Dear Colleagues

This is an exciting year for the ICA as we make final preparations for the 19th General Assembly and the 31st International Cartographic Conference (ICC) in Cape Town, South Africa. The ICC 2023 is our opportunity to join with each other and share our knowledge, experiences, and friendship while advancing interests and commitments to cartography and GIScience. These two Cape Town events are presently the principal focus of the ICA Executive Committee. In addition, we also have been planning for a smooth transition to the new Executive Committee that will be installed following the second session of the General Assembly in Cape Town on Friday, 18 August 2023.

I am particularly excited that the ICC 2023 will have the greatest attendance and participation by our colleagues from African countries than in any other previous ICA event. We worked closely with the United Nations, particularly the UN Economic Commission for Africa, to encourage the UN Committee of Experts on Global Geospatial Information Management Regional Committee for Africa to meet in Cape Town and to participate in the ICC 2023. As stated in their announcement: “The ninth session of UN-GGIM: Africa will be co-located with the 31st International Cartographic Conference (ICC 2023) to maintain and strengthen the synergy between geospatial and cartographic and mapping communities in all domains of applicability.” Their willingness to change their meeting season and location speaks volumes for the ICA. This close collaboration between the ICA and the UN emboldens the ICC 2023 theme of Smart...
The proximity of the ICA General Assembly always reminds me that another 4-year term is coming to its end. It is only natural to look back and reflect – how have we done, what were the highlights, what challenges have we faced...?

For the first time since I started my editorial adventure, there were only seven newsletters published in the last term. Yes, No. 78 is still coming, but various circumstances prevented me from publishing it on time. Similarly, the ICA News publication frequency was suffering, affecting the dissemination of timely updates on ICC 2023 in Cape Town and various ICA Commission and Working Group events. These challenges were hard enough to come to terms with, especially for me, but hopefully they are now in the past.

The highlight was undoubtedly the work undertaken by the ICA Working Group on the History of ICA. We have focused on tiding up records concerning ICA leadership, commissions, and awards. We have made good progress with collating data on ICA membership and publications. We are working on lists of people who have served on ICA Committees and as honorary auditors. Interestingly, middle names have proved to be a challenge! Did you know that Carl Manneferlt’s full name was Carl Otto Göran Månsson Manneferl or Janusz Klawe’s middle name was Józef? And if you know the middle names of Erwin F. O. Gigas, please get in touch!

And, while we did a reasonable job documenting ICA history, the last four years also made us realise how much more there is to do. Looking at our Terms of Reference (icahistory.icaci.org/about/), the ICA Archives need a lot of attention, something we look forward to working collaboratively on with the ICA Secretary General. Similarly, more work is needed on the ICA Chronicle, especially around creating a knowledge base about ICA, and publishing the results of our work. The ICA Hub area calls for better promotion of our expertise and research services. Let us hope we are able to continue our efforts in the next term 2023-2027.

Igor Drecki | Editor ICA News | ICA

The ICA News is published by the International Cartographic Association (ICA).
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Secretary General & Treasurer: Thomas Schulz | Swiss Federal Statistical Office | Switzerland
Editor ICA News: Igor Drecki | National Library of New Zealand | New Zealand
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Cartography for Sustainable Development. The ICC 2023 program, to which you are contributing, offers so many important and interesting topics that are increasingly relevant to our world today.

Also aligned to the ICC 2023 are two open workshops sponsored by the SDG Data Alliance (www.sdg.org) which seeks to advance the UN’s Sustainable Development Goals. The first workshop will occur on Thursday afternoon, 17 August, and centres on Country-level Action Plans (CAPs) that reflect a country’s plan for implementing national geospatial information capabilities. The second workshop on Friday morning, 18 August, demonstrates the merging of geospatial information with other data, especially statistical data, in visualizing the current state and future potential for acting on each of the 17 Sustainable Development Goals. The core benefit of each workshop centers on sharing experiences from specific African countries engaged in this work today.

As stated in the ICC 2023 welcome page (icc2023.org), by the time of the conference, “we will be immersed in the 4th Industrial Revolution with new ways in which to represent geospatial information, and new ways in which humans interact with and use cartography and geospatial information. This has given rise to new cartography and geospatial information science and management.” Five keynotes are creatively designed to reflect local to global themes to stimulate each of us in our daily work. The keynotes also reflect achievements and possibilities for our host continent as we enjoy the beautiful city of Cape Town with all that it has to offer. Eight pre-conference workshops have been organized by various ICA Commissions and Working Groups. Over 40 themes in cartography and GIScience are included in the scientific program and six technical tours in and around Cape Town are planned. The Local Organizing Committee has designed a new experience for the International Map Exhibition in addition to a display of the Children’s Map Competition and the opportunity to engage with vendors in the Technical Exhibition. We will also be enjoying optional tours and social events. I am looking forward to seeing everyone in Cape Town.

As I look back, the ICA is built on three pillars. The first involves the people who make the ICA work. The thematic focus of our discipline rests with cartographers, GIScientists and enthusiasts who come together on topics aligned with the 28 Commissions and 6 Working Groups. Colleagues are also involved in other ways, such as committees or publications, or conference organizing. These experiences not only encourage learning and knowledge sharing, but are also fun and entertaining.

International Cartographic Conferences are another pillar of the ICA. While Cape Town is in our future, the ICC 2021 in Florence, Italy is warmly in our rear-view mirrors. As the pandemic continued to affect our lives, having a physical presence for the 2021 ICC in Florence was a very important goal for the ICA. We worked tirelessly with our colleagues in Italy to stay the course on holding the conference while adjusting plans to accommodate government restrictions and taking advantage of generous offers by the University of Florence and other institutions in and around Florence to make the event possible. We were one of the first international professional societies in our domain to have an in-person event in that time period.

A third pillar focuses around communication and publication. The first means of communication is our website which has timely information about the ICA, as well as a rich set of resources. The International Journal of Cartography continues to grow in its value as a peer-reviewed publication that exhibits scientific excellence. The ICA News is another form of communication that offers stories and articles about all of us in the ICA. eCARTO News informs us about mapping and GIScience around the world and the proceedings from ICCs serve as a record of progress, development, and varied cartographic interests made possible by the ICA. For me, during this period, three publications stand out as special achievements. Mapping for a Sustainable World was collaboratively prepared by the ICA and the United Nations. This e-book and printed publication in several languages is evidence of ‘actionable cartography.’ This valuable resource will be relevant for years to come. The World Drawn by Children continues showing all of us the importance of children’s perceptions and talents. Lastly, the recently produced The Atlas Cookbook is the culmination of a long effort in completing a guide on various aspects of atlas cartography (atlas.icaci.org).

The end of the pandemic was reflected by many organizations scheduling events to make up for lost time during the 2-year period. For a president of ICA, the travel schedule began to reflect more normal demands. In 2023 I have participated in a number of events thus far, including the UN-GGIM Arab States Meeting in Abu Dhabi, the EuroGeographics conference in Malta, the American Association of Geographers in Denver, a gathering of the International Advisory Committee for the UN Global Geospatial Knowledge and Innovation Centre in China, the Geospatial World Forum in Rotterdam, and a Workshop on Policy and Geospatial Data Standards in Saudi Arabia.

One goal for any leadership group of an organization is to leave the association in a stronger, more stable position than when we began. Realizing this goal assures that the ICA remains a sound institution. I am confident that the ICA Executive Committee achieved this goal. The challenges that we faced during the last 4 years made us a better organization through the effort and contribution made by all involved in the ICA.

This is my last ‘President’s Corner’ for this 4-year term. I want to thank the ICA Executive Committee for their endurance during a period...
ICC 2023 Pre-conference Workshops

**Time / Place**  
**Friday, 11 August**

<table>
<thead>
<tr>
<th>Time / Place</th>
<th>Workshops</th>
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<tbody>
<tr>
<td>09:00-15:00</td>
<td>OGC Standards for making geospatial data, maps and charts findable, accessible, interoperable, and reusable</td>
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<tr>
<td>Cape Town, South Africa</td>
<td>Workshop of the ICA Commission on SDI and Standards</td>
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<td>09:00-16:00</td>
<td>Other Cartographies</td>
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<td>Cape Town, South Africa</td>
<td>Workshop of the ICA Commission on Art and Cartography</td>
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<td>09:00-16:00</td>
<td>Cartography Connecting Schools</td>
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<td>Stellenbosch, South Africa</td>
<td>Joint Workshop of the ICA Commissions on Cartography and Children, and Maps and Graphics for Blind and Partially Sighted People</td>
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<td>09:00-17:00</td>
<td>Cartographic and Geospatial Information Education: Transformation in the Era of AI</td>
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<tr>
<td>Stellenbosch, South Africa</td>
<td>Joint Workshop of the ICA Commissions on Education and Training, Open Source Geospatial Technologies, and Working Group on the Cartographic Body of Knowledge</td>
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<td>13:00-16:00</td>
<td>Storytelling with Geographical Visualisation</td>
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<td>Cape Town, South Africa</td>
<td>Workshop of the ICA Commission on Topographic Mapping</td>
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<td>13:00-17:00</td>
<td>Disaster Mitigation and Risk Reduction for Cartography in Big Data Era</td>
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<td>Cape Town, South Africa</td>
<td>Workshop of the ICA Commission on Cartography in Early Warning and Crisis Management</td>
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<td>14:30-17:30</td>
<td>Visualization of Dynamic Phenomena and Processes on Web Maps and Ubiquitous Mapping (Part II)</td>
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<tr>
<td>Cape Town, South Africa</td>
<td>Workshop of the ICA Commissions on Ubiquitous Mapping and Maps and the Internet</td>
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**ICC 2023**  
**cape town · south africa**

The 19th General Assembly of the International Cartographic Association (ICA) and the 31st International Cartographic Conference (ICC 2023) will be held in Cape Town, South Africa from the 13th to 18th August 2023. The event is being organised by the South African National Committee for ICA. The logo is indicative of the theme for the conference which is “Smart Cartography for Sustainable Development”. The colours covering the globe are representative of the UN 17 Sustainable Development Goals (SDGs), all below Table Mountain – a natural wonder of the world. The world-class Cape Town International Convention Centre (CTICC), located in the beautiful coastal city of Cape Town has been selected as the main conference venue. The Fourth Industrial Revolution (4IR) given rise to new cartography and geospatial information science and management. The topic of ‘smart cartography’ will be ready for discussion and debate. In 2023, the 2030 Agenda for Sustainable Development and will be at the half-way stage. This will be an important topic for consideration by the international cartographic and geospatial information community at that time, particularly in an African city.

Join us in discussion with our esteemed keynote speakers:
- Andiswa Mlisa: CEO, Aqua Spatial
- Barend Erasmus: Dean, Faculty of Natural and Agricultural Sciences, University of Pretoria
- Patricia Solis: Executive Director, Knowledge Exchange for Resilience, Arizona State University
- Georg Gartner: Research Division Cartography, Vienna University of Technology

We are excited to announce the parallel sessions of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM): Africa, as well as the SDG Data Hub Workshops opened to all. Looking forward to seeing you in Cape Town in August!

Janusha Singh | ICC 2023 Local Organising Committee | South Africa ■

**Venue**
CTICC, in the beautiful coastal city of Cape Town has been selected as the main conference venue.

**ICC 2023 Pre-conference Workshops**

Join Discussion and debate on ‘smart cartography’

**2023 Halfway stage for 2030 Agenda for Sustainable Development**

Unlike any other in ICA’s history. Normally, the ICA Executive Committee tries to meet at least one time each year. In some terms, that has extended to a few more times. During this term, your leadership met 14 times to ensure that the association carried on with your important contributions to cartography and GIScience. Even though some of those meetings were virtual, the preparations and durations of meetings had the same demands as meeting in person.

There are many individuals that I could name in offering thanks, but I will leave it to each of you to search them out on the ICA website. That way there’s a good chance that you will look for more details in their involvement within the ICA while continuing to stimulate your interests. They include the ICA Executive Committee, the ICA Commission and Working Group Chairs, the webmasters, the ICA publications, including the Journal editors and editorial committee, the ICA News editor, the eCARTO News editor, the ICC Scientific Committees managing the ICC Proceedings, the ICA Committees and the organizers of regional cartographic conferences endorsed by the ICA. All of these people and their important positions figure prominently on our website. There is one person that I will name in my thanks for his unyielding support and exceptionally hard work during these last four years. Thomas Schulz has been exemplary as your Secretary General and Treasurer of the ICA. It is without question the most demanding job for our international society and Thomas has fulfilled his responsibilities admirably in doing all that was needed to ensure the viability of the ICA as an international professional organization. This is no small task.

I will have an opportunity in Cape Town for other concluding remarks. For those not able to be with us in South Africa, it has been an honor to serve as your President of the ICA over these last 4 years. Thank you!

Tim Tréan | President | ICA ■
19th general assembly of ICA
cape town · south africa  cont...

eligible to vote at the General Assembly. This process sets the rules for any subsequent voting, for example on the new national and affiliate members that applied for ICA membership. The ICA Statutes and By-laws is the most important document of the Association and a number of motions will be put to the vote (icaci.org/general-assembly-2023/). It is therefore critical to have a good representation of the ICA members attending the General Assembly having a say in this process.

The second session is devoted almost exclusively to the election of the new Executive Committee and Auditors. Other items of the Agenda include voting on the new Commissions and Commission chairs, and the 2023-2027 budget. The last point of the proceedings is the selection of the place of the next General Assembly. The official nomination of national delegates is an important formal requirement from all member nations to take part and vote at the General Assembly, so please let the Secretary General know your nominations prior to the General Assembly.

Igor Drecki  Editor ICA News | ICA

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<tr>
<th>General Assembly of ICA · Session Two · Friday, 18 August 2023</th>
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The ICA News is again available in printed form for ICA members. Each member, both national and affiliate, is entitled to receive three printed copies of every issue. If you are interested in subscribing to this service and receiving your copies, please contact Igor Drecki, Editor ICA News (idre002@aucklanduni.ac.nz) directly, providing a name of the recipient and a postal address. Please note, this service is offered by subscription only and covers all issues from newsletter No 77, December 2021. Additional copies of the newsletter can be requested at a cost. All members are also entitled to a one-time offer of requesting printed copies of ICA News past issues, from No 68, June 2017 to No 76, June 2021. Please contact Igor no later than 1 August 2023, if you would like to take advantage of this offer.

Igor Drecki | Editor ICA News | ICA | ♦

**Obituary**

**James R. Carter**

22.09.1936 – 22.07.2022

Dr James (Jim) R. Carter passed away on 22 July 2022, at the age of 85. Many in the ICA community will remember him for his participation in many of the association’s conferences, as well as his involvement in the ICA Commission on Map and Spatial Data Use. He served as its chair from 1991-1995, taking over from Judy M. Olson. During his second term as chair, from 1995-1999, the Commission changed its name to the ICA Commission on Map Use. According to Jim’s abstract from the International Cartographic Conference (ICC) 2005 in A Coruña, “...from the beginning, attempts were made to define the dimensions of map use through the work of the Commission.”

The commission evolved over the years and provided a fertile ground for other commissions to flourish, such as the ICA Commission on Visualization (established in 1995) or the ICA Commission on Maps and the Internet (established in 1999), both continuing to this day. In later years, a more direct continuation of the ICA Commission on Map Use was carried out by:


However, the focus of the current ICA Commission on User Experience (2019-2023) remains the same: “... issues related to map use, map users, and map usability. Map UX design herein is defined as the set of workflows, methods, and techniques needed for a successful user outcome with a map or interactive mapping system, as well as a productive and satisfying user process while arriving at this outcome.”

Jim’s interest in map use also led him to create a website called MAP USE: The Many Dimensions (www.jrcarter.net/mapuse/), which outlines many of the ideas that were first developed relative to the ICA Commission on Map Use, as he explained on its website: www.jrcarter.net/mapuse/commission.htm.

Some may also remember Jim for his enthusiasm to study and photograph ice. Jim wrote about this passion on his website, www.jrcarter.net. He stated, “In 2003 I found attractive ice seeming to grow on a plant stem. Explaining that ice and other unique forms of ice have become a driving force in my life, I put together a collection of web pages showing what I have found and what I learned from others.” This interest led Jim to become an expert on the formation of ice on plants in nature (www.jrcarter.net/ice/).

Jim was Professor Emeritus of Geography-Geology and the Environment at Illinois State University where he taught for 15 years. He was also a professor for 18 years at the University of Tennessee, Knoxville. He was a long-term member of the Illinois State University Senior Professionals organization, which, according to its website, provides “partnerships among retirees, Illinois State University students and faculty, and the community.” Jim also served as President (1999-2000) of the Illinois GIS Association.

Jim is survived by his wife of 61 years, two daughters, four grandchildren, and one great-grandchild.

Aileen Buckley | Cartography and Geographic Information Society | USA | ♦

Of course, the contribution below caught my attention because of its topic; it is about ICA News after all! However, the real gem for me is the shifting technology behind publishing the ICA newsletter a quarter of the century ago, and the drive to have ICA News present on the World Wide Web (finally achieved in 1999). I am also pleased to read that the hard-copy version was also as essential back in 1997 as it is today!

Igor Drecki | Editor ICA News | ICA | ♦

ICA Newsletter, No 29, Winter 1997

**Editorial**

Writing a report for the Executive Committee on my first two years as editor of ICA News, I had the opportunity of reviewing the way ICA News is compiled, produced and distributed. Contributors will mostly be aware the we are using predominantly electronic means of transferring documents for publication. Very few contributions come to me as type-written manuscripts, but these can often be scanned before editing. As is appropriate for a newsletter, I want to encourage anyone working in an ICA capacity to send a contribution which they think will be of interest to others.

Anything the ICA can do to increase the flow and interchange of information about cartography world-wide is worth attempting. ICA News is simply one of the ways in which information is disseminated, but it is not limited to passing down information from the Executive Committee. It is especially a vehicle for publicising the thoughts and activities of the Commissions and Working Groups. These are now greatly assisted by the possibilities of communication by e-mail and fax which render interchanges of views, plans, assignments more immediate than when we had to rely on air-mail postage. [...]

At ICC‘97 chairs of Commissions and Working Groups and delegates all wanted ICA News to be put on the World Wide Web, but it was also recognised that the hard-copy version was also essential. I am already investigating the options available and at the likely cost implications for ICA. At the present number of copies of ICA News sent out reflect guidelines suggested by the Executive Committee. If chairs of Commissions, Working Groups or National Committees want more copies sent to them, I shall need to know how many by the end of April next year [1998].

Christopher Board | Editor ICA News, 1996-1999
irene sahagún luis

I have been working at the National Geographic Institute of Spain in Madrid for over three years. To join this national institution you have to pass several exams, so you have to study hard for a while. I did not mind much because once I started preparing for my examinations, I noticed there was a lot of information from my studies that I had forgotten, so it was a perfect chance to refresh my memory and learn new things. Cartography is a science that uses new applications every day, as well as new standards and new representation techniques. In the end, you must know how to live with these changes and be updated.

I studied at the University of Salamanca. I chose cartography because I like to travel, always with a map in my hand. Every time my parents took me to a new village or city, I needed to have a map of the location. What’s more, I always like to know the specific place I am at that moment. The day I discovered Google Earth as a child I couldn’t sleep and spent the whole night ‘travelling’ from one place to another.

I have also lived in other cities: Lisbon (Portugal) and London (United Kingdom), where I met people from different places and with different points of view, which makes you more open-minded. And that made me feel very lucky, both personally and professionally. My current job on the National Atlas of Spain requires me to work in a multidisciplinary team, consult with people with different specialities, and reach agreements. I enjoy what I do because, thanks to the maps, I learn something new every day, which is why I love thematic cartography, as it makes it easier to understand the world around you.

Irene Sahagún Luis | Instituto Geográfico Nacional España | Spain | isahagun@mitma.es

A cover of The COVID-19 Pandemic in Spain monograph with examples of thematic maps and graphs; this is a recent publication I have worked on defining content.

CONTRIBUTE TO THE ICA HISTORY

The ICA Working Group on the History of ICA is interested to hear from anyone who is willing to share their ICA archives and collections. We are interested in documents, records, official correspondence, publications, photographs, conference materials, promotional brochures, and any other items of relevance. If you can help, please get in touch with Igor Drecki, Chair of the Working Group (idre002@aucklanduni.ac.nz). Looking forward to hearing from you!
Art and Cartography
artcarto.wordpress.com/

Special Issue
The ICA Commission on Art and Cartography is currently overseeing the peer review process for our upcoming special issue of the International Journal of Cartography, now delayed to the Fall of 2024. We have accepted nearly two dozen full papers and invited essays, and look forward to developing the special issue along with an accompanying multimedia website that will allow us to showcase the wide range of media practices employed by artist-cartographers.

Commission Workshop
The Commission is organizing a pre-conference workshop Other Cartographies to be hosted by the National Geospatial Information in Cape Town, South Africa on Friday, 11 August 2023 from 10am to 5pm.

The theme of the International Cartographic Conference (ICC) 2023 is Smart Cartography for Sustainable Development. How can this theme be interpreted through Art? The Commission’s Terms of Reference include the directive to “advance the field of artistic and experimental cartographies, including but not limited to such subfields as narrative cartography, cinemographic cartography, sensory and phenomenological approaches to mapping, locative media, performative and performance-based cartographies, and media archaeological and other research-creation or practice-led processes.” What might “sustainability” mean in terms of these and other such subfields? However the theme is interpreted, one thing is clear: other approaches to mapping, locative media practices employed by artist-cartographers can challenge the status quo.

The goal of this workshop is to provide an intellectual and creative space to share different ideas around artistic methodologies of mapping and engaging with space and place, particularly those that challenge the status quo of capitalism, colonialism, extractive resource development, etc. The format of the workshop will be as follows: a morning of lightning presentations from all of the participants, to introduce each other, an afternoon of 3-4 mini-workshops that explore different methodologies or practices related to our theme of Other Cartographies.

The workshop is open to everyone with an interest in alternative and sustainable mapping art practices and experimental cartographies. Registration is required and is free of charge. A catered lunch is included! Please note that it is not necessary to be registered for the ICC 2023 conference (which requires fees) to be able to attend the workshop. For more information or to register, please contact Workshop Coordinator Sharron Mirsky at smirsky@yorku.ca.

The Commission’s current goals are to advance the field of artistic and experimental cartographies, and to facilitate, through workshops and special events, interdisciplinary collaborations and exchanges of ideas and practices amongst diverse practitioners and theorists to promote the development of hybrid artistic cartography practices.

Taien Ng-Chan | Chair | ICA Commission on Art and Cartography | Canada

Atlases
atlas.icaci.org/

The Atlas Cookbook
The ICA Commission on Atlases proudly announces the publication of The Atlas Cookbook – 10 ingredients how to edit an atlas.

The intention of the book is:
• to give an overview over the realization phases
• to show how to start a new atlas project (which is always the hardest part)
• to give advice on how to deal with conceptual, organizational, graphical or publishing issues

We divided The Atlas Cookbook into ten chapters, which reflect a viable and practicable way to carry out an atlas project. The chapters start with (1) Organization and Marketing, followed by (2) Editorial Aspects. After the administrative issues are addressed, the book focuses on (3) Atlas Use, the (4) Thematic and Geographic Content, and (5) Data Management. Other components to be considered in the atlas process include the use of (6) Multimedia Elements and the (7) Atlas GUI and Layout Design, followed by detailed chapters on (8) Map Design and Visualization, and on interactive (9) Atlas Functionality. And finally, (10) Prototyping and Evaluation describes the last steps before publishing the atlas.

The Atlas Cookbook is intended for atlas makers, map producers, and cartographers in general; it can be read as a whole, but even just a single chapter can help! It is written at a management level, not in a technical way. Most comments and recommendations apply to current and emerging digital technologies, but many sections are also valid and useful for editing printed atlases.

To get a digital copy, please visit our Commission’s website: atlas.icaci.org/awards-and-publications/atlas-cookbook/. You are welcome to download it for free and use it according to the Creative Commons license.

In addition, we produced a printed book in a limited edition of 200 copies, supported by ICA and ETH Zurich. If you’d like to receive a printed edition (also free of charge), please send your postal address together with some kind words and good reasons to René Sieber, Commission Chair:
sieberr@ethz.ch.

René Sieber | Chair | ICA Commission on Atlases | Switzerland

A sample page from The Atlas Cookbook | Image courtesy of René Sieber
**Cartographic Heritage into the Digital**
cartography.web.auth.gr/ICA-Heritage/

**Conference in Thessaloniki, Greece**
The ICA Commission on Cartographic Heritage into the Digital held its annual conference in Thessaloniki, Greece, 24-26 May 2023. The venue was the Museum of Byzantine Culture. The 26 presentations in six scientific sessions were completed with a map exhibition visit at the Aristotle University Central Library as well as an Ice Breaking conversation. The number of participants were above 60, coming from 11 countries, representing universities, research institutes, military and civilian mapping agencies. Full programme is available on the conference website: cartography.web.auth.gr/ICA-Heritage/Thessaloniki2023/.

Mátyás Gede | Chair | ICA Commission on Cartographic Heritage into the Digital | Hungary

**Cognitive Issues in Geographic Information Visualization**
cogvis.icaci.org/

**Commission Activities**
The ICA Commission on Cognitive Issues in Geographic Information Visualization has focused in the past several months on advancing our collaboration with the Portrayal Domain Working Group of the Open Geospatial Consortium (OGC). This project also involves the ICA Commissions on SDI and Standards; Geospatial Semantics; and Open Source Geospatial Technologies.

The aim of the collaboration is to find ways to make our cartographic knowledge understandable and actionable for geospatial software developers, with the end goal of improving the representation of geospatial data in their software. Our ICA team presented our first steps in this project at the International Cartographic Conference (ICC) 2021 in Florence, where we held a workshop to allow anyone from ICA to become involved in and contribute to the project.

The ICA members who have been working on this project have since produced a draft OGC Technical Paper that describes how we think cartographic research could inform OGC standards. We will be presenting the ideas from this technical paper in a workshop for the Portrayal Domain Working Group at the upcoming OGC meeting in early June 2023 in Huntsville where we will seek feedback on the draft and their help in identifying existing standards that might be relevant to the project. We plan a presentation on our revised technical paper at ICC 2023 in Cape Town.

In other news, the Commission leadership has been hard at work on a renewal plan for the upcoming term, with some members of the leadership stepping off the team and new members added to the leadership team. We encourage all interested members to examine the Commission’s proposed terms of reference that have been submitted to the ICA Executive Committee to learn about the upcoming plans, should the Commission’s proposal for renewal be accepted by the ICA General Assembly in August.

Amy Griffin | Chair | ICA Commission on Cognitive Issues in Geographic Information Visualization | Australia

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**Education and Training**
education.icaci.org/

**Commission Activities**
Cartographers and academic researchers have been using artificial intelligence (AI) in many areas in GIS which is also employed in teaching and learning. The new development of Generative AI offers opportunities and challenges for educators, learners and management. The ICA Commission on Education and Training pays close attention to relevant applications in cartographic and geospatial information education and recently supported two events.

Our Commission co-sponsored the International Conference on Geomatics Education organized by the Hong Kong Polytechnic University, China between 10-12 May 2023. Educators, researchers and government officials from Asia, Europe and North America have been exchanging ideas and sharing experiences concerning the best practices on effective teaching and learning of cartography, GIS, photogrammetry, remote sensing, and relevant geomatics subjects. Professor Liqui Meng and Professor Georg Gartner were invited to deliver keynote speeches. Professor Tao Wang delivered an opening address and invited participants to join the future ICA activities.

Between 13-14 May 2023, the 10th Chinese Cartography and GIS Conference was held in Xi’an, China. The ICA Commission on Education and Training co-sponsored a session on Cartography and GIS Education in the Era of AI. Professor Terje Midtibbe was invited to present a keynote speech on the ICA Cartographic Body of Knowledge (CartoBoK). Thirteen speakers shared their insights and experiences on course and curriculum design. A question on how to
better employ current generative AI tools, like OpenAI’s ChatGPT, in cartographic and geospatial information teaching sparked active discussions. About 80 participants joined the session and were invited to contribute to the development of the ICA CartoBoK.

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

Location Based Services
lbs.icaci.org/

LBS 2023 Conference

The ICA Commission on Location Based Services and the Ghent University are pleased to invite you to the 18th International Conference on Location Based Services, which will take place in Ghent, Belgium, on 20-22 November 2023.

Built on the success of previous conferences in this series, LBS 2023 aims to offer a common ground to colleagues from various disciplines and practice where they can meet, interact and exchange knowledge, experience, plans and ideas on how LBS can and could be improved and on how it will influence both science and society.

The Call for Papers is currently open. We call for full papers, work in progress and showcases. High-quality full paper submissions are intended to be published in the Journal of Location Based Services by Taylor & Francis.

The best work in progress papers will be invited to submit an extended version to the Journal.

Marine Cartography
marine.icaci.org/

Commission Activities
The search for ICA representatives to serve on the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) has been partly successful with two nominations. Commodore Gurumani (India) has been accepted as a Member of the IBSC and will commence his role as a full Member shortly and attending annual meetings from IBSC 47 in 2024. Commodore Gurumani is a senior officer in the Indian Navy, well qualified as a Mariner, Hydrographer and Marine Cartographer. Dr Pablo Sanchez (Spain) was an observer at IBSC 46 and will become a member following acceptance by the forthcoming ICA General Assembly of his organization Instituto Hidrografico de la Marina (IHM) as an Affiliate Member of ICA. Pablo is a Geomatics Engineer with the Spanish Marine Forces.

The search will continue for a further two members to replace the current members representing ICA. Interested persons should contact Ron Furness, Commission Chair, on rffurness@ozemail.com.au.

At IBSC 46 in Tokyo, two nautical cartographer programmes were considered. One is a re-recognition of a Category B programme from France SHOM. The other is a new programme, submitted by China Department of Hydrography and Cartography – Dalian Naval Academy at the Category A level.

During the same meeting the revision of the Standards was resolved to include new subjects, such as Marine Spatial Data Infrastructures (MSDIs) and the identification of further subjects, in addition to full programmes.

As we approach the ICC 2023 it seems there will be a few marine cartographers attending. Our communication with them showed that this is due to an unfortunate combination of personal restrictions as well as travel budgetary constraints. As a result, it will not be practicable to conduct a workshop during the ICC. Considerations are being given to an online meeting of the Commission on Marine Cartography following ICC 2023 if there is sufficient interest.

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

Mountain Cartography
www.mountaincartography.org/

Workshop at Snow Mountain Ranch, Colorado, USA
The 12th ICA Mountain Cartography Workshop, organized by the ICA Commission on Mountain Cartography (CMC), was held on 11-15 April 2023 in Colorado’s Rocky Mountains. Workshops are usually held biennially, alternating with the International Cartographic Conferences (ICC). This year, however, the workshop was out of sequence due to the COVID-19 pandemic. The workshop, originally scheduled for April 2020, was first rescheduled for April 2022, and then again for April 2023 in response to
shifting pandemic conditions. By 2023, pandemic-related travel restrictions had eased and CMC members were eager to once again meet in-person. Our successful gathering this year thus concluded five years of planning which began immediately after the 2018 workshop in Hvar, Croatia.

All based in Washington, D.C., the workshop organizers were: Tom Patterson, U.S. National Park Service (retired); Brooke Marston, U.S. Department of State; and Alex Tait, National Geographic Society. Dušan Petrović, Commission Chair, supported the team in preparation of the workshop. We selected Snow Mountain Ranch, a YMCA facility, as the workshop venue because of its proximity to Denver International Airport (two hours drive by car) and for its inspiring locale. Snow Mountain Ranch is nestled in a high valley (2,700 m; 8,680 ft) just west of Rocky Mountain National Park. Many workshop participants experienced a three-hour delay getting to the venue when an avalanche on Berthoud Pass (3,446 m; 11,306 ft) temporarily closed the road. It served as a reminder that high mountain environment is unique and often unpredictable.

The workshop had 51 participants from Austria, France, New Zealand, Norway, Portugal, Romania, Russia, Slovenia, Switzerland, and the United States. 30 participants were first-time attendees, with women and young participants well represented; the youngest being 25 (and the oldest 82 years old).

Workshop’s theme was People, Maps, and Mountains focussing on the importance of using cartography to better understand human–mountain interactions – adventure, sustainable management, travel, recreation, etc. The workshop featured 40 presentations grouped into nine sessions. Brooke Marston organized the program. We asked several first-time and younger participants to chair sessions with the goal of making them feel welcome and involved.

The workshop began on Tuesday evening with welcoming remarks from Tom Patterson and Dušan Petrović. This was followed by Alex Tait, who gave the keynote presentation titled, A Climber’s Tour of the Rocky Mountains: Teewinot, Pingora, Athabaska, and more. Afterwards, there was a social hour in our spacious meeting room, which also served as a map and poster gallery. The walls were covered with dozens of fine maps authored or contributed by participants.

Wednesday and Friday were devoted to presentations covering a variety of topics related to mountain cartography. Presentations were either 10 or 20 minutes in length. Two presentations, one by Jürg Gilgen and the other by Timofey Samsonov, were pre-recorded because they were unable to attend in-person. Dr Samsonov answered questions remotely after his talk. After dinner on Wednesday, the organizers scheduled short (5 minute) Avalanche Talks for map/poster presenters. The session was packed with interesting and inspiring talks.

The traditional ‘Outdoor Recreation Day’ was originally scheduled for Friday, but switched to Thursday due to inclement weather. It gave the participants a chance to get to know one another better in a more informal setting and appreciate the outdoor beauty. There were options for the adventurous and those preferring to take it easy. Alex Tait organized the activities, which included backcountry skiing, alpine skiing and snowboarding, hiking in Rocky Mountain National Park, and soaking in natural hot springs. If this were not enough, several participants went roller skating afterwards. The last activity on Thursday was a mountain trivia quiz hosted by Tom Patterson. The winning team (Yann Boulanger, Alex Fries, Carl Churchill, Becca Holdhusen, and Chaney Swiney) scored 21 out of 27 possible points.

The workshop concluded on Friday evening. Before dinner, we held the Commission business meeting. After dinner, we held a general meeting where everyone learned about the next workshop scheduled for April 2024 in Zakopane, Poland. Rafał Jonca is the 2024 workshop organizer. Terje Midtbø, our ICA Executive Committee liaison, concluded the workshop by giving a brief history of the ICA followed by a discussion of the ICA Cartographic Body of Knowledge project. He also presented Andrew Tyrrell (New Zealand) with the young cartographer travel grant award.

Ten days after the workshop concluded, Alethea Steingisser, Daniel Huffman, and Patrick Kennelly sent a survey to all attendees to hopefully provide us with constructive feedback on how to improve our future workshops, remove participation barriers, and make our group welcoming to all.

The workshop program, notes from the Commission business meeting, and other information are available from the Commission website.

Tom Patterson, Brooke Marston, Dušan Petrović and Alex Tait | Workshop Organisers | ICA Commission on Mountain Cartography | USA / USA / Slovenia / USA |
Reports

ICA Working Groups

Cartographic Body of Knowledge

bok.cartography.no/

Working Group Activities

Last year the ICA Working Group on the Cartographic Body of Knowledge has focused on developing a digital form to collect, manage and store information in the Cartographic Body of Knowledge (CartoBoK) devoted to cartographic concepts. A web form has been established that allows entering various details and information about these concepts. As a minimum there has to be a definition. In addition, there are provisions for entering other information, such as explanations, examples, etc. The idea is to use the expertise of the ICA Commissions when collecting concepts. However, so far engagement from the Commissions has been rather weak. We hope that this will improve when people learn more about how the CartoBoK works and visit our website to find out how to contribute.

To manage and store the information we are using Living Textbook (LTB), a system developed by ITC at the University of Twente, Netherlands. The system links together different concepts and their connections are visualized in a knowledge graph (ltb.itc.utwente.nl/page/659/dashboard).

We are looking forward to the International Cartographic Conference in Cape Town in August 2023, where we will be presenting the ongoing work on the Cartographic Body of Knowledge.

Terje Midtbø | Chair | ICA Working Group on the Cartographic Body of Knowledge | Norway

Ethics in Cartography

Working Group Activities

Ethics, empathy, and equity have recently become central topics not only in cartography and GIScience but also in many areas of scientific thought and practice. The International Cartographic Association (ICA) has taken a leadership role in advancing the development of ethical guidelines for cartography through the creation of the Working Group (WG) on Ethics in Cartography. The WG was approved by the ICA Executive Committee at its meeting, which was held during EuroCarto 2022 in October in Vienna, Austria.

The formation of the WG comes at a time when attention to the topic of geoethics has increased dramatically. Geoethics had been lurking in the wings prior to 2021. After all, the American Geographical Society launched the EthicalGeo Organization in August 2019 and Geovision announced the Benchmark Initiative in October 2019, both of which were meant to build a community and generate activity around the ethical challenges associated with geospatial data. And in August 2020, the United Nations (UN) Committee of Experts on Global Geospatial Information Management adopted the Implementation Guide of the UN Integrated Geospatial Information Framework outlining strategic pathways for the correct use of geospatial data.

But geoethics moved to centre stage in 2021. The spotlight shone on the topic when the Association of American Geographers, the University of California – Santa Barbara, and Esri announced the GeoEthics project, which included a yearlong webinar series, from February 2021 to February 2022, and culminated in an in-person summit in June 2022. From this came a “high-level report that builds a framework for continued and collaborative work in the coming years” (aag-geoethics-series.secure-platform.com/a/).

During the same period, several articles, blog posts, and conference sessions targeted the topic of ethics in cartography. These activities filled a gap that was not covered in the geoethics discussions – the importance of ethics in making and using maps. These topics are of critical importance today when we see so much evidence of the power of a lie that feels true driving people’s behavior. Maps are among the few information sources that are still seen as authoritative. Misinformation and disinformation, primarily through social media, have eroded the authority of many purveyors of information. Threats to the perceived authority of maps include fake news/faked maps; redlining; cartographic conspiracies; gerrymandering; and deep fakes in satellite imagery.

In response to these concerns and developments, the ICA Executive Committee approved the establishment of a WG to focus on ethics in cartography. The goals of the WG are to review work to date on guidelines for ethical conduct and practices in cartography and closely related fields; articulate a set of basic guiding principles that reinforce ethical behavior and practice in cartography; develop guidelines that arise from and are justified by those basic guiding principles; and identify resources created or endorsed by cartographic practitioners or professional organizations that relate to the guidelines.

The WG will focus first on ethical issues and challenges related to mapmaking, then it will widen the scope to include other aspects of cartography. Its approach will be inclusive of diverse contributors and ideas, and its work will be open for free and easy access. A hope is that the ICA guidelines will be adopted by ICA member nations and by cartographic organizations worldwide. The guidelines could also potentially be recognized by other national and international organizations, such as the UN.

There is a commitment to solicit and support contributions and comments from individuals and organizations worldwide, including national and international cartographic societies and their members. The intent is to provide an open forum for discussions and contributions. There is also a goal to develop a repository for the related resources, such as articles, blog posts, and technical papers, to be used as teaching and self-learning resources.

The hope is that these activities will lead practitioners to “clarify ethical issues of interest and work toward developing guidance on them for the cartographic and GIScience communities,” as ICA President Tim Trinor stated in his 2022 ArchNews article Cartographic Engagements in a Postvirtual World.

Aileen Buckley | Chair | ICA Working Group on Ethics in Cartography | USA
Cartography and Geographic Information Society

The Cartography and Geographic Information Society (CaGIS) is the adhering body to the ICA for the United States. The mission of the Society is to support research, education, and practice to improve the understanding, creation, analysis, and use of maps and geographic information to support effective decision-making and improve the quality of life. The Society serves as a forum for the exchange of original concepts, techniques, approaches, and experiences by those who design, implement, and use cartography, geographic information system (GIS) technology, and related geospatial technologies.

AutoCarto 2022

In November 2022, the Society proudly presented AutoCarto 2022, the 24th International Research Symposium on Cartography and GIScience, focused on the intersection of these two disciplines (see article below for a report).

CaGIS Distinguished Career Award

Dr Barbara (Babs) Buttenfield was awarded the Society’s highest honor, the CaGIS Distinguished Career Award. We congratulate Babs on this very well-deserved recognition of her amazing career and significant contributions to the cartography and GIScience disciplines.

Babs received the award at a reception held during the annual meeting of the American Association of Geographers in Denver, Colorado, in March 2023. CaGIS board member Samantha Arundel presented the award in a room crowded with people to congratulate Babs. Former graduate students offered touching testimonials and recounted heartwarming memories.

CaGIS Rising Grants

CaGIS Rising projects include research or outreach efforts that have the potential to transform global challenges into new opportunities that advance and promote cartography and GIScience. Creativity, novelty, and the potential for broader impacts to society constitute key criteria for evaluating these proposals for funding.

This year, a CaGIS Rising grant was awarded to the project Characterizing and Promoting Cartography and GIS Graduate Programs through Research Theme Discovery and Online Seminars. Students involved in the project are:

- Yuhao Kang, University of Wisconsin–Madison
- Yanbing Chen, McGill University
- Bing Zhou, Texas A&M University
- Zhining Gu, Arizona State University

Advisors are Song Gao (University of Wisconsin–Madison), Lei Zou (Texas A&M University), and Wenwen Li (Arizona State University).

CaGIS Scholarships

The scholarships recognize academic achievement and encourage the continuing success of outstanding cartography and geographic information science students. The scholarships also recognize achievement or potential for achievement in original research advancing the specific disciplines of cartography or geographic information science. The 2023 winners are as follows:

- Yuhao Kang (PhD), University of Wisconsin–Madison; advisor: Song Gao
- Jinwen Xu (PhD), University of South Florida; advisor: Yi Jiang
- Yue Lin (PhD), The Ohio State University; advisor: Stephenie Dietrick
- Oladunni Farinloye (Masters), Western Illinois University; advisor: Christopher Sutton

Map Design Competition

The 49th annual CaGIS Map Design Competition had 55 professional entries and 36 student entries. The Best of Show was awarded to the Atlas of Yellowstone, 2nd Edition, by W. Andrew Marcus, James E. Meacham, Ann W. Rodman, Alethea Y. Steingisser, Justin T. Menke, and Ross West, University of Oregon and Yellowstone National Park. Other professional winners included the following:

- Reference: The Essential Geography of the Salish Sea by Jeff Clark, Clark Geomatics
- Recreation/Travel: Big Bend National Park Day Hikes by Jeremy Goldsmith and Christopher Knoll, National Geographic Staff
- Thematic: A Summit in the Deadliest Season by Soren Walljasper, National Geographic Staff

Student winners included the following:

- David Woodward Interactive/Animated Digital Map Award: Mapping the Infrastructure of the Roman Empire by Sirius T. Bontea, University of Kentucky (siriusbontea.github.io/roman-empire/)

- Arthur Robinson Static Print Map Award: Visualizing Historical Hurricanes in Contiguous United States (1851–2021) by Chenxiao (Atlas) Guo, University of Wisconsin–Madison

National Children’s Map Competition

The Children’s Map Competition is a national competition for all children ages 15 years or younger. The goal of the contest is to promote the creative representation of the world in graphic form by children. It is offered every two years to celebrate the creativity, imagination, artistry, and wisdom of child mapmakers. This year’s theme was A Map of My Future World! CaGIS received 42 entries. These were displayed at the Annual Meeting of the American Association of Geographers in Denver from March 24 through 26. Viewers were able to ‘vote’ for their favourite maps using stickers. First-, second-, and third-place winners were selected in four age categories: under 6 years old, 6 to 8 years old, 9 to 12 years old, and 13 to 15 years old. A selection of the winning entries will represent United States at the international competition at the ICC 2023 in Cape Town, South Africa, in August 2023.

Aileen Buckley | Cartography and Geographic Information Society | USA

AutoCarto 2022

Between 2-4 November 2022, the Cartography and Geographic Information Society (CaGIS) presented AutoCarto 2022, the 24th
International Research Symposium on Cartography and GIScience (cartogis.org/autocarto/autocarto-2022/). AutoCarto 2022 was a hybrid event for both in-person attendees and virtual participants, with pre-event workshops on 1 November. The venue was the beautiful Esri campus in Redlands, California, USA.

The theme of AutoCarto 2022 was Ethics in Cartography: Integrity, Inclusion, and Empathy, which brings attention to ethical responsibilities we face in all aspects of our discipline, with conversations on the power of maps and the critical need for integrity, inclusion, and empathy in cartography and GIScience. This is a summary of AutoCarto 2022 by the numbers:

- 1st time AutoCarto was offered as a hybrid event
- 3 keynote presenters with 9 panelists in associated sessions
- 52 presentations in 12 sessions
- 5 posters
- 142 authors of accepted submissions
- 6 workshops offered by 18 organizers
- 172 contributors, including keynote speakers, panelists, paper and poster authors, and workshop organizers
- 75 presentations, not counting talks in the opening and closing sessions
- 184 registrations: 112 in-person, 72 virtual
- 10 student assistants awarded funding by CaGIS
- 9 students awarded ICA scholarships so they could participate in the conference
- 3 ICA Executive Committee members attended the conference

The 2022 conference was the first time AutoCarto was held as an ICA Regional Cartographic Conference. ICA President Tim Trainor and ICA Secretary General Thomas Schulz were in attendance. ICA Vice President Terje Midtbø also attended but had to leave early due to unforeseen circumstances. A special session was held in memory of former ICA Vice President Lynn Usery.

On 1 November, Tim Trainor participated in a workshop on Advancing Ethics in Cartography. During the AutoCarto 2022 opening session, he gave a presentation titled The Role of the ICA in Ethics in Cartography. Thomas Schulz formally presented the Carl Mannerfelt Gold Medal to Dr Alan MacEachren, who was unable to attend the ICC 2021 in Florence to accept the award. He also presented the nine ICA scholarship winners with their awards.

Although ICC 2023 was announced in the opening session, a slide presentation and video in the closing session provided in-depth details about the upcoming conference. Also, in the closing session, a memorandum of understanding between the ICA and the International Map Industry Association was formally signed.

The AutoCarto 2022 Conference Co-chairs were Aileen Buckley, Esri, and Dan Cole, Smithsonian Institution. The Program Co-chairs were Marguerite Madden and Angela Yao, both of the University of Georgia. An additional 10 people made up the rest of the organizing committee, and the program committee consisted of 35 people from around the world, many of them associated with the ICA.

The session themes covered many interesting topics related to the Ethics in Mapping theme. These included the following:

- Inclusion in Cartography and GIScience
- Geotagging and Social Networks
- Machine Learning and GeoAI in Cartography
- Power of Maps for Equity and Social Justice
- Uncertainty in Geospatial Data
- Empathy and Integrity in Cartography and GIScience
- Diversity, Ethics, and Equality
- Use and Misuse of Geographic Information in Social Media
- Spatialization and Modelling
- Student Success in Empowering Social Goods with Cartography & GIScience (Panel)

All sessions were recorded, and the abstracts, slides, and videos for each talk and the graphics for each poster are freely accessible on the AutoCarto 2022 website at cartogis.org/autocarto/autocarto-2022/program/presentations. Also available are recordings of the keynote presentation and panelist talks in the three plenary sessions, as well as the entire opening and closing sessions.

By any measure, AutoCarto 2022 was a success. CaGIS is now in the process of planning its next International Research Symposium on Cartography and GIScience. The CaGIS Board is contemplating a name change for the conference, so keep an eye on the organization’s website (cartogis.org), for developments on that issue and announce-ments about the next conference.

Aileen Buckley | Co-chair | AutoCarto 2022 | USA

**Cartographic Activities at United Arab Emirates University**

The Geography and Urban Sustainability Department at the United Arab Emirates University (UAEU) organised several training events for its students between February and May 2023. They were delivered by Dr Naeema Alhosani, College of Humanities and Social Sciences and/or the university students:

- **2 February**: presentation Innovation in Cartography during the Innovative Geospatial Applications and Sustainability Symposium at UAEU in celebration of the Innovation Month in United Arab Emirates.
- **16 February**: student presentations of research posters on Cartography and GIS in collaboration with Dibba Al Fujurah’s Municipality in celebration of the Innovation Month.

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Maritime Vector Data

Known to users worldwide, vector-based Electronic Navigational Charts (ENCs) have long provided unique and useful data content, but primarily for navigational use on board ships. These ENCs in their standard format are also difficult to consume in standard GIS environments. Demand is now increasing for ENC data to be used for non-navigational purposes such as cartographic production, and in the study of hydrographic aspects of climate change, boundary disputes and international security, biological and geological natural resources, green energy development, and the social sciences.

In response to this demand, East View Geospatial (EVG) has pursued ENC derivative agreements with hydrographic offices throughout the world and is pleased to offer a new series of authoritative maritime datasets for non-navigational use: EVMaritime Vector Data. Leveraging EVG’s expertise in data translation, the EVMaritime Vector Data products combine all ENC scales, without overlap, into one seamless mosaic, and are delivered as Esri file geodatabases with schema, symbology, font, labelling, domains, and aliases fully applied. Users will find it easy to identify specific features, including underwater cables, wrecks, offshore oil platforms, military and regulated areas, buoys, danger points, and more. The data is also available in other formats including, but not limited to, Shapefile, GeoJSON, and Geopackage.

EVG has recently completed EVMaritime Vector Data for Ukraine after signing an agreement for derivative ENC products with the State Hydrographic Service of Ukraine. Comprised of 141 individual vector databases, the EVMaritime Vector Data Ukraine series offers comprehensive GIS-ready data coverage of Ukrainian waters. In addition to the individual databases, EVG has also assembled eleven collections covering specific waterbodies such as the Danube River and the Black and Azov seas based on scale, giving users access to cohesive data for specific areas of interest.

EVMaritime Vector Data is a rapidly expanding program with designs to cover all of the world’s major waters. In addition to the Ukraine vector data, United States coverage is also available now, and future expansion will include the rest of North America, Asia, Oceania, and more. We welcome requests for specific areas of interest.

For more information, please contact geospatial@eastview.com.

Grant Bistram | East View Companies | USA

EVMaritime Vector Data for Ukraine displayed in ArcMap | Image courtesy of East View Geospatial
ica affiliate members

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1995 - year of ratification by the ICA General Assembly

1995 - affiliate member’s profile published in ICA News (issue number)
children’s map gallery 2021 winners and participants

Alfonsina Valdez Galli | 7 | Friendly World | Resistencia, Chaco Province | Argentina
Magda Oswald | 12 | The Planet of the Future | Osijek | Croatia

Tatiana Rusek | 11 | Blooming Flower of the Earth | Nalchik | Russia

Elmira Sabanchieva | 13 | The Fragile World | Nalchik | Russia

Tayla Grie | 9 | Message in a Bottle | Osijek | Croatia

Magda Oswald | 12 | The Planet of the Future | Osijek | Croatia