ICA Commission on the User Experience

2023 Business Meeting
18 August | Cape Town, South Africa

Commission Chair
Robert E. Roth, PhD | reroth@wisc.edu
What is the “UX” Commission?

First established in 1984 as the **Map Use** Commission
- continual commission status since except 1999-2003

Refreshed in 2003 as the **Use & User Issues** Commission
- added treatment of usability & user-centered design

Currently the **User Experience (UX)** Commission

*Image: Kraak & Fabrikant (2017) Of maps, cartography, & geography of the ICA*
What is “UX” Design?

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data
map interface

What is “UX” Design?

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What is “UX” Design?

What is “UX” Design?

User Experience Design

map interface

User Interface Design

What is “UX” Design?

What is “UX” Design?

UI = user interface

UX = user experience

Designer = sketcher + tinkerer + evaluator
UI = implemented interactive features

UX = processes & outcomes of interaction

Designer = decider of how it “works”
<table>
<thead>
<tr>
<th>#</th>
<th>Job Title</th>
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</thead>
<tbody>
<tr>
<td>#1</td>
<td>IOS Developer</td>
</tr>
<tr>
<td>#2</td>
<td>Android Developer</td>
</tr>
<tr>
<td>#3</td>
<td>Zumba Instructor</td>
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<tr>
<td>#4</td>
<td>Social Media Intern</td>
</tr>
<tr>
<td>#5</td>
<td>Data Scientist</td>
</tr>
<tr>
<td>#6</td>
<td><strong>UI/UX Designer</strong></td>
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<td>#7</td>
<td>Big Data Architect</td>
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<tr>
<td>#8</td>
<td>Beachbody Coach</td>
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<tr>
<td>#9</td>
<td>Cloud Services Specialist</td>
</tr>
<tr>
<td>#10</td>
<td>Digital Marketing Specialist</td>
</tr>
</tbody>
</table>

*Source: LinkedIn*
What is the “UX” Commission?

Basic Science / Generalizability

“Traditional Cartography”

Qualitative ← UCD Studies / Transferability Quantitative

“New Empirics”

What is the "UX" Commission?

- **Controlled experiments**
- **Secondary sources**
- **Focus groups**
- **Quantitative**
- **Surveys**
- **Think aloud**
- **Qualitative**
- **Interviews**
- **Participant observation**

*Source: UX Commission Workshops on Designing & Conducting User Studies*
What is the “UX” Commission?

Source: van Elzakker et al. (2007) Field-based usability evaluation methodology
Leadership: 2011–2015

Corné van Elzakker | Netherlands
Chair: 2007–2015

David Forrest | United Kingdom
Vice-Chair: 2007–2015

Kristien Ooms | Belgium
Vice-Chair: 2011–2015

Alex Pucher | Austria
Vice-Chair: 2007–2015
Leadership: 2015–2019

Kristien Ooms | Belgium
Chair: 2015–2018
Vice-Chair: 2018–2019

Alena Vondráková | Czech Republic
Vice-Chair: 2015–2018

Robert Roth | USA
Vice-Chair: 2015–2018
Chair: 2018–2019

Artemis Skarlatidou | United Kingdom
Vice-Chair: 2015–2019
Leadership: 2019–2023

Robert Roth | USA
Chair: 2018–2023

Luciene Delazari | Brazil
Vice-Chair

Katarzyna Słomska-Przech | Poland
Vice-Chair

Zdeněk Stachoň | Moravia
Vice-Chair
Leadership: 2023–2027

Robert Roth | USA
Chair: 2018–2023

Luciène Delazari | Brazil
Vice-Chair

Merve Keskin | Finland
Vice-Chair

Zdeněk Stachoň | Moravia
Vice-Chair
Terms of Reference: 2023–2027

1. **Website:** Maintain & expand the commission website on UX design & user issues: https://use.icaci.org/.

2. **Bibliography:** Maintain & expand the bibliographic reference for UX design & user studies in cartography & related field.

3. **Educational Workshops:** Organize training workshops on UX design & user studies for students & non-specialists.

4. **Student Services:** Provide institutional and logistical support to the Next Generation Cartographers initiative.

5. **Open Educational Resources:** Develop and maintain open educational resources to support user studies in cartography.

6. **Scholarly Workshops:** Organize research workshops on UX design & user studies with other commissions & sibling intellectual commissions.

7. **ICA Sessions:** Organize sessions on user studies and UX design at the 2021 & 2023 International Cartography Conferences.

8. **UX Research Agenda:** Jointly develop a research agenda on map UX.
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Training Workshop on Mapping for a Sustainable World
Robert Roth | 12/07/2023
Training Workshop on Mapping for a Sustainable World. The ICA Commissions on Sustainable Development and the User Experience will offer a free two-day Mapping for a Tuesday 8 August & Wednesday 9...

Workshop Spatial information for Virtual Environments – materials
Zdeněk Slachoň | 01/07/2022
Commission on User eXperience organized a workshop as a part of the 8th International Conference on Cartography and GIS (Nessebar, Bulgaria). The workshop was focused on alternative ways of presenting spatial data in immersive virtual geographic environments. Selected materials are...

Join us for the 2022 CyberCartography Workshop June 14th, 9:30-13:00 CET+1
Robert Roth | 13/06/2022
2022 CyberCartography Workshop Call for Participation: June 14th (9:30 – 13:00, CET+1) ahead of AGILE 2022 Please see the conference website for complete information on objectives, speakers, and scheduled: http://cybercarto.ntua.gr/events/agile2022/ Video dial-in: https://lledin.zoom.us/j/8842288828 Please complete this.

Sign-up to our listserv!!!
2. Zotero Database

https://www.zotero.org/groups/928693/uuui/items/5AGCK8S1/library
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Workshop on Adaptable Research Methods For Empirical Research with Map Users

Thursday 6 May 2021

Everyone globally has been affected by the COVID-19 impact on planned research projects as a result of restrictions on movement. Despite these challenges, people have been successful in finding creative ways to collaborate and share experiences in adapting user research methods for research, education, and industry. The workshop helps each other solve unsolved problems.

Session 1

22:00-22:20 (AEST)
14:00-14:20 (CET)
8:00-8:20 (US EST)
5:00-5:20 (US PST)

Experiences with Collaborative Map Use Interface in Remote Courses of Maritime Spatial Planning
Pyry Kettunen, Christian Koski, Mikko Rönneberg
15 minutes presentation + 5 minutes discussion, slides, recording

22:20-22:40 (AEST)
14:20-14:40 (CET)
8:20-8:40 (US EST)
5:20-5:40 (US PST)

Investigating Differences in Perception & Cognition of Map Symbols Through Laboratory & Online User Experiments
Bradley Denney, Amy L. Griffin, Zdeněk Stachoň
15 minutes presentation + 5 minutes discussion, slides, recording

3. Educational Workshops
Online | 6 May 2021

Visual search experiments online: opportunities and challenges
Korakas L. Kesidis, Athina Pappa, Loukas-Moysis Misthos
10 minutes discussion, slides
3. Educational Workshops
Harare, Zimbabwe | 8-9 August 2023
4. Next Generation Cartographers
EuroCarto, Vienna | 9 September 2022
5. Open Educational Resources
Mapping for a Sustainable World

94 SDG Maps!
68 Schematic Maps!
35 SDG Diagrams!
30 Other Figures!
Mapping for a Sustainable World: QGIS technical supplement


About

These tutorials pair with the open-source book Mapping for a Sustainable World. The book teaches principles of cartography through the United Nations’ 17 Sustainable Development Goals. Mapping for a Sustainable World was developed as a collaboration between the United Nations and the International Cartography Association with the University of Wisconsin Cartography Lab supporting creation of the book.

All tutorials demonstrate map design using the open access mapping software QGIS. The goal of the tutorials is to enhance the cartographic design thinking described in Mapping for a Sustainable World and use a number 1.1, 1.2, 1.3, etc. to indicate the sequence.

The tutorials were developed by Lily Houtman and Robert E. Roth of the NSF #1555267 and are freely available for personal or classroom workshop use.

How to Use These Tutorials

There are three sets of tutorials that follow the technical design and implementation symbol, and nominal map from Mapping for a Sustainable World. The tutorials are used to enhance the cartographic design thinking described in Mapping for a Sustainable World and use a number 1.1, 1.2, 1.3, etc. to indicate the sequence.

The tutorials are meant to enhance but not replicate information from Mapping for a Sustainable World use bold and italics and are followed by a reference to the relevant book section (Note: Mapping for a Sustainable World 2021).

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Introduction

Tutorial 1 - Choropleth Map
- 1.1 - Overview and Project Planning
- 1.2 - Downloading QGIS
- 1.3 - Downloading Location and Attribute Data
- 1.4 - Creating the Choropleth Map
- 1.5 - Adding Other Layers
- 1.6 - Publishing the Map

Tutorial 2 - Thematic Map
- 2.1 - Overview and Project Planning
- 2.2 - Downloading QGIS
- 2.3 - Downloading Location and Attribute Data
- 2.4 - Creating the Thematic Map
- 2.5 - Adding Other Layers
- 2.6 - Publishing the Map

Tutorial 3 - Time Series Map
- 3.1 - Overview and Project Planning
- 3.2 - Downloading QGIS
- 3.3 - Downloading Location and Attribute Data
- 3.4 - Creating the Time Series Map
- 3.5 - Adding Other Layers
- 3.6 - Publishing the Map

Try it for Free!
https://github.com/uwcartlab/MappingSDGsTechnicalSupplement

5. Open Educational Resources

QGIS Technical Supplement

GOAL 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

**SDG Target 5.5**

Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making.

- Only 24% of parliamentary leaders were women in 2020
- Only four national parliaments have 90% or greater representation by women

Map depicts indicator 5.1.1 (2020) on the proportion of seats held by women in national parliaments by a choropleth map. The choropleth map is highly granular to show only the level of the percentage, mapping in a range. The map also uses the color weight of smaller nations. Larger countries are shown in equal area classification to the color and attribute data, and a sequential color scheme that changes from yellow to green. This allows for visual data trend and value changes in the choropleth. The choropleth map uses an equal area classification to the color and attribute data, and a sequential color scheme that changes from yellow to green, allowing for visual data trend and value changes in the choropleth.
STEP #7: Resize the Symbols
Select “Data define override → Assistant…” to create a rule for data-driven proportional scaling.

5. Open Educational Resources
QGIS Technical Videos

Load 3.3.1 as “Source” and refresh to load the full value range.

Scale 1 to 20 (may need to update based on your layout) and select Flannery correction.
5. Open Educational Resources
GIS&T Body of Knowledge


https://gistbok.ucgis.org/
CV-38 - Usability Engineering & Evaluation

In this entry, we introduce tenets of usability engineering (UE) and user-centered design (UCD), interrelated approaches to ensuring that a map or visualization works for the target use. After a general introduction to these concepts and processes, we then discuss treatment of UE and UCD in research on cartography and geographic visualization. Finally, we present a classification of UE evaluation methods, including a general overview of each category of method and their application to cartographic user research.

Author and Citation Info:


This entry was first published on March 9, 2018. No earlier editions exist.

Topic Description:

1. Definitions
2. Overview
3. UE Approaches and Applications
4. UE Evaluation Methods

1. Definitions

evaluation: the assessment of the extent to which a product, mapping or otherwise, supports user needs

conceptual development: the outline of a product's functional requirements prior to product development, as identified from the work domain analysis

debugging: the process of fixing errors and optimizing code before final release of a product to the end users

Source: Ooms & Skarlatidou (2018)
https://gistbok.ucgis.org/bok-topics/usability-engineering-evaluation
5. Open Educational Resources
Open (Free) Web Mapping Course!

https://github.com/uwcartlab/webmapping
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ICA Joint Commission

Workshop Usability 4All

Inclusive Design

Recognize exclusion; solve for one, extend to many; learn from diversity

Permanent
Temporary
Situational

Touch
One arm
Arm injury
New parent

See
Blind
Cataract
Distracted driver

Hear
Deaf
Ear infection
Bartender

Speak

Source: Microsoft Inclusive Design Toolkit
https://www.microsoft.com/design/Inclusive/

https://www.youtube.com/playlist?list=PLGqsHedNsYJaYDAL-iQU8-_rmhACTR2o

Commission on User Experience
Commission on Cartography and Children
Commission on Maps and Graphics for Blind and Partially Sighted People
Commission on Open Source Geospatial Technologies

Programming:
Morning - ICA Chairs presentations
Afternoon - Presentation of selected papers.

Send your contribution (max 2 pages, pdf format) until October 10th to luciene@ufpr.br.

6. Scholarly Workshops
Online | 13 November 2020
Pre-Conference Workshop Immersive Cartography / Cartography for Immersive Environments

Monday, December 13 - Firenze, Via Laura, 48 Room A2.09
Webex link: https://unifirenze.webex.com/unifirenze/j.php?MTID=mcc5491e2b25e30d8e585633b5a33a831

14:00 - 14:10 Introduction
- Commission on User eXperience (UX) - Zdeněk Stachoň
- Commission on Cognitive Issues in Geographic Information Visualization - Petr Kubiček

Part 1 - Keynotes (Petr Kubiček, Chair)
14:10 - 14:30
Alex Klippel - Thinking within - explorations toward a science of consciousness

14:30 - 14:50
Arzu Coltekin - Extended (virtual, augmented, mixed) reality in cartography

14:50 - 15:10
Ioannis Giannopoulos - Geographic Aware Augmented Reality

15:10 - 15:30
Čeněk Šašinka - Collaborative Immersive Virtual Environments

6. Scholarly Workshops
Florence, Italy | 13 December 2021

15:45 - 16:10
Pavel Llosa, Dajana Sosnovská - Evacuation in IVE: How to manage activities and interaction
6. Scholarly Workshops
Vilnius, Lithuania | 14 June 2022

6. Scholarly Workshops
Vilnius, Lithuania | 14 June 2022

AGILE 2022 PRE-CONFERENCE WORKSHOP 3:

CYBERCARTOGRAPHY 2022

A Beyond State-of-the-Art Role of Geovisualization in the Understanding of...

Tuesday, June 14, 2022, 9:30 – 13:00, CET+1 (half-day workshop)

25th Conference of the Association of Geographic Information Laboratories in the Baltic Region
Gediminas Technical University – VILNIUS TECH, Saulėtekio av. 11, Vilnius, Lithuania.
Room SRK-I 313 & online.

Please fill in this form if you intend to participate in the workshop (either physically or remotely) and plan the event.
Symposium
ICA Spring Olomouc 2023
April 3–5, 2023
Olomouc, Czechia

ATLASES: THEIR DESIGN AND USE

Joint Symposium of
Commission on Atlases (René Sieber)
Commission on Map Design (Ian Muelenhaus)
Commission on User Experience (Rob Roth)

6. Scholarly Workshops
Olomouc, Czechia | 3-5 April 2023

https://icaspring2023.upol.cz/
7. ICC Sessions
Cape Town, SA | 14-18 August 2023

20 talks over 6 sessions!
User studies in cartography: opportunities for empirical research on interactive maps and visualizations

Robert E. Roth\textsuperscript{a}, Arzu Çöltekin\textsuperscript{b}, Luciene Delazari\textsuperscript{c}, Homero Fonseca Filho\textsuperscript{d}, Amy Griffin\textsuperscript{e}, Andreas Hall\textsuperscript{f}, Jari Korpi\textsuperscript{f}, Ismini Lokka\textsuperscript{b}, André Mendonça\textsuperscript{g}, Kristien Ooms\textsuperscript{h} and Corné P.J.M. van Elzakker\textsuperscript{i}

\textsuperscript{a}UW Cartography Lab, Department of Geography, University of Washington, Seattle, WA, USA; \textsuperscript{b}Geographic Information Visualization and Analysis (GIVA), Zurich, Zurich, Switzerland; \textsuperscript{c}Department of Geomatics Engineering, University of Calgary, Calgary, AB, Canada; \textsuperscript{d}Geospatial Computing Lab, Environmental Management Group, Delft University of Technology, Delft, The Netherlands; \textsuperscript{e}School of Physical, Environmental and Geographical Sciences, University of Melbourne, Melbourne, Victoria, Australia; \textsuperscript{f}Department of Real Estate, Aalto University, Espoo, Finland; \textsuperscript{g}School of Technology, Amazonas State University, Manaus, Brazil; \textsuperscript{h}Geo-information Research Center, University of Antwerp, Wilrijk, Belgium; \textsuperscript{i}Geo-information Research Center, University of Antwerp, Wilrijk, Belgium

8. Research Agendas
Interactive Cartography (2017)
Call for Papers: Special Focus Issue of the International Journal of Cartography on the State of the Art & Science in Cartography

Posted on July 6, 2021 by Arzu Sultanekin

Call for Papers: Special Focus Issue of the International Journal of Cartography on the State of the Art & Science in Cartography

Guest Editors: Arzu Sultanekin, Anthony C. Robinson, Luciene Delazari, Pyry Kettunen

The ICA Commissions on Visual Analytics, Cognitive Issues in Geographic Visualization, and User Experience (UX) invite paper submissions for a special focus issue of the International Journal of Cartography (https://www.tandfonline.com/toc/ica20/current). The theme for this special issue is the State of the Art & Science in Cartography. The aim of this special issue is to provide an overview of the current state of the art and science in cartography, and to highlight emerging trends and future directions in the field. The issue will cover a wide range of topics, including visualization, cognition, and user experience, and will be of interest to researchers, practitioners, and students in the field of cartography. Submissions are due by October 31, 2021.
8. Research Agendas
Mobile Cartography (2024)
Making Maps and Visualizations for Mobile Devices: A Collaborative Research Agenda

Robert Roth | USA
University of Wisconsin
Chair, User Experience

Arzu Çöltekin | Switzerland
FHNW Switzerland
Chair, Visual Analytics

Bradley Denney | Austria
RMIT University

Jie Shen | China
Nanjing Normal University
Vice Chair, Crisis Management

Luciene Delazari | Brazil
Federal University of Paraná
Vice-Chair, User Experience

André Mendonça | Brazil
Federal University of Amazonas

Zdeněk Stachoň | Moravia
Vice-Chair, User Experience

Mingguang Wu | China
Nanjing Normal University
First Call For Papers: 2020 ICA Workshop on Analytical Reasoning

Robert Roth | 17/02/2020

Uncategorized

ICA Joint Commission Workshop on Analytical Reasoning for Cartography, Visualization, and Design

Date: Monday 14 September 2020 (ahead of GIScience 2020) Postponed to Fall 2021 due to COVID-19

Location: University of Warsaw | Warsaw, Poland

Workshop website: http://carta-vis-workshop.uw.edu.pl/

Purpose

It has been 15 years since visual analytics was first established as the science of analytical reasoning for interactive maps and visualizations. Since then, new models have been proposed to understand cognitive processes, new technologies have been released to support interactive, mobile, and immersive mapping methods have been developed to examine and evaluate user experiences with analytical support systems. High quality research papers in cartography, visualization, and allied design fields to capture the state-of-science on analytical reasoning.

News

- Training Workshop on Mapping for a Sustainable World
- Workshop Spatial information for Virtual Environments – materials
- Join us for the 2022 CyberCartography Workshop June 14th, 9:30-13:00 CET+1
- 8th International Conference on Cartography & GIS – workshop
- Next Generation Cartographers: A Cartographic Colloquium

Recent Comments

- Eric Swett on Workshop on lessons learned from volunteers’ interactions with geographic citizen

Future Workshops!
Warsaw, Poland | September 2024

- July 2022
- June 2022
ICC 2025

The 32nd International Cartographic Conference will take place in **Vancouver, Canada, 28 July–1 August 2025.**

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**Future Workshops!**

**Vancouver, Canada? | July/August 2025**
ICA Commission on the User Experience

2023 Business Meeting
18 August | Cape Town, South Africa

How can we better support your user needs!? 

https://use.icaci.org/