

ica joins ogc



The International Cartographic Association (ICA) recently joined the Open

Geospatial Consortium (OGC) as an associate member. As an international consortium of more than 500 businesses, government agencies, research organizations, and universities, the OGC focuses on the interoperability of geospatial data, applications and services “to make geospatial (location) information and services FAIR - Findable, Accessible, Interoperable, and Reusable” (www.ogc.org).

OGC membership makes it possible for ICA Commission members to participate in

standards development and gives them access to member-only content in the OGC portal. This includes attendance and participation in OGC meetings, voting rights in working groups, and insight into geospatial technology trends with recommendations for actions in the technology forecast report. Additional benefits are the awareness and promotion of the ICA and cartography to a broader public and further intensified contact with leading geospatial organisations.

The ICA Commissions on SDI (Spatial Data Infrastructures) and Standards; Cognitive Issues in Geographic Information Visualization; and Open Source Geospatial Technologies, have

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30th international cartographic conference 2021 florence · italy



In recent weeks, the Local Organising Committee (LOC) of the 30th International Cartographic Conference (ICC), in agreement with Executive Committee of the International Cartographic Association (ICA), has decided to postpone the ICC 2021 from July to 14-18 December 2021, in the hope that the

additional months will be sufficient to allow for international travel to Florence. As you may appreciate, it was not an easy decision, but it was dictated by the gravity of the global situation with the COVID-19 pandemic and the attempt to time the event that allows for an in-person conference. After much deliberation, the month of July was deemed too risky.

With so much economic uncertainty, the LOC also planned for and have now settled on a new location for the event – The University of Florence. The University’s central location, accessibility, and facilities combine to meet all of the conference needs for the ICA. The change in dates together with a new venue are the reasons for the recent uncertainty regarding published deadlines for papers,

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Panorama of Florence | Photography
Nono vlf (CC BY-SA 4.0) ▼



First announced in December 2016, *ICA News* brings you regular news and updates concerning the upcoming International Cartographic Conference (ICC) to be held in Florence, Italy. Initially planned for July 2021, the middle of summer, the Local Organising Committee (LOC) started their planning early to deliver one of the best ICA conferences ever. Reading their reports, I felt confident a trip to the Capital of the Renaissance will be one of the most memorable and the experience treasured by all attendees. I knew the ICC 2021 is in good hands.

Then came COVID-19, a pandemic that hit Italy so hard and so unexpectedly. The heroism and dedication of the Italian medical staff and ordinary citizens in the fight with the pandemic set an example for the entire world to follow. The same spirit of heroism and dedication is shared by ICC 2021 LOC, who continue to work tirelessly to deliver a first class event despite all constraints and difficulties. Their goal is clear – to welcome us all to Florence and celebrate cartography together regardless of how much work and often personal commitment is involved.

This is not the first time ICC LOCs are doing the impossible to make us welcome. The ICC 1982 in Warsaw was delivered during the Martial Law introduced in Poland in December 1981. The ICC 1987 in Morelia, Mexico, was held just two short years after the devastating Mexico City earthquake in which around 10,000 people lost their lives and 250,000 were left without shelter. Members of the Polish and Mexican LOCs braved their way through all adversities and delivered two excellent cartographic meetings. No doubt our Italian colleagues will do the same. And whether we meet at ICC 2021 in-person or virtually, we will be able to be there thanks to them!

This issue of *ICA News* brings you another update on ICC 2021, reports on the meeting of ICA Executive Committee with chairs of the ICA Commissions and Working Groups, and farewells Keith Smith, National Secretary of the Mapping Sciences Institute Australia. Thank you again for your continuous support and contributions.

Igor Drecki | Editor ICA News | ICA ■

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

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ica joins ogc cont...

started regular discussions to coordinate the ICA's involvement in the OGC. We think that the ICA can make a particular contribution by providing expertise to the standardization of cartography-specific terminology and by bringing in a user-centred perspective to the technical standards of the OGC through communicating our understanding of what design choices are effective.

We are already participating in the virtual OGC meetings. A webinar to introduce the ICA

Community to OGC and its standards related to cartography and visualization is planned for 2021.

If you are interested in joining the discussions and contributions, please contact Serena Coetzee (serenacoetzee@gmail.com), Petr Kubiček (kubicek@geogr.muni.cz), or Silvana Camboim (silvanacamboim@gmail.com).

Serena Coetzee | Chair | ICA Commission on SDI and Standards | *South Africa* ■

ica news children's map awards 2021

The biennial Barbara Petchenik Children's World Map Competition was created by the International Cartographic Association (ICA) in 1993 as a memorial for Barbara Bartz Petchenik, a former Vice President of the ICA and a cartographer, who had a lifelong interest in maps for children. The aims of the contest are to promote children's creative representation of the world, to enhance their cartographic awareness and to make them more conscious of their environment.

The Association together with the ICA Commission on Cartography and Children invites member countries and affiliated members to participate in the 2021 edition of the competition. You are encouraged to organize the national round of the competition and then select a maximum of six maps to represent your country in the international contest. The entries should be collected in four age groups: under 6 years, 6–8 years, 9–12 years and 13–15 years. The submission deadline is 15 September 2021.

The maps will be displayed at the Barbara Petchenik International Children's Map Exhibition during the 30th International Cartographic Conference to be held in Florence, Italy, between 14–18 December 2021. An International Jury will select the international winners in each age group. In addition, a Public Award will be given based on the votes of visitors to the exhibition. The ICA Commission on Art and Cartography will present a Creativity Award.

It is very important to note that from 2019 all national coordinators can also participate in the voting process by e-mail, which is organized by the International Jury before each International Cartographic Conference. For this reason, please send the details of national coordinators to José Jesús Reyes Nuñez (jesusreyes@caesar.elte.hu), Vice Chair of the ICA Commission on Cartography and Children.

For detailed information regarding competition rules and other documents, please visit icaci.org/petchenik/ and lazarus.elte.hu/ccf/ccf.htm, as well as in the Commission's Facebook profile on www.facebook.com/icaccc. We are looking forward to hearing from you.

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

Children maps displayed at the 2013 International Cartographic Conference held in Dresden, Germany | *Photography ICC 2013*



30th international cartographic conference 2021 florence · italy cont...

abstracts, and the International Cartographic Exhibition. We hope that you will understand the many challenges faced by the LOC and the ICA Executive Committee when several fundamental assumptions in planning a large international event suddenly went amiss because of the pandemic's long reach.

Announcing a Hybrid Conference Opportunity

The ICC 2021 will be a hybrid conference – a chance to participate in person or via remote access. This is the first time that the ICA has offered such a choice. A hybrid event opens access to more participants and now makes it possible for those unable to travel or with limited resources to experience the benefits of an international cartographic event, as long as you have internet access. This is a recent decision and specific details are being formulated to help you decide on your attendance preferences. We anticipate that the hybrid option will highlight selected program content and will not include the full program. Conference registration rates will reflect these distinctions. As more details are decided, information will be posted to the conference website (www.icc2021.net).

Important Dates and Information

Please review the conference website for recent information on deadlines and details. The table beside gives the most recent information, but please periodically check the ICC 2021 website for updates and new information.

Submission of full papers for review closes on 19 March 2021. The organizers anticipate that authors who are considering publishing their work in *Advances of the ICA* have been working on their paper(s) already and the new deadline is achievable.

The abstract submission deadline is 28 May 2021 for consideration either as a full paper in the *Proceedings of the ICA* or as stand-alone published abstract in the *Abstracts of the ICA*;

see www.icc2021.net/submission-guidelines/ for details.

Conference registration options will be decided soon and will be available to you.

ICA members, both national and affiliate, who plan to submit maps or cartographic products to the International Cartographic Exhibition, please refer to the guidelines available from www.icc2021.net/wp-content/uploads/2020/12/ICC_2021_Guide-lines_201204_web.pdf. The submission of maps, charts and cartographic materials opens on 12 July 2021.

Sponsors, exhibitors, businesses, and associations that plan to have a presence at the ICC 2021, please contact the LOC (www.icc2021.net/contacts/) and check the conference website for details. This international conference is a great opportunity to make your mark in the rebirth of your enterprise coming out of the pandemic.

For all updates regarding dates, venue, and registration options (in-person or online), please consult the website. We want to thank you for your understanding and patience. At this particular time your support and encouragement means a lot to us.

Giuseppe Scanu and Tim Trainor | Conference Director / President | ICC 2021 Local Organising Committee / ICA | Italy / United States of America ■

ICC 2021 Important Dates	
Open	Call for papers
19 Mar 2021	Submission of full papers closes
28 May 2021	Submission of abstracts closes
2 Jul 2021	Notification of acceptance for full papers and abstracts
12 Jul 2021	Submission to the International Cartographic Exhibition opens
30 Jul 2021	Submission of final manuscripts
9 Oct 2021	Submission to the International Cartographic Exhibition closes

ICC 2021 Conference Themes	
T01	Art in Cartography
T02	Atlases
T03	Cartographic Heritage into the Digital Domain
T04	Cartography and Children
T05	Cartography for Early Warning and Crisis Management
T06	Cognition in Geovisualization
T07	Education and Continuous Learning in Cartography
T08	Generalization and Multiple Representation
T09	Artificial Intelligence in Mapping
T10	Social Sensing and Visual Analytics
T11	History of Cartography
T12	Location Based Services and Ubiquitous Mapping
T13	Map Design
T14	Map Production and Geoinformation Management
T15	Maps and Accessibility
T16	Participatory Mapping
T17	Marine Cartography
T18	Mountain Cartography
T19	Open Geospatial Data and Technologies
T20	Planetary Cartography
T21	Spatial Data Infrastructure and Standards
T22	Sensor-Driven Mapping
T23	Toponymy in Cartography
T24	Cartography and Public Health
T25	Cartography and Sustainable Development
T26	Perspectives in a New Cartographic Research Agenda
T27	Transformation of National Mapping Agencies
T28	Cartography in Digital Humanities
T29	Mapping Urban Environments
T30	Theoretical Cartography
T31	Cartography for Leisure
T32	Military Mapping
T33	Augmented and Virtual Realities in Cartography
T34	Use, User, and Usability
T35	Map Projections
T36	Cartography, Privacy, and Ethics

Florence: (left) Lugarno degli Acciaiuoli street along Arno River; Library of the Italian Military Geographic Institute | Photography LOC ICC 2021



ica executive committee

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ica news contributions

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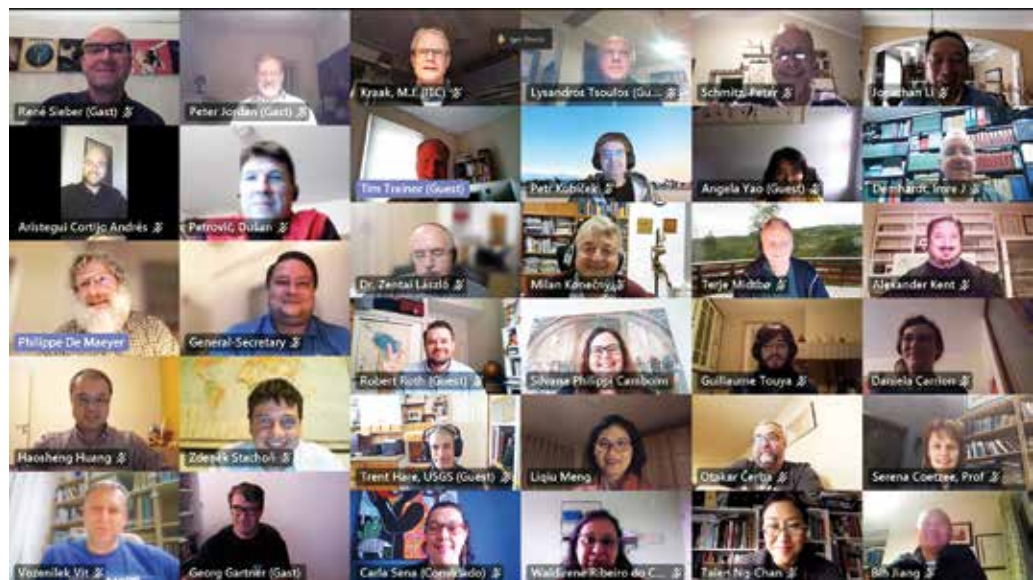
Submission Deadlines

15 May for **June** editions

15 November for **December** editions

ica news ica executive committee and

The year 2020 is truly an extraordinary year dominated by the COVID-19 pandemic, which has severely restricted our mobility and created uncertainty in decision-making, but at the same time it has shaped the ubiquitous digital life and operation. Despite these developments, the ICA's Executive Committee (EC) held its second virtual meeting on 17 October 2020. A week later, a virtual meeting of the EC with the ICA Commissions and Working Group chairs was organized on 24 October 2020.



Participants of the virtual meeting of the ICA Executive Committee with the ICA Commission and Working Group chairs held on 24 October 2020 | Image courtesy of Philippe De Maeyer

ICA Executive Committee meets with Commission and Working Group Chairs

The virtual meeting of the ICA Executive Committee and 28 Commission and Working Group chairs across multiple world's time zones was a pleasant experience. Participants appreciated the online option as a convenient opportunity to engage with each other, exchange news, and learn and discuss various topics covered by the Agenda. They shared their experiences of dealing with various constraints caused by the Covid-19 pandemic and how they are now better prepared for lockdown measures.

Despite the postponement of nearly all scheduled events in 2020, most ICA Commissions and Working Groups managed to maintain regular internal contacts, resume their responsibilities, and continue plans for publications and joint activities with other ICA Commissions or commissions of our sister organizations. A number of commission events were successfully delivered online via live streaming, making the abstracts and/or papers accessible in digital format. One of the successful examples was the recent EuroCarto 2020 (Central European Cartographic Conference and 68th German Cartography Congress) delivered entirely online between 21-25 September 2020 from Vienna, Austria. The conference was one of the best practical examples in terms of the quality of live-streaming presentations and a record-breaking participation.

ICA Publications

ICA Publications were amongst the key issues discussed at the meeting. Georg Gartner, who chairs the ICA Publications Committee, presented an overview of ICA publications, shared the future plans of the Committee, as well as responded to a number of open questions. Since its foundation in 1959, the ICA has spread its knowledge regionally or internationally through different channels in the form of conference proceedings, books, maps, tutorials, lecture notes, etc. Some publications are issued regularly, others are published *ad-hoc* to serve specific meetings and events. Digital versions of the Proceedings from the ICA International Cartographic Conferences (ICC) are available from ICC 1993 onwards.

Three new series of publications to serve ICA conferences and workshops have been introduced in 2017 (see *ICA News*, No 70, June 2018, page 1):

- *Abstracts of the International Cartographic Association (in short: Abstracts of the ICA)*
- *Proceedings of the International Cartographic Association (in short: Proceedings of the ICA)*
- *Advances in Cartography and GIScience of the International Cartographic Association (in short: Advances of the ICA)*

They go through different review processes and can build upon each other. Abstracts presenting very early or practical work are subject to a single-blind peer review process and, upon acceptance, can be published either in the *Abstracts of the ICA* or, when developed into a full paper, in the

commission chairs meet virtually

Proceedings of the ICA. Full papers (or extended abstracts) presenting significant scientific results are also subject to a single-blind review process. Once accepted, the good quality full papers are included in the *Proceedings of the ICA*, while high quality papers are published in the *Advances of the ICA*.

All the above ICA publications are open access and available online (see the summary of all current volumes at icaci.org/publications/). In addition, the best paper contributions can be selected for publication in the *International Journal of Cartography* (IJC), which is the official journal of the ICA. The above diversity of publication options can significantly increase the flexibility for authors to share their research ideas, report on the progress they make, and highlight their scientific achievements to the community.

The editors of the IJC, William Cartwright and Anne Ruas, presented a report on the current developments with the Journal. The IJC started in 2015 (see the Journal's profile in *ICA News*, No 68, June 2017, page 6) publishing two issues annually in 2015 and 2016. Since 2017, the Journal continued with three issues annually, with the aim to reach ultimately four issues per year. Authors and reviewers are very much encouraged to contribute.

Currently, the IJC is in the midst of consolidation and steadily improves its index values. It has been accepted for inclusion in Scopus, the world's largest abstract and citation database of peer-reviewed research literature. According to reviewers, the Journal consistently contains articles that are scientifically sound and relevant to an international academic or professional audience in this field, and its title addresses a subject area that is not properly covered by an existing journal. To further enhance the reputation and discoverability of the IJC, in June 2020 the publisher Taylor & Francis submitted an application for its inclusion in the Web of Science core collection. The evaluation process will take approximately 12 months to complete.

In parallel with the above publication opportunities, cartographic researchers and practitioners have always enjoyed the freedom of publishing their work in other affiliated or relevant journals, such as *The Cartographic Journal*, *Cartographica*, *Cartography and Geographic Information Science*, and many more international, regional and national journals focusing on cartography and GIScience. In addition to the transfer of the scientific knowledge, the ICA family is well served by *ICA News* on the one hand, which documents the activities of the ICA, its members and commissions, and by *eCARTO News* on the other hand, which focuses on the latest cartographic news and developments from around the world.

At the meeting, the ICA EC members and Commission chairs also shared their opinions and concerns about:

- how to promote the *International Journal of Cartography* without having to sacrifice the success of other international, regional and national journals
- how to maintain a good balance between journals with the sole focus on cartography and the interdisciplinary journals that contribute to improving the visibility of our domain
- what are the best practices or lessons we can learn from the successful open access journals

UN-ICA Project

With regards to the ICA public relations, Menno-Jan Kraak and Robert Roth reported on the final phase of the joint UN-ICA book on *Mapping a Sustainable World*. Despite the limited availability of data on Sustainable Development Goals (SDG) and the United Nations' intention to avoid showing conflict boundaries, both authors succeeded in realising their project by inclusion of a wide range of maps of Southeast Asia, Australia and South America. Although the book focuses on basic mapping skills and techniques, there is a potential to add new content, as the ICA builds resources on mapping UN's SDG. Moreover, the translation of the book into national languages could further improve its outreach and social impact of maps and cartography worldwide.

International Cartographic Conference 2021

The virtual meeting picked up again on the major topic of the next International Cartographic Conference (ICC) to be held in Florence, Italy in 2021. ICA President Tim Trainor and Secretary General & Treasurer Thomas Schulz reported on their smooth and fruitful communication with the Italian Cartographic Association, represented by President Giuseppe Scanu and the Coordinator of the Local Organizing Committee (LOC) Paola Zamperlin. After fruitful discussions with the LOC for ICC 2021, the ICA Executive Committee decided to postpone the 30th International Cartography Conference to be held in Florence, Italy, from July to 14-18 December 2021. The ICA website and the website of ICC 2021 has already been updated (also, see page 1 and 3 for further details).

Regardless of the impact of COVID-19 pandemic in 2021, the ICC 2021 is expected to set a new benchmark as a hybrid event combining on-site exhibitions, pre-conference workshops and conference sessions with immersive online participation from all over the world. Let's make it one of the most innovative and creative international cartographic conferences in the ICA history, inspired by a city known for its Renaissance culture and art.

Liqiu Meng and Philippe De Maeyer | ICA Vice Presidents | Germany / Belgium ■

obituary

Keith Howard Smith

21.04.1929 – 07.10.2020



It is with great sadness that we record the passing of Keith Howard Smith, National Secretary of the Mapping Sciences Institute Australia (MSIA), Australia's

national adhering organization to the International Cartographic Association.

In April 1945, Keith took up a position as a cadet survey draftsman in the Survey Office, Queensland Department of Lands, and this became the basis of his working career for the rest of his life. He progressed 'through the ranks' to become a senior cartographer and then Land Planning Officer.

When the Department of Mapping and Surveying was formed in 1975, he became an assistant director and subsequently appointed to the position of Director of Mapping and then Assistant Surveyor General, where he spearheaded the highly successful *Sunmap* tourist mapping program. He also served on the National Mapping Council.

Keith was a part-time lecturer in cartography at both the Queensland Institute of Technology and the University of Queensland. He established the Australian branch of the International Map Dealers Association and was a member of the Institution of Surveyors, Australia, and the Australian Planning Institute. Keith was registered as a surveyor. In the 1980s he served as the Chairman of the Australian Surveying and Mapping Industry Council.

For a major part of his life he was involved in the MSIA. Keith joined the Institute in 1961 (it was then called Australian Institute of Cartographers) and soon took on the role of Honorary Secretary and then President of the Queensland Division. He progressed to Chairman of Executive in 1988 and then National Secretary from 1994 until his death. He became an Honorary Fellow of the Institute in 1990 and was awarded its Gold Medal in 1996 for distinguished service. In 1990, Keith was amongst Queensland's first recipients of the Australian Public Service Medal for outstanding service.

Vale Keith Smith, you will be missed.

Igor Drecki | Editor ICA News | ICA ■

(text based on Keith Smith's notes and Eulogy by Des Diggles, former President of MSIA)

benjamin schröter



"Strictly speaking, I am not a cartographer." This might be the wrong opening statement for a contribution to the *ICA News*. Or is it not?

Ten years ago, almost to the day, a

chain of coincidences led me to the introduction and then, shortly after, to the intensive exposure to the world of cartography. A meeting with the former director of the Institute of Cartography of TU Dresden, Professor Manfred Buchroithner, set the foundation for many exciting cartographic experiences I had during the last decade and for which I am very grateful. Highlights included: mapping expeditions to Austria, Chile, China, Malaysia and Nepal; membership of the local organising committees of the 2013 International Cartographic Conference held in Dresden, Germany, and the 2016 ICA Mountain Cartography Workshop held in Berchtesgaden, Germany; participation in various glacier mapping and research projects; membership of the ICA Commission on Mountain Cartography; as well as organising and teaching the annual TU Dresden Alpine Cartography Field School.

The field school is a ten-day course within the international *Cartography M.Sc.* programme (cartographymaster.eu) that is taught in the Austrian Dachstein Mountains. Since 2012, students from 61 countries have participated in the course that covers topics such as map reading, field mapping, cartographic surveying, and the peculiarities and special problems of high mountain cartography.

In 2017 I started my own business offering general scientific services, but (mountain) cartography still plays a major role in my professional career. The latest project, in cooperation with TU Dresden's cartography professor Dirk Burghardt, will focus on the production of a new German Alpine Club (DAV) map featuring Ushba, the most prominent mountain of the Georgian Caucasus.

Cartography is not limited or bound to professional cartographers! It reaches far beyond and touches many people. And being a social geographer by education, I consider myself to be a fitting proof.

Benjamin Schröter | Technische Universität Dresden | Germany | benjamin.schroeter@tu-dresden.de ■

One of 6,225 time-lapse camera images of Zhadang Glacier, China (30°28.24' N, 90°38.69' E) captured between May 2010 and September 2012. This image was taken on 16 July 2011 at 16:00. ►

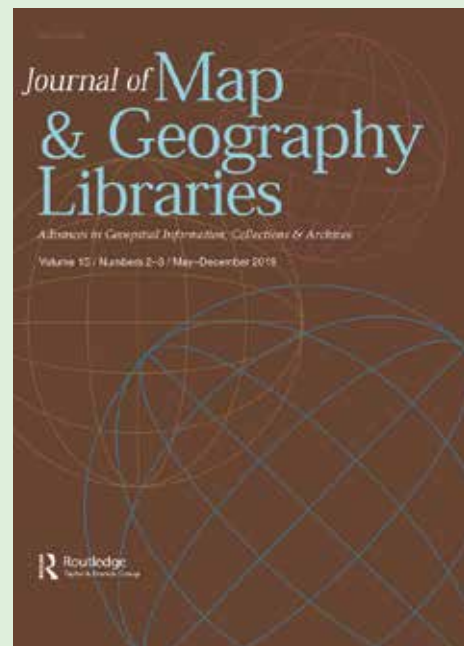
www.tandfonline.com/toc/wmgl20/current

The *Journal of Map & Geography Libraries: Advances in Geospatial Information, Collections & Archives* (JMGL; Print ISSN: 1542-0353 / Online ISSN: 1542-0361) was founded in 2002 by Mary Laarsgard and Paige Andrew to fill a gap in available journals for the map and geography library field. Published since 2004, first with Hawthorn Press and then by Taylor and Francis when they purchased Hawthorn, JMGL has responded to how map and geography libraries and the services they provide have changed. Over the years the scope reflected these changes and now regularly publishes articles focusing on the use of cartographic and geographic information not only from libraries, but also from other disciplines that use geospatial data collections and services. As founding editors, Mary and Paige set the tone for JMGL as a scholarly journal which provided a unique outlet for the librarians and professionals working in map libraries and with map and geospatial information to publish their research in a peer reviewed journal.

Published in 3 issues per year, JMGL distributes international research on the collecting, organization, and utilization of geographic and cartographic materials and information. The journal covers topics including, but not limited to:

- research, discussion and innovations involving the use, collecting and access to historical and contemporary maps and atlases, and use, collection, access and standards regarding geographic information (GIS) and geospatial data in general and specialized subject areas;
- the role of the library and librarian, archivist, data manager and GIS professional in the exchange of cartographic and geographic information;
- methodologies for access to and delivery of geospatial information;
- innovations in tools and software in the manipulation and presentation of maps and geospatial data;
- metadata for and cataloging and preservation of print and digital cartographic materials;
- the planning, operations and assessment of GIS centralized and decentralized GIS centers.

Marcy Bidney and Nathan Piekielek | Editors | *Journal of Map & Geography Libraries* | United States of America ■



Recent cover of the *Journal of Map & Geography Libraries*





Facilitators and presenters at the Nanjing Normal University summer school | Image courtesy of Liu Jiping

Cartography in Early Warning and Crisis Management

map.casm.ac.cn/ewcm/home/

Summer School in Nanjing, China

From 14 to 23 August 2020, the School of Geographical Sciences at the Nanjing Normal University in China ran a summer school for postgraduate students entitled *Geographic Big Data Training*.

The summer school was sponsored by the Working Committees on Theory and Method, and Education and Popular Science of the Chinese Association for Geospatial Information Society, the ICA Commission on Cartography in Early Warning and Crisis Management (CEW&CM), the Jiangsu Graduate Education Steering Committee (Science Class II), and the Jiangsu Remote Sensing and Geographic Information System Society. It was delivered by the School of Geographical Sciences, the Ministry of Education's Key Laboratory of Virtual Geographic Environment at the Nanjing Normal University, the Jiangsu Collaborative Innovation Center for Geographic Information Resources Development and Utilization, the National Earth System Science Data Center – Yangtze River Delta Science Data Center, the Jiangsu Institute of Geographic Information Industry, the Jiangsu Institute of Surveying and Mapping, and the Editorial Committee of *Modern Surveying and Mapping*, and received exclusive sponsorship from Esri China Information Technology Co. Ltd.

3,275 students took part in the summer school, coming from more than 300 universities and research institutes at home and abroad, including the Chinese Academy of Sciences, Nanjing University, Lanzhou University, Beijing Normal University, Hohai University, Nanjing Normal University, Nanjing University of Information Science and Technology and other well-known universities and institutions.

The summer school programme was arranged into four parts: the opening ceremony, expert report, academic 'salon' and the closing ceremony. It was delivered online as a live broadcast.

The opening ceremony, chaired by Prof Zhang Xueying, a person in charge of the summer school, was held in the morning of 15 August, and included greetings from the CEW&CM and the Academy of Geological Sciences at the Nanjing Normal University. Wang Lixin, representing the University, and Liu Jiping, chair of the ICA CEW&CM, expressed their thanks for organising the summer school and shared their hope that this event will act as an important academic exchange platform for experts, scholars and graduate students.

Between 15–21 August, the summer school programme included reports from a variety of experts. On the first day, Prof Lu Guonian of Nanjing Normal University, Prof Zhu Qing of Southwest Jiaotong University, and Prof Zhu Changqing of Nanjing Normal University, were invited to discuss three topics: geographic holography and holographic GIS; real-life 3D representation of natural resources and 3D monitoring technology; and cutting-edge technology and application of data security. The reports were discussed by students in a lively atmosphere.

A further 25 expert reports were delivered by researchers from: Wuhan University, East China Normal University, Strategic Support Force Aerospace Engineering University, Chinese Academy of Sciences, Nanjing University of Information Science and Technology, Nanjing University, Sun Yat-sen University, Peking University, National Geomatics Center of China, Southeast University, Masaryk University, Central South University, Beijing Normal University, Hohai University, Esri China Information Technology Co. Ltd., Nanjing Normal University, and many other universities and research institutes. The expert reports attracted overall about 700,000 live broadcasts. The students showed extremely high

learning enthusiasm and created a good academic atmosphere.

On 22 August, the summer school provided a 'salon' for students to share study experience. The salon covered four topics: new technology application of geographic big data; the theory and methods of remote sensing big data; the theory and methods of spatiotemporal big data; and the theory and methods of humanities and social GIS. 19 students were invited to present their reports on these topics, while two academics provided their comments. Students gave a wonderful explanation and display of their research, and received professional suggestions from the academics.

The closing ceremony of the summer school was held in the afternoon of 23 August 2020. It was presided over by Su Jin, Secretary of the Party Committee of the Academy of Geological Sciences, Nanjing Normal University. The ceremony provided an opportunity for Liu Jiping to present awards to 145 outstanding students taking part in the event. Finally, Professor Wang Tao from the Academy of Geological Sciences summarized the summer school and provided his vision for the future.

Prof Liu Jiping and his team worked hard for the success of the event. The summer school was rich in content and wide in coverage, dealing with geography, computer science, mathematics, surveying, mapping and other subjects, and providing students with valuable opportunities to acquire professional knowledge and a platform for communicating with experts. All students commented that they have benefited from the event a lot, had an opportunity for networking, broadening their horizons, acquiring wisdom, and making new friends, all in a strong academic and supportive atmosphere.

International Workshop in Deqing, China

The *Belt and Road Initiative* is a significant development strategy launched by the Chinese government with the aim of promoting economic cooperation among countries along the proposed Belt and Road routes. It intends to enhance the orderly free-flow of economic factors and the efficient allocation of resources, as well as to further market integration and create a regional economic cooperation framework of benefit to all.

In order to meet the needs of this vision, an international workshop on *Professional Standards and Practice of Surveying and Mapping in the Countries along the Belt and Road Routes* was organised in Deqing, China, between 16–18 September 2020.

Considering the impact of COVID-19, the workshop was conducted onsite and online. It attracted nearly 200 academics and professionals from many countries including China, United States of America, Russia, Czech Republic, Finland, Germany, United Kingdom, New

Zealand, Austria, Pakistan, Zimbabwe and Nigeria.

Prof Milan Konečný, Vice Chair of the ICA Commission on Cartography in Early Warning and Crisis Management (CEW&CM), delivered a keynote address on *Sendai Framework and Geospatial Efforts: Potentials of DBAR and UN-GGIM*, which impressed participants deeply.

The workshop was the second international conference held in Deqing supported by our Commission during COVID-19 period. Although the global situation with the pandemic is still difficult, the workshop was run on schedule and contributed to the geospatial information internationalization, a purpose shared by CEW&CM.

Liu Jiping | Chair | ICA Commission on Cartography in Early Warning and Crisis Management | *China* ■

Education and Training

education.icaci.org/

Commission Activities

In July 2019, the ICA Commission on Education and Training (CET) organized a workshop titled *Geospatial and Cartographic Education – Contemporary Challenges and Opportunities*. It was held in Beijing, prior to the International Cartographic Conference in Tokyo. Developing online educational resources for cartography and GIS was one of the key topics discussed at the event. Later on, the ICA Executive Committee meeting with Chairs of the Commissions and Working Groups held in Ghent, Belgium, in November 2019 provided us with an opportunity to reiterate that online educational resources would play an important role in enhancing the efficiency and equity of future education. And in December 2019, Tao Wang, Chair of the CET, and Terje Midtbø, ICA Vice President, proposed a workshop *Cartographic and Geospatial Information Education: from Classroom to Anywhere*, to be run at the AutoCarto 2020 Conference. This path demonstrates that we have anticipated for some time that the online education and distance learning would play an important role in today's world. Our proposal for the workshop at AutoCarto 2020 included the following description "...Suites of online courses incorporate some of the new concepts and technologies and make teaching cartography and GIS more flexible and practical....".

But we have never imagined that these ideas and initiatives will become so critical and indispensable so soon due the outbreak of COVID-19 at the end of 2019. In the following months, UNESCO report claimed that over a billion students were affected by these unprecedented developments. However, as a result, teachers, students, schools, governments

and societies worldwide have never been so prepared as they are now.

With more than six months experience of a hybrid or entirely online teaching, we believe educators in cartography and GIS have already gained abundant experience about all aspects of online teaching, including choices of streaming software, lecture videos of key topics, design of online assignments and exams, and most importantly received useful feedback from students and their evaluation of teaching performance.

We believe challenges are opportunities if we share our insights on the best practices and educational resources. Year 2020 is a year of transformation of education from traditional to digital. It is also a year when education strategies were developed to make teaching more resilient and sustainable.

Tao Wang | Chair | ICA Commission on Education and Training | *China* ■

Location Based Services

lbs.icaci.org/

Special issue of *Computers, Environment and Urban Systems*

A special issue on *Geospatial Big Data Analytics for Smart Cities* of the *Computers, Environment and Urban Systems* journal is in preparation. It is a joint activity with the ICA Commission on Geospatial Analysis and Modeling. The special issue will contain invited submissions from the ICC 2019 pre-conference Symposium on Location-based Big Data – LocBigData 2019 (lbs.icaci.org/locbigdata/) and other relevant papers. We received about 30 submissions covering different research themes on the subject and all of them have been peer-reviewed. Currently we are making final acceptance decisions of the selected revisions. We expect to publish the special issue in the first half of 2021.

LoCafé

We are planning to organize a series of webinars (LoCafé) taking place over the coming months, leading to LBS 2021 (lbsconference.org/) to be held in the United Kingdom in November 2021. Each webinar will consist of an inspiring talk of 20-30 minutes, with another 10-20 minutes for informal discussion. The topics will cover different aspects of location based science/services and location data in the era of connected world and big data, and ranging from methodological to social-technological issues. The first few webinars will focus on location data and LBSscience in the context of COVID-19. More details regarding the

webinar series will be published shortly on our Commission website.

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

Marine Cartography

marine.icaci.org/

Commission Activities

Ron Furness and Lysandros Tsoulos, Chair and Vice Chair of the ICA Commission on Marine Cartography, maintain close regular contact. Communication has been limited this year in these obviously difficult times. COVID-19 has put on hold thoughts of Commission seminars or gatherings and has impacted intra-Commission communication effectiveness. Nevertheless, progress has been made on key Commission initiatives through virtual communications.

As reported previously, since 1 October 2019, ICA, represented by Ron Furness, has held the Chair of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC). This has required an ongoing heavy workload of chairing the IBSC. Following the pandemic disrupted meeting of the IBSC (IBSC43) in Cartagena de Indias, Colombia, March 2020, the resultant workload continues, dominated by the consideration of educational programmes for recognition. Those interested in viewing the documents and the Standards of Competence will find them at iho.int/en/standards-and-specifications. The periodical *International Hydrographic Review* can be found at iho.int/en/international-hydrographic-review. The pandemic has seemingly disrupted the delivery of educational programmes throughout the world. It will be of great interest to all within ICA as we learn of how institutions grappled with the sudden shock of severe restrictions to delivering their cartographic programmes and how they marshalled resources to continue in the face of such adversity.

Lysandros Tsoulos represents ICA through maintaining direct liaison with the International Hydrographic Organization's Nautical Cartography Working Group (IHO NCWG) and contributed to the programme of the last NCWG meeting in November 2020. The benefits of closer ties between IHO and ICA through the two sub-bodies are apparent and this Commission will seek to encourage greater collaboration between the members of each group.

Ron Furness recently participated in the video-tele-conference meeting of the IHO Inter-Regional Coordination Committee (IRCC12) reporting as Chair IBSC. This is one of the senior IHO committees responsible for the Regional Hydrographic Commissions and other bodies and liaises with the IBSC.

With the ongoing impact of COVID-19 and the situation in various countries, especially in Europe, contingency planning for IBSC operations is being discussed, which will consider the potential disruption caused if the planned annual meeting, IBSC44, cannot go ahead in Cadiz, Spain, in April 2021.

An ongoing research Project on generalization of Nautical Charts is being carried out in cooperation with the National Technical University of Athens (NTUA) Cartography Laboratory.

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

Mountain Cartography

www.mountaincartography.org/

Commission's Virtual Meeting

The ICA Commission on Mountain Cartography has become known for its interesting and intensive workshops that take place biennially in different and diverse mountain regions around the world. Since our first gathering at Silvretta in the Austrian Alps in 1998, we have held workshops in the mountains of North America, Europe and New Zealand. For 2020, our 12th workshop was planned for April in the Colorado Rockies, USA, but due to the COVID-19 crisis we have had to reschedule it for spring 2022. By that date, four years will have elapsed since our previous workshop in Croatia, on the Dalmatian island of Hvar.

To fill this gap, we held a virtual Commission meeting on 21 November 2020. Due to the worldwide distribution of our members, from Moscow to Melbourne, we carefully selected a meeting time so that no one would have to participate in the middle of the night. Initially planned as a business meeting in order to inform members about recent ICA developments, we expanded the meeting to include a mini virtual workshop to partially make up for the cancelled in-person workshop earlier in the year. There were 36 participants from 15 countries and four continents.

The meeting started with Commission Chair, Dušan Petrovič, and a new ICA liaison, Terje Midtbø, informing the participants about the recent ICA Executive Committee and Commission Chairs Meeting (see pages 4-5). Topics included rescheduling the Florence conference from July to December 2021, preparation of the revised Body of Knowledge, update on the new book on cartography and the UN Sustainable Development Goals, and the status of publications. Next, Tom Patterson discussed tentative plans to reschedule postponed Commission workshop in Colorado to the spring of 2022. The business part of the meeting concluded with Timofey Samsonov discussing Snow Valley,



Participants of the ICA Commission on Mountain Cartography virtual meeting held in November 2020 | Image courtesy of Dušan Petrovič

Kamchatka, Russia, as a possible venue for the 2024 workshop.

A highlight of the meeting were eight short presentations by Commission members focusing on interesting projects that they have worked on since we last met. Timofey Samsonov explained an algorithm for the conflation of DEMs and streams – the results are very promising and the method should be soon available for use in QGIS. Jenny Jansen discussed an empiric evaluation of panoramas versus planimetric ski area maps for navigating a ski area in Austria. Alexander Klaus presented two Nepalese maps made for the Association for Comparative High Mountain Research: Annapurna Himal at the scale of 1:100,000 and Dhaulagiri at 1:50,000 scale. Klemen Kozmus Trajkovski discussed how to conduct a UAV survey for areas with steep slopes and the results of data modelling. Mark Stock informed us about different technologies for 3D printing and showed several 3D terrain models with different shapes, colours, and resolutions, which were very impressive. Alex Tait took us back to Himalayas, explaining his role and the results of a National Geographic Mapping Everest project. The final models and images resulting from this project exhibited extreme resolution and precision. Bernhard Jenny discussed a new technique for stylizing digital shaded relief with neural networks. The results of his method reveal a striking resemblance to manually produced Swiss shaded relief. Finally, Patrick Kennelly and Tom Patterson introduced standard elevation models that cartographers and software developers can use for the

comparative evaluation of their products. All presentations triggered interesting debate and gave us ideas for further work and research. After almost three hours, our virtual gathering concluded with a lot of positive comments from all participants. During a break in the presentations, we took a screen capture of the participants for our customary joint picture.

Unfortunately, our traditional outdoor recreation day couldn't take place in a virtual environment, but at least we had a chance to say hello to everyone. And until we can gather again in person, we'll keep on mapping high places.

Dušan Petrovič and **Tom Patterson** | Chair / Vice Chair | ICA Commission on Mountain Cartography | Slovenia / United States of America ■

Toponymy

www.igu-icatoponymy.org/

Proceedings from 2019 Toponymic Symposia

The Joint ICA/IGU Commission on Toponymy co-organized two international symposia in 2019:

- 5th International Symposium on Place Names, *Recognition, regulation, revitalisation: place names and indigenous languages*, 18-20 September in Clarens, South Africa
- GeoNames19 Symposium, *Place names and migration*, 6-8 November in Vienna, Austria

> 10

Proceedings with selected papers from these events will be available shortly.

Future Plans

Listed below are the planned events being organized or co-organized by the Commission in 2021:

- *Atlases in Time – National and Regional Issues*, a conference on the occasion of 150th anniversary of the Instituto Geográfico Nacional (IGN), Madrid, Spain, 21-24 April 2021 (in cooperation with the ICA Commission on Atlases)
- IGU Conference on Heritage Geographies: Politics, Uses and Governance of the Past, Lecce, Italy, 26-28 May 2021 (sessions on

Place names as a part of the cultural heritage have 25 papers accepted already)

- 8th EuGeo Congress on the Geography of Europe, Prague, Czechia, 28 June – 1 July 2021 (call for papers to the *Minority place-name standardization – A comparison of regulations and approaches in Europe* session is already open; please contact Peter Jordan: peter.jordan@oeaw.ac.at; conference website: www.eugeo2021.eu)
- 34th IGU International Geographical Congress, Istanbul, Turkey, 16-21 August 2021. (sessions on *Place names as indicators of human perception of space* have 15 papers already submitted and accepted; this Congress should have taken place in August

2020 but it was postponed due to COVID-19 outbreak)

- 6th International Symposium on Place Names, *Standardisation and the wealth of place names – aspects of a delicate relationship*, Bloemfontein, South Africa, 29 September – 1 October 2021 (for more information and abstracts submission, please contact Chrismi-Rinda Loth: kongresetfb@ufs.ac.za)

Peter Jordan | ICA Chair | Joint ICA/IGU Commission on Toponymy | *Austria* ■

reports ica working groups

Cartographic Body of Knowledge

Working Group Activities

The cartographic body of knowledge has attracted the attention of the International Cartographic Association for several years and many people have been involved in the work. In the 2015-2019 term, the ICA Working Group on the Body of Knowledge for Cartography was established to further this work. However, by the end of its term, it did not produce final recommendations for consideration at the International Cartographic Conference held in Tokyo in July 2019.

The ICA Executive Committee has consequently decided to restart this initiative and established a new Working Group on Cartographic Body of Knowledge at their meeting in November 2019. The ICA Vice Presidents Vít Voženilek, Temenoujka Bandrova and Terje Midtbø representing the Executive Committee, and Georg Gartner and Miljenko Lapaine are members of the Working Group (WG). The plan is to grow the membership.

The WG leans on all the good work that has been done over the last few years, but at the same time it tries to make a 'fresh start' based on the lessons learned. Currently the WG is working on definitions and, among other things, looking into how to define boundaries for the body of knowledge in cartography.

Terje Midtbø | ICA Executive Liaison | ICA Working Group on Cartographic Body of Knowledge | *Norway* ■

The painting (a) viewed as an evolution progressing from the empty square (b) through to its structural likeness (e) ►

Digital Transformation of National Mapping Agencies

nationalmapping.icaci.org/

New Working Group Established

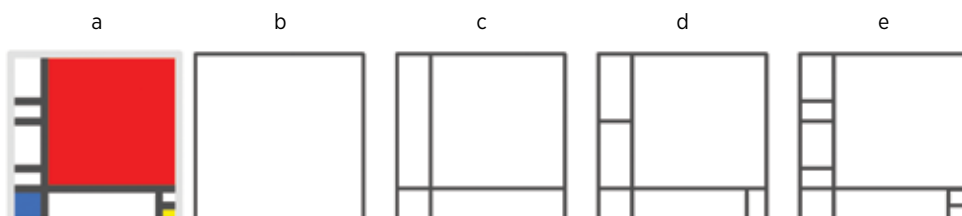
Typically for a map, as well as for a territory, there are far more small things than the large ones, and they are always organized as a hierarchical structure. More generally, a structure that bears the inherent hierarchy is called a living structure, which is featured by a scaling law – or spatial heterogeneity, i.e. there are far more small substructures than large ones across all hierarchical levels, and by Tobler's law – or spatial homogeneity, i.e. there are more or less similar substructures on each level of the hierarchy. The living structure is therefore said to be governed by these two fundamental laws.

To illustrate, let us examine the following red yellow blue painting below (a), modified from the famous painting *Composition II* by Piet Mondrian (1872-1944), a famous Dutch painter whose artistic vocabulary is largely based on simple geometric elements. The painting can be viewed to be naturally evolving or differentiating in a step-by-step fashion – like a cell

division – from a square, thus featured by the recurring notion of far more newborn (or newly generated) substructures than the old ones. More specifically, there are always far more newborns when evolving from (b) to (c), from (c) to (d), and from (d) to (e). On the other hand, at each step there are far more small substructures than the large ones.

The painting illustrates the third view of space, an organic view of space that differs fundamentally from the Cartesian mechanistic world picture. Under the organic view, space is neither lifeless nor neutral, but a living structure capable of being more living or less living, as exemplified in the illustration below with (b) and (e) being the least and most living structures. Under the mechanistic world view, the painting is commonly perceived as a composition of 9 substructures, whereas under the organic view of space, the painting is supposed to be composed of 20 (1 + 4 + 6 + 9) substructures. In other words, the painting is not – as conventionally conceived – a LEGO-like assembly of the 9 substructures statically, but rather an embryo-like growth out of the empty square, leading to the 20 recursively defined substructures, i.e., [b1] [c1, c2, c3, c4] [d1, d2, d3, ..., d6] [e1, e2, e3, ..., e9].

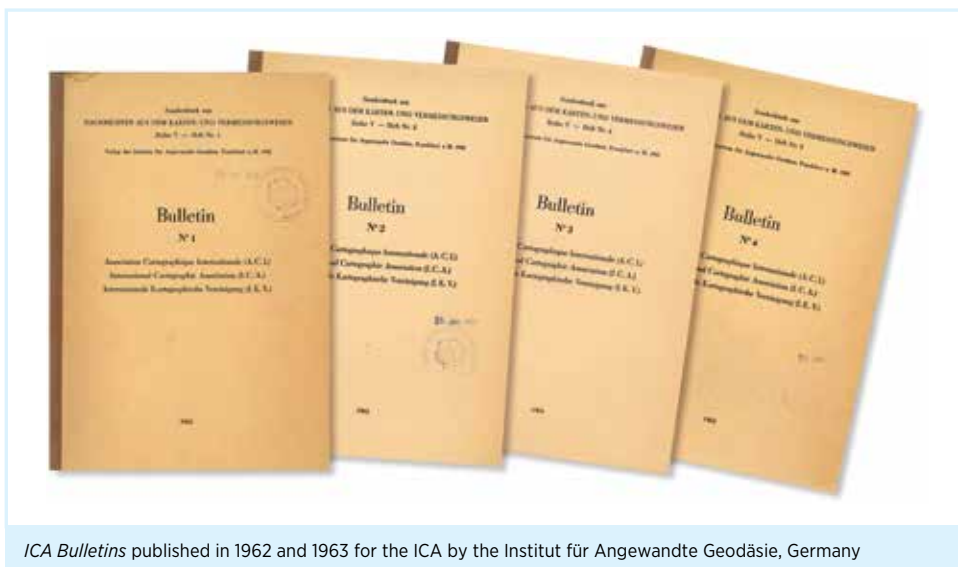
Inspired by the third view of space and the emerging new technologies such as AI/machine learning and big data analytics, a new ICA Working Group on Digital Transformation of



National Mapping Agencies was established in June 2020 to understand the on-going second wave of digital transformation and to enable national mapping agencies, both technologically and theoretically, to make them more competitive in the big data era. The Working Group has two primary goals:

- to advocate and promote new ways of mapping in a cloud/mobile computing environment, where the living structure view of space appears to be a powerful solution to solve the unsolved mapping problem such as map generalization
- to harness new technologies for delivering better maps or data services for the users and the society

Bin Jiang and Juha Oksanen | Chair / Vice Chair
| ICA Working Group on Digital Transformation of
National Mapping Agencies | Sweden / Finland ■



ICA Bulletins published in 1962 and 1963 for the ICA by the Institut für Angewandte Geodäsie, Germany

History of ICA

icahistory.icaci.org/

ICA Bulletin

The ICA's official newsletter is 58 years old! In a report from the 1st General Assembly of ICA held in Paris from 29 May to 5 June 1961 and published in the *Internationales Jahrbuch für Kartographie* (Band 1, 1961, pp 195-199), we can find the following note:

Every member-nation presented a report on its cartographic activity. These reports, certain other papers and addresses will be published in an I.C.A. Bulletin, which is to be edited by Professor Gigas.

Indeed, a year later Erwin Gigas, then Secretary General and Treasurer, edited and published the first two *ICA Bulletins*. A further two issues were released in 1963 and, as it turned out, these would be the last newsletters published exclusively by the ICA for another 20 years, until the first issue of the *ICA Newsletter* appeared in June 1983. Prof Gigas was Director of the Institut für Angewandte Geodäsie (Institute of Applied Geodesy), Frankfurt am Main in Germany and he arranged printing of the *Bulletins* through the Institute. They appeared as reprints, with only minor modifications, of the Institute's journal *Nachrichten aus dem Karten- und Vermessungswesen*, Series V, Special Issue No 1, 3, 4 and 5.

Thanks to Anja Hopfstock and Monika Sester (Germany) who provided us with digital copies, we can learn that the first two *ICA Bulletins* are primarily devoted to the 1st General Assembly of ICA held in Paris. *ICA Bulletin* No 1 contains forewords by Prof Gigas and Prof Eduard Imhof, the first ICA President, greetings and addresses delivered at the General Assembly, and notes on the creation of the ICA. The main feature though is the full text of the Statutes of the

International Cartographic Association adopted in Paris in three languages: French, English and German. The 81-page document finishes with two book reviews.

ICA Bulletin No 2 is entirely devoted to National Reports received from 23 national members at the General Assembly. Apart from the preface authored by Gigas, it contains reports on cartographic activities carried out in Germany, Austria, Belgium, Canada, Spain, United States of America, Finland, France, Greece, India, Iran, Ireland, Israel, Italy, Japan, Luxembourg, Malaysia, Morocco, Netherlands, Peru, United Kingdom, Sweden and Switzerland.

ICA Bulletins No 3 and 4 serve as proceedings from the 1st Technical Conference of the ICA held in Frankfurt am Main, 10-15 September 1962, containing 27 papers, 13 of which appear in issue No 3, and 14 in issue No 4. The conference focused on the problems of *Generalization and Revision of Maps* and was attended by more than 100 participants from 19 countries.

In his foreword to *ICA Bulletin* No 1, Prof Imhof wrote:

Such bulletins with reports on the activities of our young Association and the affiliated national organizations should also be published in the future. They are likely to become a solid link for our members and support the main task of our association, i.e. the international exchange of experiences in the field of cartography. This wish accompanies this first issue.

Despite Imhof's wish, the newly started ICA newsletter came to a premature end when Prof Gigas completed his term as Secretary General and Treasurer in 1964. Fortunately, his departure coincided with the ICA becoming an affiliate member organisation of the International Geographical Union (IGU). The affiliation was formally ratified by both organisations at their respective General Assemblies held in

London in July 1964. Soon after, the ICA was generously granted free space for communication and reporting in the semiannual *IGU Newsletter* (from 1969 *IGU Bulletin*). The first *IGU Newsletter* containing news about ICA activities appeared in 1965 (Vol XVI, No 2), and although it was not 'ours' it served the ICA community admirably over the next 18 years.

Igor Drecki | Chair | ICA Working Group on the
History of ICA | New Zealand ■

New Research Agenda in Cartography

Research Landscape of ICA Commissions

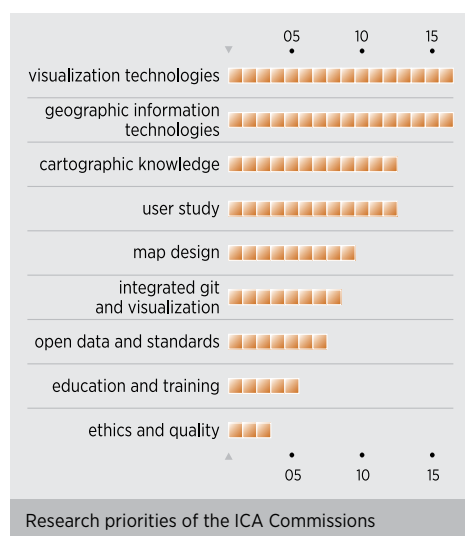
The ICA Working Group on New Research Agenda in Cartography conducted a survey of 28 ICA Commissions in September and October 2020. Chairs and co-chairs of individual commissions were asked to respond to the following three questions:

1. What will be the research priorities for your commission in the coming years (up to three topics)?
2. What do you think are the most efficient ways to communicate the latest ideas / findings on these topics (up to three ways)?
3. With which commissions do you want to initiate joint actions? (up to three commissions)?

The responses from commission chairs and co-chairs have revealed a number of interesting development trends.

Research Priorities

The research priorities are grouped into nine topic clusters as shown in the graph overleaf. The two dominating clusters, i.e. *Visualization Technologies* and *Geographic Information Technologies*, can very well justify the ICA



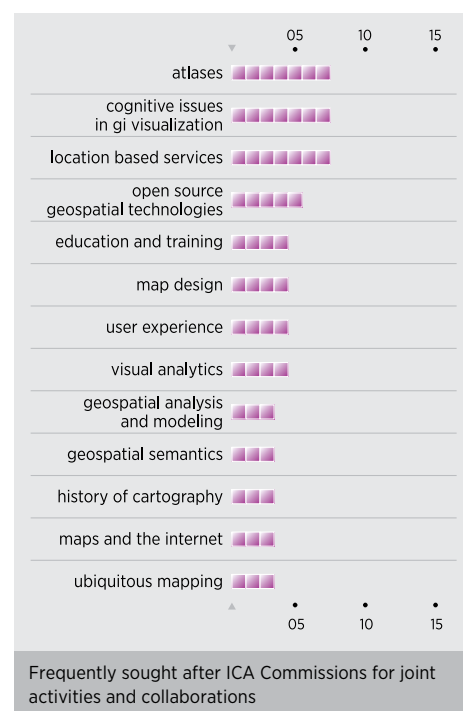
as an international community for the promotion of the discipline and profession of cartography and GIScience. The two other clusters, i.e. *Cartographic Knowledge*, including its preservation, accessibility and communication, and *User Study* with research questions related to user experience, usability testing, human-computer interface etc., have also gained significant visibility. *Integrated GIT and Visualization* has been a sustainable cluster for more than ten years and is characterized by topics of visual analytics. *Open Data and Standard* is a cluster with two mutually enhancing concepts. It has grown rapidly in the recent years with open source platforms. *Education and Training* covers both regular cartographic education programs for young people and life-long learning for mid-career professionals. Finally, there is an increasing awareness of *Ethics and Quality* issues as an



integral part of the quality of data and maps. More detailed keywords and their frequencies of occurrence are better represented in the word cloud below.

Communication Channels

It is very interesting to identify two equally dominant channels for the communication of research findings and ideas, as shown in the table above: the relatively large-scale and cross-disciplinary *Conferences and Conference*



The diversified communication channels also reflect multiple roles of cartographers as teachers, collaborators, tutors, journalists, consultants, competitors, etc.

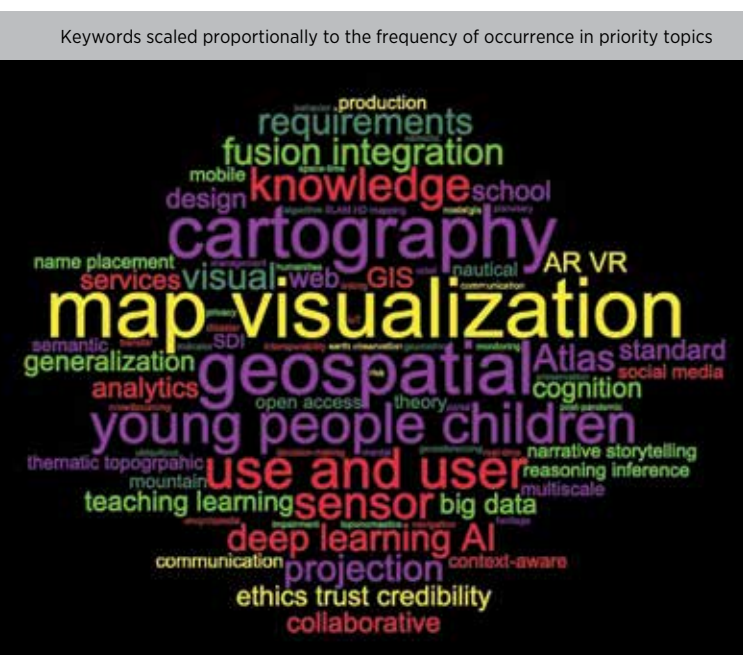
Internal Networking

ICA Commissions have various joint initiatives, although not necessarily reciprocal. ICA Commissions on Atlases; Cognitive Issues in Geographic Information Visualization; and Location Based Services are the three most sought after Commissions for joint activities and collaborations, as shown in the table above.

Each of the Commissions addresses a wide range of issues related to mapping contents, human minds and technological progresses. The frequently sought after Commissions usually share some common objectives, research questions or technological settings with other Commissions.

Many national and international research teams or individual researchers are active in multiple ICA Commissions and they are naturally the best bridge builders. We are confident that the collaboration between ICA Commissions and other international professional organizations will continue in the coming years with greater networking intensity and higher quality.

**Liqiu Meng, Vít Voženilek, Temenoujka
Bandrova and Terje Midtbø** | ICA Executive
Liaisons | ICA Working Group on New Research Agenda
in Cartography | *Germany / Czech Republic / Bulgaria /
Norway* 





In the GL_Week studio: (left) Prof. Josef Strobl (Z_GIS) and Peter Remesch (SynerGIS Informationsystems GmbH)
| Photograph Team AGIT, University of Salzburg

GI_Forum 2020: Connecting Spatially

Challenge of Organizing a Virtual Conference

The Department of Geoinformatics at the University of Salzburg has an over 30-year-history of organizing scientific conferences. It started with the German-language AGIT, adding the English-language GI_Forum later on. These two conferences are at the core of our annual GL_Week taking place in Salzburg, Austria during the first week of July.

Until March of this year, we were in the middle of preparing the next GI_Forum in Salzburg, when the COVID-19 pandemic hit Austria and set the country in a lock-down with far-reaching consequences. The organizing team concluded quickly that we don't want to cancel the conference. Over the following weeks we discussed and tested several scenarios and eventually decided to offer the GI_Forum 2020 as a virtual conference.

Challenge Accepted

The virtual GI_Forum has been a completely new experience for the organizing team, as well as our sponsors, exhibitors and participants. One thing is certain: we have learned a lot during the past few months. Sometimes our expectations have been exceeded, another times a few things have not worked out as we had hoped for.

The biggest challenge has certainly been the very limited time we had to completely turn our planning around and adjust to the "new normal". Within only three months we had to find a platform that fits our multiple needs: conducting presentation sessions, facilitating discussions and hosting a virtual EXPO. We had to create a new program, which offered a balance between well-established lecture sessions and hands-on workshops for our

participants. In addition, we needed to convince our sponsors and exhibitors to our concept. Parallel to that we had to ensure that the scientific review process of the GI_Forum contributions continued as planned, in order to meet our publication deadline of the GI_Forum journal.

A few changes we chose to make as part of the virtualization of the conference were:

- extending the overall time from 3 to 5 days
- reducing the number of parallel sessions
- reducing the session times from 90 to 45 minutes, while limiting individual presentation times drastically

The thought driving these decisions has been that we wanted to make it as easy as possible for participants to attend the conference from their home or office. We also took the following two limitations into consideration:

- the attention span for presentations consumed via screen is usually shorter than in an conventional on-site conference with live interactions
- attendees have very likely multiple tasks on their hands while joining the GI_Forum

The aspect that has been hardest to anticipate was the question about how many participants would attend. Today we can be content with the overall outcome. Nearly 700 attendees have registered for the GL_Week 2020. We had around 250 active participants online per day throughout the week, attending between 1-4 parallel sessions.

Live participation, meaning actively sharing audio and video when encouraged during Q&A sessions, has been rather low. Especially our exhibitors had hoped for more live interactions at their booths. However, they were positively surprised by the high number of participants in their workshops or during their product presentations. This helps us make the case once more that it is essential for exhibitors to play an active role in the conference program, as this usually serves as a great starting point for further conversations.

Our takeaways from this first virtual GI_Forum are overall positive. We will build on the history we have in organizing conferences and combine it with the knowledge we gained this year in order to create something new and exciting for the coming year(s) – our preparations for 2021 have already started as well as our discussions about what a hybrid-conference could look like.

Julia Stepan and Ursula Witzmann-Müller |
GI_Forum | University of Salzburg | Austria ■

EuroCarto 2020

EuroCarto is the brand name of a successful series of regional European cartographic conferences, that were initiated in Oxford, United Kingdom, in 1981. Throughout Europe, from Paris to Brno, from Palma de Mallorca to Kiruna, a total of 14 EuroCarto conferences were organised between 1981 and 1997, as Prof Wolfgang Kainz, Conference Director of the EuroCarto 2020, pointed out in his keynote address.

Almost 20 years later, Prof Georg Gartner, former ICA President, took up again the idea of organizing a European regional conference. Consequently EuroCarto was reborn with an invitation to come to Vienna, Austria, in November 2015. The conference was a great success with more than 200 participants taking part in an exciting meeting including presentations, excursions, and a map exhibition, which many still remember well today (for a report from EuroCarto 2015, see *ICA News*, No 65, December 2016, page 20). Encouraged by the positive feedback from participants, the idea of repeating EuroCarto in Vienna at regular intervals was already discussed in 2015. Finally, in 2019, on the invitation of the President of the Austrian Cartographic Commission, representatives of the German Society of Cartography, the Swiss Society of Cartography and the International Cartographic Association met in Vienna to form an International Organizing Committee and plan for a new EuroCarto 2020 to be held in Vienna, 21-25 September 2020. As in 2015, the approach was to focus on Central Europe, hence the conference subtitle "Central European Cartographic Conference". In addition, the German Cartographic Society decided to run jointly its annual German Cartography Congress (68. Deutscher Kartographie Kongress) with EuroCarto 2020. The ICA supported the planned conference in many ways and endorsed it as the ICA Regional Cartographic Conference.

Then, at the height of the planning phase, COVID-19 pandemic spread throughout the world. Soon after, instead of cancelling the event, the organizing committee decided to break new ground and hold the EuroCarto

conference virtually for the first time. Although it was not an easy decision, it paid off! The conference programme was entirely revised, including its duration from the original 3 full days on-site, to 5 half days virtually. Around 420 participants registered for EuroCarto 2020, more than could have been expected for an on-site event, with Germany providing the largest group of participants (126). Just under half of all participants came from German-speaking countries, while the rest represented 55 nations from all continents and time zones of the world – a truly remarkable result. Without exaggeration it was a worldwide event with a European touch, which was also well reflected in the presentations.

The high number of participants was mainly attributed to free registration for the event, thanks to the generous contribution of the four conference sponsors: Esri, Schubert & Franzke publishing house, Geoville and the MDPI-Open Access *International Journal of Geoinformation*. The logistical support was provided by the University of Vienna. Many new faces who usually do not attend cartographic meetings, but are generally interested in cartography and visualisation, joined us at EuroCarto. This was one of valuable findings we learned from running a virtual event of this kind.

The conference programme was arranged into six regular sessions featuring 22 presentations, including one session delivered purely in German, and five spotlight sessions with 25 short presentations. Each presentation was attended by 50 to 100 participants. In addition EuroCarto 2020 featured three keynotes: Tim Trainor, ICA President, who spoke about the current ICA activities in connection with the objectives of the United Nations, notably the Sustainable Development Goals; Gerd Buziek, Esri, who presented the COVID-19 dashboard developed by his company and shared his experiences of this high-profile project; and Prof Wolfgang Kainz, Conference Director, who presented his personal (and optimistic) view on the relatively 'young' science of cartography. All presentations were followed by a short discussion.

Another first at the conference was the *CartoHacks* session, which was developed by members of the "Formats for Young People" team of the German Cartographic Society to provide insights into cartographic methods and workflows with the help of live tutorials. In this hands-on session, Sebastian Meier demonstrated how he collected, analyzed and visualized open weather data from the German Weather Service. A subsequent survey revealed that *CartoHacks* session was very well received by participants and should become part of the future conferences.

The virtual *CartoCafé*, offered regularly by the German Cartographic Society since June 2020, provided an opportunity to share some thoughts. Wishes and ideas for the future

format of EuroCarto and the German Cartography Congress were discussed with the international participants. Apart from much praise received for the virtual format, there was also a broad consensus that on-site events with in-person contacts and exchanges should not be abolished. The participants shared the common view, that at the moment there is still little experience in designing hybrid meetings with in-person and online components, but the organizers should continue with chat room discussions and virtual workshops.

The closing ceremony provided an opportunity for the organisers to express their satisfaction with the past five days. It was concluded that the event was more than just a replacement of the originally planned on-site event, its delivery went smoothly technically, and it even provided a small financial gain for the organizers. The cooperation between the Austrian Cartographic Commission of the Austrian Geographic Society (represented by Wolfgang Kainz and Georg Gartner), the Swiss Society for Cartography (Mark Wigley and Thomas Schulz), the German Cartographic Society (Jochen Schiewe and Dirk Burghardt), and the International Cartographic Association (Thomas Schulz) worked very well. Special thanks went to Wolfgang Kainz, Conference Director, and his team for the excellent technical and organisational delivery of EuroCarto 2020 from their base in Vienna.

From the ICA's point of view, EuroCarto 2020 was a genuine success. The conference set the example for future online and potentially hybrid events. Important lessons learned from this conference and other successful 2020 regional conferences run in North and South America, will certainly be discussed by the ICA Executive Committee with the organizers of the International Cartographic Conferences to be held in Florence, Italy, in 2021, and in Cape Town, South Africa, in 2023. Of course, one should not forget the personal encounters, which were greatly missed, but the programme offered and the flexible participation were expressly praised.

Abstracts of all contributions from EuroCarto 2020 are available as the second volume of the *Abstracts of the International Cartographic Association* series from www.abstr-int-cartogr-assoc.net/2/index.html. Video recordings of the presentations were also made available online and can be accessed from the event's website www.eurocarto2020.org.

And please make a note of an important date already – the EuroCarto 2022 conference will be held in Vienna from 17 to 19 September. It is hoped it will be largely an in-person event, but perhaps with a virtual supplement. So please plan a trip to beautiful Vienna in 2022!

Thomas Schulz | EuroCarto 2020 International Organizing Committee | *Switzerland* ■

16th International Conference on Geoinformation and Cartography

The 16th International Conference on Geoinformation and Cartography, 24-27 September 2020, was organized by the Croatian Cartographic Society and the Faculty of Geodesy, University of Zagreb. The conference was endorsed by the International Cartographic Association (ICA) and was held in compliance with epidemiological recommendations, i.e. mandatory wearing of face masks and maintaining physical distancing.

Facilitating the conference, the organizers wished to contribute to the development of geoinformatics, cartography, geodesy, geography, and associated fields with special emphasis on new developments. A wide range of themes and renowned invited speakers guaranteed interesting programme and a contemporary approach.

The event attracted 80 expressions of interest to participate, with 60 indicating their preference for online participation and 20 – in person. Keynote speakers included Prof Temenoujka Bandrova, ICA Vice President, and Prof Haosheng Huang, Chair of the ICA Commission on Location Based Services. Prof Bandrova spoke about the establishment of an educational centre "Save the children life", while Prof Huang gave his talk on modelling and data processing in map-based mobile services. Keynotes were followed by a presentation of the new *Dictionary of Cartography* by Nedjeljko Frančula, Miljenko Lapaine and Ivo-Pavao Jazbec (for more details about this publication, see *ICA News*, No 74, June 2020, page 14). The conference continued with a series of presentations after a solemn session of the Faculty Council which marked the Day of the Faculty of Geodesy.

The next day was devoted to a tour of Rovinj, a city situated in the northern part of the Adriatic Sea. We visited the Franciscan monastery and the Centre for Historical Research in Rovinj. The scientific library of the Centre features more than 93,000 volumes. It has been a depository library of the Council of Europe since 1995 and includes a special section on human and minority rights and environmental protection. The library also preserves a special collection of geographical, topographic and military maps, as well as paintings and views from the 16th century to the present day.

On the third day, 26 September, we visited Vodnjan, a town and municipality in Istria County. We started with the Belci family's olive oil tasting room and afterwards made our way

to the Church of Saint Blasius. The conference programme resumed in the afternoon in the Bradamante Palace, which was made available to us by the Italian Community in Vodnjan. At Several presentations were delivered there followed by a small concert in which thirteen-year-old Giulia Timea Fioranti played the piano.

The conference finished with a half-day visit to the Plitvice Lakes National Park, one of the oldest and largest national parks in Croatia. Established in 1949, it was added to the UNESCO World Heritage register in 1979. It is located in the mountainous karst area of central Croatia bordering with Bosnia and Herzegovina.

All materials from the 16th International Conference on Geoinformation and Cartography, including the *Program and Abstracts* publication, are available from www.kartografija.hr.

Miljenko Lapaine | Croatian Cartographic Society | Croatia ■

10th Congress of Cartographic Science

The 10th Congress of Cartographic Science / 1st International Virtual Congress *The challenge of cartography as an element of territorial management* was held in Resistencia, Argentina, between 4-6 November 2020. It was organized by the Argentine Center of Cartography and the Faculty of Humanities of the National University of the Northeast of the Argentine Republic. The main objective of the congress was to create opportunity to disseminate, facilitate and share cartographic innovations, methods, techniques, as well as projects and research utilising geographic information. In addition, the idea was to provide platform for exchange for public bodies, professionals and companies that are generators and/or users of cartographic information, products and services.

The congress programme was developed to address themes relating to Cartographic Science:

- *Cartography and territorial management*: use and application of cartography that supports prioritising, planning and management of actions, programs, projects and public policies
- *Cartography and Web 3.0*: facilitation and dissemination of cartographic products through different formats and platforms
- *Cartographic education, teaching and professional training*: history of cartography, social and participatory cartography, cartography for different users, cartography didactics
- *Cartography in the XXI Century*: trends and new technologies in cartographic production

The three busy days of the congress offered a range of activities: presentations of scientific papers, technical exhibitions, virtual cafes, poster displays, awards, etc. At the Opening Ceremony, Ing Raúl Kulichevsky, Executive Director of the National Commission for Space Activities, provided an exhaustive description of the SAOCOM Satellite Mission, while at the closing session we had the privilege to host Tim Trainor, President of the International Cartographic Association (ICA), who shared an overview of the ICA and reflected on the current trends in cartography.

The programme featured three other international speakers: Dr José Jesús Reyes Nuñez, Hungary; Dr Francisco Javier Escobar Martínez, University of Alcalá, Spain; and Dr Fernando López Martín, Geographic Institute of Aragón, Spain. Their talks were complemented by five national presentations delivered by representatives of the National Commission for Space Activities (CONAE), the Naval Hydrography Service (SHN), the National Geographic Institute (IGN), the Argentine Mining Geological Service (SEGEMAR) and the National Institute of Statistics and Censuses (INDEC).

The congress attracted 622 attendees, of which 261 were students and 183 – guests. Participants came from 23 Argentine provinces and 14 countries: Brazil, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Paraguay, Peru, Uruguay, Mexico, Spain, Hungary and the United States.

The virtual transmission was made possible via a YouTube channel, with an average of 200 participants per day. A total of 33 hours of live broadcast were recorded, and more than 5,900 views have been made so far. Simultaneously, six Virtual Cafes were held focusing on Teacher Education and Training; Collaborative Cartography; Fires, Land Cover and Use; Geographical Names; and Climate Change. On average, 20 people participated in each of these sessions.

Traditionally, the Juan Abecian Prize is awarded at the Congress of Cartographic Science. The award, given in two categories, was established by the Board of Directors of the Argentine Center for Cartography (CAC) in recognition of Juan Abecian, a long-serving and dedicated Argentinian cartographer and former CAC President. The objective of this prize is to stimulate cartographic research and give recognition to the diffusion of cartographic knowledge in the country. Lic Luis Humacata won in the young researcher's category, whilst Lic Graciela Marin won the prize for her work in the category 'scientific advances and technology in cartography'.

For more information about the congress, please visit centrodecartografia.wixsite.com/10ccc.

Jorge Machuca | Centro Argentino de Cartografía | Argentina ■

AutoCarto 2020

Acknowledgements

As with many conferences, AutoCarto 2020 was organized entirely through the volunteer efforts of many dedicated people who spent countless hours grinding out the details. This was, of course, complicated by the COVID-19 pandemic, which caused us not only to reschedule the event – adding six months to the planning period – but also to completely rethink its presentation. The organizing committee of 17 met nearly weekly for 18 months – there are few who deserve special mention for their tireless efforts and continuous enthusiasm. Under the vigilant eye of program chair Dr May Yuan, the program committee of 35 people from around the globe worked to ensure that this conference's offerings met the high standards that May had set. And a much-deserved shout-out goes to the Cartography and Geographic Information Society (CaGIS) webmaster, Thomas Pingel, for his unflagging efforts to bring this conference to you online. We also thank our sponsors: Esri, the US Census Bureau, and the University of Redlands for their support. And finally, we acknowledge the CaGIS, which has been dedicated to offering you this conference for the past 46 years!

WhereNext

AutoCarto 2020, online and free of cost for all, offered presentations, workshops, and visionary keynote presentations from participants across the globe. Four distinguished keynote speakers address the conference's theme of *WhereNext* from international, government, industry, and academic perspectives.

Included below is the abridged introduction by Aileen Buckley, AutoCarto 2020 Conference Chair, which provides the scope, value, and purpose of the conference and explains its continued importance as a venue for important discourse on cartography and GIScience. For full text and information on AutoCarto 2020 conference, please visit cartogis.org/autocarto/autocarto-2020/program/.

Introduction by Aileen Buckley

On behalf of the Cartography and Geographic Information Society, I want to welcome you to AutoCarto 2020, offered this 18th day of November – GIS Day!

The theme of AutoCarto 2020, *WhereNext*, was conceived by Dr May Yuan, AutoCarto 2020 program chair. Her vision was to promote communication and collaboration that challenged the ideas of where and next in terms of meaning, communication, visualization, and reasoning. And she wanted to position the sharing of ideas within the context of a new

technological age that's characterized by advancements such as automation, the robotic revolution, and artificial intelligence.

May's vision, which she first articulated last year as we began planning the conference, has turned out to be somewhat prophetic, as is evident in a recent article in the *National Geographic* magazine, which explores a world in which robots perform the tasks that humans would, and AI makes the decisions that humans would. AI now is broadly used in a wide variety of activities, from screening job applicants to assisting with food production and – perhaps more relevant to geography – supporting smart cities in a whole range of areas, such as security, traffic, public safety, and governance.

In the past, automation may have been primarily about efficiency and productivity. But – in a world faced with a global pandemic – automation, robots, and AI may become essential for our health and safety. People may have to overcome their distaste for the idea that machines can replace humans. Robots are helping to ensure that people are safer and healthier by reducing contact, monitoring social distance, and even eliminating the need to go out altogether.

Suddenly, replacing people with robots may not just be safer and more practical – we may find it becoming essential. And that's not only to do the actual work that humans do, but also to provide social support, as with socially assistive or telepresence robots, which are being used to replace direct person-to-person contact. For example, these robots can allow users to check on elderly relatives, share experiences with distant friends, or verify that an item is available in a store before visiting. The use of telepresence robots may help reduce feelings of loneliness by providing much-needed social interactions during physical isolation. And socially assistive robots can help people cope with the negative consequences of social distancing by motivating them to maintain physical activity and proper nutrition.

At Oregon State University, researchers are testing the power of artificial intelligence, using deep learning algorithms to capture geographic features from satellite images and learn a 'sense of place' like humans. This information is then used to develop what's called a 'city style,' which can be transferred to other places, like an imaginary city. However, it can also be used to falsify geospatial data or generate fake data.

Deepfakes use a form of deep learning to fake images, thus leading to a new threat – doctored images of the earth itself. With an emerging technique called 'generative adversarial networks,' computers are tricked into seeing objects – in landscapes or satellite images – that aren't there. This is deeply concerning as more open-source images are generated and increasingly used – for example, to route self-driving vehicles or help run smart cities. I believe geographic information

scientists and cartographers are uniquely positioned to watchdog these types of deceptions.

The myriad uses – and misuses – of automation, the robotic revolution, and artificial intelligence frame new thoughts in the discussion of *where* and *next*, especially as automation, the robotic revolution, and AI challenge both theoretical and practical aspects of some of the most important foundational geographic concepts – scale, place, distance, interaction, change, movement, and others.

This is why it is important that we have a forum in which to share our ideas – that is the intent of AutoCarto 2020. Researchers from around the world responded to May's call for contributions. For this year's conference, you have access to 40 papers by 121 authors from 14 different countries, thus constituting a truly international program. There are 7 workshops by 16 organizers from 6 countries. And you can watch four visionary keynote speeches from four different perspectives – international, government, industry, and academia.

To give you a taste of this year's content, I want to briefly touch on some of the inspiring and insightful thoughts of our keynote speakers. The first is Tim Trainor, President of the International Cartographic Association (ICA). Presidents of the ICA have traditionally graced the stage of AutoCarto to welcome its audience and to provide some insight and direction from the international organization.

In his talk, Tim speaks about the association's work to address global challenges through involvement in three important international initiatives: the United Nations Sustainable Development Goals (SDGs); the Integrated Geospatial Information Framework (IGIF); and the Global Statistical Geospatial Framework (GSGF). He explains how the ICA provides a platform for engagement to advance areas of research in support of these initiatives through public media, publications, and conferences.

Deirdre Dalpiaz Bishop, Chief of the Geography Division of the US Census Bureau, speaks

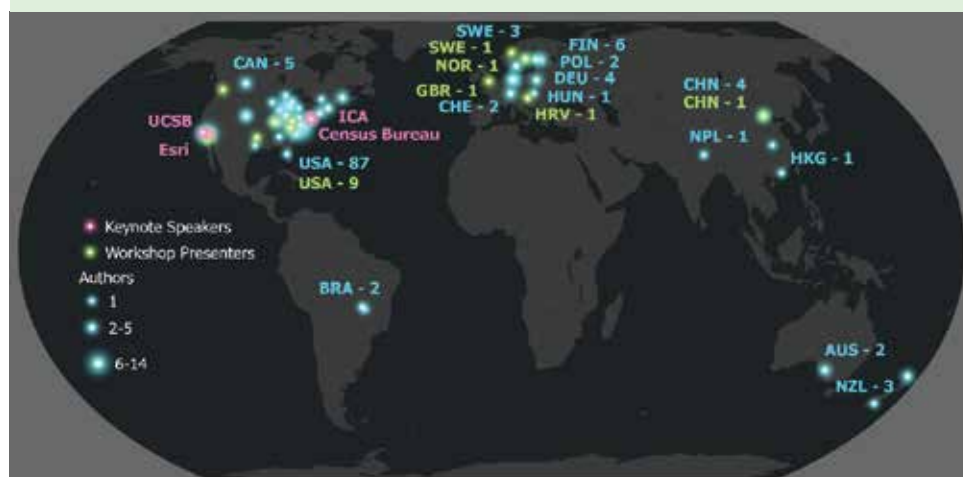
to the theme of *WhereNext* in relation to geospatial data innovation. She reflects on the accomplishments that have led to finalization of all 2020 Census data-collection operations. She speaks about the necessity of building and maintaining geographic partnerships to help achieve the bureau's completeness and consistency requirements while collecting massive amounts of data at a very local scale. She explains a unique use of satellite imagery to validate the bureau's data about societal geography. And she describes the bureau's requirements to publicly share its progress throughout the data collection process.

Shifting perspectives from government to private industry, Clint Brown, Director of Product Engineering at Esri, talks about this new age of cloud-based and elastic computing in which maps are dynamic and multiscale, mashed up, and not only interactive but also reactive. He points out that the features on the maps are linked directly to the data and that the data has been integrated from many different sources. He also highlights the importance of sharing, using as examples the 1.5 million ArcGIS StoryMaps stories that have been created in the last 5 years and the 35 million items that have been added to ArcGIS Online in the last 10 years. These items include not only the geographic data that we have come expect to find online but also maps, models, and apps.

I especially like how Clint has summarized mapping in this new age in which we find ourselves. As he says, *"All of our information is being brought together and integrated in interactive maps built for specific audiences so that everyone gets the map for their mission, purpose, or work. . . . GIS and maps are becoming relevant for everyday citizens."*

Moving on to an academic viewpoint, Keith Clarke, renowned Professor of Geography at the University of California in Santa Barbara, describes a recently completed project that explores the current state of and future prospects for cartographic research in the US.

Global distribution of AutoCarto 2020 contributions | Map courtesy of Aileen Buckley



He identifies five overarching thematic topics that led the authors to reflect on the accomplishments and shortfalls of the past and to contemplate the possibilities and challenges for the future.

Unlike all previous AutoCarto conferences, AutoCarto 2020 is being offered completely online. Prompted by the global pandemic, CaGIS made the decision to offer this year's content in an open-access format, by delivering it online and free of cost for all.

The conference's intent has changed over the years – shifting from automation in cartography to activities, advancements, and challenges at the interface of cartography and GIScience. While there are some vast differences between the AutoCarto events of old and those of today, some things still hold true, such as this observation by the chair of Auto-Carto 1, Dean Edson: “Things are going on in the field of cartography that were unthought of just a few years ago.” And his hope was that after that first meeting concluded, they would have a better idea of what the future might hold. We, too, hope for that as an outcome of AutoCarto 2020.

Aileen Buckley | Cartography and Geographic Information Society | *United States of America* ■

Australian and New Zealand Map Society

Society Activities

The Australian and New Zealand Map Society's (ANZMapS) Annual General Meeting was held following the online event *Mapping Pacific Places*, on Thursday, 10 September 2020. The new committee has been elected: Martin Woods (President), Michael Pearson (Vice President), Andrew Eliason (Business Manager); (Secretary), Brendan Whyte (Editor of *The Globe*), and Sarah Ryan and Riaz Dean (Ex-officio). The committee will be reviewing approaches to publishing its journal *The Globe*, planning for the 2021 conference and a post-COVID future looking at new ways of engaging a membership with diverse cartographic interests.

Mapping Pacific Places comprised ten individual presentations across three sessions. The pre-recorded webinar attracted over 600 listeners through the day, while speakers also managed live Q&A. The speakers were:

- Granville Allan Mawer: *East by South West: Navigating with Magellan*
- Ian Burnet: *A World Divided*, the Pacific after the 1494 of Treaty of Tordesillas
- Robert King: *Finding the Antipodeans*, origins of the antipodean southern continent
- Margaret Sankey: *The French 'discovery' of the Pacific: New Worlds in the South*

- Bronwen Douglas: *Place, Race, Genome: 'Polynesia' in Deep Historical Perspective*
- Paul Geraghty: *Maps and the European understanding of Fiji toponymy 1643-1840*
- Jan Tent: *Naming Places: Dutch Voyagers and Toponyms in the Fifth Part of the World, 1616-1722*
- Tim Kong: *Digital Pacifik*, collaboration of the Australian Government, National Library of Australia and Te Puna Mātauranga o Aotearoa, the National Library of New Zealand on a shared online place for digitized records of Pacific cultural heritage
- Katerina Teaiwa: *Banaba – Ocean Island*, history of Banaba in Kiribati and the impact of phosphate mining on the island and culture of its people.
- Talei Lusia Mangioni: *Mapping the Creative Revolution of the Nuclear Free and Independent Pacific*

Where the speakers agreed, recordings of their presentations were made available through the National Library website.

Notable Achievements

National Library of Australia

In November 2020, the National Library launched *Map Search* (mapsearch.nla.gov.au), with the involvement of ANZMapS committee and input of the members.

Map Search is the National Library's latest user interface, and has been launched in beta form, using the considerable map collections held by the Library. It allows the user to layer historical street, topographic, road and other maps over modern basemaps, with the capability to view and document map features. *Map Search* can be used to track change over time, with added value for local and family historians, students and educators, environmental and many other researchers. We're excited as well that the 'features editor' function allows users to use a map to record the history of their area of interest. The service currently includes 13,500 maps predominantly of Australia, with considerable scope for expansion over time.

During the six-month beta phase *Map Search* will take on feedback from users before full production launch in 2021.

State Library of New South Wales

In December 2020, the Library is opening a suite of rooms dedicated to the display of maps, globes, and atlases from the Library's extensive collections. The Map Rooms will be in the historic Mitchell Building.

The first room is dedicated to Australia's place in the history of global cartography and exploration. The second, larger map room – complete with a huge digital screen showing other highlights from the Library's cartography collection – is devoted to charts and maps of early New South Wales and Sydney.

The larger room will be available for events and seminars including talks and tours to

introduce the map collections to Library visitors and researchers.

Martin Woods | Australian and New Zealand Map Society | *Australia* ■

Cartographic Capacity Building Initiative

As private organizations and governmental mapping agencies around the world seek to grow their mapping capabilities and production capacity, East View Geospatial (EVG) is responding to those needs by launching *The Cartographic Capacity Building (CCB) Initiative* – an official training and capacity building program to set them up for success. After more than 25 years in the cartographic space, EVG is pleased to bring forth CCB initiative centered around the core areas of Data Sourcing, Feature Data Collection and Cartographic Finishing. Following a needs analysis, the training program is highly tailored to an organization's needs, covering topics in a dynamic and comprehensible fashion. Cartographic teams will be trained utilizing EVG's proprietary collection and extraction methodologies and immersed in hands-on, in-depth training exercises on the latest feature collection techniques and premier cartographic tools. As a longtime partner of Esri and recent recipients of the Top Esri Consultants award by CIO Applications, EVG is an accredited resource to train any organization on the Esri Defense Mapping & Production Mapping toolsets.

East View Geospatial is unrivalled in its commitment to working with national mapping agencies and foreign governments, building training programs for multiple international partners on a variety of map production workflows including civilian national mapping as well as standard military map products such as Multinational Geospatial Co-Production (MGCP), Topographic Data Store (TDS), and Topographic-Line-Map (TLM), among others.

Following CCB initiative certification, organizations will be equipped with the skills, knowledge and tools to create and publish new maps in-house at scale. East View Geospatial is looking forward to working with organizations around the world to transform their staff into self-sufficient mapping professionals. No matter the region of interest, size of the organization or level of expertise, EVG is committed to delivering the ultimate cartographic capacity building program.

For more information and a downloadable brochure, please visit geospatial.com/services-core-capabilities/training-and-capacity-building/.

Alex Evert | East View Geospatial | *United States of America* ■

Cartographic Activities at United Arab Emirates University

Between June and December 2020, the United Arab Emirates University (UAEU) organised several meetings and training events. They were delivered or facilitated by Dr Naeema Alhosani, Associate Professor in Cartography in the College of Humanities and Social Sciences:

- **10 June:** a virtual workshop entitled *Secrets of success and distinction* to UAEU students, in collaboration with the Continuing Education Center.
- **16 June:** virtual workshop entitled *Planning during a crisis* to UAEU alumni students, in collaboration with the Alumni Affairs Unit.
- **24 June:** a virtual book review session to UAEU students about her book *A to Z... Cartographic Terms* for school children.
- **1 October:** (with Dr Ahmed Almurshidi) a virtual meeting with GIS Center of the Dubai Municipality to discuss the development plans and research projects, such as the innovation lab, which will concentrate on the implementation of the new and unique ideas in the GIS industry with the help of internal expertise and with the support of the organizations in the GIS field, i.e. Esri, Ordnance Survey, Trimble, and similar.
- **5 October:** a virtual lecture entitled *Ways to Show your Teacher Appreciation* to UAEU students.
- **5 November:** a virtual meeting with the Al Ain Municipality, the renowned urban designer Professor Carl Steinitz from Harvard University GSD and the Centre for Advanced Spatial Analysis of University College London, and Mr Carsten Björnsson from Esri, to discuss the development plans and various research projects.

In addition, on 5 November 2020, GeoDubai Center of the Dubai Municipality invited Dr Naeema Alhosani from the Geography and Urban Sustainability Department and her students to attend a virtual workshop entitled *Design of Cartographic Map Subjects* delivered by Eng Mohammed Adel and Eng Hala Faozi.

Naeema Alhosani | United Arab Emirates University
| *United Arab Emirates* ■

CartoCafé

Global pandemic made it possible: since face-to-face meetings in larger groups have not been possible for months, the German Cartographic Society (DGfK) has launched the virtual *CartoCafé*. Since June 2020 this is taking place on the first Thursday of the month. The regular participation of 30 to 50 people can be seen as a great success for this type of event. The virtual meetings have the advantage of allowing the exchange of ideas more flexibly and are time- and cost-efficient regardless of the location of participants. Of course, *CartoCafé* is not to replace personal contact, rather it is to be run as a complementary event.

The previous topics of *CartoCafé* sessions reflected the breath of cartography – the focus was on contributions from cartographic practitioners, but also covered discussions concerning articles published in *Kartographische Nachrichten*, journal of DGfK. In addition, topics related to the Society were also dealt with and a *CartoQuiz* was organized.

If you like to attend *CartoCafé* sessions, please email praesident@dgfk.net. *CartoCafé* is run in German language only, however similar sessions in other languages are highly recommended; we are happy to provide assistance.

Jochen Schiewe | German Cartographic Society |
Germany ■

calendar

may 2021

06: ICA Commission on Cognitive Issues in Geographic Information Visualization and ICA Commission on User Experience Joint Workshop | *Adaptable Research Methods for Empirical Research with Map Users* | **VIRTUAL** | cogvis.icaci.org/21_adaptable.html

06-07: 15th Conference Digital Approaches to Cartographic Heritage / 22nd Conference of the Map & Geoinformation Curators Group (co-organised by the ICA Commission on Cartographic Heritage into Digital) | *Challenges in Modern Map Librarianship* | **VIRTUAL** | cartography.web.auth.gr/ICA-Heritage/Budapest2021/

26-28: IGU Conference on Heritage Geographies (session on toponymy coordinated by the ICA Commission on Toponymy) | *Politics, Uses and Governance of the Past* | Lecce | Italy | conference.unisalento.it/ocs/index.php/heritagegeographies/heritagegeographies/

june

14-19: 8th International Conference on Cartography and GIS | Nessebar | Bulgaria | iccgis2020.cartography-gis.com

28-01 July: 8th EuGeo Congress on the Geography of Europe | Prague | Czech Republic | www.eugeo2021.eu

july

05-09: GI_Forum 2021 / ISDE12 (organised by the ICA affiliate member UNIGIS International Association) | **VIRTUAL** | www.gi-forum.org | digitalearth2021.org

august

08-10: 28th Chinese Professionals in Geographic Information Sciences Conference (session organised by the ICA Commission on Cognitive Issues in Geographic Information Visualization) | *Spatial Cognition in the Mobile Era* | Nanchang | China | cogvis.icaci.org/pdf/cpgis2021/cfp-CPGIS2021_Spatial_Cognition.pdf

16-20: 34th IGU International Geographical Congress (session on *Place Names as Indicators of Human Perception of Space* coordinated by the ICA Commission on Toponymy) | Istanbul | Turkey | www.igc2020.org

september

01-04: 20th Colloquium on the History of Cartography | Basel | Switzerland | www.kartengeschichte.ch/dach/

10-12: ICA Commissions on Cognitive Issues in Geographic Information Visualization, ICA Commission on Visual Analytics and ICA Commission on User Experience Joint Workshop | *Analytical Reasoning: Cartography, Visualization, Design* | Warsaw | Poland | carto-vis-workshop.uw.edu.pl

december 2021

14-18: 30th International Cartographic Conference | Florence | Italy | www.icc2021.net



CELEBRATING NEW ZEALAND MAPPING

The New Zealand Cartographic Society warmly invites you to our **50th Anniversary** to be held on **Saturday, 27 February 2021** in Wellington. Join us for a pleasant summer's evening, reconnecting with old friends and meeting new colleagues, on Wellington's beautiful waterfront. Let us **celebrate New Zealand mapping!**

For information and registration or remote access, please visit cartography.org.nz/events/nzcs50

ica affiliate members

- 2011** **Association of Polish Cartographers** | *Poland* | www.polishcartography.pl
Attn: Assoc Prof Joanna Bac-Bronowicz | joanna.bac-bronowicz@pwr.wroc.pl
- 2019** **Australian and New Zealand Map Society** | *Australia / New Zealand* | www.anzmaps.org
Attn: Dr Martin Woods | mwoods@nla.gov.au
- 1999** **Centro Argentino de Cartografía** | *Argentina* | www.centroargentinodecartografia.org
Attn: Jorge Horacio Machuca | cac@centroargentinodecartografia.org
- 2011** **Chinese Cartographic Association (Chinese Taipei)** | *Taiwan-China* | www.ccartoa.org.tw
Attn: Dr Ching Jen Kao | ccartoa@gmail.com
- 2007** **Dubai Municipality** | *United Arab Emirates* | www.dm.gov.ae
Attn: Hussein Mohammed Abdulmuttalib | huseinma@dm.gov.ae
- 2007** **East View Geospatial** | *United States of America* | www.geospatial.com
Attn: Kent Lee | geospatial@eastview.com
- 2005** **Eko-Graf Publishing House** | *Poland* | www.ekograf.pl
Attn: Roman Janusiewicz | ekograf@ekograf.pl
- 2017** **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
- 2003** **Esri** | *United States of America* | www.esri.com
Attn: Mark Cygan | mcygan@esri.com
- 1995** **Geospatial Information Authority of Japan** | *Japan* | www.gsi.go.jp
Attn: GIA Secretariat | gsi-intex@ml.mlit.go.jp
- 2007** **German Federal Agency for Cartography and Geodesy** | *Germany* | www.bkg.bund.de
Attn: Dr Paul Becker | vorzimmerpraesident@bkg.bund.de
- 2015** **HERE** | *Germany* | www.here.com
- 1995** **Hexagon Geospatial** | *United States of America* | www.hexagongeospatial.com
Attn: Jon Thies | jon.thies@hexagongeospatial.com
- ICON** | *Ireland* | www.icon.ie
Attn: Emmet McHugh | contact@icon.ie
- 2003** **Indian National Cartographic Association (INCA)** | *India* | www.incaindia.org
Attn: Col Sunil S Fatehpur | secretarygeneralinca935@gmail.com
- 1991** **Institut Cartogràfic i Geològic de Catalunya (ICGC)** | *Spain* | www.icgc.cat
Attn: Jaume Massó i Cartagena | direccio.icgc@icgc.cat
- 1991** **Institut National de l'Information Géographique at Forestière (IGN)** | *France* | www.ign.fr
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- 2017** **Library and Archives Canada** | *Canada* | www.bac-lac.gc.ca
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- 1995** **Moscow State University of Geodesy and Cartography** | *Russia* | www.miigaik.ru
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- 2007** **Ordnance Survey** | *United Kingdom* | www.ordnance-survey.co.uk
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- 2003** **Regional Centre for Mapping of Resources for Development (RCMRD)** | *Kenya* | www.rcmr.org
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- 2003** **Union of Chambers of Turkish Engineers and Architects, Chamber of Surveying and Cadastre Engineers (UCTEA-CSCE)** | *Turkey* | www.hkmo.org.tr
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- 2015** **United Arab Emirates University** | *United Arab Emirates* | www.chss.uaeu.ac.ae/en/
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- 2011** **United Nations Geospatial Information Section** | *United Nations* | www.un.org/depts/cartographic/english/htmain.htm
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- 1991** **United States Geological Survey** | *United States of America* | cegis.usgs.gov
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- 2007** **University of Architecture, Civil Engineering and Geodesy** | *Bulgaria* | www.uacg.bg
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- 2017** **University of Lay Adventists of Kigali** | *Rwanda* | www.unilak.ac.rw
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- 1995** **University of Twente, Faculty of Geo-Information Science and Earth Observation (ITC)** | *The Netherlands* | www.itc.nl
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- 2015** **Wuda Geoinformatics** | *China* | www.geostar.com.cn
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1995 – year of ratification by the ICA General Assembly

65 – affiliate member's profile published in ICA News (issue number)

children's map gallery 2019 winners



Barnaby Blampied | 9 | *A Turtles Tear: Our Plastic Oceans* | Matakana School: Wellsford | New Zealand

Tara Dibbaratana Jayamanggala Suprato | 5 | *Map is the Most Beautiful Flower in the World* | -: West Jakarta | Indonesia

Robert Hopjan | 11 | *The Maps Show Me the Way* | -: - | Czech Republic

Hande Korbalt | 9 | *World of Colour Lines* | -: - | Turkey

Agata Filipiak | 14 | *We Love Maps* | -: Książ Wielkopolski | Poland

