpretation of map projections. However, a different approach can be taken. Mapping onto a developable surface has limited application and can lead to incorrect conclusions about map projection distortion.

Many textbook authors are aware that nowadays developable surfaces are not used to create projections, but still insist on using them as conceptual aids, which help to illustrate the projection process. Yet, there are different ways and possibilities of illustrating the process applicable to all map projections.

The ICA Commission on Map Projections is preparing a proposal for standardizing symbols in map projections to be presented at ICC 2017 in Washington, D.C. The meeting and the Workshop are open to everyone.

Miljenko Lapaine | Chair | ICA Commission on Map Projections | *Croatia* ■

Maps and Graphics for Blind and Partially Sighted People

visualdisabilities.wixsite.com/icahome/

Commission Activities

The publishing arm of the Metropolitan Technological University of Chile (UTEM) has accepted a proposal to publish a book *Teaching and Learning About Space Through Touch: Methodological guidance* by Teresa Barrientos, Victor Huentelmu and Alejandra Coll. The book is now in the final revision process and will be published under the auspices of the International Cartographic Association (ICA) and the Pan American Institute for Geography and History (PAIGH/OAS) in both Spanish and English.

The ICA Commission on Maps and Graphics for Blind and Partially Sighted People has recently published and distributed its third newsletter. Unlike the first two, this newsletter includes articles and news submitted by contributors from various countries. It has been

distributed to the Commission's contact list (if you would like a copy to be sent to you via e-mail, please contact the newsletter editor Edwin Hunt – rrii@igm.cl).

Alejandra Coll Escanilla and Edwin Hunt | Chair / Technical Secretary | ICA Commission on Maps and Graphics for Blind and Partially Sighted People | *Chile* ■

Planetary Cartography

planetcarto.wordpress.com/

Pluto and Charon Mapped for Children

The new map showing the *New Horizons* spacecraft encounter hemispheres of Pluto and Charon is the result of a cooperation between the worlds of planetary science, cartography and arts. It is the 7th map in the series of multilingual maps of planets and moons designed for children. The map shows the geology of the surface together with characters taken from the informal nomenclature.

The map of Pluto, named after the god of the underworld, and Charon, named after the ferryman between the worlds of the living and the dead, has the theme of the Halloween. A feature of this map compared to scientific maps is that while keeping cartographic accuracy, it links arts and science, and visualizes features in a way that is easier to interpret for non-scientists.

The map premiered at the American Geophysical Union Fall Meeting in San Francisco 12-16 December 2016 (agu.confex.com/agu/fm16/meetingapp.cgi/Paper/134228). It is a joint effort of graphic artist Adrienn Gyöngyösi

and scientists working at NASA and SETI Institute (Henrik Hargitai, editor; and Ross Beyer who contributed description of Pluto). This nonprofit project is supported by the International Cartographic Association.

The map is free to download from childrensmaps.wordpress.com/.

Henrik Hargitai | Chair | ICA Commission on Planetary Cartography | *Hungary* ■

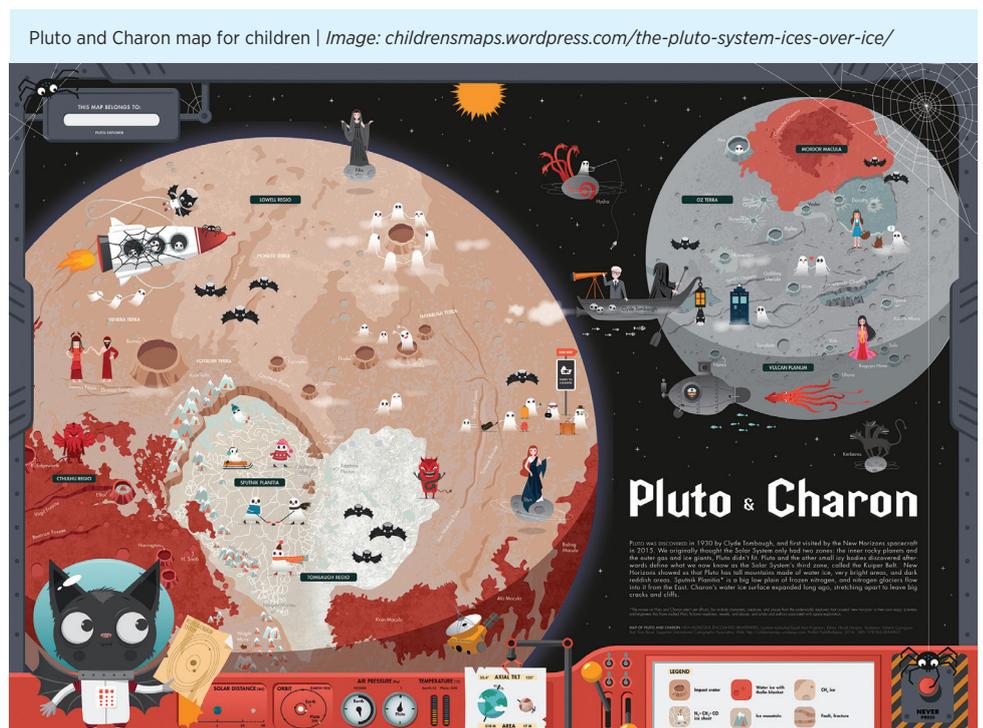
Topographic Mapping

topo.icaci.org/

Commission Activities

We have recently been actively engaging with producers of topographic mapping to explore the role of the Commission as a conduit for research. Meetings took place over the summer at the Bundesamt für Kartographie and Geodäsie (Frankfurt, Germany), Institut national de l'information géographique et forestière (Paris, France) and the University of Ghent (Belgium) to gain new insights into the issues faced by national mapping agencies, especially how the role of emerging research methodologies and techniques (such as eye tracking) can be a useful tool for developing existing and new products. We are therefore identifying a series of relevant themes to establish a research agenda that focuses on best practice and are developing plans for the publication of a journal special issue.

We are also continuing to build the resources section of the Commission's website, which now includes a bibliography of some 700 texts relating to topographic mapping, and plan > 14



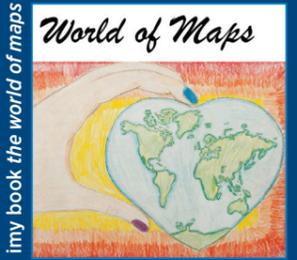
international cartographic **association** cartographique internationale
international map year around the world
 summary 2014-2016



lászló in svalbard



małgorzata in wrocław

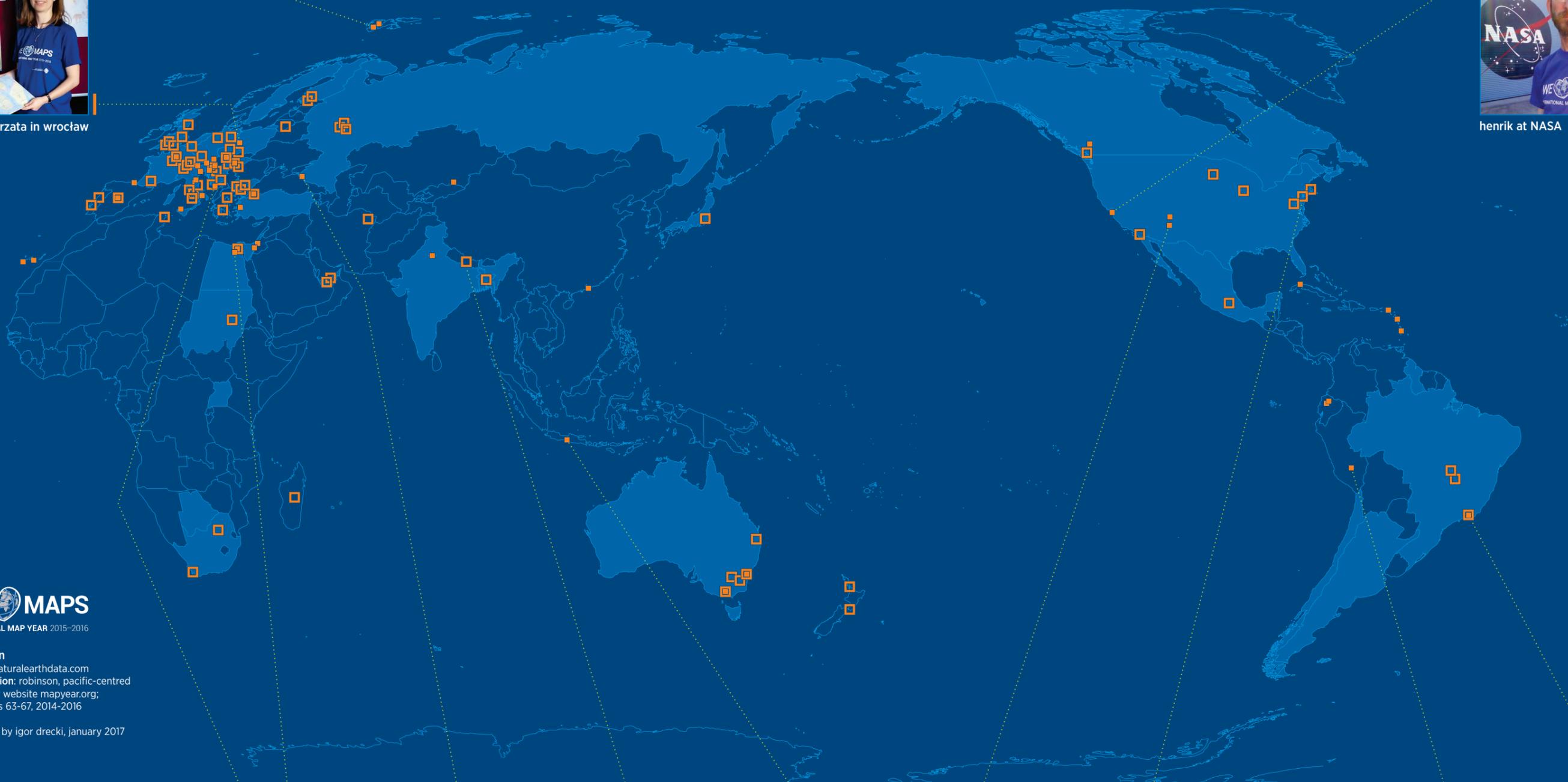


imy book the world of maps



henrik at NASA

■ imy participating country
 □ imy event(s)
 ■ imy photo post



WE MAPS
 INTERNATIONAL MAP YEAR 2015-2016

information
 map data: naturalearthdata.com
 map projection: robinson, pacific-centred
 sources: imy website mapyear.org;
 ica news, nos 63-67, 2014-2016

cartography by igor drecki, january 2017

dušan in dubrovnik



mostafa in cairo



dmitriy by gelendzhik bay



imy in nepal



ferjan in magelang



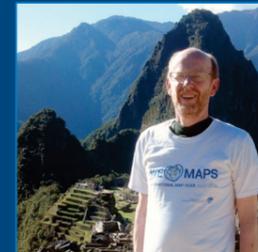
mátyás at painted desert



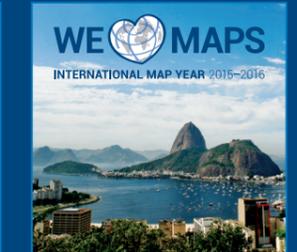
imy at un



david in machu picchu



imy inauguration in rio de janeiro



to have our online glossary and FAQ completed soon. Our aspiration is to facilitate access for research and networking and provide a global reference point for information on the producers of topographic mapping, including their contact information, history, and their products. Please contact us via the website if you would like to assist with gathering information for this valuable resource.

The findings of a pilot project to investigate cultural differences to symbol design and evaluation were presented at this year's Annual Meeting of the Association of American Geographers, which was held in San Francisco, California, 29 March – 2 April 2016. This took place within series of sessions organized by the ICA Commissions on Cognitive Visualization, on Visual Analytics and on Commission on Use, User, and Usability Issues. The research, conducted by Alex Kent and Jari Korpi, compared the original designs of a series of nine point symbols created by participants from three countries (Finland, Malta, and the UK) and how these were judged within each cohort. The authors are planning to publish these findings and to make the instructions for this simple exercise available for download from the Commission website so that it can be run in different countries and the results analysed and shared.

Dr Alex Kent, was invited to chair a session at the 10th Mountain Cartography workshop near Berchtesgaden in April 2016, organized by the ICA Commission on Mountain Cartography. He also chaired a session at the 6th International Symposium on the History of Cartography at Dubrovnik in October 2016.

The Commission on Topographic Mapping took the lead in the successful creation of a 'cartographic poster' for UN Sustainable Development Goal No 1 – *End poverty in all its forms everywhere*, working with the Commission on Toponymy. The poster was exhibited at the United Nations Headquarters in New York in August 2016 as part of the wider series produced by the ICA Commissions and utilized data from Rio de Janeiro to illustrate how maps can help us to understand problems at different local, regional and global scales.

The joint British Cartographic Society (BCS) and Society of Cartographers (SoC) conference *Mapping at the Edge* took place in Cheltenham, England in September 2016. As BCS President, Alex Kent opened the conference (with SoC Chair Steve Chilton). The programme incorporated aspects of topographic mapping, including a presentation by Ordnance Survey (UK) on their recent re-branding. We are planning to incorporate a session on topographic mapping at the next joint BCS/SoC conference in Durham in 2017. In addition, a series of research seminars were taking place at Canterbury Christ Church University (topics range from news media mapping to Soviet city plans), which concluded with three public

lectures in autumn. On 3 December 2016, we co-hosted a short conference *Visualising life and landscapes: From topographic maps to habitat dioramas* at the University.

Future Plans

Looking further ahead, we are working with the Commission on the History of Cartography to hold a joint conference *Colonial Mapping Beyond Europe* in 2017 and towards a pre-ICC 2017 workshop *Maps and Emotions* in Washington, D.C., organized jointly with the Commissions on Cognitive Issues in Geographic Information Visualization, and Art and Cartography. 2017 will see the publication of two new volumes associated with topographic mapping and the activities of our Commission:

- *The Routledge Handbook of Mapping and Cartography*, edited by Alex Kent and Peter Vujakovic, includes over 40 chapters by authors drawn from the ICA Commissions and beyond
- *Red Atlas: How the USSR Secretly Mapped the World* by John Davies and Alex Kent, provides the first comprehensive guide in English to Soviet topographic mapping.

Alexander Kent | Chair | ICA Commission on Topographic Mapping | *United Kingdom* ■

Use, User and Usability Issues

use.icaci.org/

Workshop in Albena, Bulgaria

A new edition of our Training Workshop on *Designing and Conducting User Studies* was

held on 15 June 2016, in conjunction with the 6th International Conference on Cartography and GIS in Albena, Bulgaria. The workshop, attended by about 17 participants with different levels of experience on user studies, was indeed an interactive one, with a lot of input from the audience itself, including discussions on setting up user experiments using a combination of qualitative and quantitative methods, taking part in eye tracking exercises, thinking aloud or combined study, and sharing experiences.

Enhancing our Digital Presence

Our Commission extended its digital presence on the Internet by:

- A brand new, responsive website, which is more user friendly on mobile devices. It includes the same information as on the previous website (e.g. the bibliography), but with room for extensions on future projects – see use.icaci.org/.
- A Twitter account, for short fast updates (deadline reminders, pointing out interesting events or presentations, etc.) – [@ICA_usability](https://twitter.com/ICA_usability)
- A SlideShare account, where you can find all presentations from the Commission workshops, meetings and events, and from other events linked with the Commissions topics – visit www.slideshare.net/UUUIICA/. The slides from our latest Training Workshop in Albena are already available.

If you are interested in the work of our Commission, please send an email to use@icaci.org and you will be added to the mailing list to receive up-to-date information.

Kristien Ooms | Chair | ICA Commission on Use, User and Usability Issues | *Belgium* ■

(anticlockwise from top left) Impression of the interactive modules during the Training Workshop held in Albena, Bulgaria; new Commission website | *Photography Lieselot Lapon and Kristien Ooms*





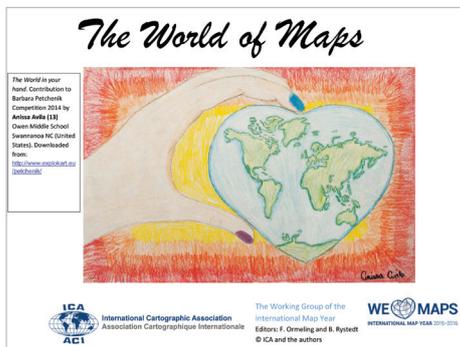
Various language versions of the IMY logo *We love maps*; arrangement inspired by a poster produced by the Italian Geological Society (mapyear.org/we-love-geological-maps/) | IMY logo design by Manuela Schmidt

International Map Year

mapyear.org/

Working Group Activities

International Map Year (IMY) is coming to a close. Over the last 18 months, some 40 countries have been involved in arranging National Map Days and other types of national events in celebration of IMY. The Executive Committee of the International Cartographic Association (ICA) and its IMY Working Group are now working to determine whether the IMY concept could be continued with an annual Map Day. Because International GIS Day is held every year in November, it is possible that a suitable month for an International Map Day could be April or May, about six months apart. A preliminary decision whether and when to declare such an International Map Day may be made by the Executive Committee in July 2017 at the International Cartographic Conference (ICC) in Washington D.C., USA, to be followed by a final decision by the ICA General Assembly to be held in Tokyo in conjunction with ICC 2019.



In the meantime, the IMY book *The World of Maps*, will be extended with a chapter on Geological Maps to be written by Italian authors and based on a presentation at the Italian Map Day in September 2016, which concentrated on geological maps. The book has already been translated from English to French, Spanish, Italian, Portuguese and Hungarian, and there are now several translation teams working in China, Germany/Switzerland, and United Arab Emirates. The IMY Working Group is grateful to

the writers of the various chapters of *The World of Maps* and to the book's many translation teams.

The IMY Working Group is in the process of producing a report on the IMY activities held worldwide. An abstract of a paper, titled *Outcomes of the International Map Year* has been submitted for presentation at ICC 2017. The report is also being considered for publication in the ICA's *International Journal of Cartography*.

The IMY Working Group is also indebted to Manuela Schmidt for acting as webmaster of the IMY website, for continually updating the website with the latest news and events, and for design of the IMY logo. Members of the ICA Executive Committee, ICA Commission Chairs, as well as United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) and the Joint Board of Geographic Information Societies (JBGIS) have also been very supportive, in particular by producing the posters of the UN sustainability goals. In all, IMY has been a great success and we congratulate everyone for their participation in this worldwide effort to celebrate maps and their unique role in our world.

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

Marine Cartography

Revision of Nautical Cartography Standards of Competence

Lysandros Tsoulos and Ron Furness, representing ICA, attended a working group meeting of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers held in London during September 2016 at the offices of both the Royal Institute of Chartered Surveyors and the Port of London Authority.

The standards for nautical cartographers are known as International Hydrographic Organization (IHO) Special Publication S-8 and can be downloaded from the IHO website (www.iho.org).

[int/iho_pubs/draft_pubs/S-8/S-8B_draft_Ed1.0.0.pdf](http://www.iho.org/pubs/draft_pubs/S-8/S-8B_draft_Ed1.0.0.pdf)). This is the Category B level, Draft Edition 1.0.0; Category A will become available within a few months from the same site.

The intention of the International Board is that a **Category A** qualified individual, with appropriate experience, would be a senior professional in their chosen area of activity (government, industry, academia). **Category B** qualified individuals, with appropriate experience, would be technical professionals preparing and delivering products and services to meet specifications and outcomes.

Comments on the drafts are welcome, but for the Category B draft edition 1.0.0 of S-8B, the closing date has already passed (31 December 2016). However, the Board would appreciate comments on Category A draft edition of S-8A as soon as possible, and ideally prior to its meeting in New Zealand in March 2017.

Subject to the subsequent approval of a new edition of S-8A and S-8B in 2017, institutions seeking recognition of their nautical cartography programmes



by the IBSC in 2018 (at the IBSC41 meeting) will be expected to submit their programmes based on the new Standards S-8A and S-8B. Comments can be sent to rfurness@ozemail.com.au for forwarding to the

Secretariat of the International Board.

The attention of the Working Group on Marine Cartography now turns towards ICC 2017 in Washington D.C. It is planned to hold a WG meeting during the ICC of interested ICA members in order to discuss the viability of the WG, its suggested work program and future drivers. A key discussion point will be how best to continue the excellent relationship between ICA and IHO. Interested persons are advised that the WG presently works by correspondence.

Ron Furness and **Lysandros Tsoulos** | Chair / Vice Chair | ICA Working Group on Marine Cartography | Australia / Greece ■

ICC 2017 Pre-conference Workshops

A number of workshops have been arranged by the ICA Commissions and Working Groups. These will take place before the ICC 2017 at either Marriott Wardman Park Hotel or George Washington University, Washington, D.C. (registration required). For a full list of available workshops, please refer to:

icc2017.org/preconference-workshops/



Participants of the Bulgarian National Day celebration; Prof Temenoujka Bandrova, President of Bulgarian Cartographic Association (BCA)(centre front), and recipients of BCA certificates Rumyana Dzhibova with her hand-embroidered map (right) and Ivaylo Lisichkov | Photography Stefan Bonchev

Bulgarian National Map Day Celebrates IMY

The Bulgarian National Map Day was held on 7 November 2016 contributing to the world-wide International Map Year 2015-2016 celebrations. It was organized by the Bulgarian Cartographic Association (BCA), Sofia University and National Institute of Geophysics, Geodesy and Geography.

The event featured a seminar on current topics in cartography and mapping and showcased a range of Bulgarian cartographic products. It provided an opportunity for Temenoujka Bandrova, BCA President, to present certificates and prizes to Rumyana Dzhibova from Banichan village and Ivaylo Lisichkov, representative of Dryanovo Municipality, for their contribution to Bulgarian cartography.

Hand-embroidered Map Dedicated to IMY

Ms Rumyana Dzhibova lives in the village of Banichan, Bulgaria. She is a Project Manager of the *The New Old Saying: The cultural symbols of the Banichan village* project supported by the National Culture Fund program *Folklore*. One of its activities is related to the creation of a map of Banichan village featuring traditional cultural symbols and motifs.



The hand-embroidered map is 70 x 100 cm in size and covers the area of Banichan village (13.1 km²), located in the majestic Pirin and Rhodope Mountains. The map contains 23 symbols and 23 unique embroidery relics of Banichan's woman dresses, which are

reproduced by approximately 900,000 stitches made from about 5,000 m of natural cotton thread. It took six months to embroider the map by three people aged 11, 50 and 55.

Temenoujka Bandrova | Bulgarian Cartographic Association | Bulgaria ■

Bulgarian Cartography in the IMY Exhibition

On 17 November 2016, Dimitar Glavchev, Vice Chair of the Bulgarian National Assembly, Petar Kanev, Chair of the Committee on Economic Policy and Tourism, and Temenoujka Bandrova, President of the Bulgarian Cartographic Association (BCA) opened an exhibition *Bulgarian Cartography in the International Map Year* in the Bulgarian National Assembly building. The exhibition, one of the International Map Year 2015-2016 events organised in Bulgaria (see *ICA News*, No 64, June 2015, p 21 and No 66, June 2016, pp 16-17 for reports on other events), included examples of old maps, military topographic maps, thematic, tourist, educational maps and atlases, panoramic maps derived from 3D models and cartographic navigation products.

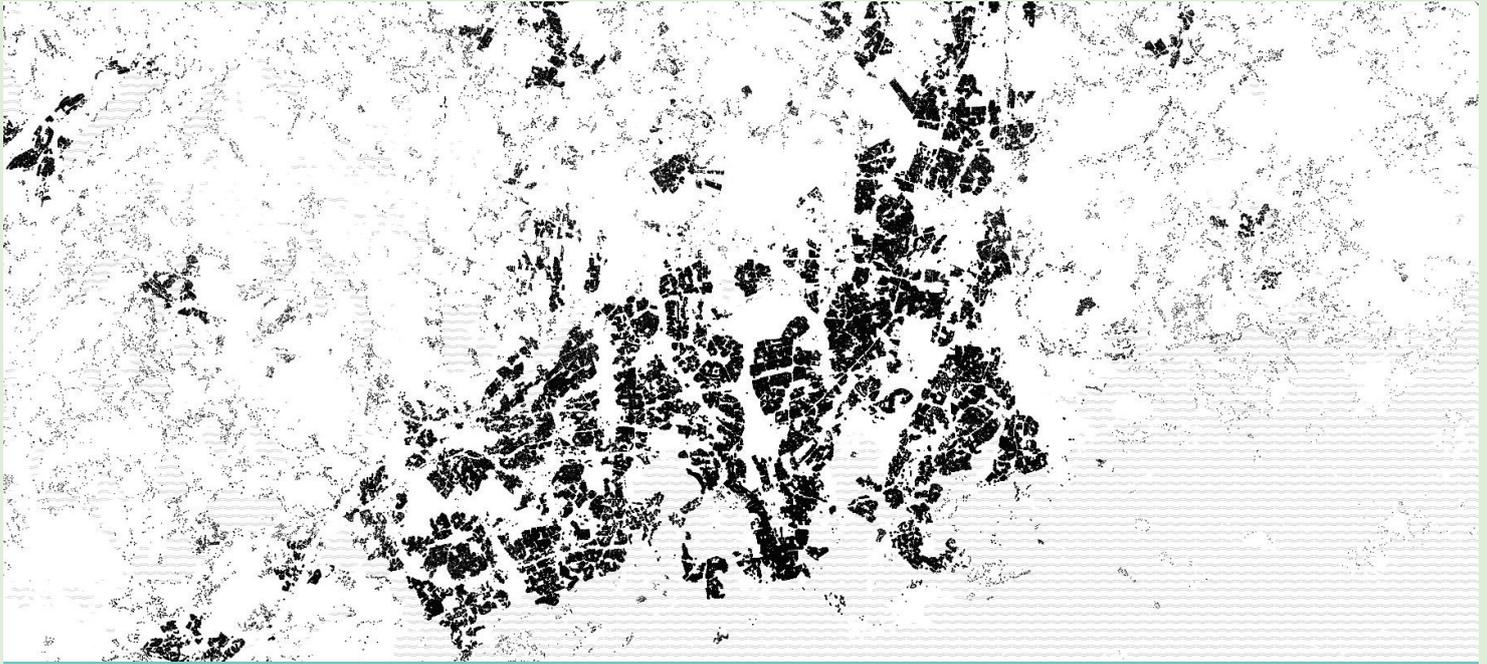
The exhibition opening was attended by representatives of the Bulgarian Cartographic Association corporate members, including DataMap-Europe, Cartographic Studio DavGEO, KartGeo, KartProekt, International Commercial and Cultural Centre GEOPAN and HERE Europe, as well as the Bulgarian Military Geographic Service and the Diplomatic Institute at the Ministry of Foreign Affairs.

The event provided an opportunity for Temenoujka Bandrova, BCA President, to award Mr Petar Kanev with a special diploma for his contribution to the development of Bulgarian cartography.

Temenoujka Bandrova | Bulgarian Cartographic Association | Bulgaria ■

Finnish Contribution to IMY

The Finnish Cartographic Society contributed to the International Map Year 2015-2016 by announcing the *Map 2016* challenge. The idea was to create a web map application or a static web map on any topic. In addition, the National Land Survey of Finland and Helsinki Regional Transport sponsored prizes for entries that utilized their open data. The challenge included two categories: one for students and an open



Finns on a Map project | Image courtesy of Teemu Saloriutta

category. A total of 24 contributors participated in the challenge submitting a wide range of interesting maps. The jury awarded six maps at the annual *GIS Expo* in Helsinki on 8 November 2016.

The winning entry *Finns on a Map* by Mr Topi Tjukanov represents every inhabitant of Finland with a dot. This interactive map was created by drawing a set of random dots within building polygons based on the population of each postal code area, thus all postal code areas have as many dots as there are inhabitants. The map is accessible from columbo.navici.cloud/.

Other awarded maps visualized soil dynamics, the nature of Japan, thunderstorm data, bus lines in Helsinki region and Finnish roads. All awarded maps will represent Finland at the International Cartographic Exhibition during the International Cartographic Conference in Washington D.C. in July 2017.

Teemu Saloriutta | Finnish Cartographic Society | Finland ■

IMY in Switzerland



The Swiss Society of Cartography (SSC), founded in 1969, brings together a wide community of map producers, map users, map researchers, map historians, map collectors and map enthusiasts, who simply love maps as means of communication and cannot live without them. Switzerland is a country of maps and almost everyone calls the *National Map* – the Swiss national topographic map – one's own and uses it for outdoor activities, such as hiking, climbing, ski mountaineering or cycling.

It was beyond question whether the SSC would participate in the International Map Year (IMY) when we first received the news from the ICA. As early as in 2014, the Society nominated SSC's long-time secretary Stefan Räber as a contact person, who would coordinate all activities throughout IMY 2015-2016. Already from the beginning, it was clear that the SSC, which is purely based on the voluntary commitment of its members, could not organize a wide range of events on its own. The idea was rather to create a national (IMY) umbrella, under which SSC's institutional members would organize and host events and activities that match their interests and capabilities. This concept proved very successful.

From August 2015 until December 2016, the SSC and our institutional members, amongst them swisstopo, Esri Switzerland, ETH Zurich, Zentralbibliothek Zurich, Fachhochschule Nordwestschweiz, Gletschergarten Lucerne and others, organized a total of 22 map events around Switzerland and prepared several publications, which promoted cartography and cartographic products at its best. The Society organized two symposia at the beginning and at the end of the International Map Year, one of which was also promoted as the *National Map Day* (29 October 2016). More than 200 participants came to these events. During 2015, the Society's biennial cartographic awards *Prix Carto* were presented. For the first time, and especially for the IMY, a new student category was introduced and three out of the five prizes were awarded to young cartographers, who have just started their career in the field. The well received award ceremony took place at the IMY symposium in October 2015.

The IMY *Map Blog* organized throughout the year by the SSC and the Zentralbibliothek Zurich attracted a lot of attention amongst the public. Every week of the IMY 2015-2016 – 70 in total – a Swiss map from various map collections, or recently produced by one of our members, was featured on a dedicated website as the *Map of the Week*, accompanied by a short but enthralling explanation. The *Map Blog* will later be published as a printed book. However, probably the most successful event organized during the International Map Year was the *GeoBeer* event. It was hosted by the ETH Zurich and attracted more than 150 attendees participating in numerous cartographic activities and presentations (kartografie.ch/veranstaltungen/archiv-veranstaltungen/2016-geobeer/). The SSC organized a team for of the biggest running event in Switzerland. The *Map Year Runners*, a team of 14 cartographers, run a total of 116 km in and around Zurich.

Finally, to complete the IMY 'properly' and celebrate our genuine love for maps, the SSC has launched an IMY wine(!) at the Swiss *National Map Day* in October 2016. This

The IMY wine launched by SSC



> 18



An IMY symposium on 3D Cartography in MuttENZ, organized by the Swiss Society of Cartography in November 2015 | Photography Thomas Maag

fine red wine from the Mont Vully region is strictly limited to 50 numbered bottles and will surely find its place amongst map and wine lovers. The IMY festivities in Switzerland, which were surely a huge success, come to an end with one last event in the heart of Zurich – a *Map Stand* at one of the biggest Christmas markets nationwide. Over 70 different cartographic products were on display, available for purchase or simply given away, all under the banner of *WE LOVE MAPS*. There can't be a better place to meet thousands of people in a cosy atmosphere and promote the cause of cartography! See our website for a list of all IMY activities in Switzerland and the *Map Blog* – www.cartography.ch/imy/.

Thomas Schulz | Swiss Society of Cartography | Switzerland ■

United Arab Emirates Celebrates IMY

United Arab Emirates University (UAEU) supports and contributes to celebrating International Map Year 2015-2016 in United Arab Emirates. Here are the events and contributions undertaken in the last few months:

NACIS 2016 – Dr Naeema Alhosani, National Coordinator for IMY in the United Arab Emirates (UAE), participated in the annual meeting of the North American Cartographic Information Society in Colorado Springs, Colorado, USA, 19-22 October 2016. The meeting celebrated IMY 2015-2016 and Dr Alhosani took an opportunity to distribute several IMY gifts to the attendees.

International Map Year Workshop – on 20 November 2016, a group of students organized the *IMY Workshop* at the UAEU hostel. The event provided information about the history of cartography, types of maps and map applications. In addition, students distributed the IMY 2015-2016 flyer to the Workshop participants together with some snacks and gifts.

Make Map Art Workshop – on 21 November 2016, Dr Alhosani delivered a workshop entitled *Make Map Art* to UAEU students. Workshop participants enjoyed the workshop and benefited from the program by designing a map!

Naeema Alhosani | National Coordinator for International Map Year | United Arab Emirates ■

(from left) NACIS 2016 attendee enjoys an IMY gift; various IMY gifts available to NACIS 2016 delegates; participants of the *IMY Workshop*; examples of maps and artworks created at the *Make Map Art Workshop* held at the United Arab Emirates University | Photographs courtesy of Naeema Alhosani



6th International Conference on Cartography and GIS

The 6th International Conference on Cartography and GIS organized by the Bulgarian Cartographic Association and the University of Architecture, Civil Engineering and Geodesy (UACEG), Sofia was dedicated to the International Map Year 2015-2016. The conference was held in Albena, Bulgaria between 13-17 June 2016. The aim of the conference was to share and exchange knowledge and information about the latest achievements in cartography and GIS that support ever increasing demands for analysis and visualization of geospatial data in the area of science, economy, ecology and crises management, particularly in the Balkan region, but also across Europe and globally.

The main conference themes were:

- Cartographic Concepts in BigData Environment
- GIS Technologies and Related Disciplines
- Web Cartography and Digital Atlases
- Map Design and Production
- Cartographic Visualization
- Volunteer Geographic Information
- 3D Cartographic Modelling
- Cartography and GIS in Education
- Geospatial Analysis and Data Mining
- Contemporary Problems Using Geodetic Coordinate Systems and Map Projections
- Geospatial Data Acquisition by Remote Sensing Technologies for Cartographic Purposes
- GIS for Geology and Natural Sciences

The conference was complemented by a two-day seminar on Early Warning and Disaster/Crisis Management organized by Prof Milan Konečný, Chair of the ICA Commission on Cartography in Early Warning and Crises Management, under the auspices of the Czech ambassador to Bulgaria His Excellency Mr

Dušan Štrauch and with support of the Masaryk University in Brno, Czech Republic.

Bulgarian ministries and government institutions supported the conference, which highlighted the importance of collaboration and cooperation in the field of Earth sciences at the highest level. The seminar mentioned above was an example of such cooperation by the European Union states of Bulgaria and Czech Republic.

The event attracted sponsorship of many leading companies in the field of geoinformatics and cartography, such as HERE, DataMap-Europe and GIS Sofia, while GeoConnexion, Coordinates and Bulgarian Geomedia provided media coverage.

The following keynotes were presented:

- *ICA's Modern Cartography* by Prof László Zentai, ICA Secretary General and Treasurer, Hungary
- *Cartography and Its Connecting Role* by Prof Liqiu Meng, Technical University of Munich (TUM), Germany
- *HERE Maps and Mobility of the Future* by Aleksander Todorov, HERE Ltd, Sofia, Bulgaria

The conference was endorsed by the International Cartographic Association (ICA) and attended by Prof László Zentai and Dr Lynn Usery, ICA Vice President. Several ICA Commission chairs and vice chairs also attended – Prof Milan Konečný, Prof Miljenko Lapaine (Map Projections), Dr Kristien Ooms (Use, User and Usability Issues), and Prof Jesús Nuñez (Cartography and Children). In total, 150 participants from more than 40 countries attended the conference.

The Opening Ceremony started with greetings from Prof Milan Konečný, Prof László Zentai, Prof Slaveyko Gospodinov, Vice Rector of UACEG, and Alexander Todorov. Mrs Zdenka Boeвоva, Honorary Consul of the Czech Republic, was in attendance.

A children's folk dance group *Balik* from Balchik city greeted the participants with wonderful performance that attracted a huge

applause. At the conclusion of the opening session, Prof László Zentai presented a diploma and a prize to five year old Alexandra Garkova for her winning entry to the Barbara Petchenik Children's World Map Competition held during the 27th International Cartographic Conference in Rio de Janeiro, Brazil.

Traditionally, several ICA Commissions held their meetings during the conference – Cartography and Children, Cartography in Early Warning and Crisis Management, Map Projections, and Commission on Use, User and Usability Issues.

A total of 87 papers were presented in 17 oral sessions and 30 posters in five dedicated sessions. The papers are published in the conference Proceedings available from iccgis2016.cartography-gis.com/. The conference programme also featured an interactive workshop on *Designing and Conducting User Studies* organized by Dr Kristien Ooms and available particularly to young participants.

During the conference, the international jury consisting of Lyubka Pashova (Bulgaria), Corné van Elzakker (the Netherlands), and Jesús Nuñez (Hungary), awarded Jakub Havlicek from the Czech Republic with the Young Scientist Award. The jury presented another award to a young prosperous researcher Shun Ikezawa from Japan.

Besides the traditional trips to Balchik and Kaliakra, two social events were organized – a Welcome Reception, where participants had an opportunity to establish new contacts and exchange ideas, and a Gala Dinner. Prof Ivan Markov, Rector of UACEG, greeted the dinner participants, followed by a rich folklore programme of the Bulgarian traditions and culture. Prof Temenoujka Bandrova, President of the Bulgarian Cartographic Association presented a special award to Mrs Tanya Mihaylova, Director of the Diplomatic Institute at the Ministry of Foreign Affairs, for her contribution to the development of Bulgarian cartography.

> 20

(clockwise from left) Participants of the 6th International Conference on Cartography and GIS in Albena, Bulgaria; Alexandra Garkova receives an award from Prof László Zentai; children's folk dance group *Balik*; members of the ICA Commission on Use, User and Usability Issues | Photographs courtesy of Temenoujka Bandrova



The conference participants had an opportunity to visit a newly built complex for preventing and combating oil spills at the Naval Academy in Varna. They were greeted by Captain Assoc Prof Kalin Kalinov Spasov and Captain Assoc Prof Miroslav Tsvetkov. The history and traditions of the school were presented together with a visit to the planetarium and other scientific and technical sections of the Naval Academy.

Temenoujka Bandrova and Silvia Marinova | Bulgarian Cartographic Association | Bulgaria ■

GeoCart'2016 Conference

Unfolding the Map

GeoCart'2016 – what a conference! It was truly an event not to be missed for any person engaged in cartography, mapping and GIScience, as well as in the map industry, curatorship and research.

The biggest dilemma I had at the conference was which paper session to attend, who to talk to during short breaks, which map displayed at the exhibition was the most engaging...

Fortunately, plenary sessions presented no such dilemma – nice!

My favourite talk was... well, there were a few. The story of Darwin (or Palmerston), masterfully told by Trevor Menzies, literally transported me back in time to witness its early surveys, development, tragedies and resurrections – all

in a richly illustrated and superbly researched narrative. Along the same theme, Shannon McColley opened up the wonderful world of New Zealand government maps through the lens of a comprehensive digitisation effort – a collaboration of several agencies that truly care for New Zealand cartographic heritage – National Library, New Zealand Defence Force, Land Information New Zealand (LINZ), School of Surveying at the University of Otago, and the University of Auckland Library. Her mix of technical information and her obvious passion for the beauty and usability of these maps was informative and simply infectious.

Ken Field, the man in the map jacket, not only provided a humorous side to map making and experimentation (by showing, for example, images of David Bowie on Mars), but delivered a deeper message concerning modern cartography – one affected by fashion and (good) design. His superb talk left us all craving more – good mapping, engaging visuals and Bowie's music! Another aspect of modern cartography was covered by Serena Coetzee in her keynote dedicated to standards in cartography and SDI (I have to confess – not a hot topic in my books). Her engaging talk, full of down to earth examples, made me realise that standards are quiet achievers – often completely invisible, that allow us to share, collaborate, understand and enjoy the richness of geospatial data that underpins whole nations, their people, infrastructure, defence, science... and addresses. Incredible!

Looking at our own back yard, Brent Robertson shared with us the latest and

greatest in New Zealand topographic mapping. LINZ's work concerned with the capture and representation of buildings in rural and urban environments is an example of our national mapping agency's constant push for excellence. Implementation of the cutting edge image extraction and automation processes resulting in improved positional accuracy of features is a testimony to LINZ keeping an ear to the ground and actively responding to the needs of our modern nation. As a follow up, Graeme Jupp painted before us the drama of the 2011 Christchurch earthquake using compelling images of pre- and post-event topographic maps of the city. Once beautifully landscaped residential areas along the Avon River turned into desolated spaces with empty sections and overgrown streets. The story behind the symbolisation of these areas to preserve the tragic truth about what has happened there was universally appreciated.

The social events were simply superb, with a conference dinner at Dockside Restaurant being an unforgettable experience. The icing on the cake was no doubt the award of the New Zealand Cartographic Society Honorary Membership to Dr Kenneth Field, celebrating his unparalleled dedication to us, New Zealand cartography and in particular map design, which he so keenly and generously popularises through a string of highly regarded and appreciated Map Design Workshops – thank you Ken! Our sincere thanks also go to Michelle Knight, Conference Director, and her team for their dedication, energy and drive to see things through and deliver such a wonderful event.

GeoCart'2016 in pictures: (top row from left) one of the plenary sessions; Serena Coetzee; Chris Kinzett; Ice Breaker reception; (middle row) Julia Fettes; Tony Moore; Igor Drecki and Ken Field; Geoff O'Malley; (bottom row) Aaron Jordan; Graeme Jupp; dinner at Dockside restaurant; Menno-Jan Kraak; Amy Griffin | Photography Marney Brosnan



And for the record... The 8th National Cartographic Conference GeoCart'2016 and the 4th ICA Regional Symposium on Cartography for Australasia and Oceania were jointly held at the National Library of New Zealand in Wellington, 31 August – 2 September 2016. The conference attracted 107 delegates from Australia, Austria, the Netherlands, Russia, South Africa, United States and New Zealand. It was organised jointly by the New Zealand Cartographic Society (NZCS), Mapping Sciences Institute Australia and the National Library of New Zealand, and endorsed by the International Cartographic Association. The event incorporated an InterCarto/InterGIS session on *Sustainable Mapping*. LINZ, the ICA affiliate member, was the main sponsor of the conference, with Eagle Technology Group Ltd and HERE providing additional sponsorship.

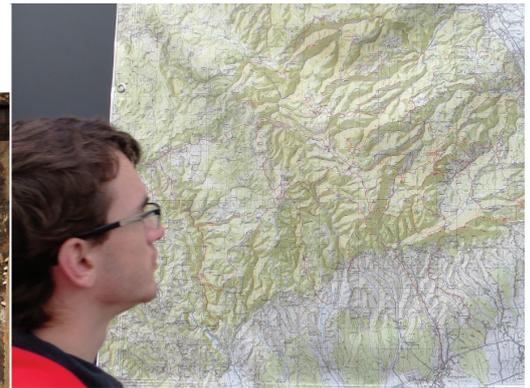
GeoCart'2016 delivered 51 keynote, paper and poster presentations across three days. The accompanying National Cartographic Exhibition provided a sampling of the New Zealand and international cartography, with the best national maps being subject to the NZCS Map Awards 2016. The winning entries and a selection of other entries will represent New Zealand at the International Cartographic Exhibition in Washington D.C., USA. The programme also included GeoExpo'2016 featuring engaging displays by a number of industry players.

The Conference Proceedings are being published as the third volume of CartoPRESS Occasional Publication series (ISBN 978-0-473-38351-0 / ISSN 2382-0381) and will be available in early 2017. A number of video recordings from GeoCart'2016 produced by Marney Brosnan are available from www.youtube.com/playlist?list=PLK1Di6nDny3t508IX_JUpXkwyB66ng6yk. Bring on GeoCart'2018!

Igor Drecki | New Zealand Cartographic Society | *New Zealand* ■

12th Conference on Cartography and Geoinformation

The Croatian Cartographic Society and the Faculty of Geodesy, University of Zagreb, organized the 12th Conference on Cartography and Geoinformation in Zagreb, 16–18 November 2016, as part of the World GIS Day celebration. By organizing this conference in the International Map Year (IMY) 2015–2016, we wanted to contribute to the development of geoinformatics, cartography, geography and associated fields with special emphasis on GIS applications. The conference covered a wide range of themes, interesting lectures and contemporary research. The conference was endorsed by the International Cartographic Association (ICA),



(clockwise from top left) Conference banner; map showing hiking tracks in the Samobor highlands; Saint Barbara mine in Rude near Samobor, Croatia | Photographs courtesy of Miljenko Lapaine

the Croatian Academy of Engineering (HATZ), the University of Zagreb and the University of Zadar. 70 participants attended the three-day conference.

The first day of the conference consisted of lectures held in the Great Hall of the Miroslav Krleža Institute of Lexicography in Zagreb. Prof Joep Crompvoets was the keynote speaker, delivering a lecture on *Governance for a Smart World*. Other lectures covered a wide range of topics, such as geodiversity and geoheritage, GIS in education at universities and high schools, mapping vegetation cover, forest ecosystems, geomorphological research for the needs of the proclamation, expansion and management of protected areas, developing speleological geodatabases, and presenting migrations on thematic maps.

The second day continued in the Council Hall of the Faculty of Geodesy, University of Zagreb with more lectures on different applications of GIS. Afterwards, a Round Table was organized to discuss plans for various celebrations in 2017:

- 250 years since the results of the Vienna meridian survey were published (Brno–Varaždin)
- 230 years since the death of Ruđer Bošković
- 200 years of the Patent on Stable Cadastre
- 200 years since the beginning of the cadastral survey of Istria
- 170 years since the beginning of the 30-year cadastral survey of Croatia and Slavonia
- 80 years since the establishment of the Astronomic Observatory in Maksimir
- 65 years of the Croatian Geodetic Society
- 55 years of independent Faculty of Geodesy

After lunch, we visited the Croatian State Archive, which has a rich map collection including cadastral material of the Croatian State Geodetic Administration. Later on, the Open Source Geospatial Lab of the Faculty of Geodesy, the Croatian Cartographic Society and the IT-section of Student Council of the Faculty of Geodesy organized the OsmGeoWeek workshop, where participants had an opportunity to learn about and work together on humanitarian mapping project using Open-StreetMap.

A tour to Samobor highlands was organized on the last day of the conference by the Student Mountaineering Section of the Faculty of Geodesy, University of Zagreb. We visited St Barbara mine in Rude, near Samobor. Afterwards we climbed the Oštrc peak (752 m), where we took some photos and enjoyed views of the surrounding hills. We enjoyed our lunch in Veliki Dol mountain hut, where a kind lady served us a stew with gnocchi and cabbage salad, with apple strudel for dessert. We returned to Zagreb in the afternoon.

The conference Program and Abstracts were published (ISBN 978-953-95815-5-6) and made available, along with many photos, from the Croatian Cartographic Society web site www.kartografija.hr.

Miljenko Lapaine | Croatian Cartographic Society | *Croatia* ■

ICA Workshop on Modern Thematic Mapping

In November 2016, the International Cartographic Association (ICA) organized a workshop on modern thematic mapping in Georgia. This workshop was the first of its kind – offered on demand to a new ICA member nation. The hosts selected thematic mapping as the theme for the workshop to match their field of interest. The event was jointly facilitated by Menno-Jan Kraak, University of Twente, the Netherlands, and ICA President; Dali Nikolaishvili, Ivane Javakishvili Tbilisi State University, Georgia, and local representative; and Irma Kveladze, Aalborg University, Denmark, who provided ICA and local support. The program consisted of three parts:

- Introduction to the International Cartographic Association inventory
- Lectures on *How to decide which thematic map to choose?* and *The most important map types*



(from left) Workshop organisers: Irma Kveladze, Menno-Jan Kraak, Guliko Liparteliani and Dali Nikolaishvili; one of the workshop's break-out sessions | Photographs courtesy of Menno-Jan Kraak

- Breakout sessions and discussions on *Your maps and mapping environments* and *Your mapping problems*.

The workshop was attended by 70 participants including 25 students. It was well received and very much appreciated – fitting given the rich history of Georgian cartography.

Vakhushti Bagrationi (1696-1757), a Georgian historian, geographer and cartographer was one of the first to publish maps and atlases of Georgia. His first atlas dating from 1735 contained eight hand-drawn maps. At present, only four full pages survive, and they are preserved at the National Center of Manuscript of Georgia. He was responsible for two more atlases of the region. In the 19th and at the beginning of the 20th century, the surveys and mapping of Caucasus, including the territory of Georgia, was mostly done by the Russian, German and French military topographers and surveyors.

A new series of maps covering Georgia was produced in the 1930s. In this period, maps of high cartographic standard were published, thanks to Alexander Javakhishvili (1875-1973), a Georgian geographer and anthropologist, who authored and edited the maps. Under his leadership the first national atlas of Georgia was published at the beginning of the 1960s. A second edition was released in 2012.

A particular contribution to the development of theoretical issues in cartography was made by Alexander Aslanikashvili. His books

Cartography, Issues of General Theory (1968) and *Metacartography* (1974) attracted a broad international interest with translations into Russian and Japanese. He is considered as one of the co-founders of metacartosemiotics.

Cartography, both from the scientific and didactic point of view, has played an important role in the development of geographic science at Tbilisi State University and its Institute of Geography. An important contribution to this development was made by Nokoloz Beruchashvili, who was the Chair of Cartography and Geodesy (later renamed to Cartography and Geo-informatics) between 1982 and 2006. He played an important role in teaching cartography by introducing geo-information systems and organizing expeditions, scientific seminars and conferences.

The first non-governmental organization in Georgia that introduced and popularized new technologies was GINFO, established in 1994. Another was the consultancy firm GeoGraphic. Today, there is a number of small companies working in Georgia that gather, process and analyze spatial data.

In 2004, the National Agency of Public Registry was established and consequently registration systems were developed. This stimulated the need for experienced staff and technological development, and strengthened the link with tertiary institutions.

Providing access to spatial data has become one of the most important challenges in

Georgia in recent years. For this purpose, work on developing the national spatial data infrastructure (NSDI) based on European INSPIRE standards has begun and is coordinated by the National Agency of Public Registry.

At present, GIS technologies are introduced at different commercial and government establishments in Georgia, such as Institute of Geography, Institute of Geophysics, National Statistics Office, Oil Corporation, Land Management Department, Agrogeodesy, and Georgian Water Power. They are widely used in different fields, particularly in urban planning, land cadastre, environmental protection, infrastructure, real estate, military operations and other fields. Development of databases and integration of GIS technologies and cartography is undertaken to support design publishing and a wide range of cartographic products.

Dali Nikolaishvili, Guliko Liparteliani and Menno-Jan Kraak | Tbilisi State University / University of Twente | Georgia / Netherlands ■

Minecraft® on Demand – New Maps of France

Do you wish to discover France with your children? IGN France, affiliate member of the International Cartographic Association, developed a new free web service – *Minecraft® on Demand*. You have only to enter an address in France and you will obtain a *Minecraft®* map with relief, roads, buildings, forests, etc. These maps are rendered using IGN's geographic databases (available from geoportail.gouv.fr), based on a grid of 5 km by 5 km, and augmented by DTM, topographic database and orthophotographs.

The IGN's web service allows you to play *Minecraft®* game, the most popular game in the world, and build the Eiffel Tower! With *Minecraft® on Demand*, you can discover (or rediscover) France by playing with your children.

François Lecordix | IGN France | France ■

Orthophotograph of Fourvière, a district of Lyon (left), a 3D representation of the same area (centre) and its *Minecraft®* rendering | Images IGN France



calendar

april 2017

03-13: International Workshop on Crowdsourcing in National Mapping 2017

(endorsed by the ICA) | Leuven | *Belgium* | www.cs.nuim.ie/~pmooney/eurostr2017/

26-28: 12th Conference on Digital Approaches to Cartographic Heritage

(organised by the ICA Commission on Cartographic Heritage into the Digital) | Venice | *Italy* | cartography.web.auth.gr/ICA-Heritage/Venice2017/

may

03-05: Panamerican International Symposium on Toponymy (conference organised by the joint ICA/IGU Commission on Toponymy) | Rio de Janeiro | *Brazil* | pmenezes@acd.ufrj.br

03-05: Panamerican International Symposium on Toponymy (conference organised by the joint ICA/IGU Commission on Toponymy) | Rio de Janeiro | *Brazil* | pmenezes@acd.ufrj.br

june

28-30: ICA Commission on the History of Cartography Workshop (organised in cooperation with the ICA Commission on Atlases and the ICA Commission on Toponymy) | *Charting the Cosmos of Cartography: History – Names – Atlases* | Washington, D.C. | *USA* | history.icaci.org/washington-dc-2017/

01-02: ICA Commissions on Geospatial Analysis and Modeling & Location Based Services Joint Workshop | *Location-based Social Media Data and Tracking Data* | Washington, D.C. | *USA* | gam.icaci.org/symposium-2017/

july 2017

01: ICA Commission on Cartographic Heritage into the Digital Workshop (in association with the Map and Geoinformation Curators Group (MAGIC)) | *Mapping Tools for Non-Mapping Experts: Incorporating Geospatial Visualization Tools in Libraries* | Washington, D.C. | *USA* | cartography.web.auth.gr/ICA-Heritage/2015-2019/pg/ICC2017.html

01-02: ICA Commissions on Cognitive Issues in Geographic Information Visualization & Art and Cartography Joint Workshop | *Maps & Emotions* | Washington, D.C. | *USA* | icaci.org/wp-content/uploads/2016/07/2017_Emoional_Mapping_Workshop_CFP.pdf

01-02: ICA Commissions on Open Source Geospatial Technologies & SDI and Standards Joint Workshop | *Spatial Data Infrastructures, Standards, Open Source and Open Data for Geospatial (SDI-Open 2017)* | Washington, D.C. | *USA* | sdistandards.icaci.org/

02: ICA Commission on Map Projections Workshop | Washington, D.C. | *USA*

02-07: 28th International Cartographic Conference | Washington, D.C. | *USA* | www.icc2017.org

04-07: GI_Forum 2017 (organised in conjunction with AGIT 2017) | Salzburg | *Austria* | www.gi-forum.org/

ica affiliate members

Association of Polish Cartographers |

Poland | www.polishcartography.pl

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Chinese Cartographic Association (Chinese Taipei) | *Taiwan-China* | www.ccartoa.org.tw

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Dubai Municipality | *United Arab Emirates* | www.dm.gov.ae

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East View Geospatial | *United States of America* | www.geospatial.com

Attn: Kent Lee | geospatial@eastview.com

Eko-Graf Publishing House | *Poland* | www.ekograf.pl

Attn: Roman Janusiewicz | ekograf@ekograf.pl

El Servicio Aerofotogrametrico del General Juan Soler Manfredini de la Fuerza Aerea de Chile (SAF) | *Chile* | www.saf.cl

Attn: Viviana Barrientos Lardonis | viviana.barrientos@saf.cl

Esri | *United States of America* | www.esri.com

Attn: Mark Cygan | mcygan@esri.com

Geospatial Information Authority of Japan | *Japan* | www.gsi.go.jp

Attn: Secretariat of ISCGM | sec@iscgm.org

GeoTechVision Enterprise Limited | *Jamaica* | www.techvisionenterprise.com

Attn: Valrie Grant | valrie@techvisionenterprise.com

German Federal Agency for Cartography and Geodesy | *Germany* | www.bkg.bund.de

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HERE | *Germany* | www.here.com

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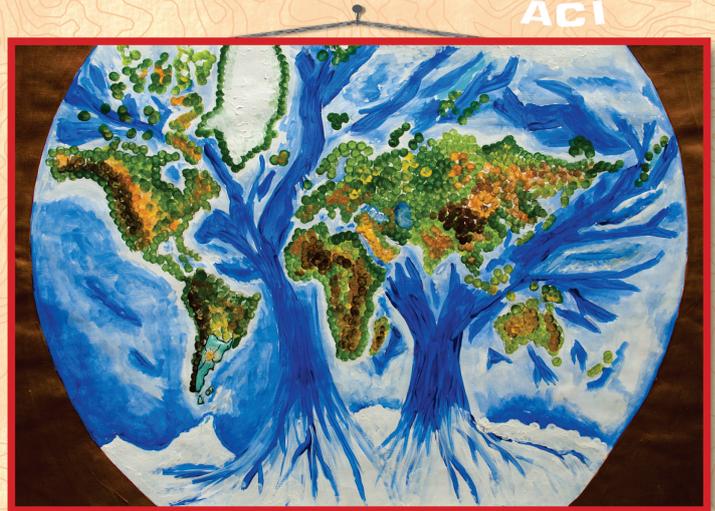
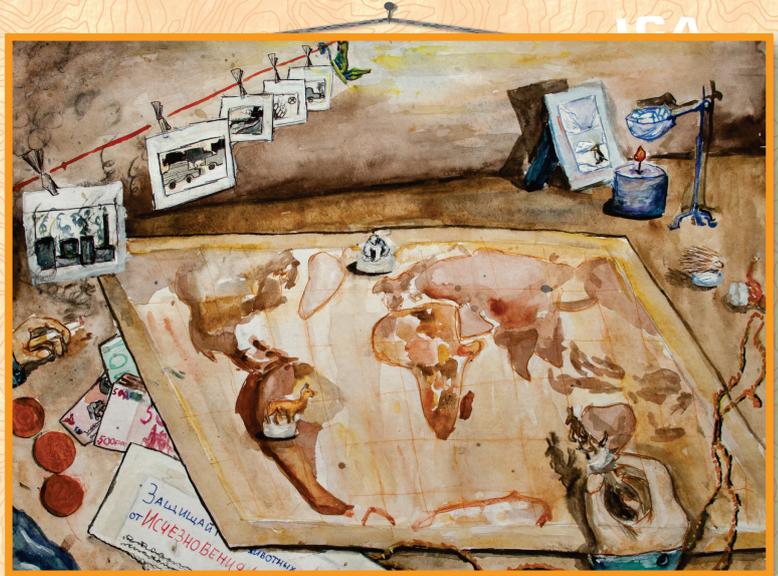
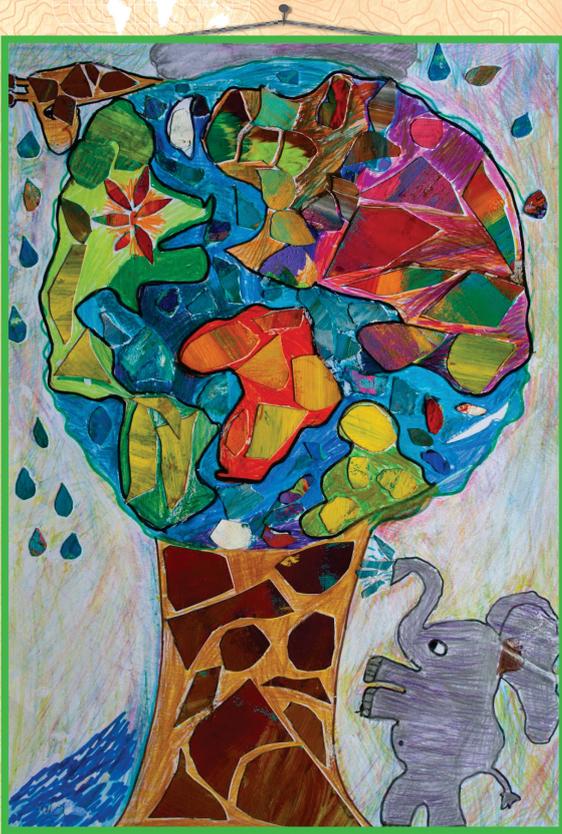
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ICA welcomes new affiliate members; for more information, please contact László Zentai, ICA Secretary General & Treasurer (sg@icaci.org).

children's map gallery 2015 winners and participants



Luka Huerta del Avellano and Luana Noemi Salazar Harder | 8 | *We are Part of All* | Colegio Suizo de México: Cuernavaca | Mexico

winner

Elena Berkutova | 14 | *The Small Big World* | -: Moscow | Russia

Marcos Estanislao Lo Frano | 11 | *Let's Take Care of It, It May Get Dry* | Instituto Educacional Almafuerte: Buenos Aires | Argentina

Valentina Sturcz | 14 | *Let the Music for Everyone* | Fazekas Mihály Elementary and Secondary School: Budapest | Hungary

winner

Emma Tapp | 13 | *Music Gives a Soul to the World, Wings to Your Mind, Flight to Your Imagination and Life to Everything* | Te Kauwhata College: Te Kauwhata | New Zealand



MAP LEGEND
The map title is quote from Zoltán Kodály (1882-1967), who was a Hungarian composer, ethnomusicologist and pedagogue. It's best known internationally as the creator of the Kodály Method, to teach music for children.

"The musical notes above the map can be considered the inspiration motto of my work. It's a fragment recorded by Bela Bartok (1881-1945), a Hungarian composer and pianist. He was one of the founders of comparative musicology which later became ethnomusicology. The English translation of the text is as follows:
"Life my beautiful country, famous little Hungary."

"The swimming letters in the Oceans are internationally used musical notes: C-D-E-F-G-A-B-C. From these Kodály made the semichromatic keynotes do-re-mi-fa-so-la-ti-do. He wanted to children could learn music easier and playfully."