

Technical Session Overview



Monday, 18 August, 2025

Start	End	111: GeoAI	RM 8&15	112: Map Design	RM 10	113: Geovisualization & Mapping the Arctic	RM 13	114: Cartographic Heritage into the Digital	RM 18	115: Cartography and Sustainable Development	RM 19
9:30	9:45	Applications of generative methods in cartography on the example of creating pictorial maps	Dirk Burghardt	Understanding Crowdsourced Map Layout Designs via Interpretable GNN-based Layout Representation Learning	Chenyu Zuo	Visualising spatial data of different origin and resolution in diverse terrain: St. Ana in Slovenia	Klemen Kozmus Trajkovski	The concept of the Historical Geographic Information System for the settlements of Transylvania	Laszlo Zentai	The cartographic methods of visualising Sustainable Development Goals (SDGs) indicators elaborated based on Earth Observation data	Anna Markowska
9:45	10:00	Digging Deeper: Automating Archaeological Feature Detection through Deep Learning	Alisa Pettitt	Mapbusters: Breaking the rules in cartography	Kenneth Field	Pan-Arctic 200m Resolution Ice Concentration Mapping by Fusing RCM, Sentinel-1 and AMSR2 Data via Deep Learning	Mabel Heffring	Castles, Fortress and Citadels – A New Method for Exploring Military Heritage Through 3D Immersive Geovisualization	Jakub Zawadzki	Mapping the city's trajectory for climate change adaptation: mapping territorial evolution, politics will and planning regulations	Anne Ruas
10:00	10:15	AI and Map Use: Can AI Understand Maps?	Amy Griffin	Efficiency of Mini-Map Navigation in Virtual Topographical Space	Krzysztof Zagata	Flood Risk Awareness in the Digital Age: Virtual Reality and Geovisualization for the Next Generation	Peter Fischer-Stabel	Engineers of Map Art – 170 Years of Cartography at ETH Zurich	Lorenz Hurni	Conceptualizations of space for maps reducing energy loss and achieving United Nations Sustainable Development Goal 7: Affordable and clean energy	Britta Ricker
10:15	10:30					Arctica - Carta non blanca. Openstreetmap for Arctic Archipelago.	Pawel Strus			Thematic map types and Earth observation data sources for achieving for United Nations Sustainable Development Goal 15 Life on Land	Britta Ricker
Start	End	121: Geospatial Analysis and Modeling	RM 8&15	122: Map Projections	RM 10	123: User Experience	RM 13	124: Multi-Scale Mapping	RM 18	125: Education and Training	RM 19
11:00	11:15	Advancing Urban Flood Preparedness with 4D Geospatial Digital Twins	Debayan Mandal	Towards a discrete generalization of cartographic projections	Luke Bergmann	The Influence of Intuitive Associations on our Reading Comprehension of Temperature Maps	Jochen Schiewe	The Good Map - a benchmark generalized multi-scale map	Guillaume Touya	Immersive Virtual Reality (VR) in Geography Lessons in Schools – A Case Study from North Rhine-Westphalia, Germany	Dennis Edler
11:15	11:30	The Roaring '20s Project: Mapping Pre-Renewal Built Environments in Chicago from Sanborn Fire Insurance Maps Using a Computational Workflow	Parker Otto	On designing a low distortion map projection for Slovenia	Bojan Šavrič	Integration of game technology, digital twins of buildings and real-life indoor navigation app for cartographical research purposes	Jakub Łobodecki	Can naive and expert users spot the difference between AI vs. human-generalized maps?	Izabela Karsznia	Co-designing a new Bachelor study programme at the interface of geo(infor)matics and data science together with students – first insights	Gertrud Schaab
11:30	11:45			CSRS Modernization: A new Coordinate Reference System for Canada	Ismael Foroughi	University Students' Cognition of the Campus Town Represented in their Sketch Maps	Kaori Ito	Human interactive sequences caused by the desert fog	Guillaume Touya	How do geography students read and interpret contour lines? An empirical study of their misconceptions	Jolanta Korycka-Skorupa
11:45	12:00	Identifying Geographic Disparities in Suicide Determinants Across United States Counties with Spatial Modeling	Emma Von Hoene			Evolving the WCAG3 Accessible Contrast Perceptibility Standard for Maps	P. William Limpisathian			Experiences of a Brazilian-Hungarian Erasmus Collaboration on Cartography and GIS	Laszlo Zentai
Start	End	131: GeoAI	RM 8&15	132: Inclusive Cartography	RM 10	133: Map Design	RM 13	134: Cartography in Early Warning and Crisis Management	RM 18	135: Art and Cartography	RM 19
13:30	13:45	Multimodal large language model-based multi-agent framework for map style transfer and evaluation	Yuhao Kang	The Map of Inclusive Symbols and Spaces at Harvard	Jeff Blossom	Every Map Can Be a Game: Playable Cartography	Krzysztof Zagata	Advancing Flood Hazard Mapping to Enhance Sustainable Development and Climate Resilience	Marie-Josée Valliquette	The Potential of AI "Maps" with Differences from the Real World to Expand Imagination	Sumire Hamatsu
13:45	14:00	A Theoretical Framework for Fallibilism and Generative AI in Cartography	Dennis Edler	Human-AI Collaboration in Data-Driven Visual Storytelling	Chenyu Zuo	Integrating use-specific styles into a generalized map hierarchy for Apple Maps	Lauren James	Cartographic Analysis of Nature Risks and a Proposal for a New Early Warning System in Bulgaria	Temenoujka Bandrova	Masaki Fujihata's BeHere/1942 AR app: From Relational Map to Geolocate Augmented Reality Experience	Sharon Hayashi
14:00	14:15	Semantic search engine for geospatial datasets using large language models and AWS OpenSearch	Bo Lu	Toward an ICA Code of Conduct: Community Workshop	Chelsea Nestel	Innovation and individualism: The evolution of aesthetics in British Cartographic Society Awards, 1978–2024	Martin Davis	Leveraging Topological Data Analysis for disaster preparation, a cartographic perspective	Jim Thatcher	Deep mapping cartography's limits: the artfulness of rendering spatial practice	Lily Demet
14:15	14:30	Interpreting morphological prototype of urban form using CNN and prototype learning	Yuhan Jiang	Amplifying the Unseen: Ethnographic Mapping of Informal Urban Economies	Roni Mero					The matter of maps. A public art experiment	Lena MK
Start	End	1411: Rethinking the Role of Societies for Enhancing Diversity and Services Panel	RM 8&15	142: Participatory Mapping	RM 10	143: Geovisualization	RM 13	144: Standards in Cartography	RM 18	145: History of Cartography	RM 19
14:30	14:45	Organizers: Cartography and Geographic Information Society (CaGIS) Speakers: Caglar Koylu, President, CaGIS PANELISTS: Aileen Buckley, IMIA; Indy Hurt, CaGIS; Reginald Archer, Tennessee State University This panel aims to inspire dialogue and ideas for building inclusive and impactful communities in cartography, GIScience, geography and beyond. Through discussions on who our members are and could be, what services best meet their needs, and how to deliver those services efficiently—especially through inter-society collaboration and leveraging innovative platforms—this session seeks to identify actionable insights for building inclusive, and impactful professional communities.		Bridging Myths and Science: Participatory Mapping as a Tool for Creating, Sharing and Communicating Environmental and Health Crises Information	Jakleen Al-Dalat'a Artemis Skartatidou	3D Geovisualizations at Multiple Scales: UAV and VR Integration for Geosite Exploration	Apostolos Papakonstantinou	Introducing libCartoSym, an open-source software library for transcoding portrayal rules between different encodings based on OGC CartoSym 2.0	Jérôme Jacovella-St-Louis	International Journal of Cartography – An analysis of a decade of publishing	Ruas Anne
14:45	15:00			Never the Twain Shall Meet? An Intellectual History of Participatory Mapping	Ayla De Grandpré	GC-Analyzer – Analyzing Spatiotemporal Correlations for Demand-Driven Services: Using an Interactive GeoVisual Analytics Approach in Decision-Making	Alexander Rolwes	The effects of line simplification on platform geometry	Ethan Shavers	The United States by Geographical-Statistical Atlases: Historical and Geographical American Atlas (1822) and Atlas von Amerika (1823-29)	Imre Demhardt
15:00	15:15			Reflections on the use of tangible participatory mapping at scientific outreach events: exploring perceptions of photovoltaics in Luxembourg	Catherine Jones	Mastering Cartography with QGIS: Unlocking its Full Potential	Andreas Neumann	Development of 3D Digital Japan Basic Map	Mayumi NOGUCHI	Large-format map of the Tloskov estate	Drozda Jifi
15:15	15:30					Differences in navigation behavior between head mounted display and desktop presentation	Annika Korte			The maps in Le Mouvement Géographique - a magazine created 150 years ago - as unique witnesses of the Western imperialism	Philippe DE MAEYER

Technical Session Overview



Tuesday, 19 August, 2025

Start	End	211: GeoAI	RM 8&15	212: Inclusive Cartography	RM 10	213: Cartography in Early Warning and Crisis Management	RM 13	214: Map Design	RM 18	215: Maps and the Internet & Location Based Services	RM 19
8:30	8:45	How to trust AI-generated maps	Georg Gartner	Designing Storytelling Maps for Cross-Regional Transport Network Planning	Chenyu Zuo	Transition and Characteristics of Road Clearance Based on Government Announcements During Multiple Disasters in the Noto Peninsula in Japan	SEIYA TAKAYANAGI	Inflection Point: Multi-Agent AI and the Future of Cartographic Practice and Knowledge Production	Ian Muehlenhaus	Life and deprecation: what happens to digital maps in the long-term?	Gareth Baldrice-Franklin
8:45	9:00	Modernization of Canadian Digital Topographic Data	Heather McGrath	Map Color Transformation and Recommendation System for Color Vision Deficiency	Jeon-Young Kang	High-Frequency Guided Multi-Level Cross-Attention Mamba Network for Damage Building Mapping	Yong Wang	When old maps step into the limelight in animated films	Marina Duféal	Styling and Publishing Multidimensional Imagery to the Web	Emily Meriam
9:00	9:15	Towards Geo-AI enabled spatiotemporal regularities unveiling: A mini-review of pathways, challenges, and prospects	Yaolin Liu	Cartographies in a Justice-Seeking Toolkit: Specific Claims in Canada	Julia Bristow	Comparing the Spatio-temporal Patterns of Crime Incidents based on Time Series Analysis: A Case Study of Austin, Texas	Yihong Yuan	Preference Analysis Methods in Cartographic Research. Map Reader Preference for Lettering Typefaces on printed Maps.	Rex Cammack	Development of an adaptive TDCP and RTK/INS tightly coupled navigation system for autonomous vehicles	Shui Guo
9:15	9:30			Tracing the Flow of Treaty Relations in the Salish Sea	Leah Fulton			The layout and screen area of GUI elements in mobile map applications	Wojciech Rymkiewicz	Best practices of cartography education at the University of West Bohemia in Pilsen (Czech Republic)	Otakar Čerba
Start	End	221: Geospatial Data Analytics	RM 8&15	222: Thematic Cartography	RM 10	223: Digital Earth and Discrete Global Grid Systems	RM 13	224: Mountain Cartography	RM 18	225: Education and Training	RM 19
11:00	11:15	Wildfire Evacuation Insights from GPS Data: Contrasting Tantalion and Jasper, Canada	Apratim Sen	Visual variables for pictorial signs in the city immersive geovisualization	Beata Medyńska-Gulij	Discrete global grid flow direction model	Anastasia Shurygina	Mitigating relief inversion illusion with multidirectional sky illumination model: A user study	Izabela Gołębiowska	Promoting reflexive learning in cartography in an international classroom	Juliane Cron
11:15	11:30	Mapping the war-affected landscape of Ukraine using Earth observation data with high resolution	Monika Kopecká	A Geospatial Career of 50 years with more than 500 Maps and GIS Projects	Daniel Cole	Transport network modelling on hexagonal discrete global grid system	Anastasia Shurygina	Neural Network Models for Adaptive Multi-scale Relief Shading	Lorenz Hurni	The Evolution of Cartographic Education in the United States	Robert McMaster
11:30	11:45	Urban Planning Analysis Using Stereo Mapping Feature Collection	Filip Janicijevic	Past and future of International Specification for Orienting Maps	Dušan Petrović	Interoperable Global and Local Indexing of DGGs Based on the ISEA Projection for Efficient Storage, Processing and Transmission	Jérôme Jacovella-St-Louis	Integrated Cartographic Visualization Method for Analyzing the River Valleys in Mountain Topography – an Application for the Dunajec Gorge	Lukasz Wieleski	A criteria framework for critical cartography education	Juliane Cron
11:45	12:00	Human responses to extreme heat through the lens of human mobility: a multiple scales study across the United States	Hao Tian	Summarizing Classed Region Maps with a Disk Choreme	Steven van den Broek	Introducing the OGC API – Discrete Global Grid Systems Standard for Enhanced Geospatial Data Interoperability	Jérôme Jacovella-St-Louis	A Public Digital Platform for the Inventory and Cataloguing of Handmade Relief Models	Stefan Räber	The spatial thinking ability of respondents from the geospatial industry of South Africa: An exploratory study	Serena Coetzee
Start	End	231: GeoAI	RM 8&15	232: Cartography and Children & Cartography and Sustainable Development	RM 10	233: Map Design	RM 13	234: Topographic Mapping	RM 18	235: Art and Cartography	RM 19
13:30	13:45	What do you see? An XAI approach for VLM-generated map descriptions	Güren Tan Dinga	Using Geographic Information System in Measuring Mine Action Sustainable Development Outcomes	Ashna Kareem	Common Trends and Pitfalls in Maps Submitted to an Academic Journal	Michael Peterson	Analysis of the semantic quality of the topographic mapping of Porto Alegre	Andrea Iescheck	Disagreements about Style	Chelsea Nestel
13:45	14:00	AI-based Accuracy Improvement of Precipitation Mapping for the Korean Peninsula	Hyo Ju Park	Visualizing Glacial Retreat in Maps: An Empirical Evaluation Study	Fangsheng (Jasper) Zhou	Apple Maps: How Cartography is Approached And Why it Matters	Nat Slaughter	Developing Automated Map Generalisation Workflow for Building, Road, and Stream Course Features in Topographic Map of Hong Kong	Chun-wan KWOK	gathering: a tool for experiments with geographic information	Nick Lally
14:00	14:15			Integrating Cadastral Map for Smart Village Initiatives (Udaipur, India) with GIS: A Novel Approach for Rural Maps Reconstruction	Bhanwar Vishvendra Raj Singh	Generating Consistent Sets of Map Icons Using AI	Sacha Schlumpf	Promoting Access to National Topographic Mapping: A New Initiative	David Forrest	Flows, Territory, and Identity: Understanding Transformation in the Strait of Messina Through Art and Cartography	Aleksandra Stanczak
14:15	14:30	An Exploration of Deep Learning based Road Network Extraction from High-Spatial-Resolution Remotely Sensed Imagery	Haochen Zhou	Children's cognitive story mapping: integrating child care work practice, art creation and cartography	Romola Thumbadoo	Guiding map readers' eyes to what matters	Sacha Schlumpf	An approach to street and road network generalization from Graph Theory	Maria Cristina Calvo		
Start	End	2411: Tree Spatial Asset Management Solution	RM 8&15	242: Thematic Cartography	RM 10	243: User Experience	RM 13	244: Geospatial Analysis and Modeling	RM 18	245: Ubiquitous Mapping & Geospatial Semantics	RM 19
15:00	15:15	ORGANIZER: City of Vancouver SPEAKERS: Nenad Knezevic, GIS Systems Analyst, & Warren Eichhorst, Business Analyst, City of Vancouver DESCRIPTION: The presentation will explore the use of Geographic Information Systems (GIS) to enhance urban forestry management at the City of Vancouver. Attendees will learn about the business drivers behind the adoption of GIS, the new capabilities introduced, and the architecture of the solution. The session will cover practical use cases of the technology, highlighting the challenges faced and the solutions implemented. The presentation will conclude with key learnings, a roadmap for future, and a Q&A session, making it accessible and informative		Cartographic support of scientific and production activities: terminology, modeling and communication aspects	Dmitrii Loginov	Initial takeaways from a case study of streamlined user-centered design	Juliane Cron	An automatic solution for determining the Big Geo Data characteristics and classification for thematic mapping	Claudia Sluter	Virtual landmark cues improve spatial learning: evidence from an augmented reality indoor navigation study	Armand Kapaj
15:15	15:30			Carto-philatelic time series and other oddities	Menno-Jan Kraak	Accelerated User Evaluation of a Geovisual Dashboard for Local Government Transportation Planning	Lydia Yoder	A Geospatial Approach to Measuring Greenspace Access and Equity with the 3-30-300 Rule	Esther Ayeni	Characteristics of J. Bertin's graphic system from the perspective of heuristic and abductive reasoning methods	Takashi Morita
15:30	15:45			Flexible Algorithms for Visualizing Geophytogenies	Bettina Speckmann	The Impulse to Map and the Nature of the Human Cognitive System	Michael Peterson	The Use of Geographic Information Systems and Spatiotemporal Data Analysis to Support Decision-Making in Agriculture	Karel Jedlička	Beyond naturalism: the cartographic ontology visualizer	Nicolas Martinez Heredia
15:45	16:00					Augmented reality landmarks on windshield and their effects on the acquisition of spatial knowledge in autonomous vehicles	Rui Li			Making Marine and Freshwater Data FAIR: Refining Geospatial Search Requests Using Ontologies and Thesauri	Pekka Latvala
Start	End	251: GeoAI	RM 8&15	252: Participatory Mapping	RM 10	253: Education and Training	RM 13	254: Atlases and Decolonial Maps	RM 18	255: Integrated Geospatial Information for Cartography	RM 19
16:00	16:15	Semantic Segmentation-based approach to the analysis of old maps	Francis Harvey	Data from Beekeepers and Maps for Beekeepers: A Decade of Monitoring Honeybee Colony Losses in the Czech Republic	Jan Brus	Cartographic Textbook Writing in the Digital Age: Lessons Learned from Map Use, Ninth Edition	Aileen R. Buckley	An "Atlas in a Day" Design Challenge: Co-creating a Historical Atlas of Racial Violence in the UW Cartography Lab	Alicia Cowart	Is local level implementation of the Integrated Geospatial Information Framework (IGIF) in South Africa feasible?	Antony Cooper
16:15	16:30	Vector-Based Super-Resolution Mapping with the Population Dynamics Foundation Model	Hongyu Zhang	Integrating Participatory Mapping into Urban Governance: opening data in Ostrava, Czechia	Jiri Panek	Shaping new infrastructure and practices for cartographic innovation, education, and outreach in universities	Anthony Robinson	Decolonizing mapping practices: Tools, tensions, and issues of translation in creating counter-cartographies	Britta Ricker	Analysis of stakeholder roles in the Integrated Geospatial Information Framework (IGIF) and spatial data infrastructures (SDIs)	Antony Cooper
16:30	16:45	A Wide-and-Deep-Based Time Sequence Model for Predicting Power Outages Caused by Extreme Winter Storms	Jikun Liu	Pre-Filled Maps for Proactive e-Participation: A New Paradigm for PPGIS Methodologies	Thibaud Chassin	Supporting Creation of Innovative Location-Based Solutions through Location Innovation Hub	Antti Jakobsson	Digitizing historical Swiss railway data for interactive presentation in the Atlas of Switzerland	Christian Wohler	PROPOSAL FOR QUERY AUTOMATION FOR FIRE PREVENTION AND COMBAT PROJECTS USING A SPATIAL DATABASE: A CASE STUDY OF THE UFPR CAMPUSMAP	Gabrielle Silva Gardim
16:45	17:00	Precise Vegetation Index Mapping and Analysis Through AI-based Atmospheric Correction of Sentinel-2 Satellite Imagery	Seoyeon Kim	Intrinsic assessment of the attribute completeness and accuracy in OpenStreetMap road data	Wangshu Wang	Novel Cartographic Praxis in a Classroom: Visualizing Seattle	Gunwha Oh	Post-Colonial National Atlases – Celebrating Realizations of Independence or Sustaining Colonial Structures?	Eric Losang	Building the Foundation for a National Spatial Data Infrastructure in Armenia: Current Status and Future Prospects	MARIAM PETROSYAN

Technical Session Overview



Wednesday, 20 August, 2025

Start	End	311: Map Design	RM 8&15	312: Inclusive Cartography	RM 10	313: User Experience	RM 13	314: Maps and the Internet	RM 18	315: Atlases & GeoAI	RM 19
8:30	8:45	Framework for Understanding Elements of Map Trust	Alton Hipps	Tactile map evaluation using Technology Acceptance Model	Albina Mościcka	Advancing Cartography: Exploring 3D Visualization and Interaction in Immersive Virtual Reality	Zdeněk Stachoň	Enabling Web-Based Customization of Contiguous Cartograms	Michael Gastner	Atlas of Small Towns (Poland) - assumptions and challenges	Jerzy Bański
8:45	9:00	Developing best practice guidelines for geospatial data and mapping within the South African polar sciences	Chistel Hansen	Seeing through Satellites, Streets and Stories: Assessing Nature-Based Solutions in the Santa Rosa-Silang Watershed, Philippines	Ana Polgar	Designing Map-Based Dashboards for Mobility Digital Twins	Chenyu Zuo	Conceptual foundations for publishing web map services of topographic databases in Poland	Bartłomiej Bielawski	Pictorial atlases revisited - the didactic narrative approach of Cläre With and Walter von Dreesen	Eric Losang
9:00	9:15	Synthetic and simplified visualisation of reality through a choreographic map	Dariusz Dukaczewski	Cartographic Display of Indigenous Lands in Apple Maps	Bradley Herried	Geographic Spatial Cognition Differences in Virtual Reality Environments	Shiyuan Cheng	[CANCELLED] Research and application practice of high-precision map security compliance technology	Dong Ming	Developing a Digital Atlas: Concept for multi-perspective peace and conflict mapping	Jana Moser
9:15	9:30	Mapping Speed 2 – AIR	William Cartwright	Atlas of Gender Equality – Challenges in Comparing Statistical Maps	Oren Raz	How feelings affect map learning: The role of positive and negative emotions in spatial memory	Veronica Muffato	Disruptive Innovation: The Lasting Outcomes of Participatory Mapping and Volunteered Geographic Information in Nepal's Post-Earthquake Recovery	Theresa Dearden	GAGE-Q: Reinforced Genetic Algorithm using Spatial Neighborhood Graph Embedding for Green Intermodal Transportation	Apratim Sen
Start	End	321: GeoAI	RM 8&15	322: Location Based Services	RM 10	323: Geovisualization	RM 13	324: Student Papers	RM 18	325: Digital Transformation of National Mapping Agencies	RM 19
11:00	11:15	Agricultural Cultivation Parcels Extraction and Crop Mapping Using Multisource Remote Sensing Data and Intelligent Algorithms	Manjia Li	Location-Based Services in Complex Indoor Environments Via Modern Smartphone Multi-Sensor Integrated Navigation	Mir Abolfazl Mostafavi	Quantitative Line Glyphs to Visualize Multi-variate Geometric Properties in Multi-scale Representations of Spatial data	Stefan Eberlein	Perceiving Multidimensional Disaster Damages from Street-View Images Using Visual-Language Models	Yifan Yang	«Base Map» - a new vector tiles-based map for mobile applications	Mark Wigley
11:15	11:30	From Maps to Meaning: An Exploratory Study of Generative AI Models' Use of Statistical Maps	Marta Solarz	From maps in the head to maps in the hand: how does environmental familiarity influence pedestrian navigators' mobile map use behavior?	Armand Kapaj	Methods of 3D Geovisualization of Thematic Data in the Context of Graphic Variables	Jakub Žejdlík	Gender Differences in Wayfinding Abilities in Real-World Geographic Environments: Insights from Eye-Tracking Analysis	Siqi Xiong	The CNIG Download Centre. Free and open use of geospatial data of Spain.	Laura Moral Fernández
11:30	11:45	CNN-Based Geometric Feature Embedding Using Coordinates for Cartographic Generalization Tasks on Building Footprints	Matthias Warnhoff	A Comparison of Hand-Held AR and VR for On-Site Assessment of Construction Projects	Tomasch Reichenbacher	Sacred Forests Around Us – Simulating the Past Forest Landscapes in Virtual Reality	Johanna Roiha	The World Cup reshaped the urban green space pattern of Qatar	Xi Wang	Mapping Canada: Addressing challenges through collaboration and innovation	Marie-Josée Valiquette
11:45	12:00	Generating Analysis-Ready Geospatial Products from National Historical Air Photos	Mozhdeh Shahbazi			Using physiological measurement to investigate fear in virtual geographical spaces	Katrin Reichert			Improvement of the exchange format of the digital cadastral plan	Ivana Racetin
Start	End	331: Geospatial Data Analytics	RM 8&15	332: Marine Cartography & Mapping the Waterbodies and Oceans	RM 10	333: Map Design	RM 13	334: Student Papers	RM 18	335: Cartography and Sustainable Development	RM 19
13:30	13:45	Mapping Red Dust Dispersion in Saldanha Bay: Machine Learning Classification Using Open-Source Geospatial Tools	Ivan & Susan Henrico & Henrico	Sailing the Rough Seas to Automating Generalization Tasks for Electronic Navigational Charts Compilation	Christos Kastrisios	Designing Scenic Tourist Maps through a Framework of Spatio-temporal Imageries Formation	Meixuan Li	Under Pressure: The Impact of Psychological Stress on Usability in Cartographic Interaction	Brynn Patrello	Assessing Map Designs to Enhance Human Participation in Sustainable Mobility	Chenyu Zuo
13:45	14:00	Leveraging spatial big data technology for country-wide analysis of mobility using Floating Car Data	Kamil Choromański	Addressing the Issue of Data Quality Symbology in Marine Cartography	Christos Kastrisios	Revisiting perceptual properties of visual variables in mixed reality	Pyy Kettunen	Off the record: Balancing privacy, transparency, and accuracy in mapping access to reproductive healthcare	Helen Tosteson	Simulations in the Minetest video game (Luanti) for sustainable development themes	François LECORDIX
14:00	14:15	Efficient Visual Analytics of Localized High-Frequency Multimodal All-Traffic Trajectory Data at Urban Intersections	Zihan Liu	Crowd-Sourced Bathymetry Vertical Uncertainty Calculation per Sounding	Punitha Muthusamy	Saliency-Driven Map Consistency: A Quantitative Approach to Cartographic Evaluation using Computer Vision	Sarah Bergquist	Understanding Users in Small Area Cancer Mapping: Insights from the Early Stages of a User-Centered Design Process	Caglar Koylu	Visualizing Access and Land Use Change in Hurricane-Affected Landscapes through Web Cartography	John Morgan
14:15	14:30	Interactive Dashboards for Multi-Modal Data Analysis: Insights from Rail Construction Projects	Manuela Ammann	Advancing Seafloor Mapping with Machine Learning: A Point Convolution Approach for Filling the Gaps in Multibeam Echo Sounder Data	Sara Shamaei/Ghaifarokhi	Visualizing States Across Reference Cartographic Designs	Zhaoxu Sui			[CANCELLED] Behavioural Dynamics and Geospatial Insights: A Framework for Reducing Household GHG Emissions through Tailored Strategies	Maryam Naghdizadeganjharomi
Start	End	341: GeoAI	RM 8&15	342: Ethics in Cartography	RM 10	343: Geovisualization	RM 13	344: Student Papers	RM 18	345: Art and Cartography	RM 19
15:00	15:15	Spatial Susceptibility Mapping of Boreal Forest Fires: Insights from Quebec's Historical and Future Trends (1980-2050)	Navid Mahdizadeh Garakhanlou	Metadata for an Ethical Data Practice in Cartography	Ester Scheck	Visualization concepts for representing spatiotemporal vagueness in colonial collection research using the example of historical ship journeys	Stefan Fuest	Navigating Cognitive Challenges: How ADHD Affects Spatial Knowledge Acquisition	Susannah Cox	Endangered Islands, Isolation & Integration: Ecological Fragility & Flow in Three Artistic Maps	Darren Sears
15:15	15:30	Enhancing Flood Management in Canada: Leveraging SAR and AI for Improved Emergency Response	Nicolas Desrochers	Mapping and citizenship. Cartography and international right: a professional deontology	Jasmine DESCLAUX-SALACHAS	Creating Geospatial Data Visualization and Exploration Tools for Simulated and Modeled Datasets	Stuart McGorman	The Qualitative Development and Evaluation of a New User Perspective Map	Juliette Bricker	Coastal Settlement and its Ecological Vulnerability: a cartographic study of the Dayapur Village of Sundarban Delta, India	Binod Singh
15:30	15:45	Dynamics of Forest Fires in PNN El Tuparro: Application of Remote Sensing and Machine Learning in Environmental Monitoring.	OSCAR BORDA	Cartographic Vocabularies and Their Redescription – A Contribution to Neopragmatic Cartographic Theory	Olaf Kühne	Supporting understanding of complex spatio-temporal relationships with multi-perspective visualizations linked through smooth display transitions	Susanne Bleisch	Drawing the line: Sketch-maps and data comics as a participatory research method	Natalie Correa	Mapping Autofiction: Young Female in the Post-Soviet Vilnius	Inga Vidugirytė
15:45	16:00	Challenges of deep learning recognition of cultivated terraces and their mapping: The case of Slovenia	Rok Ciglič	Education on Cartography based on some principles of ethics	Claudia Robbi Sluter	Characterizing Pandemic-related Publications: A Retrospective Study Using Spatial Citation Network Analysis	Zhiyang Xiao				
Start	End	351: Geovisualization	RM 8&15	352: User Experience	RM 10	353: Geospatial Analysis and Modeling	RM 13	354: High Definition Maps	RM 18	355: Cartography in Early Warning and Crisis Management	RM 19
16:00	16:15	A Methodological Framework for Mapping Coastline Spatiotemporal Changes Using UAV Airborne LIDAR	Apostolos Papakonstantinou	How pre-existing knowledge affects map reading?	Marketa Beitlova	[CANCELLED] Discussion on quality inspection method driven by Big Data for the work of natural resources survey and monitoring	Jing Shen	Enhancing Aerial Data Semantic Segmentation with a Colour Range Mask Layer: A Deep Learning Approach	Mir Abolfazl Mostafavi	Application Programming Interfaces (APIs) for real-time warnings on mobile maps – the case of forest fires	Christophe Lienert
16:15	16:30	Spatial reality capture and geovisualization in ancient Egypt: mapping figural inscriptions across the surfaces of the Temple of Isis at Philae	Nick Hedley	Context Based Visual Search on a Mobile Map	Pawet Cybulski	Spatial Analysis of HPV Cancer Mortality in Persistent Poverty Counties in the US (1999-2020)	Esther Amoako	The Impact of HD Maps for Autonomous Vehicles on the Evolution of Cartography	Dariusz Gottlieb	Mapping Healthcare Facility Resilience During Hurricane Beryl Using Cellphone Location Data	Heng Cai
16:30	16:45	Racing Ra: a geovisual solar analysis protocol to guide photogrammetric strategy at the Temple of Isis at Philae	Nick Hedley	Leveraging interactive mixed reality for dynamic situational information updating in fire evacuation	Qianhe Zhang	The Built-Hazard Interface: A Dynamic Framework for Mapping Hazard Zones	Aleksander Berg	Urban-Scale Semantic Segmentation Using PointMamba and Mobile Laser Scanning Point Clouds	Hongjie He	A fast twin modelling method for earthquake AR scenes with multi-sensor perceptual enhancement	Jigang You
16:45	17:00	The Envision of Representational Spectrum of Pan-maps in the ICT era	Yebin Chen	Understanding User Behavior with Maps Displayed on Mobile and Desktop Devices	Stanislav Popelka	Mapping a Transboundary Flood from the USA to Canada using Space-Air-Ground Remote Sensing	Bing Lu	Toward Machine Cartography: Development Prospect of High Definition Maps for Autonomous Driving	Qingyun Du		

Technical Session Overview

Thursday, 21 August, 2025

Start	End	411: Atlases	RM 8&15	412: Indigenous Mapmaking & Map Design	RM 10	413: Map Design and Open Data	RM 13	414: User Experience	RM 18		RM 19
8:30	8:45	Statistical Atlas of Poland – challenges of cartographic presentation of official statistical data	Maciej Zych	Advancing Methodologies for Integrating Indigenous Knowledge and Culture in Mountain Ecosystem Service Assessments: A Case Study from Taiwan	John Harrison	Simplifying the Publishing Process for Open Geospatial Data	Andreas Divanis	Mapping the Process: A Framework for Non-Cartographers in Visual Storytelling	Gabriela Godišková		
8:45	9:00	Exploration of Atlas Compilation Design System and Knowledge Service Model	Xiaomei Gao	Mapping with SIKU - The Indigenous Knowledge App for environmental data access, land safety, and knowledge sharing across the North	Joel Heath	The complexity of simplicity: on the perception of schematized thematic maps	Jakob Listabarth	How do experts and novices read thematic maps? – An eye-tracking and EEG study	Haosheng Huang		
9:00	9:15	Mapping Mineral Resources: A Comparative Study of Symbology in School Atlases Over Seven Decades	Vit Vozenilek	Towards a fuzzy model for the cartography of fishing areas in the Moorea lagoon	Clement Iphar	Empirical Evaluation of Encoding Multi-temporal Quantitative Data Using Spatial Unit Sizes	Jochen Schiewe	Can multivariate maps be effective and easy to read? About map users' preferences	Jolanta Korycka-Skorupa		
9:15	9:30			So who wins on this map? A user study on the persuasiveness of selected design solutions for presenting dominance on thematic maps	Kacper Sobczak	Mapping Quantitative Data in Dark Mode: Need for Reversing Color Schemes?	Jochen Schiewe	Locative Audio for Educational and Inclusive Cartography: A Case Study in Green Stormwater Infrastructure	Nuzhat Tabassum Nawshin		
Start	End	421: GeoAI	RM 8&15	422: Inclusive Cartography	RM 10	423: Mapping the Waterbodies and Oceans	RM 13	424: Toponymy	RM 18	425: Thematic Cartography & Mapping	RM 19
11:00	11:15	Development of AI geo-agents for retrieval, analysis, and visualization of spatial data	Adam Iwaniak	Combining Space-time Cube and Dashboard for Inclusive Visual Analytics: A Case Study with Bibliographic Data	Chenyu Zuo	Integrating Sites of Interest into Unstructured Mesh Generation for use in Ocean Modeling	Joshua Burke	The role and meaning of geographical names on Torjančič's map of Carniola from 1744	Matjaž Geršič	Transversal perspective in the National Atlas of Spain	IRENE SAHAGUN
11:15	11:30	AI-Based Plant Phenology Mapping and Analysis Using Satellite Imagery and Meteorological Data	Geunah Kim	Development and production of an inclusive didactic resource for the introduction to the use of maps through 3D printing	Carla Cristina Reinaldo Gimenes de Sena	Classifying challenges in ML small watercourse recognition	Pyry Kettunen	Comparing urban namescape: A quantitative analysis of European and North American stadium names.	Florian Koch	Bridging Heritage and Innovation: The Digital Repository of Polish Geological Cartography	Katarzyna Jóźwik
11:30	11:45	Building a GIS-Based Place Name Dictionary: Advancing Spatial Humanities with MapKurator and Historical Topographic Maps of Japan	Keiji Yano	I saw it (on a map): Gendered Poetic Optics of Vinius	Inga Vidugirytė	Application of Multibeam Sonar Bathymetry and Backscatter in Coastal Sediment Transport Modelling: Implications for Nautical Charting	Andreina Romero	[CANCELLED] Toponymy and the challenge of the border. Notes for a critical reflection	Joan Tort-Donada	Cartographic visualization of the Mars terraforming process	Miłosz Gnat
11:45	12:00	Envisioning Generative Artificial Intelligence in Cartography and Mapmaking	Yuhao Kang	T-rep - a web repository of tactile cartographic knowledge	Jakub Wabiński					Perspectives on Land Tenure and Administration through Map Applications	Tomáš Janata
Start	End	431: Geospatial Analysis and Modeling	RM 8&15	432: Art and Cartography	RM 10	433: Multi-Scale Mapping	RM 13	434: Cartography and Sustainable Development	RM 18	435: Integrated Geospatial Information for Cartography & Integrated Geospatial Data & Analytics	RM 19
13:30	13:45	Generating isoline maps from spatially-exhaustive climate reanalysis data	Aline Wildberger	Accuracy analysis of the chorography of A. Wyngaerde's view of Zaragoza, 1563	Gabriel Marro-Gros	Review of road selection methods for the purpose of multiscale mapping	Albert Adolf	Mapping the Vanishing and Transformation of Urban Villages in China: A Tale of Three Cities	Wenyu Zhang	Monitoring of mining sites using UAV and radar imagery around the Benue National Park (North-Cameroon)	Aoudou Doua Sylvain
13:45	14:00	Model Selection for Disease Mapping	Jinfeng Wang	Mapping the Strata of the Strasbourg-Kehl Border	Taien, Michael, Lee Ng-Chan, Darroch, Rodney	Reconstructing the topology of urban street intersections from a line+lanes road model for improved generalization and representation on maps	Florian Ledermann	Harnessing solar energy from rooftops in Jeffersville informal settlement (City of Tshwane Metropolitan Municipality, South Africa)	Samy Katumba	Mapping crop type using arbitrary time series HLS and Sentinel-1 images through masked Transformer network	Xianghong Che
14:00	14:15	Land use change analysis of the flooded area in the Guaíba watershed in southern Brazil 2024	Leandro Meneguelli Blondo	kaleidomap: an artistic map expression collaging multiple maps	Atsuhiko Yamaguchi	A three-in-one tool for cartographic generalisation with the new version of CartAGen	Guillaume Touya	Planning and Outlook for the SDGs Exhibition Area at Deqing Geographic Information Science and Technology Museum	Xiyou Wang	An Update to the Canadian Vertical Datum	Ismael Foroughi
14:15	14:30	Geospatial Big Data and AI for Smart Humanitarian Mapping	Lei Zou	A literature map construction approach combining reality and virtuality for the Eastern mythological novel Journey to the West	Yue Zhang	Can machine learning help to unify river selection for small-scale map design?	Iga Ajdacka	Semantic Segmentation of Time-Series of Historical Maps by Learning from Only One Map	Yunshuang Yuan	Settlement-Mesozone Geo-Frame: An evolving spatial data framework facilitating data integration in support of South Africa's development planning	Kathryn Arnold
Start	End	4411: Toward an ICA Code of Conduct: Community Workshop	RM 8&15	442: Geovisualization	RM 10	443: Participatory Mapping & Location Based Services	RM 13	444: Cartography and Children	RM 18	445: Geospatial Data Analytics	RM 19
15:00	15:15			An interdisciplinary perspective on abstracting and highlighting buildings in their urban context	Carolín Bronowicz	Addressing characteristics of environmental context - challenges and potential for location-based mobile learning applications	Friedrich Striewski	Learning with maps: How school atlases shape spatial perceptions	Jana Moser	Geographic entity matching based on spatial and semantic features	Yao Cheng
15:15	15:30			Advancing the future of wall plans in archaeology and epigraphy using cartographic and GIScience thinking – examples Abydos and Philae, Egypt	Nick Hedley	Taxonomy of Trust in Location-Based-Services (LBS) – Providing trustworthy information with better maps and data	Jukka Krisp	Walking, talking and drawing with children – in search of alternative cartographies	Kemal Ahson	OGC Standard Compliant Platform Following FAIR Principles for Marine and Freshwater Research	Hanna Lahtinen
15:30	15:45	ORGANIZER: Next Generation of Cartographers Working Group SPEAKERS: Chelsea Nestel, Katarzyna Stomska-Przech, Juliane Cron, Aileen Buckley, Serena Coetzee, Menno-Jan Kraak, Merve Keskin, Travis White		Turning everyday workspaces into cross-reality geovisualization portals	Nick Hedley	From individuals to collective spatial truth: data characteristics in digital participatory mapping	Mariana Vallejo Velázquez	Cartography and Cognitive Neuroscience: Using Eye-Tracking to Investigate How 9- and 10-Year-Old Students Read Thematic Maps	Marilisa Biscaia Rizzo	Accurate recognition method for landslides based on semi-supervised generative adversarial network	Wenjuan Lu
15:45	16:00	DESCRIPTION: The ICA Next Generation Cartographers Working Group is developing a Code of Conduct to enhance safety and respect within the ICA community. This initiative aims to establish clear rules for expected behaviour, ensuring a respectful and collegial environment at ICA events. The workshop at ICC 2025 will gather community insights to refine the ICA draft Code of Conduct and address potential shortcomings. All members of the ICA community are welcome and encouraged to attend. Join us in developing an informed Code of Conduct for the ICA community!		Classed or continuous rainbow color scheme? A case study with 2D and 3D permafrost visualizations	Izabela Gołębiowska	HBCU EJ Technical Collaborative: Developing Geospatial Tools to Support Community-Based Action Towards Clean and Safe Environments	Reginald Archer	Educational activities for children on disaster preparedness and map use	Silvia Marinova	Urban Ecosystem Transformations in New York City: Insights from Multi-temporal Remote Sensing and Machine Learning	Xiaojun Yang
Start	End				RM 10	453: Geospatial Data Analytics	RM 13	454: Topographic Mapping	RM 18	455: Art and Education in Cartography & Standards in Cartography	RM 19
16:00	16:15					The semantic street map guide: research on people that name our streets and what it says about our society	Maria Cristina Calvo	Modernization of topographic mapping	Haico van der Vegt	Mapping Extremes: An Atlas of Drought-to-Flood Transitions Through Art, Science	Danai-Maria Kontou
16:15	16:30					[CANCELLED] Mapping wildfires in seconds	Simon Jones	Updating of vague geographic objects in topographic databases of NMCAs – case	Juha Oksanen	Emotional Landscapes: Mapping Urban Park Sentiments Using Natural Language Processing	Eric Delmelle
16:30	16:45					Uncertainty-aware geospatial visual analytics	Xiayin Lou	Usefulness of WebXR technology in the 3D geovisualization of topographic data	Lukasz Halik	What these topics tell about the evolution of cartography as a discipline	Georg Gartner
16:45	17:00							The Soviet Military City Plans of Canada: An Introduction	Martin Davis	Advancing the Canadian Geospatial Data Infrastructure: Innovations in Automation, Sustainability and Accessible Web Cartography for Mapping the Arctic's Fragile Ecosystem	Aliyan Haq

Technical Session Overview



Friday, 22 August, 2025

Start	End	5111: Mapping, Verifying and Displaying First Nations and Inuit Place Names	Ballroom C		RM 10		RM 13	RM 18			RM 19
8:30	9:30	SPEAKERS: Julia Conzon, The Firelight Group & Rylan O'Krane, GIS Analyst, The Firelight Group DESCRIPTION: Firelight will present on verifying and displaying First Nations and Inuit place names. Firelight will present general methods, best practices, challenges and lessons learned on mapping, verifying and displaying First Nations and Inuit place names in Canada. Case studies and examples will be shared.									
Start	End	521: Geospatial Analysis and Modeling	RM 8&15	522: Toponymy	RM 10	523: Geovisualization and High Definition Maps	RM 13	524: Education and Training	RM 18		RM 19
11:00	11:15	Relief classification using artificial neural networks	Malgorzata Wiczorek	Visualizing place-name qualities on maps and in texts	Peter Jordan	Geoheritage mapping: The case of Lesvos UNESCO Geopark	NIKOLAOS SOULAKELLIS	Cartographic Body of Knowledge – still in progress	Terje Midtbø		
11:15	11:30	[CANCELLED] Urban perceptual inequalities of 15-minute city: A Comparative Streetscape Analysis of Residential Areas and Transit-Oriented Development (TOD)	Martin Zidong Yu	Mapping Changes to Geographical Names Over Time in Canada	Steve Westley	Multi-temporal surface water mapping with high-resolution elevation and image data through weakly supervised deep learning	Lawrence Stanislawski	[CANCELLED] Historical maps in geography teaching	Paula Cristiane Strina Juliasz		
11:30	11:45	Research on the Impact Mechanism of Leisure Environment Quality on Spatial Vitality from the Perspective of Image-Text Fusion Perception	Xiawei CHEN	Translation of Streetscape in the cities of Taiwan: Renaming the past in Postcolonial Taiwan	Wenchuan Huang	Visualizing Spatial Dynamic Networks with Force-Directed Graph Layouts	Annika Bonerath	From PhD to Professor: Global Faculty Placement Trends in GIScience	Yanbing Chen		
11:45	12:00	Geospatial Insights into Agricultural Land Use Dynamics in Slovakia (2004–2024): Challenges and Opportunities	Tomáš Goga					Gamifying Maps with Pokémon Go for Elementary Education	Carla Cristina Reinaldo Gimenes de Sena		
Start	End	5355: Understanding DGGs: Past, Present, and Future	RM 8&15	532: Thematic Cartography	RM 10	533: User Experience & Cartographic Heritage into the Digital	RM 13	534: Maps and the Internet	RM 18	531: Geospatial Analysis and Modeling	RM 19
13:30	13:45	SPEAKER: Dr. Sina Taghavikish, OGC This session will explore the foundations of Discrete Global Grid Systems (DGGs), from their origins in the limitations of traditional paper-based maps to their evolving role in modern geospatial standards. We'll cover key technical concepts, OGC's decade-long engagement with DGGs, and future directions including 3D, spatio-temporal, and AI integration—highlighting why DGGs is uniquely positioned to enhance data accessibility, interoperability, and insight.		A Cartographic Analysis of the 1939-1945 U-Boat Campaign	Fritz Kessler	Redesigning the User Interface of the Atlas of Switzerland for the Web	Andreas Neumann	Auto-generalized labels on multi-layer Leaflet maps	Mátyás Gede	Beyond Spatial Proximity: A Temporal Accessibility Index for Equitable Nature Access in Bavaria's Hiking Trails	Yuhan Jiang
13:45	14:00			Where Rivers, Mountains and People Meet: The Essential Geography of The Sea to Sky	Jeff Clark	Exploring the Possibilities and Limitations of Webcam-Based Eye-Tracking for Map Studies: A Comparative Perspective on WebGazer and RealEye	Tomáš Vaníček	A Novel GIS-based Polygon Shape Similarity Measure Applied to OSM Building Footprints	Mir Abolfazl Mostafavi	Optimizing Electric Vehicle Charging Station Locations Using GIS: A Case Study from Minnesota, USA	Xiaohuan Zeng
14:00	14:15			Characterizing the current state of mobile thematic cartography	Lily Houtman	[CANCELLED] The Integration of Digital Technologies in Cartography: An Approach from an Educational Perspective	Paula Cristiane Strina Juliasz	View-adaptive implementation of hypsographic tinting for interactive web maps	Pyy Kettunen	An Exploratory Study Investigating Users' Understanding of Noise Model Uncertainties Utilising Webcam Eye Tracking	Merve Keskin
14:15	14:30							The Geographical Atlas of Natural Disasters in Slovenia	Rok Ciglic	Modelling and visualisation of heat stress in urban areas using high-resolution geospatial data	Jaroslav Hofierka