

# CV

university of zürich  
department of geography  
geographic information visualization & analysis division  
CH-8057 Zürich  
e-mail: sara@geo.uzh.ch  
web: <http://www.geo.uzh.ch/giva>  
SiF./Jun. 2024

---

## *education*

- Spring 2000 Ph.D. in Geography, University of Colorado at Boulder, Boulder, CO, U.S.A.  
Advisor: Dr. Barbara Buttenfield.
- Spring 1996 M.S. in Geography (dipl. geogr.), University of Zürich, Zürich, Switzerland. Advisor:  
Dr. Robert Weibel. Included: two years of cartography training at the Institute of  
Cartography of the Swiss Federal Institute of Technology (ETH), supervised by  
Dr. E. Spiess.
- 1993 One year graduate studies in Geographic Information Systems (GIS) and Remote  
Sensing, University of Canterbury, Christchurch, New Zealand (Rotary Ambassadorial  
Scholarship). Advisor: Dr. Pip Forer.

---

## *related training*

- 2023 Professionals in supervision. Two-day course offered by the UZH Graduate Campus,  
University of Zurich.
- 2019-2020 High Potential University Leaders Identity & Skills Training (H.I.T.) Program - Gender  
Sensitive Leaders in Academia. Lead by swissuniversities programme P-7 Equal  
opportunity and university development 2017-2020.
- 11/2008- 5/2009 UZH Weiterbildung für universitäre Führungskräfte (UZH Management Seminar).
- May 1999 Graduate Teacher Training Certification, Boulder, CO. Two-year training through the  
Graduate Teacher Program, University of Colorado, Boulder.
- Nov. 1998 Environmental Systems Research Institute (ESRI) Boulder, CO. One-day seminar: GIS  
Management and Planning, with Dr. R. F. Tomlinson.
- Oct. 1997 Urban Regional Information Systems Association (URISA), Cincinnati, OH. One-day  
workshop: Introduction to Object Oriented GIS Technology, with Dr. D. Arctur,  
Laser-Scan, Inc.
- Apr. 1994 IBM Switzerland, Zürich. One-week training: Introduction to AIX and Advanced AIX.

---

## *Employment and appointments*

- Sep.-Nov. 2023 Research Fellow, Toyo University, Tokyo, Japan.
- Sep. 2017-2021 Founding Member of the Board of Directors of the Digital Society Initiative, University  
of Zurich, Switzerland.
- Aug. 2016-2018 Member of the Executive Board: Head Teaching,  
Department of Geography, University of Zurich, Switzerland.

- Aug. 2014–2016 Head of the Department of Geography, University of Zurich, Switzerland.
- 2013–2014 Visiting Scholar, UCSB Center for Spatial Studies, University of California, Santa Barbara, Santa Barbara (CA), sabbatical stay, Nov. 2013–Feb. 2014.
- 2013 Visiting Scholar, Center for Geographic Analysis, Harvard University, Cambridge (MA), & Visual Attention Lab, Brigham and Women's Hospital, Harvard University, Cambridge (MA), sabbatical stay, Oct. 2013.
- Included lab visits at the Massachusetts Institute of Technology (MIT): Civic Data Design Lab & SENSEable City Lab at the Urban Planning Department; Affective Computing Group at the Media Lab; Perceptual Science Group at the Computer Science and Artificial Intelligence Lab.
- 2013 Full Professor at the University of Zürich, Zürich, Switzerland.
- 2005–2013 Associate Professor at the University of Zürich, Zürich, Switzerland.
- 2008 Adjunct Professor, San Diego State University, CA.
- 2000–2005 Assistant Professor at the University of California-Santa Barbara, Santa Barbara, CA.
- 1999/2000 Visiting Assistant Professor at the State University of New York, Buffalo, NY.
- Jan. – Aug. 1999 ARGWorld Project (Association of American Geographers), University of Colorado, Boulder. Research assistant with Dr. D. Hill.
- Jun. – Aug. 1998 Alexandria Digital Library (ADL) Project, University of Colorado, Boulder.
- Jun. – Aug. 1997 Research assistant with Dr. B. P. Buttenfield.
- Aug. 1997 Geological Society of America's Earth and Space Science Technological Education Project (ESSTEP), University of Colorado, Boulder. GIS workshop assistant.
- Aug.'96 – Dec. '99 Department of Geography, University of Colorado, Boulder. Teaching assistant.
- May – Aug. 1996 ESEC SA, Cham, Switzerland. Corporation in the semiconductor industry. Marketing Division. Responsible for project on information access and dissemination within the company.
- Jul. '94 – Aug. '95 Department of Electronic Production at the Institute of Industrial Engineering and Management at the Federal Institute of Technology (ETH) Zürich. Research assistant with Dr. M. B. Meier.
- Mar. – Jul. 1994 IBM Switzerland, Zürich. Member of the project team "Science, Research and Education". Paid internship.
- Jul. – Sep. 1992 Department of Geography at the Federal Institute of Technology (ETH) Zürich. Research assistant in human ecology with Dr. D. Steiner.
- Jun. – Dec. 1992 Department of Geography at the Federal Institute of Technology (ETH) Zürich. Research assistant in hydrology with Dr. B. Sevruck.

---

### *teaching experience*

UZH:

- regular courses BSc: Intro. Cartography & Geovisualization (GEO123), Statistics in Geography (GEO246: 2006-2013), Small Group Teaching (GEO199/299).
- fully online BSc: Studium Digitale (cross-faculty)  
MSc: Geovisualization (GEO878/454), Cognitive Issues in GIScience (GEO873)

other courses Thinking Geographically (GEO410: 2010-12), Ringvorlesung (GEO891: 2010-11)  
PhD: Promotion Seminar II (2006-2010). DSI Excellence Program PhD Journal Club.

ZHAW: MSc: Ringvorlesung Angewandte Psychologie I (Cognitive Psychology)

TU Vienna: MSc: International Cartography Masters, lectures on cognitive cartography

UNOSAT: MSc: Geo-Information in Disaster Situations, lectures on cartography.

UCNZ (2019): BSc: Intro. GIS (GEOG205), Adv. GIS (GEOG324) (Term I: lectures)

UCSB (2000-2005):

regular courses Maps & Mapping (GEOG12), Cartographic Design (GEOG118), Geographic Visualization (GEOG184C), GIS Applications & Design (GEOG176C).

Seminar in cartography (GEOG234): mapping cyberspace, HCI & GIScience, Information Visualization, Web mapping & SVG (co-taught with Andreas Neumann), Dynamic geovisualization/Animation

other courses Cognitive Science Seminar. Internal/External Visualizations (INT 200B). Co-taught with Dr. Mary Hegarty (Psychology).

Buffalo (SUNY):

Spring 2000 Instructor. Cartographic Design (GEO 381/550) and Seminar in GeoVisualization (GEO 655): Graphical User Interface Design & Information Visualization.

Fall 1999 Instructor. Maps and Mapping (GEO 120) and Geographic Visualization (GEO 485/551).

CU Boulder:

Fall 1998 Teaching assistant, Maps and Mapping (GEOG 2053), with A. Mulder.

Spring 1998 Teaching assistant, Cartography 1 (GEOG 3053), with T. M. Gayon

Fall 1997 Teaching assistant, Introduction to GIS (GEOG 4103/5103), with

Spring 1997 Dr. B. P. Buttenfield.

Fall 1996 Teaching assistant, Cartography 2 (GEOG 4043/5043), with Dr. B. P. Buttenfield.

Zürich, Switzerland:

Nov. '95 - May '96 Internet World Café, Zürich. Instructor.

Fall 1992 Department of Geography, University of Zürich. Lead teaching assistant, Introduction to Geostatistics, with Dr. K. Brassel.

Spring 1992 Department of Geography, University of Zürich. Teaching assistant Cartography,

Fall 1991 with Dr. H. Kishimoto.

---

### *academic honors and achievements*

#### *Positions of Trust and Fellowships*

Fall 2023 Research Fellow, Department of Information Networking for Innovation and Design (INIAD), Toyo University, Tokyo, Japan.

Spring 2023 Nominated for SigmaXi, the scientific research honor society

Spring 2023 Nominated for Academia Net, the online database of excellent women academics.

Fall 2021 Swiss National Science Fund - Postdoc.Mobility MINT-N: Panel Member.

- Spring 2021 Swiss National Science Fund – Postdoc.Mobility STEM-N: Adhoc Panel Member.
- Fall 2021 Visual Communication – Frontiers in Communication Journal: Associate Editor
- Fall 2021 – Member of the Ethics Commission of the UZH Faculty of Arts and Social Sciences
- Fall 2019–2023 Swiss Science Council (SSC): Reappointed Member.
- Spring 2019 Elected Erskine Fellow, University of Canterbury, Christchurch, New Zealand
- 2018–2021 Elected Associate Fellow of the UZH|ETH|ZHdK Collegium Helveticum
- Fall 2017 Elected Fellow of the Digital Society Initiative
- Fall 2015 Swiss Science Council (SSC): Elected Member.
- 2015–2019 International Cartographic Association: Elected Vice President and member of the Executive Committee
- 2011–2015 International Cartographic Association: Cognitive Visualization Commission. Elected Chair.
- Fall 2008–2010 Inter-University Partnership for Earth Observation and Geoinformatics (IPEG). Elected President.
- Spring 2006 Association of American Geographers Cartography Specialty Group. Elected Academic Councilor (2006–2008).
- Spring 2006 Association of Geographic Information Laboratories in Europe (AGILE). Elected council member (2006–2009)
- Spring 2003 Association of American Geographers GIS Specialty Group. Elected Academic Councilor (2003–2005).
- 1997 – 1998 Department of Geography, University of Colorado, Boulder. Elected Graduate Student Representative.
- 1996 – 1999 Department of Geography, University of Colorado, Boulder. Three-year teaching assistantship.
- 1993 Rotary International, Ambassadorial Scholarship to study GIS for one year at Canterbury University, Christchurch, New Zealand.
- Awards* \*together with supervisees, see publication list)
- 2023 Waldo-Tobler GIScience Prize 2023, Austrian Academy of Science, Committee for Geographic Information Science.
- 2022 \*Best Short Paper at COSIT 2022 (awarded to PhD student Armand Kapaj)
- 2019 \*Best Paper of the Year 2019 award in Cognitive Research: Principles and Implications (Psychonomic Soc.)
- 2017 \*Michael Breheny Prize for best article in Environment and Planning B: Planning and Design in 2016.
- 2017 \*Best Poster Award and 3rd place at COSIT 2017
- 2016 \*Best Short Paper and Best Poster at GIScience 2016
- 2016 \*British Cartographic Society's Henry Johns Award for best paper in The Cartographic Journal (ISI) in 2015.
- 2015 \*Best Poster Award at GEOMED 2015.
- 1998 AAG, Geographic Information System (GIS) Specialty Group. Best Student Paper.
- 1998 National Geographic Society Geography Award. Co-authored with Michael J. Rock.

publication profiles GoogleScholar: <http://tinyurl.com/fabs-gs>; Scopus: <http://tinyurl.com/fabs-sc>

journal papers \*Ying, Q., Dong, W., Fabrikant, S.I. (2024) How do in-car navigation aids impair expert navigators' spatial learning ability? To appear in *Annals of the American Association of Geographers*, doi: 10.1080/24694452.2024.2356858.

Lanini-Maggi, S., Lanz, M., Hilton, C., Fabrikant, S.I. (2024). The positive effect of blue luminescent pathways on urban park visitor's affective states: A virtual reality online study measuring facial expressions and self-reports. *Environment and Planning B: Urban Analytics and City Science*, doi: 10.1177/23998083241239383.

§Kapaj, A., Hilton, C., Fabrikant, S.I. (2024). The influence of landmark visualization style on task performance, visual attention, and spatial learning in a real-world navigation task. *Spatial Cognition & Computation*, doi: 10.1080/13875868.2024.2328099.

Hilton, C., §Kapaj, A., Fabrikant, S.I. (2024). Fixation-related potentials during mobile map assisted navigation in the real world: the effect of landmark visualisation style. *Attention, Perception, & Psychophysics*, doi: 10.3758/s13414-024-02864-z.

[185] Conroy, M., Gillmann, C., Harvey, F., Mchedlidze, T., Fabrikant, S.I., Windhager, F., Scheuermann, G., Weingart, S., Tangherlini, T., Warren, C.N., Rehbein, M., Borner, K., Elo, K., Jäncke, S., Kerren, A., Nöllenburg, M., Dwyer, T., Eide, Ø., Kobourov, S., and Betz, G., (2024) Uncertainty in Humanities Network Visualization. *Frontiers in Communication: Visual Communication*, vol. 8, doi: 10.3389/fcomm.2023.1305137.

Kuster, F., Ruginski, I.T., Fabrikant, S.I. (2023). How does your viewing perspective matter for decision making with flood risk maps. *Cartography and Geographic Information Science*, doi: 10.1080/15230406.2023.2268502.

Lanini-Maggi, S., §Hilton, C., Fabrikant, S.I. (2023). Limiting the reliance on navigation assistance with navigation instructions containing emotionally salient narratives for confident wayfinding. To appear in the *Journal of Environmental Psychology*. doi: 10.1080/15230406.2023.2268502.

Fabrikant, S.I. (2023). Neuroadaptive LBS: Towards human-, context-, and task-adaptive mobile geographic information displays to support spatial learning for pedestrian navigation. To appear in *Journal of Location Based Services*, doi: 10.1080/17489725.2023.2258100.

Fabrikant, S.I. (2023). Neuroadaptive mobile geographic information displays: an emerging cartographic research frontier. To appear in *International Journal of Cartography*, doi: 10.1080/23729333.2023.2253645.

[180] Tominski, C., Behrisch, M., Bleisch, S., Fabrikant, S.I., Mayr, E., Miksch, S., Purchase, H. (2023). Visualizing Uncertainty in Sets, *Visualization in IEEE Computer Graphics and Applications*, early access, doi: 10.1109/MCG.2023.3300441

arXiv Tominski, C., Behrisch, M., Bleisch, S., Fabrikant, S.I., Mayr, E., Miksch, S., Purchase, H. (accepted). Visualizing Uncertainty in Sets, to appear in a special issue on Uncertainty Visualization in *IEEE Computer Graphics and Applications* arXiv:2302.11575 [cs.HC].

§Hilton, C., §Kapaj, A., Fabrikant, S.I. (2023). Landmark sequence learning from real-world route navigation and the impact of navigation aid visualisation style. *Journal of Cognition*, vol. 6(1), no. 41: 1-8, doi: 10.5334/joc.307.

- \*Kapaj, A., §Lanini-Maggi, S., §Hilton, C., Fabrikant, S.I. (2023). How does the design of landmarks on a mobile map influence wayfinding experts' spatial learning during a real-world navigation task? *Cartography and Geographic Information Science*, doi: 10.1080/15230406.2023.2183525.
- \*Cheng, B., Lin, E., Wunderlich, A., Gramann, K., Fabrikant, S.I. (2023). Using eye blink-related brain activity to investigate cognitive load during assisted navigation. *Frontiers in Neuroscience. Neural Technology*, doi: 10.3389/fnins.2023.1024583.
- \*Cheng, B., Wunderlich, A., Gramann, K., Lin, E., Fabrikant, S.I. (2022). The effect of landmark visualization in mobile maps on brain activity during navigation: A virtual reality study. *Frontiers in Virtual Reality*, vol. 3. doi: 10.3389/frvir.2022.981625.
- [175] §Reichenbacher, T., Aliakbarian, M., Gosh, A., Fabrikant, S.I. (2022). Continuous ambulatory assessment and analysis of in-situ map app use behaviour, *Journal of Location Based Services*. doi: 10.1080/17489725.2022.2105410.
- Weber, W., Dingerkus, F., Fabrikant, S.I., Zampa, M., West, M., and Yildirim, O. (2022). Virtual Reality as a Tool for Political Decision-Making? An Empirical Study on the Power of Immersive Images on Voting Behavior. To appear in *Frontiers in Visual Communication 2022*. doi: 10.3389/fcomm.2022.842186.
- Bartling, M., Resch, B., §Reichenbacher, T., Havasa, C. R., Robinson, A. C., Fabrikant, S.I., Blaschke, T. (2021). Adapting mobile map application designs to map use context: a review and call for action on potential future research themes. *Cartography and Geographic Information Science*. DOI: 10.1080/15230406.2021.2015720.
- §Lanini-Maggi, S., §Ruginski, I.T., Shipley, T.F., Hurter, C., Duchowski, A.T., Briesemeister, B.B., Lee, J., Fabrikant, S.I. (2021). Assessing how visual search entropy and engagement predict performance in a multiple-objects tracking air traffic control task. *Computers in Human Behavior Reports*, Vol. 4. DOI: 10.1016/j.chbr.2021.100127.
- Tominski, C., Andrienko, G., Andrienko, N., Bleisch, S., Fabrikant, S.I., Mayr, E., Miksch, S., Pohl, M., Skupin, A. (2021). Toward flexible visual analytics augmented through smooth display transitions. *Visual Informatics*. DOI: 10.1016/j.visinf.2021.06.004.
- [170] Staub, K., Jüni, P., Urner, M., Matthes, K. L., †Leuch, C., Gemperle, G., Bender, N., Fabrikant, S.I., Puhan, M., Rühli, F., §Gruebner, O., Floris, J. (2021). Public health interventions, epidemic growth, and regional variation of the 1918 influenza pandemic outbreak in a Swiss Canton and its greater regions. *Annals of Internal Medicine*. DOI: 10.7326/M20-6231
- Christen, M., Brugger, P., Fabrikant, S.I. (2021). Susceptibility of domain experts to color manipulation indicate a need for design principles in data visualization. *PLoS ONE* Vol. 16, No. 2: e0246479. DOI:10.1371/journal.pone.0246479.
- Korporaal, M., §Ruginski, I. T., Fabrikant, S.I. (2020). Effects of uncertainty visualization on decision making with map-based geographic data under time pressure. Théron, R., Padilla, L. M. K., (eds.), *Frontiers in Computer Science, Human-Media Interaction, Special Issue on Uncertainty Visualization and Decision Making*, DOI: 10.3389/fcomp.2020.00032.
- Vokinger K. N., Nittas, V., Witt, C. M., Fabrikant, S.I., von Wyl V. (2020). Digital health and the COVID-19 epidemic: an assessment framework for apps from an epidemiological and legal perspective. *Swiss Medical Weekly*, Vol. 150, no: w20282, DOI:10.4414/smw.2020.20282.

- Bruggmann, A., Fabrikant, S.I., Purves, R.S. (2020). How can Geographic Information in Text Documents be Visualized to Support Information Exploration in the Humanities? Special Issue on *The Geospatial Humanities: Transdisciplinary Opportunities for the GIScience Community* in the International Journal of Humanities and Arts Computing (IJHAC): A Journal of Digital Humanities, Vol. 14, No. 1-2: 98-118. DOI: 10.3366/ijhac.2020.0247.
- [165] \*Credé, S., §Thrash, T., Hölscher, C., Fabrikant, S.I., (2019). The advantage of lobally visible landmarks for spatial learning, *Journal of Environmental Psychology*. DOI: 10.1016/j.jenvp.2019.101369.
- Kübler, I., Richter, K.-F., Fabrikant, S.I., (2019). Against all odds: Multi-criteria decision making with hazard prediction maps depicting uncertainty. *Annals of the Association of American Geographers*, DOI: 10.1080/24694452.2019.1644992.
- \*Brügger, A., Richter, K.-F., Fabrikant, S.I. (2019). How does navigation system behavior influence human behavior? *Cognitive Research: Principles and Implications*, vol 4, no.5, DOI: 10.1186/s41235-019-0156-5.  
[best article of the year 2019 award in *Cognitive Research: Principles and Implications* by the U.S. Psychonomic Society.]
- \*Credé, S., §Thrash, T., Hölscher, C., Fabrikant, S.I. (2019) The acquisition of survey knowledge for local and global landmark configurations under time pressure. *Spatial Cognition and Computation* DOI: 10.1080/13875868.2019.1569016.
- Hässig, M., Depka, D., Boo, G., Fabrikant, S.I., Torgerson, P. (2019). Räumliche Unterschiede in der Prävalenz von Rinderkrankheiten in einer Nutztierpraxis, DOI: 10.17236/sat00195.
- [160] \*Lokka, I., §Çöltekin, A., Wiener, J., Fabrikant, S.I., and Röcke, C. (2018). Virtual environments as memory training devices in navigational tasks for older adults. *Scientific Reports*, vol. 8, no. 10809. DOI: 10.1038/s41598-018-29029-x
- §Çöltekin, A., §Janetzko, H., and Fabrikant, S.I. (2018). Geovisualization. *The Geographic Information Science & Technology Body of Knowledge (2nd Quarter 2018 Edition)*, John P. Wilson (Ed). DOI: 10.22224/gistbok/2018.2.6.
- Stachoň, Z., Šašinka, Č, Čeněk, J., Štěrba, Z., Angsuesser, S., Fabrikant, S.I., Štampach, R., Morong, K. (2018). Cross-cultural differences in figure-ground perception of cartographic stimuli. To appear in: *Cartography and Geographic Information Science*. DOI: 10.1080/15230406.2018.1470575.
- \*Boo, G., Leyk, S., Brunsdon, C., Graf, R., Pospischil, A., Fabrikant, S.I. (2018). The importance of regional models in assessing canine cancer incidences in Switzerland. *PLoS ONE* 13(4): e0195970. <https://doi.org/10.1371/journal.pone.0195970>
- Schito, J. and Fabrikant, S.I. (2018). Exploring Maps by Sounds: Using Parameter Mapping Sonification to Make Digital Elevation Models Audible. *International Journal of Geographic Information Science*, vol. 32, no. 5: 874-906. DOI: 10.1080/13658816.2017.1420192.
- [155] §Çöltekin, A., Francelet, R., Richter, K.-F., Thoresen, J., Fabrikant, S.I. (2017). The effect of visual realism, spatial abilities, and competition on performance in map-based route learning in men. *Cartography and Geographic Information Science*, DOI: 10.1080/15230406.2017.1344569
- \*Boo, G., Leyk, S., Fabrikant, S.I., Pospischil, A., Graf, R. (2017). Assessing effects of structural zeros on models of canine cancer incidence: a case study of the Swiss Canine Cancer Registry, *Geospatial Health*, DOI: 10.4081/gh.2017.539.

- Griffin, A.L., White, T., Fish, C., Tomio, B., Huang, H., Robbi Sluter, C., Meza Bravo, J.V., Fabrikant, S.I., Bleisch, S., Yamada, M., Picanço, Jr., P., Jr. (2017). Designing across map use contexts: A research Agenda, *International Journal of Cartography*, DOI: 10.1080/23729333.2017.1315988.
- Kraak, M.-J. and Fabrikant, S.I. (2017). Of Maps, Cartography, and the Geography of the International Cartographic Association. *International Journal of Cartography*, DOI: 10.1080/23729333.2017.1288535.
- Grüntzig, K., Graf, R., \*Boo, G., Guscetti, F., Hässig, Axhausen, K., Fabrikant, S.I., Welle, M., Meier, D., Folkers, G., Pospischil, A. (2016) Swiss Canine Cancer Registry 1955-2008: Occurrence of the Most Common Tumor Diagnoses and Influence of Age, Breed, Body Size, Sex and Neutering Status on Tumour Development. *Journal of Comparative Pathology*, DOI:10.1016/j.jcpa.2016.05.011
- [150] \*Brügger, A., Fabrikant, S.I., §Cöltekin, A. (2016). An Empirical Evaluation of three Elevation Change Symbolization Methods along Routes in Bicycle Maps. *Cartography and Geographic Information Science*. DOI: 10.1080/15230406.2016.1193766.
- Thoresen, J. C., Francelet, R., §Cöltekin, A., §Richter, K.-F., Fabrikant, S.I., Sandi, C. (2016). Not all anxious individuals get lost: Trait anxiety and mental rotation ability interact to explain performance in map-based route learning in men. *Neurobiology of Learning and Memory*, Vol. 132: 1-8.
- \*Bruggmann, A., and Fabrikant, S.I. (2016). How does GIScience support spatio-temporal information search in the humanities? Special Issue on Spatial Approaches to Information Search in Spatial Cognition and Computation. DOI: 10.1080/13875868.2016.1157881
- Graf, R., Grüntzig, K., \*Boo, G. Hässig, M., Axhausen, K.W., Fabrikant, S., Welle, M., Meier, D., Guscetti, F., Folkers, G., Otto, V., Pospischil, A. (2016). The Swiss Feline Cancer Registry: the Influence of Sex, Breed and Age on Tumour Types and Tumour Locations. *Journal of Comparative Pathology*, Vol. 154, No. 2-3: 195-210. DOI: 10.1016/j.jcpa.2016.01.008
- §Reichenbacher, T., De Sabbata, S., Purves, R.S., Fabrikant, S.I. (2016). Assessing geographic relevance for mobile search: a computational model and its validation via crowd sourcing. *Journal of the Association for Information Science and Technology*. DOI: 10.1002/asi.23625.
- [145] Graf, R., Grüntzig, K., Hässig, M., Axhausen, K.W., Fabrikant, S., Welle, M., Meier, D., Guscetti, F., Folkers, G., Otto, V., Pospischil, A. (2015). The Swiss Feline Cancer Registry: a retrospective study on the occurrence of tumours in cats in Switzerland from 1955-2008. *Journal of Comparative Pathology*. Vol., 153, No. 4: 266-277. DOI:10.1016/j.jcpa.2015.08.007.
- \*Maggi, S., Fabrikant, S.I., Imbert, J.-P., Hurter, C. (2015). How do Display Design and User Characteristics Matter in Animations? An Empirical Study with Air Traffic Control Displays. *Cartographica*, vol. 51, no. 1: 25-37.
- \*Maggi, S., Fabrikant, S.I., Imbert, J.-P., Hurter, C. (in press). Principes cartographiques et caractéristiques utilisateurs dans la visualisation dynamique d'information. French translation of "How do Display Design and User Characteristics Matter in Animations? An Empirical Study with Air Traffic Control Displays?" for Le Comité Français de Cartographie (LECF).
- \*Ory, J., Christophe, S. and Fabrikant, S.I., Bucher, B. (2015). How Do Map Readers Recognize a Topographic Mapping Style? *The Cartographic Journal*, vol. 52, no. 2: 193-203. [Henry Johns Award for best Article in the Cartographic Journal 2016]

\*Ory, J., Christophe, S. and Fabrikant, S.I., Bucher, B. (in press). Comment les utilisateurs reconnaissent-ils un style topographique? French translation of "How Do Map Readers Recognize a Topographic Mapping Style?" for Le Comité Français de Cartographie (LECF).

- [140] Salvini, M.M., Fabrikant, S.I. (2015). Spatialization of user-generated content to uncover the multifunctional world city network. *Environment and Planning B*, vol. 47: 1-21. DOI:10.1177/0265813515603868. [Michael Breheny Prize for the Best Paper in Environment and Planning B 2016]

Fabrikant, S.I., Gabathuler, C., Skupin, A. (2015). SOMViz: Web-based Self-Organizing Maps. *Kartographische Nachrichten*, vol. 65, no. 2: 81-91.

Grüntzig, K., Graf, R. Hässig, M., Welle, M., Meier, D., Lott, G., Erni, D., Schenker, N.S., Guscetti, F., \*Boo, G., Axhausen, K., Fabrikant, S.I., Folkers, G., Pospischil, A. (2015). The Swiss Canine Cancer Registry: a retrospective study on the occurrence of tumours in dogs in Switzerland from 1955-2008. *Journal of Comparative Pathology*, vol. 152: 161-171. DOI 10.1016/j.jcpa.2015.02.005

Ooms, K., Coltekin, A., De Maeyer, P., Dupont, L., Fabrikant, S.I., Incoul, A., Kuhn, M., Slabbinck, H., Vansteenkiste, P., Van der Haegen, L. (2014). Combining user logging with eye tracking for interactive and dynamic applications, *Behavior Research Methods*, DOI 10.3758/s13428-014-0542-3.

\*Bruggmann, A., \*Salvini, M.M., Fabrikant, S.I. (2014). Agglomerationen mit nutzergenerierten Inhalten neu definiert - Visualisierung der Nordostschweiz mithilfe von Wikipedia. [Agglomerations newly defined with crowd-sourced data: visualizing North Eastern Switzerland based on Wikipedia content]. *disP – The Planning Review*, Vol. 49, No. 4: 37-45.

- [135] Hurter, C., Ersoy, O., Fabrikant, S.I., Telea, A. (2013). Bundled Visualization of Dynamic Graph and Trail Data. *IEEE Transactions on Visualizations and Computer Graphics*, Vol. 20, No. 8: 1141-1157. online Nov. 2013: doi.ieeecomputersociety.org/10.1109/TVCG.2013.246.

Opach, T., Golebiowska, I., Fabrikant, S.I. (2014). How Do People View Multi-Component Animated Maps? *Cartographic Journal*, online Oct. 2013: dx.doi.org/10.1179/1743277413Y.0000000049.

Barth, L., Fabrikant, S.I., Kobourov, S. Lubiw, A., Nöllenburg, M., Okamoto, Y., Pupyrev, S., Squarcella, C., Ueckerdt, T., Wolff, A. (2013). Semantic Word Cloud Representations: Hardness and Approximation Algorithms. ArXiv eprint: arXiv:1311.4778 [cs.CG].

Christen, M., Vitacco, D. A., Huber, L., Harboe, J., Fabrikant, S.I., Brugger, P. (2013). Colorful brains: 14 Years of Display Practice in Functional Neuroimaging, *NeuroImage*, Vol. 73: 30-39.

\*Wilkening, J. and Fabrikant, S.I. (2013). How Users Interact With a 3D Geo-Browser under Time Pressure, *Cartography and Geographic Information Science*, Vol. 40, No. 1: 40-52.

- [130] Pospischil, A., Hässig, M., Vogel, R., \*Salvini, M.M., Fabrikant, S.I., Axhausen, K., Schenker, N.S., Erni, D., Guscetti, F. (2013). Hundepopulation und Hunderassen in der Schweiz von 1955 bis 2008. *Schweizer Archiv für Tierheilkunde*, Vol. 155, No. 4: 219-228.

Andrienko, G., Andrienko, N., Demsar, U., Dransch, D., Dykes, J., Fabrikant, S.I., Jern, M., Kraak, M.-J., Schumann, H., Tominski, C. (2010). Space, Time, and Visual

*Analytics, International Journal of Geographical Information Science*, vol. 24, no. 10: 1577-1600.

§Çöltekin, A., Fabrikant, S.I., and †Lacayo, M. (2010) Exploring the efficiency of users' visual analytics strategies based on sequence analysis of eye movement recordings, *International Journal of Geographical Information Science*, vol. 24, no. 10: 1559-1575.

Hegarty, M., Canham, M., and Fabrikant, S.I. (2010). Thinking about the Weather: How Display Saliency and Knowledge Affect Performance in a Graphic Inference Task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, vol., 36, no. 1: 37-53.

Fabrikant, S.I., \*Rebich-Hespañha, S., Hegarty, M. (2010). Cognitively inspired and perceptually salient graphic displays for efficient spatial inference making. *Annals of the Association of American Geographers*, vol. 100, no. 1: 1-17. (doi 10.1080/00045600903362378, 2009)

- [125] Fabrikant, S.I., Montello, D. R., and Mark, D. M. (2010). The Natural Landscape Metaphor in Information Visualization: The Role of Commonsense Geomorphology. *Journal of the American Society for Information Science and Technology*, vol. 61, no. 2: 253-270. (<http://dx.doi.org/10.1002/asi.21227>, 2009)

Kramis, M., †Gabathuler, C., Fabrikant, S.I., Waldvogel, M. (2009). An XML-Based Infrastructure to Enhance Geographic Visual Analytics. *Cartography and Geographic Information Science*, vol. 36, no. 3: 281-293.

§Çöltekin, A., †Heil, B., †Garlandini, S., Fabrikant, S.I., (2009). Evaluating the Effectiveness of Interactive Map Interface Designs: A Case Study Integrating Usability Metrics with Eye-Movement Analysis, *Cartography and Geographic Information Science*, vol. 36, no. 1: 5-17.

Fabrikant, S.I., \*Rebich-Hespañha, S., Andrienko, N., Andrienko, G., Montello, D. R. (2008). Novel Method to Measure Inference Affordance in Static Small Multiple Displays Representing Dynamic Processes. *The Cartographic Journal*, vol. 45, no. 3: 201-215.

Fabrikant, S.I., and Montello, D. R. (2008). The Effect of Instructions on Distance and Similarity Judgments in Information Spatializations. *International Journal of Geographic Information Science*, vol. 22, no. 4: 463-478.

- [120] \*Leuthold, H., \*Herrman, M., Fabrikant, S.I. (2007). Making the Political Landscape Visible: Mapping and Analyzing Voting Patterns in an Ideological Space. *Environment and Planning B: Planning and Design*, vol. 34, no. 5: 785-807.

Fabrikant, S.I., Montello, D. R., and Mark, D. M. (2006). The Distance-Similarity Metaphor in Region-Display Spatializations, *IEEE Computer Graphics & Application*. July/August 2006: 34-44.

Fabrikant, S.I. Montello, D.R., †Ruocco, M., \*Middleton, R.S. (2004). The Distance-Similarity Metaphor in Network-Display Spatializations. *Cartography and Geographic Information Science*, vol. 31, no. 4, 237-252.

Fabrikant, S.I. (2003). Distanz als Raummetapher für die Informationsvisualisierung. Distance as a Spatial Metaphor for the Visualisation of Information. *Kartographische Nachrichten*, vol. 52, no 6: 276-282.

Skupin A. and Fabrikant, S.I. (2003). Spatialization Methods: A Cartographic Research Agenda for Non-Geographic Information Visualization. *Cartography and Geographic Information Science*, vol. 30, no. 2, 95-119.

- [115] Fabrikant, S.I. (2003). Commentary on "A History of Twentieth-Century American Academic Cartography" by Robert McMaster and Susanna McMaster, Special Issue: Exploratory Essays: History of Cartography in the Twentieth Century, *Cartography and Geographic Information Science*, Vol. 30, No. 1:81-84.

Fabrikant, S. I. and Buttenfield, B. P. (2001). Formalizing Spaces for Information Access. *Annals of the Association of American Geographers*, 91(2): 263-280.

Received the 3rd highest citation count (based on the ISI Citation Database) amongst the most cited "Methods, Models, and Geographic Information Systems" (MMGIS) papers that appeared in the *Annals of the Association of American Geographers* during the period 2001-2009.

Fabrikant, S. I. (2000). Spatialized Browsing in Large Data Archives. *Transactions in GIS*, vol. 4, no. 1: 65-78.

conference papers (full paper review) Fabrikant, S. I. (accepted). Neuroadaptive mobile geographic information displays: an emerging cartographic research frontier. Selected for *Advances in Cartography and GIScience of the International Cartographic Association (Advances of the ICA) 2023*, International Cartographic Conference, Aug. 13-18, 2023, Cape Town, South Africa. *Because I was unable to attend the conference in person, the organizers removed the paper from the proceedings. An extended version is now published in the International Journal of Cartography (see journal entry above).*

Fabrikant, S. I. (2022). Neuro-adaptive LBS: Towards human- and context-adaptive mobile geographic information displays (mGIDs) to support spatial learning for pedestrian navigation. In: Krisp, J., L. Meng, Kumke, H., Huang, H. (Eds.), *Proceedings, 17th International Conference on Location Based Services (LBS 2022)*. Augsburg University, Munich/Augsburg, Germany, Sep. 12-14, 2022: 48-58.

Fabrikant, S. I. (2022). Neuro-adaptive LBS: Towards human- and context-adaptive mobile geographic information displays (mGIDs) to support spatial learning for pedestrian navigation. In: Krisp, J., L. Meng, Kumke, H., Huang, H. (Eds.), *Proceedings, 17th International Conference on Location Based Services (LBS 2022)*. Augsburg University, Munich/Augsburg, Germany, Sep. 12-14, 2022: 48-58.

- [110] Bektaş, K., Çöltekin, A., Krüger, J., Duchowski, A.T., Fabrikant, S. I. (2019). GeoGCD: improved visual search via gaze-contingent display. *Proceedings of the 11th ACM Symposium on Eye Tracking Research & Applications (ETRA '19)*, Denver, CO, Jun. 25-28, 2019. DOI: 10.1145/3317959.3321488.

§Thrash, T., §Lanini-Maggi, S., Fabrikant, S. I., Bertel, S. \*Bruegger, A., \*Credé, S., , Tri Do, C., Gartner, G., Huang, H., Muenzer, S., and Richter, K.-F. (2019). The future of geographic information displays from GIScience, cartographic, and cognitive science perspectives: vision paper. In: Schlieder, C. and Timpf, S. (eds.), *Proceedings, COSIT 2019*, Sep. 11-13, Regensburg, Germany.

Johannsen, I. M., Fabrikant, S. I., Evers, M. (2018). How do texture and color communicate uncertainty in climate change map displays? In: Winter, S., Griffin, A., Sester, M. (eds). *LIPiCS: Leibniz International Proceedings in Informatics*, No. 37; 37:1-37:6. 10<sup>th</sup> International Conference on Geographic Information Science (GIScience) 2018, Aug. 28-31-2018, Melbourne, Australia.

‡Spielhofer, R., Fabrikant, S. I., Vollmer, M., Rebsamen, J. Grêt-Regamey, A., Wissen Hayek, U. (2017). Integrating 3D Point Cloud Data and Audio Recordings for Representing Landscape Changes, *Digital Landscape Architecture Conference (DLA 2017)*, June 7-10, 2017, Anhalt University in Dessau/Bernburg, Germany. *Journal of Digital Landscape Architecture*, No. 2: 206-213.

\*Boo, G., Fabrikant, S. I., Leyk, S. (2015). A Novel Approach to Veterinary Spatial Epidemiology: Dasyetric Refinement of the Swiss Dog Tumor Registry Data, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 9<sup>th</sup>

International Symposium on Spatial Data Quality (ISSDQ 2015), Sep. 28-30, Montpellier, France.

- [105] \*Ory, J., Christophe, S., Fabrikant, S. I., Bucher, B. (2014) Caractérisation visuelle d'un style topographique, Actes du Colloque International de Géomatique et d'Analyse Spatiale (SAGEO 2014), Grenoble, France, Nov. 24-27, 2014.

Fabrikant, S. I., \*Maggi, S., Montello, D. R. (2014). 3D network spatialization: Does it add depth to 2D representations of semantic proximity? Duckham, M., Pebesma, E., Stewart, K., Frank, A.U. (eds.) *Proceedings*, GIScience 2014, Wien, Sep. 23-26, 2014, Lecture Notes in Computer Science (LNCS) 8728, Springer, Berlin, Germany: 34-47.

Barth, L., Fabrikant, S. I., Kobourov, S., Lubiw, A., Nöllenburg, M., Okamoto, Y., Pupyrev, S., Squarcella, C., Ueckerdt, T., and Wolff, A. (2014). Semantic Word Cloud Representations: Hardness and Approximation Algorithms. Pardo, A. and Viola A. (eds.), *Proceedings*, Latin American Theoretical Informatics Symposium (LATIN) 2014, Mar. 31- Apr. 4, 2014. Lecture Notes in Computer Science (LNCS) 8392, Springer, Berlin, Germany: 514-525.

Shiple, T., Fabrikant, S.I., and \*Lautenschütz, A.-K. (2013). *Creating perceptually salient animated displays of spatially coordinated events*. In: Raubal, M., Mark, D. M., Frank, A. U. (Eds.). *Cognitive and Linguistic Aspects of Geographic Space: New Perspectives on Geographic Information Research*, Springer Lecture Notes of Geoinformation and Cartography, Springer, Berlin, Germany: 259-270.

\*Wilkening, J., Fabrikant, S.I. (2011). How do decision time and realism affect map-based decision making? Conference on Spatial Information Theory (COSIT 2011), Belfast, ME, USA, Sep. 12-16, 2011, *Proceedings*, Lecture Notes in Computer Science 6899. Egenhofer, M. (Ed.) Springer, Berlin, Germany: 1-19.

- [100] ‡Garlandini, S. and Fabrikant, S.I. (2009). Evaluating the Effectiveness and Efficiency of Visual Variables for Geographic Information Visualization. In: Spatial Information Theory: 9<sup>th</sup> International Conference, COSIT 2009, Aber Wrac'h, France, Sep. 21-25, 2009, *Proceedings*, Lecture Notes in Computer Science 5736. Stewart Hornsby, K., Claramunt, C., Denis, M. and Ligozat, G. (Eds.), Springer, Berlin, Germany: 195-211.

§Çöltekin, A., ‡Heil, B., ‡Garlandini, S., Fabrikant, S.I. (2008) Evaluating the Effectiveness of Interactive Map Interface Designs: a Case Study with Eye Movement Analysis. *Proceedings*, AutoCarto 2008, Shepherdstown, WV, Sep. 8-11, 2008 (CD-ROM).

Fabrikant, S.I. (2005). Towards an understanding of geovisualization with dynamic displays. *Proceedings*, American Association for Artificial Intelligence (AAAI) 2005 Spring Symposium Series: Reasoning with Mental and External Diagrams: Computational Modeling and Spatial Assistance. Stanford University, Stanford, CA, Mar. 21-23, 2005: 6-11.

Klippel, A., Lee, P. U., Fabrikant, S.I., Montello, D. R., & Bateman, J. (2005). The Cognitive Conceptual Approach as a Leitmotif for Map Design. *Proceedings*, American Association for Artificial Intelligence (AAAI) 2005 Spring Symposium Series: Reasoning with Mental and External Diagrams: Computational Modeling and Spatial Assistance. Stanford University, Stanford, CA, Mar. 21-23, 2005: 90-95.

Montello, D. R., Fabrikant, S. I., ‡Ruocco, M., \*Middleton, R. S. (2003). Testing the First Law of Cognitive Geography on Point-Display Spatializations. In: *Spatial Information Theory: Foundations of Geographic Information Science (COSIT 2003)*,

Lecture Notes in Computer Science 2825. Kuhn, W., Worboys, M., & Timpf, S. (Eds.) Springer, Berlin, Germany: 316-331.

- [95] Fabrikant, S.I. (2001). Evaluating the Usability of the Scale Metaphor for Querying Semantic Information Spaces. In: Montello, D. R., (Ed.), *Spatial Information Theory: Foundations of Geographic Information Science (COSIT 2001)*, Lecture Notes in Computer Science 2205, Berlin, Springer-Verlag: 156-172.

Fabrikant, S.I. (2004). Abstraction and Scale in Spatialization. Proceedings, Second National Cartographic Conference (GeoCart 2003). Taupo, New Zealand, Feb. 12-14, 2003: 35-43.

Ancona, D. Freeston, M., Smith, T. R., Fabrikant, S. I. (2002): Visual Explorations for the Alexandria Digital Earth Prototype. In: Visual Interfaces to Digital Libraries 2002 (JCDL 2002 Workshop), Börner, K., Chaomei C. (Eds.) Lecture Notes in Computer Science 2539, Springer Verlag, Berlin: 199-216.

conference papers Cheng, B., Lin, E., Gramann, K., Wunderlich, A. (2022). Eye blink-related brain extended abstracts, potentials during landmark-based navigation in virtual reality. In T. Ishikawa, S. I. Fabrikant, & S. Winter (Eds.), COSIT 2022: 15th Conference on short papers, etc. Spatial Information Theory. Leibniz International Proceedings in Informatics (LIPIcs), Volume 240. DOI: 10.4230/LIPIcs.COSIT.2022.28.

Kapaj, A., Lin, E., Lanini-Maggi, S. (2022). The effect of abstract vs. realistic 3D visualization on landmark and route knowledge acquisition. In T. Ishikawa, S. I. Fabrikant, & S. Winter (Eds.), COSIT 2022: 15th Conference on Spatial Information Theory. Leibniz International Proceedings in Informatics (LIPIcs), Volume 240. DOI: 10.4230/LIPIcs.COSIT.2022.157. [Recipient of Best Short Paper Award]

- [90] \*Cheng, B., §Ruginski, I.T., Fabrikant, S. I. (2020/1). Enhancing Spatial Learning During Navigation by Optimizing Landmark Density on Digital Maps. In: Bartušēvica, S., Zariņa, L., Šķilters, J. (Eds.). Book of Abstracts, University of Latvia, Riga, Latvia, Aug. 2-4: 28-29, DOI: 10.22364/SC2020.1.

\*Cheng, B., §Ruginski, I.T., Wunderlich, A., Gramann, K., Fabrikant, S. I. (2021). Poster. Effect of cognitive load on spatial learning during navigation: a virtual reality study. International Neuroergonomics Conference 2021, Sep. 11-15, 2021. Ludwig-Maximilians-Universität Fakultät für Mathematik, Informatik und Statistik, Munich, Germany.

\*Kapaj, A., §Lanini-Maggi, S., Fabrikant, S. I. (2020/1). The influence of landmark visualization style on expert wayfinders' visual attention during a real-world navigation task. 11th International Conference on Geographic Information Science, Sep. 27-30, 2020/1, Poznan, Poland. DOI: 10.25436/E2NP44.

§Lanini-Maggi, S., §Ruginski, I.T., and Fabrikant, S. I. (2020/1). Improving pedestrians' spatial learning during landmark-based navigation with auditory emotional cues and narrative. Proceedings (short papers), 11th International Conference on Geographic Information Science, Sep. 27-30, 2020/1, Poznan, Poland. DOI: 10.25436/E26P43.

Johannsen, I. M., Fabrikant, S. I., Evers, M. (2018). How do texture and color communicate uncertainty in climate change map displays? In: Winter, S., Griffin, A., Sester, M. (eds). No. 37; 37:1-37:6. 10th International Conference on Geographic Information Science (GIScience) 2018, Melbourne, Australia, Aug. 28-31-2018. DOI: 10.4230/LIPIcs.GIScience.2018.37

- [85] \*Brügger, A., Richter, K.-F., Fabrikant, S. I. (2017). Distributing attention between environment and navigation system to increase spatial knowledge acquisition during assisted wayfinding. In: Fogliaroni P., Ballatore A., Clementini E. (eds.) Proceedings of

Workshops and Posters at the 13th International Conference on Spatial Information Theory (COSIT 2017). Lecture Notes in Geoinformation and Cartography, Springer, Cham:19-22. [Recipient of Best Poster Presentation Award]

\*Credé, S., Fabrikant, S. I., Thrash, T., Hölscher, C. (2017). Do Skyscrapers Facilitate Spatial Learning Under Stress? On the Cognitive Processing of Global Landmarks. In: Fogliaroni P., Ballatore A., Clementini E. (eds.) Proceedings of Workshops and Posters at the 13th International Conference on Spatial Information Theory (COSIT 2017). Lecture Notes in Geoinformation and Cartography, Springer, Cham: 27-29. [Recipient of 3rd Best Poster Presentation Award]

\*Brügger, A., §Richter, K.-F., Fabrikant, S. I. (2016). Walk and Learn: An Empirical Framework for Assessing Spatial Knowledge Acquisition during Mobile Map Use. *Proceedings (short papers)*, 9th International Conference on Geographic Information Science, Sep. 27-30, 2016, Montreal, Canada: 27-30. [Best Short Paper Presentation Award]

\*Boo, G., Leyk, S., Pospischil, A., Fabrikant, S. I. (2016). A Regional Approach for Modeling Dog Cancer Incidences with Regard to Different Reporting Practices. *Proceedings (short papers)*, 9th International Conference on Geographic Information Science, Sep. 27-30, 2016, Montreal, Canada: 29-32. [Best Poster Award]

Frei, P., §Richter, K.-F., Fabrikant, S. I. (2016). Stress Supports Spatial Knowledge Acquisition during Wayfinding with Mobile Maps. *Proceedings (short papers)*, 9th International Conference on Geographic Information Science, Sep. 27-30, 2016, Montreal, Canada: 100-103.

- [80] Christen, M., Brugger, P., Fabrikant, S. I. (2015). Assessing the influence of color scales on data interpretation in neuroimaging—a comparative empirical study. Poster presentation at the 45<sup>th</sup> Society for Neuroscience Annual Meeting 2015, Chicago (IL), Oct. 17-20, 2015.

Christen, M., Brugger, P., Fabrikant, S. I. (2015). The influence of color-manipulation on data interpretation in neuroimaging and geographic information visualization. Poster presentation at the Annual Meeting of the International Neuroethics Society 2015, Chicago (IL), Oct. 16-17, 2015. [Recipient of a £1000 GBP Lundbeck travel award]

\*Boo, G., Fabrikant, S. I., Leyk, S. (2015). An Innovative Approach to Spatial Epidemiology: Dasymeric Refinement of the Tumor Incidence Data in Switzerland. 9<sup>th</sup> International, Interdisciplinary Conference on Spatial Statistics, Geographical Epidemiology and Geographical Aspects of Public Health (GEOMED 2015), Florence, Italy, Sep. 10-12, 2015. [Best Poster Award]

Fabrikant, S.I., Streit, A., Purves, R. (2015). Visualization of risk and uncertainty to communicate avalanche hazard: An Empirical Study. *Proceedings*, 27th International Cartographic Conference, International Cartographic Association, Aug. 23-28, 2015, Rio de Janeiro, Brazil.

\*Bruggmann, A., Fabrikant, S.I., (2014). Spatializing a digital text archive about history. *Proceedings (extended abstracts)*, 8th International Conference on Geographic Information Science, Sep. 23, 2014, Vienna, Austria.

- [75] \*Bruggmann, A., Fabrikant, S.I., (2014). How to visualize the geography of Swiss history. *Proceedings (short papers)*, 17th AGILE Conference on Geographic Information Science, Jun. 3-6, 2014, Castellón, Spain.

Ooms, A., Fabrikant, S.I., §Çöltekin, A., De Maeyer, P. (2014). Eye tracking with geographic coordinates: methodology to evaluate interactive cartographic products.

*Proceedings (extended abstracts)*, 8th International Conference on Geographic Information Science, Sep. 23, 2014, Vienna, Austria.

\*Maggi, S., Fabrikant, S.I., (2014). Embodied decision making with animations. *Proceedings (extended abstracts)*, 8th International Conference on Geographic Information Science, Sep. 23-26, 2014, Vienna, Austria.

\*Bruggmann, A., Fabrikant, S.I., (2014). Spatializing time in a history text corpus. Janowicz, K., Adams, B., McKenzie, G., Kauppinen, T., (eds.), GIScience 2014 Pre-Conference workshop on Geographic Information Observatories 2014, Sep. 23, 2014, Vienna, Austria. CEUR Workshop *Proceedings*, Vol. 1273: 15-22. (<http://ceur-ws.org/Vol-1273/>)

\*Maggi, S., Fabrikant, S.I., (2014). Triangulating Eye Movement Data of Animated Displays. Kiefer, P., Giannopoulos, I., Raubal, M., Krüger, A. (eds.). 2nd International Workshop on Eye Tracking for Spatial Research, Sep. 23, 2014, Vienna, Austria, CEUR Workshop *Proceedings*, Vol. 1241: 27-31. (<http://ceur-ws.org/Vol-1241>)

[70] \*Maggi, S. and Fabrikant, S.I., (2014). Assessing Animated Air Traffic Control Displays. *Proceedings, CARTOCON 2014*, Olomouc, Czech Republic, Feb. 25-28, 2014.

\*Maggi, S. and Fabrikant, S.I., (2013). Animated displays of moving objects and spatiotemporal coordinated events. *Proceedings (Extended Abstracts), GeoViz Hamburg 2013*, Hamburg, Germany. Mar. 6-8, 2013.

\*Salvini, M.M. and Fabrikant, S.I., (2012). Scale-dependent validation framework for spatialization. *Proceedings (Extended Abstracts), GIScience 2012*, Columbus, OH, Sep. 18-21, 2012.

Fabrikant, S.I., Christophe, S., Papastefanou, G., and Maggi, S. (2012). Emotional response to map design aesthetics. *Proceedings (Extended Abstracts), GIScience 2012*, Columbus, OH, Sep. 18-21, 2012.

Fabrikant, S.I., (2011). *Visual Geoanalytics Methods to Evaluate the Cognitive Adequacy and Perceptual Salience of Visual Analytics Displays*, Special Session: Everyday Cognitive Science, Using the methods of cognitive science to explore spatial thinking in related disciplines: *Proceedings, 33rd Annual Meeting of the Cognitive Science Society*, Boston, MA, Jul. 20-23, 2011.

[65] Fabrikant, S. I., Montello, D. R., Neun, M. (2008). Evaluating 3D Point-Display Spatializations. *Proceedings (Extended Abstracts), GIScience 2008*, Park City, UT, Sep. 23-25, 2008 (CDROM).

Fabrikant, S. I., \*Rebich S., Montello, D. R., Andrienko, G., Andrienko, N., (2008). *A visual analytics approach to evaluate inference affordance from animated map displays*. GIScience 2008 Pre-Conference workshop on Geospatial Visual Analytics, Park City, UT, Sep. 23, 2008. (<http://geoanalytics.net/GeoVisualAnalytics08/>)

Fabrikant, S. I., Montello, D. R., S. \*Rebich (2007). *Seeing Through Small Multiple Map Displays*. 23rd ICA/ACI International Cartographic Conference, Moscow, Russia Aug. 4-10, 2007. (CD ROM)

Andrienko, G. L., Jern, M., Dykes, J., Fabrikant, S. I., Weaver, C. (2007). Geovisualization and synergies from InfoVis and Visual Analytics. *Proceedings, 11th International Conference on Information Visualisation (IV) 2007*, Zürich, Switzerland, Jul. 2-6: 485-488.

Fabrikant, S. I., Montello, D. R., S. \*Rebich (2006). The Look of Weather Maps. *Proceedings (Extended Abstracts), GIScience 2006*, Münster, Germany, Sep. 20-23, 2006: 59-60.

- [60] Fabrikant, S. I., and †Boughman, A. (2006). Communicating Data Quality through Realism (Poster). Proceedings (Extended Abstracts), GIScience 2006, Münster, Germany, Sep. 20-23, 2006: 269-271.

Fabrikant, S. I. and Montello, D. R., (2004). Similarity and Distance in Information Spatializations (Poster). Proceedings, GIScience 2004, Adelphi MD, Oct. 20-24, 2004: 279-281.

†Boughman, T. and Fabrikant, S. I. (2004). Realism and Perceptions of Quality in Computer-Displayed Maps, Proceedings, GIScience 2004, Adelphi, MD, Oct. 20-24, 2004: 35-37.

‡Goldsberry, K., Fabrikant, S. I., Kyriakidis, P. (2004). The Influence of Classification Choice on Animated Choropleth Maps. Proceedings, Annual Meeting of the North American Cartographic Society (NACIS), Portland, ME, Oct. 6-9, 2004: 15-16.

Fabrikant, S. I. , †Ruocco, M., \*Middleton, R., Montello, D.R., Jörgensen, C. (2002). The First Law of Cognitive Geography: Distance and Similarity in Semantic Space. GIScience 2002, Boulder, CO, Sep. 25-28, 2002: 31-33.

- [55] Fabrikant, S.I. (2001). Visualizing Region and Scale in Semantic Spaces. Proceedings, 20<sup>th</sup> ICA/ACI International Cartographic Conference, Beijing, China, Aug. 6-10, 2001, pp. 2522-2529.

Fabrikant, S. I. (2000) The Geography of Semantic Information Spaces. Proceedings, GIScience 2000, Savannah, GA Oct. 28-31, 2000.

Fabrikant, S. I. (2000b). The Ontology of Semantic Information Spaces. Proceedings, EuroConference on Ontology and Epistemology for Spatial Data Standards - La Londe-les-Maures, France, Sep. 22-27, 2000.

conference papers §Bartling, M., §Reichenbacher, T., Fabrikant, S. I. (2023). Leveraging map use context (abstracts) for advancing cartography in the 21st century. Abstracts of the International Cartographic Association 2023, International Cartographic Conference, Aug. 13-18, 2023, Cape Town, South Africa, DOI: 10.5194/ica-proc-5-2-2023.

Weber, W., Reijnen, E., Fabrikant, S. I., Dingerkus, F., Ritter, R. (2022). Virtual Reality versus Abstimmungsbüchlein. An empirical study on political decision-making in Switzerland. SACM Annual Conference 2022. The Visual and Audiovisual Turn in the Age of Screen Media. ZHdK/ZHAW-Campus Toni-Areal, Zurich, Apr. 21-22, 2022.

- [50] \*Kapaj, A., §Lanini-Maggi, S., Fabrikant, S. I. (2021). The impact of landmark visualization style on expert wayfinder's cognitive load during navigation. Abstracts of the International Cartographic Association 2021, International Cartographic Conference, Dec. 14-18, 2021, Florence, Italy, DOI: 10.5194/ica-abs-3-138-2021.

Kuster, F., §Ruginski, I.T., Fabrikant, S. I. (2021). Take that Flood: Does your Perspective Matter? Abstracts of the International Cartographic Association 2021, International Cartographic Conference, Dec. 14-18, 2021, Florence, Italy, DOI: 10.5194/ica-abs-3-167-2021.

Korporaal, M., and Fabrikant, S.I., (2019). How are map-based decisions influenced by uncertainty visualization in risky and time-critical situations? Proceedings, 29<sup>th</sup> International Cartographic Conference, International Cartographic Association, Aug. 25-30, 2013, Tokyo, Japan. DOI: 10.5194/ica-abs-1-184-2019.

Bruggmann, A., Fabrikant, S.I., Purves, R. (2019). How Can Geographic Information in Text Documents Be Visualized to Support Information Exploration in The Humanities?

2019 UCGIS Symposium: The Geospatial Humanities: Transdisciplinary Opportunities for the GIScience Community, Jun., 10-13, Washington, D.C.

Fabrikant, S. I., Christen, M. Brugger, P. (2017). What color is your brain? Proceedings, 28th International Cartographic Conference, International Cartographic Association, Jul. 2-7, 2017, Washington, D.C. USA.

- [45] <sup>§</sup>Janetzko, H., Fabrikant, S. I., (2017). Conveying Uncertainty in Visual Cluster Representations of Soccer Player Trajectories. Proceedings, 28th International Cartographic Conference, International Cartographic Association, Jul. 2-7, 2017, Washington, D.C. USA.

Kübler, I., Richter, K.-F., Fabrikant, S. I., (2017). Visualization of risk and uncertainty to communicate avalanche hazard: An Empirical Study. Proceedings, 28th International Cartographic Conference, International Cartographic Association, Jul. 2-7, 2017, Washington, D.C. USA.

\*Bruggmann, A., Salvini, M.M., Fabrikant, S.I., (2013). Cartograms of self-organizing maps to explore user-generated content. *Proceedings, 26th International Cartographic Conference, International Cartographic Association, Aug. 25-30, 2013, Dresden, Germany.*

Fabrikant, S.I., Christophe, S., Papastefanou, G., \*Maggi, S. (2013). How to measure and visualize emotion when using maps. *Proceedings, 26th International Cartographic Conference, International Cartographic Association, Aug. 25-30, 2013, Dresden, Germany.*

\*Ory, J., Christophe, S., Fabrikant, S.I. (2013). Identification of Styles in Topographic Maps. *Proceedings, 26th International Cartographic Conference, International Cartographic Association, Aug. 25-30, 2013, Dresden, Germany.*

- [40] <sup>‡</sup>Tuggener, S., <sup>§</sup>Çöltekin, A., Fabrikant, S.I. (2012). Mobility and social inequality: exploring the nexus by means of sequence analysis and geovisualisation. International Symposium Masculine/Feminine: Geographical Dialogues and Beyond, Cité des Territoires (IGA/IUG), MSH Alpes, IUT2. UMR Pacte CNRS 5194, Universities Grenoble I and II, Dec 10-12, 2012, Grenoble, France.

Fabrikant, S.I., and \*Salvini, M.M. (2011). Charting the ICA World of Cartography 1999–2009. *Proceedings, 25th International Cartographic Conference, International Cartographic Association, Jul. 3-8, 2011, Paris, France.*

<sup>‡</sup>Kaspar, S., Fabrikant, S.I., and Freckmann P. (2011). Empirical Study of Cartograms. *Proceedings, 25th International Cartographic Conference, International Cartographic Association, Jul. 3-8, 2011, Paris, France.*

<sup>‡</sup>Gnos, A.U., \*Salvini, M.M., and Fabrikant, S.I. (2011). Cognitively Plausible Spatialization of Network Data. *Proceedings, 25th International Cartographic Conference, International Cartographic Association, Jul. 3-8, 2011, Paris, France.*

\*Wilkening, J., and Fabrikant, S.I. (2011). The Effect of Gender and Spatial Abilities on Map Use Preferences and Performance in Road Selection Tasks. *Proceedings, 25th International Cartographic Conference, International Cartographic Association, Jul. 3-8, 2011, Paris, France.*

- [35] <sup>‡</sup>Zanola, S., Fabrikant, S.I., and <sup>§</sup>Çöltekin, A. (2009). The Effect of Realism on the Confidence in Spatial Data Quality. *Proceedings, 24th International Cartography Conference (ICC 2009), Santiago, Chile, Nov. 15-21, 2009. (CDROM).*

Midtbø, T., Clarke, K. C., and Fabrikant, S.I. (2007) Human Interaction with Animated Maps: The Portrayal of the Passage of Time. *Proceedings*, 11<sup>th</sup> Scandinavian Research Conference on Geographical Information Science. Sep. 5-7, 2007, Ås, Norway.

Fabrikant, S. I. and \*Goldsberry, K. (2005). Thematic relevance and perceptual salience of dynamic geovisualization displays. *Proceedings*, 22th ICA/ACI International Cartographic Conference, A Coruña, Spain, Jul. 9-16, 2005. (CDROM)

Fabrikant, S. I. and Buttenfield, B. P. (1997). Envisioning User Access to a Large Data Archive. *Proceedings*, GIS/LIS '97, Cincinnati, Ohio, Oct. 28-30, 1997: 686-692. (CDROM).

- book chapters (refereed) Montello, D., Fabrikant, S.I., Davies, C. (2018). Cognitive Perspectives on Cartography and Other Geographic Information Visualizations (Chapter 10). In Montello, D. (Ed.). *Handbook of Behavioral and Cognitive Geography*, Elgar: 177-196, doi: 10.4337/9781784717544.00018.
- [30] Fabrikant, S. I. (2017). Spatialization. In: Castree, N., Goodchild, M.F., Kobayashi, A., Liu, W., Marston, R., Richardson, D. (eds). *AAG International Encyclopedia of Geography: People, the Earth, Environment, and Technology*. Wiley, doi: 10.1002/9781118786352.wbieg0812.
- Borgo, R., Lee, B., Bach, B., Fabrikant, S.I., Jianu, R., Kerren, A., Kobourov, S., McGee, F., Micallef, L., von Landsberger, T., Ballweg, K., Diehl, S., Simonetto, P., Zhou, M. (2017). Crowdsourcing for Information Visualization: Promises and Pitfalls. In: *Evaluation in the Crowd. Crowdsourcing and Human-Centered Experiments*. Archambault, D., Purchase, H., Hossfeld, T. (Eds.). LNCS 10264, Dagstuhl Seminar 15481, Revised Contributions, Dagstuhl Castle, Germany, November 22-27, 2015: 96-138.
- Davies, C., Fabrikant, S. I. Hegarty, M. (2015). Towards Empirically Verified Cartographic Displays. In: Hoffman, R., Hancock, P., Scerbo, M., Parasuraman, R. (Eds). *Cambridge Handbook of Applied Perception Research*, Cambridge University Press, New York, NY.: 711-729, doi: 10.1017/CBO9780511973017.043.
- Harrower, M. and Fabrikant, S.I. (2008). *The Role of Map Animation in Geographic Visualization*. In: *Geographic Visualization: Concepts, Tools and Applications*. Dodge, M., Turner M., McDerby, M. (eds.). Wiley, Chichester, U.K. 49-65, doi: 10.1002/9780470987643.ch4.
- Skupin A. and Fabrikant, S.I. (2007). Spatialization. In: Wilson, J. and Fotheringham, S. (Eds.). *Handbook of Geographic Information Science*. Malden, MA, Blackwell Publishers: 61-79, doi; 10.1002/9780470690819.ch4 (invited).
- [25] Fabrikant, S.I. and Skupin A. (2005). Cognitively Plausible Information Visualization. In: Dykes, J., MacEachren, A.M. & Kraak M. J. (eds). *Exploring GeoVisualization*. Amsterdam, The Netherlands, Elsevier: 667-690, doi: 10.1016/B978-008044531-1/50453-X.
- Fuhrmann, S., Ahonen, P., Edsall, R.M., Fabrikant, S.I., Koua, E.L., Tobon, C., Ware, C., Wilson S. (2005). Making Useful and Useable Geovisualization. In: Dykes, J., MacEachren, A.M. & Kraak M. J. (eds). *Exploring GeoVisualization*. Amsterdam, The Netherlands, Elsevier: 553-566, doi: 10.1016/B978-008044531-1/50446-2.
- edited issues Leitner, M., Skupin, A., Fabrikant S. I. (eds.) (2024). Special Issue on the Scholarship and Impacts of Professor Barbara P. Buttenfield. *Cartography and Geographic Information Science*.

- Andrienko, G., Fabrikant S. I., Dykes, J., Griffin, A., Schiewe, J. (eds.) (2014). Special Issue on selected papers from Geoviz Hamburg 2013, *International Journal of Geographical Information Science*, vol. 28, no. 10.
- Yuan, M. and Fabrikant S. I. (eds.) (2014). Special Issue on the Scholarship and Impacts of Professor David M. Mark. *International Journal of Geographical Information Science*, vol. 28, no. 6.
- [20] Griffin, A., Fabrikant, S. I., Kent, A. (2012). Special Issue on Spatial Cognition, Behaviour and Representation. *The Cartographic Journal*, vol. 49, no. 4, 2012.
- Fabrikant, S. I., and Lobben, A. (eds.) (2009). Special Issue on Cognitive Issues in geovisualization. *Cartographica*, vol. 44, no. 3.
- Andrienko, G., Andrienko, N., Dykes, J., Fabrikant, S. I., Wachowicz, M. (eds.) (2008) Special Issue on Geovisualization of Dynamics, Movement and Change. *Information Visualisation*, vol.7, no.3.
- Josselin, D. and Fabrikant S. I. (eds.) (2003). Revue Internationale de Géomatique. Numéro spécial «Cartographie animée et interactive», vol. 13, no. 1.
- edited books Ishikawa, T., and Fabrikant S. I., Winter, S. (eds.) (2022). 15<sup>th</sup> International Conference on Spatial Information Theory (COSIT) 2022, Sep. 5-9, 2022, Kobe, Japan. LIPIcs – Leibniz International Proceedings in Informatics, DOI: 10.4230/LIPIcs.COSIT.2022.0.
- [15] Fabrikant, S. I., Raubal, M., Bertolotto, M., Davies, C., Friendschuh, S., Bell, S. (Eds.). (2015). Proceedings, Conference on Spatial Information Theory (COSIT 2015), Santa Fe, NM, USA, Oct. 12-16, 2015. Lecture Notes in Computer Science (LNCS) 9368, Springer, Berlin, Germany.
- Fabrikant, S. I., Reichenbacher, T., van Kreveld, M., Schlieder, C. (Eds.) (2010). Sixth International Conference, GIScience 2010, Zürich, Switzerland, Sep. 14-17 2010, Proceedings, LNCS 6292, Springer, Berlin, Germany.
- Fabrikant, S. I., and Wachowicz, M. (Eds.) (2007). The European Information Society Leading the Way with Geo-information. Lecture Notes in Geoinformation and Cartography. Springer, Berlin, Germany. (ISBN: 978-3-540-72384-4)
- other papers \*Bruggmann, A., and Fabrikant, S.I. (2016). Die Geschichte der Schweiz aus einer geographischen Perspektive betrachtet. Geomatik Schweiz/Géomatique Suisse, Sonderheft International Map Year, 4/2016.
- \*Boo, G., and Fabrikant, S.I. (2016). Dasymeric mapping for an improved modeling of diseases. Geomatik Schweiz/Géomatique Suisse, Sonderheft International Map Year, 4/2016.
- [10] Andrienko, G., Fabrikant S. I., Dykes, J., Griffin, A., Schiewe, J. (eds.) (2014). GeoViz: Interactive Maps that Help People Think. Special Issue on selected papers from Geoviz Hamburg 2013, *International Journal of Geographical Information Science*, vol. 28, no. 10: 2009-2012.
- Yuan, M. and Fabrikant S. I. (2014). Editorial. Special Issue on the Scholarship and Impacts of Professor David M. Mark. *International Journal of Geographical Information Science*, vol. 28, no. 6: 1205-1208.
- Griffin, A.L., Fabrikant, S. I. (2012). More Maps, More Users, More Devices Means More Cartographic Challenges, *Cartographic Journal*, Vol. 49, No. 4: 298-301.
- Andrienko, G., Andrienko, N., Schumann, H., Tominski, C., Demsar, U., Dransch, D., Dykes, J., Fabrikant, S. I., Jern, M., and Kraak, M.J. (2010). *Space and time*. In: Keim, D., Kohlhammer, J., Ellis, G. and Mansmann, F. (eds.) (ed.), *Mastering the information*

age: solving problems with visual analytics. Eurographics Association, Goslar, Germany: 57-86.

Fabrikant, S. I., and Lobben, A. (eds.) (2009). Introduction. Special Issue on Cognitive Issues in Geovisualization. *Cartographica*, vol. 44, no. 3: 139-143.

- [5] Andrienko, G., Andrienko, N., Dykes, J., Fabrikant, S. I., Wachowicz, M. (2008) Geovisualization of Dynamics, Movement and Change: key issues, and developing approaches in visualization research. Special Issue on Geovisualization of Dynamics, Movement and Change. *Information Visualisation*, vol.7, no.3: 173-180.

Fabrikant, S. I. and Josselin D. (2003). Editorial. In: Josselin, D. and Fabrikant S. I. (eds.). *Revue Internationale de Géomatique. Numéro spécial «Cartographie animée et interactive»*, vol. 13, no. 1: 7-14.

Fabrikant, S.I. (2003) Dealing with the Distance-Similarity Metaphor for Knowledge Discovery and Visualization of Very Large Databases. White Paper. UCGIS Geospatial Visualization and Knowledge Discovery Workshop. National Conference Center, Lansdowne, Virginia, November 18-20, 2003.

Skupin, A., Fabrikant, S.I., Couclelis, H. (2003). Spatialization: Spatial Metaphors and Methods for Handling Non-Spatial Data. UCGIS Research Priority.

- [1] Fabrikant, S.I. (2000) Transitions from Childhood to the Workforce, Position Paper. NSF GeoEd Meeting, Santa Barbara, CA, May 27-28, 2000.

policy papers *Contributed to the following publications of the Swiss Science Council:*

Gymnasiale Bildung in der digitalen Gesellschaft (2021)

Überlegungen zur Differenzierung der Hochschulen: Die Verbindung zur Berufswelt (2020)

Begutachtung der Mehrjahrespläne nach Art. 15 FIFG für die BFI-Periode 2021-2024 (2020)

Empfehlungen des Schweizerischen Wissenschaftsrates SWR für die BFI-Botschaft 2021-2024 (2019)

The growth of science: Auswirkungen für die Forschungsevaluation und -förderung in der Schweiz (2018)

Citizen Science: Expertise, Demokratie und öffentliche Partizipation (2018)

Notions of disruption (2017)

---

### *conference presentations and invited lectures*

conferences (abstracts) (refereed) Bartling, M., Reichenbacher, T., Fabrikant, S. I. (2023). Leveraging map use context for advancing cartography in the 21st century. Abstracts of the International Cartographic Association 2023, International Cartographic Conference, Aug. 13-18, 2023, Cape Town, South Africa.

Kuster, F., Ruginski, I.T., Fabrikant, S. I. (presenter) (2021). Take that Flood: Does your Perspective Matter? 30<sup>th</sup> International Cartographic Conference, International Cartographic Association, online, Dec. 15, 2021.

Weber, W., Fabrikant, S.I., (presenter) (2020), Reijnen, E. Virtual Reality and Political Decision-Making. Digital Democracy Workshop, Digital Democracy Lab & Digital Society Initiative University of Zurich, online, Nov. 6, 2020.

- Korporaal, M., and Fabrikant, S.I., (presenter) (2019). How are map-based decisions influenced by uncertainty visualization in risky and time-critical situations? 29<sup>th</sup> International Cartographic Conference, International Cartographic Association, Jul. 17, 2019, Tokyo, Japan.
- Fabrikant, S. I., Christen, M., Brugger, P. (2017). What Color is Your Brain? International Cartographic Conference 2017, Jul. 6, 2017, Washington, D.C..
- Kübler, I., Richter, K.-F., Fabrikant, S.I. (presenter) (2017). Does uncertainty visualization influence map-based reasoning about natural hazards? International Cartographic Conference 2017, Jul. 5, 2017, Washington, D.C..
- Brügger, A., Richter, K.-F., Fabrikant, S. I. (2016). Walk and Learn: An Empirical Framework for Assessing Spatial Knowledge Acquisition during Mobile Map Use. *Proceedings (short papers)*, 9th International Conference on Geographic Information Science, Sep. 27-30, 2016, Montreal, Canada. [Best Short Paper Presentation Award]
- Boo, G., Leyk, S., Pospischil, A., Fabrikant, S. I. (2016). A Regional Approach for Modeling Dog Cancer Incidences with Regard to Different Reporting Practices. *Proceedings (short papers)*, 9th International Conference on Geographic Information Science, Sep. 27-30, 2016, Montreal, Canada. [Best Poster Presentation Award]
- Frei, P., Richter, K.-F., Fabrikant, S. I. (presenter) (2016). Stress Supports Spatial Knowledge Acquisition during Wayfinding with Mobile Maps. *Proceedings (short papers)*, 9th International Conference on Geographic Information Science, Sep. 27-30, 2016, Montreal, Canada.
- Ory, J., Christophe, S. and Fabrikant, S.I., Bucher, B. (2015). How Do How do map readers recognize a topographic mapping style? 27th International Cartographic Conference, International Cartographic Association, Aug. 23-28, 2015, Rio de Janeiro, Brazil.
- Maggi, S., Fabrikant, S.I., (presenter), Imbert, J.P., Hurter, C. (2015). How Do Display Design and User Characteristics Matter in Animated Visualizations of Movement Data? 27th International Cartographic Conference, International Cartographic Association, Aug. 23-28, 2015, Rio de Janeiro, Brazil.
- Fabrikant, S.I., Streit, A., Purves, R. (2015). Visualization of risk and uncertainty to communicate avalanche hazard: An Empirical Study. 27th International Cartographic Conference, International Cartographic Association, Aug. 23-28, 2015, Rio de Janeiro, Brazil.
- Fabrikant, S.I., Maggi, S., Montello, D. R. (2014). 3D network spatialization: Does it add depth to 2D representations of semantic proximity? GIScience 2014, Sep. 23-26, 2014, Vienna, Austria.
- Bruggmann, A., Fabrikant, S.I. (2014). Spatializing a digital text archive about history. GIScience 2014, Sep. 23-26, 2014, Vienna, Austria.
- Ooms, A., Fabrikant, S.I. Çöltekin, A., De Maeyer, P. (2014). Eye tracking with geographic coordinates: methodology to evaluate interactive cartographic products. GIScience 2014, Sep. 23-26, 2014, Vienna, Austria.
- Maggi, S., Fabrikant, S.I. (2014). Embodied decision making with animations. GIScience 2014, Sep. 23-26, 2014, Vienna, Austria.
- Bruggmann, A., Fabrikant, S.I. (2014). Spatializing time in a history text corpus. GIScience 2014 Pre-Conference workshop on Geographic Information Observatories, Sep. 23, 2014, Vienna, Austria.

- Maggi, S., Fabrikant, S.I. (2014). Triangulating Eye Movement Data of Animated 2nd International Workshop on Eye Tracking for Spatial Research, Sep. 23, 2014, Vienna, Austria.
- Bruggmann, A., Fabrikant, S.I. (2014). How to visualize the geography of Swiss history. 17th AGILE Conference on Geographic Information Science, Jun. 3-6, 2014, Castellón, Spain.
- Barth, L., Fabrikant, S.I., Kobourov, S., Lubiw, A., Nöllenburg, M., Okamoto, Y., Pupyrev, S., Squarcella, C., Ueckerdt, T., and Wolff, A. (2014). Semantic Word Cloud Representations: Hardness and Approximation Algorithms. Latin American Theoretical Informatics Symposium (LATIN) 2014, Mar. 31- Apr. 4, 2014.
- Maggi, S. and Fabrikant, S.I. (2014). Assessing Animated Air Traffic Control Displays. Proceedings, CARTOCON 2014, Olomouc, Czech Republic, Feb. 25-28, 2014.
- Bruggmann, A., Salvini, M. M., Fabrikant, S.I., (2013). Cartograms of self-organizing maps to explore user-generated content. *Proceedings, 26th International Cartographic Conference, International Cartographic Association, Aug. 25-30, 2013, Dresden, Germany.*
- Fabrikant, S.I., Christophe, S., Papastefanou, G., \*Maggi, S. (2013). How to measure and visualize emotion when using maps. *Proceedings, 26th International Cartographic Conference, International Cartographic Association, Aug. 25-30, 2013, Dresden, Germany.*
- Maggi, S. and Fabrikant, S. I., (2013). Animated displays of moving objects and spatiotemporal coordinated events. Proceedings (Extended Abstracts), GeoViz Hamburg 2013, Hamburg, Germany. Mar. 6-8, 2013.
- Fabrikant, S.I., Christophe, S., Papastefanou, G., and Maggi, S. (2012). Emotional response to map design aesthetics. *Proceedings (Extended Abstracts), GIScience 2012, Columbus, OH, Sep. 18-21, 2012.*
- Salvini, M.M. and Fabrikant, S.I., (2012). Scale-dependent validation framework for spatialization. Proceedings (Extended Abstracts), GIScience 2012, Columbus, OH, Columbus, OH, Sep. 18-21, 2012.
- Fabrikant, S. I. (2011), *Visual Geoanalytics Methods to Evaluate the Cognitive* Sep. 18-21, 2012. Columbus, OH, Sep. 18-21, 2012. *Adequacy and Perceptual Salience of Visual Analytics Displays*, Special invited Session: Everyday Cognitive Science, using the methods of cognitive science to explore spatial thinking in related disciplines, 3rd Annual Meeting of the Cognitive Science Society, Boston, MA, Jul. 20-23, 2011.
- Zanola, S., Fabrikant, S. I., and Çöltekin, A. (2009). The Effect of Realism on the Confidence in Spatial Data Quality. Proceedings, 24th International Cartography Conference (ICC 2009), Santiago, Chile, Nov. 15-21, 2009.
- Garlandini, S. and Fabrikant, S. I. (2009). Evaluating the Effectiveness and Efficiency of Visual Variables for Geographic Information Visualization. 9th International Conference on Spatial Information Theory (COSIT) 2009, Aber Wrac'h, France, Sep. 21-25, 2009.
- Fabrikant, S. I., Montello, D. R., Neun, M. (2008). Evaluating 3D Point-Display Spatializations. Proceedings (Extended Abstracts), GIScience 2008, Park City, UT, Sep. 23-25, 2008.
- Fabrikant, S. I., \*Rebich S., Montello, D. R., Andrienko, G., Andrienko, N., (2008). *A visual analytics approach to evaluate inference affordance from animated map*

*displays*. GIScience 2008 Pre-Conference workshop on Geospatial Visual Analytics, Park City, UT, Sep. 23, 2008.

Lautenschütz, A. K. and Fabrikant, S. I. (2008). *Towards a Cognitive Conceptual Framework of Movement*. AGILE 2008 pre-conference workshop on GeoVisualization of Dynamics, Movement and Change, Girona, Spain, May 5, 2008.

Fabrikant, S. I. (2007). How can geovis inform infovis, and how can infovis inform geovis? Invited presentation. European Research Forum Panel Session gIV07: Geovisualization and synergies from InfoVis and Visual Analytics, Zurich, Switzerland, Jul. 5, 2007

Fabrikant, S. I., Montello, D. R., S. Rebich (2006). *The Look of Weather Maps*. GIScience 2006, Münster, Germany, Sep. 20-23, 2006.

Fabrikant, S. I. and †Goldsberry, K. (2005). Thematic relevance and perceptual salience of dynamic geovisualization displays. 22th ICA/ACI International Cartographic Conference , A Coruña, Spain, Jul. 9-16, 2005.

Montello, D. R., Fabrikant<sup>1</sup>, S. I., †Ruocco, M., \*Middleton, R. S. (2003). Testing the First Law of Cognitive Geography on Point-Display Spatializations. Conference on Spatial Information Theory (COSIT '03). Kartause Ittingen, Switzerland, Sep. 24-27, 2003. (<sup>1</sup>presenter).

Fabrikant, S. I., Montello, D. R., †Ruocco, M., \*Middleton, R. (2003). The First Law of Cognitive Geography and Knowledge Domain Maps. Invited Poster presented at the Arthur M. Sackler Colloquium on Mapping Knowledge Domains, U.S. National Academy of Sciences, Irvine, CA, May 9-11, 2003.

Fabrikant, S. I. (with Phaedon Kyriakidis, 2002). Geovisualization of Large Databases and Spatial Uncertainty. 2002 Joint Statistical Meeting (JSM 2002), New York, New York, August 11-15, 2002.

Fabrikant, S. I., †Ruocco, M., \*Middleton, R., Montello, D.R., Jörgensen, C. (2002). The First Law of Cognitive Geography: Distance and Similarity in Semantic Space. GIScience 2002, Boulder, CO, Sep. 25-28, 2002.

Fabrikant, S. I. (2001). Visualizing Region and Scale in Semantic Spaces. 20<sup>th</sup> ICA/ACI International Cartographic Conference, Beijing, China, Aug. 6-10, 2001, pp. 2522-2529.

Fabrikant, S. I. (2000). The Geography of Semantic Information Spaces. GIScience 2000, Savannah, GA Oct. 28-31, 2000.

Fabrikant, S. I. (2000). The Ontology of Semantic Information Spaces. EuroConference on Ontology and Epistemology for Spatial Data Standards - La Londe-les-Maures, France, Sep. 22-27, 2000.

Fabrikant, S. I. and Dodge, M. (2000). Maps and Charts to Represent the Flows of Information. Annual Meeting of the North American Cartographic Society, Knoxville, TN, Oct. 12-14, 2000.

Fabrikant, S.I., Jorgensen, C., and \*Badurek, C. A. (2000). Creating an Immersive Information Space Based on a Spatial Metaphor. Annual Meeting of the American Society for Information Science and Technology 2000, Chicago, IL, Nov 13, 2000.

*non refereed*

Fabrikant, S.I. (2023). Feeling Blue? Blue urban park accent lighting will remedy that! An online study leveraging facial expression analysis technology. Annual Meeting of the American Association of Geographers, Denver, CO, Mar. 25, 2023.

- Fabrikant, S.I. (2021). 2D or 3D landmarks: how do they support navigation and wayfinding in stressful situations? Annual Meeting of the American Association of Geographers, Seattle, WA, Apr. 10, 2021.
- Johannsen, I., Evers, M., Fabrikant, S.I. (2018). What looks uncertain to you? An empirical study on how texture and color value communicate data quality in climate change maps.? Annual Meeting of the American Association of Geographers, New Orleans, LA, Apr. 12, 2018.
- Kübler, I., Richter, K.-F., Fabrikant, S.I. (2017). Does uncertainty visualization influence map-based reasoning about natural hazards? Annual Meeting of the American Association of Geographers, Boston, MA, Apr. 6, 2017.
- Fabrikant, S.I. (2016). Of Color, Geography, and Brains. Annual Meeting of the American Association of Geographers, San Francisco, CA, Mar. 31, 2016.
- Fabrikant, S.I. (2015). Affectively responsive visual display design. Annual Meeting of the American Association of Geographers, Chicago, IL, Apr. 21-24, 2015.
- Fabrikant, S.I. (2014). E-motive map displays. Annual Meeting of the Association of American Geographers, Tampa, FL, Apr. 8-12, 2014.
- Fabrikant, S.I. (2014). *Geographic Information Visualization*. Symposium & Workshop: Applying of Principles of Cognitive Psychology in Practice, Brno, CZ, Mar. 15.-18, 2014.
- \*Maggi S. and Fabrikant, S.I. (2014). Assessing Animated Air Traffic Control Displays. Cartocon 2014, Olomouc, CZ, Feb. 25.-28, 2014.
- Fabrikant, S. I. (2012). Reflection and Celebration of Professor David Mark's Contributions to Geography and GIScience. Annual meeting of the Association of American Geographers, Los Angeles, CA, Apr. 9-13, 2013.
- Fabrikant, S. I. (2012). *Animating Visual Analytics of Movement. Why, When, and How*. Annual Meeting of the Association of American Geographers, New York, NY, Feb. 22-27, 2012.
- Fabrikant, S. I. (2011). Assessing animated map displays for spatio-temporal inference making. Annual Meeting of the Association of American Geographers, Seattle, WA, Apr. 12-16, 2011.
- Fabrikant, S. I. (2011). Methodology and training in spatial cognition. Panel Moderator. Annual Meeting of the Association of American Geographers, Seattle, WA, Apr. 12-16, 2011.
- Fabrikant, S. I. (2010) Visual Analytics for Movement Data: Cognitive Issues. MOVE (COST Action IC0903) working group 4 "WG4: Visual Analytics for Movement Data" Meeting, Jun. 3<sup>rd</sup> 2010, Zürich, Switzerland.
- Fabrikant, S. I. and †Maggi, S. (2010) Assessing the Effectiveness of 3D Network-Display Spatializations. Annual Meeting of the Association of American Geographers, Washington, D.C., Apr. 14-18, 2010.
- Fabrikant, S. I. (2009) Spatial Concepts Curriculum for GIS and Design. Panelist. Annual Meeting of the Association of American Geographers, Las Vegas, NV, Mar. 14-18, 2009.
- Fabrikant, S. I. and †Garlandini, S. (2009). *Visual Change Detection in a Blink of the Eye*. (abstract) Special Session: Cognition, Behavior, and Representation I: Visualization. Annual Meeting of the Association of American Geographers, Las Vegas, NV, Mar. 14-18, 2009.

- Fabrikant, S. I. (2008). *Enduring Design for Fleeting Displays*. Special Session: Cognitive Issues in Geographic Information Visualization I: Methods. Annual Meeting of the Association of American Geographers, Boston, MA, Mar. 15-19, 2008.
- Fabrikant, S. I. 2007. *Sequence Analysis of Eye Movement Data*. Second Eye Tracking and Multimedia Workshop (ETMW '07), Dijon, France, Nov. 22-23, 2007.
- Fabrikant, S.I., Montello, D. R., S. Rebich (2007). *Seeing Through Small Multiple Map Displays*. ICA/ACI Commission on Visualization and Virtual Environment workshop: From Geovisualization towards Geovisual Analytics, Helsinki, Finland, Aug. 2-3, 2007.
- Fabrikant, S. I. (2007). *Seeing through small multiple map displays*. Special Session: Visual Analytics in Geography I. Annual Meeting of the Association of American Geographers, San Francisco, CA, Mar. 17-21, 2007.
- Fabrikant, S.I. (2007). *Aus der Werkstatt einer Kartenmacherin*. Invited talk. Interdisziplinäre Fachtagung, Alfried Krupp Wissenschaftskolleg Greifswald. Der Kartograph und sein Leser: Die Produktion und Rezeption von Karten von der frühen Neuzeit bis zur Gegenwart. Greifswald, Germany, Mar. 19-21, 2007.
- Fabrikant, S.I. (2007). *Karten & Raumkognition: empirische Forschungsbeispiele und Resultate*. Invited talk. 14. Internationale Geodätische Woche. Obergurgl, Austria, Feb. 11-17, 2007.
- Fabrikant, S.I. (2006). *Thematische Relevanz und Wahrnehmungssalienz in Karten*. GEOVIS 2006, Potsdam, Germany, Apr. 5-6, 2006.
- Fabrikant, S. I. (2006). *Thematic Relevance and Perceptual Salience in Static Weather Maps*. Special Session on Visualization III: Empirical and Education. Annual Meeting of the American Geographers, Chicago, IL, Mar. 7-11, 2006.
- Fabrikant, S.I. (2005). *Testing the Urban Landscape Metaphor in Spatialization*. Special Session on Mapping Humanity's Knowledge and Expertise in the Digital Domain. Annual Meeting of the Association of American Geographers, Denver, CO, Apr. 5-9, 2005.
- Fabrikant, S.I. (2004). *Karten als räumliche Metaphern*. Invited talk. 45. Deutscher Historikertag, Kiel, Germany, Sep. 14-17, 2004.
- Fabrikant, S.I. (2003). *Spatial Metaphors in Abstract Information Worlds*. Invited lecture. International Advanced Workshop on Virtual Geographic Environments and Geocollaboration, The Chinese University of Hong Kong, Shatin, NT. Hong Kong SAR, Dec. 15-16, 2003.
- Fabrikant, S. I. (2003). *Distance and Similarity in Semantic Networks*. Special Session on Spatialization. Annual Meeting of the Association of American Geographers, New Orleans, LA, Mar. 5-8, 2003.
- Fabrikant, S. I. (2002). *Cognitively Plausible Information Visualization*. Exploring Geovisualization workshop. International Cartographic Assoc. Commission on Visualization and Virtual Environments, City University, London, U.K., Sep. 11-14, 2002.
- Fabrikant, S. I. (2002). *Empirical Approaches to Semi-Immersive Spatialization Designs*. Annual Meeting of the Assoc. of the American Geographers, Los Angeles, CA, Mar. 20-23, 2002.
- Haug, D. and Fabrikant, S. I. (2002). *Interactive Spatialized Visualization of Hierarchical Clustering*. Annual Meeting of the Assoc. of the American Geographers, Los Angeles, CA, Mar. 20-23, 2002.

Fabrikant, S. I. (2001). The Use of Location-based Services in Distributed Collaborative Visualization Environments. Position Statement, Specialist Meeting on Location-based Services, Center for Spatially Integrated Social Science (CSISS), Santa Barbara, CA, Dec. 14-15.

Fabrikant, S. I. (2001). Building Task-Ontologies for GeoVisualization. ICA Commission on Visualization and Virtual Environment Pre-conference Workshop: Geovisualization on the Web, Beijing, China, Aug. 3-4, 2001.

Fabrikant, S. I. (2001). Regionalization and Scale Dependence in Semantic Information Spaces. Annual Meeting of the Assoc. of the American Geographers, New York, NY, Feb. 27-Mar. 3, 2001.

Fabrikant, S. I. (2000). Cartographic Considerations for Designing Information Spaces. Annual Meeting of the Assoc. of the American Geographers, Pittsburgh, PA, Apr. 4-8, 2000.

Fabrikant, S. I. (1998). Spatialized Browsing in Large Data Archives. Annual Meeting of the Assoc. of the American Geographers, Boston, MA, Mar. 25 -29, 1998.

Fabrikant, S. I. (1994). Alternative Visualisation of Spatial Data. VI Annual EGEA Congress, Võsu, Estonia.

#### *invited lectures*

- 2024 Neuroadaptive geographic information displays: a GIScience frontier to scaffold spatial learning. Invited Waldo Tobler Award in GIScience Lecture, Campus Austrian Academy of Sciences, Vienna, Austria.
- 2024 Neuroadaptive navigation assistance to limit spatial de-skilling. Robert Blumberg Distinguished Lecture in Cognitive Science, Museum of Anatomy, Jan. 16, 2024, Riga, Latvia.
- 2023 Assisted Navigation: Limit de-skilling with mobile neuroadaptive geographic information displays (mGIDs). Tokyo University of Science, Nov. 21, 2023, Tokyo, Japan.
- 2023 Of maps and mapping. Invited lecture. Faculty of Information Networking for Innovation and Design (INIAD), Toyo University, Nov. 15, 2023, Tokyo, Japan.
- 2023 AI | IA: From artificially intelligent (AI) navigation aids towards intelligently augmented (IA) humans. Invited talk. Digital Society Initiative Strategy Lab Retreat, Aug. 21, 2023, Weissenstein, Solothurn, Switzerland.
- 2022 The Risky Business of Visualizing Known Unknowns for Decision Making with Maps. Virtual Keynote, 17<sup>th</sup> International Joint Conference on Computer Vision, Imaging, and Computer Graphics Theory and Applications, Feb. 8, 2022, online streaming by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC).
- 2021 Images of the Human: Spatial wisdom for smart mobility in a digital society. Invited talk. Lecture Series on the Images of the Human, The Turing Center, ETH Zürich, Nov. 22, 2021, Zurich, Switzerland.
- 2021 Smart Navigation to make us wise. Invited talk. Lecture Series Computer Science Insights @HSG, School of Computer Science, University of Sankt Gallen, Oct. 14, 2021, Sankt Gallen, Switzerland.
- 2021 Smart mobile maps for wise spatial learning. Invited virtual talk at McGill University, Geography Department, Oct. 1, 2021, Montréal, Canada.

- 2021 Spatio-temporal analytics of mobility and health. Virtual Keynote, Intergeo Conference 2021. Hannover, Sep. 22, 2021, Hannover, Germany.
- 2021 Smart cartography for wise navigation assistance. Virtual Keynote, Spatial Cognition Conference 2020/1, University of Latvia, Faculty of Computing, Aug. 2<sup>nd</sup>, 2021, Riga, Latvia.
- 2021 Smart Cartographic Tools for Wise Navigation Decisions. Virtual Keynote, international colloquium on « tous (im)mobiles, tous cartographes? » University Jean-Jaurés, Jun. 16, 2021, Toulouse, France.
- 2021 Global GIScience Education Panel 3: Convergence, invited panelist, U.S. University Consortium for Geographic Information Science (UCGIS), May, 18, 2021  
<https://www.globalgisceeducation.org/conversations/panel-3-convergence>
- 2021 The Road ahead for wise Navigation in Smart Cities. Invited virtual talk at Tel Aviv University, Geography Department, May 4, 2021, Tel Aviv, Israel.
- 2021 On Color. Hybrid Dagstuhl Seminar 21152: Multi-Level Graph Representation for Big Data Arising in Science Mapping, Schloss Dagstuhl, Apr. 12, 2021, Wadern, Germany.
- 2021 Ersetzt das Navi unser Gehirn? Invited virtual talk, BrainFair Zürich, UZH/ETH Zürich, Mar. 15, 2021, Zürich, Switzerland.
- 2021 Spatialization as life raft to navigate the seas of information? Virtual Keynote lecture at the international workshop: Geography meets Digital Humanities: Neuere Ansätze raumbezogener Modellierung, Department of Geography, Friedrich-Alexander University Erlangen-Nürnberg, Mar. 13, 2021, Erlangen, Germany.
- 2020 Cartography: Data on Maps. Invited virtual lecture, Data+Women Zurich - <http://datapluswomen.com/zurich>, Sep. 24, 2020.
- 2020 Global GIScience Education: Europe & Africa Panel 1: Pedagogies for Resilient GIScience Education, invited panelist, U.S. University Consortium for Geographic Information Science (UCGIS), Jul., 29, 2020.  
<https://www.globalgisceeducation.org/conversations/panel-1-pedagogies>
- 2019 Smart mobile citizen sensing for wise decisions of tomorrow's digital society. Keynote, 21st European Colloquium on Theoretical and Quantitative Geography (ECTQG) 2019, Sep. 7, 2019, Mondorf-les-Bains, Luxembourg.
- 2019 Two invited guest lectures for the Erasmus Mundus Cartography M.Sc. TU Munich (GER), TU Vienna (A), TU Dresden (GER), and the University of Twente (NL). Vienna, May. 28-29, 2019.
- 2019 Space: A Cartographer's Perspective. Dagstuhl Seminar 19192: Visual Analytics for Sets over Time and Space. International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, May 6, 2019.
- 2019 Smart Geographic Information Displays for Wise Decision Making. Keynote, 5th International Conference on Geographical Information Systems, Theory, Applications and Management (GISTAM 2019), May 4, 2019, Heraklion, Greece.
- 2019 Wise Decisions with Smart Responsive Geographic Information Displays. Invited talk at the University of Canterbury, Geography Department, colloquium series, Apr. 3, Christchurch, New Zealand.
- 2019 Smart Assistive Navigation Devices to Support Wise Decisions of the Digital Citizen. Invited talk at the University of Otago, Surveying Department, colloquium series, Mar. 28, Dunedin, New Zealand.

- 2019 Geographic Information Visualization: Animation, invited course lecture in the MSc program, University of Otago, Surveying Department, Mar. 27, Dunedin, New Zealand.
- 2019 Future Smart Mobile Geographic Information Displays for Wise Navigation Decisions. Invited talk at Victoria University, Geography Department, colloquium series, Mar. 21, Wellington, New Zealand.
- 2018 Visualization of Networks: A Cartographer's View. Dagstuhl Seminar 18482: Network Visualization in the Humanities. International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, Nov. 26, 2018.
- 2018 Ubiquitous Gaze Sensing and Interaction for Wise Decisions with Smart Interfaces. Dagstuhl Seminar 18252: Ubiquitous Gaze Sensing and Interaction. International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, Jun. 19, 2018.
- 2018 Geotechnologies for All: Leaving the All for last. Keynote, 21<sup>st</sup> Conference on Geographic Information Science (AGILE) 2018. Jun. 12-15, Lund, Sweden.
- 2018 Responsive Geographic Information Displays to Support Mobility in the Digital Society. Invited CartoTalk, Department of Geodesy and Geoinformation, Cartography Research Group, TU Wien, Vienna, Jun. 6, 2018.
- 2018 Two invited guest lectures for the Erasmus Mundus Cartography M.Sc. TU Munich (GER), TU Vienna (A), TU Dresden (GER), and the University of Twente (NL). Vienna, Jun. 4-5, 2018.
- 2018 *What is a map and how to read it* and *Process of making a map*. Two invited lectures for UNOSAT Staff and within MSc Training on Geo-Information in Disaster Situations: United Nations Institute for Training and Research. CERN, European Organisation for Nuclear Research, Geneva, Switzerland, Mar. 12, 2018.
- 2017 Evidence-based, responsive geographic information display design. International Symposium "Neogeographie - Kompetente Partizipation oder Illusion von Demokratisierung?" Leibniz-Institut für Länderkunde, Leipzig, Germany, Nov. 16-17, 2017
- 2017 Informationslandschaften: Wie kartiere und navigiere ich das Datenmeer? International Symposium „Saisir le terrain / Terrain und Kultur II“, Wissensmedien des Raums, Department of Social Anthropology and Cultural Studies, University of Zurich, Jun. 15, 2017.
- 2017 Towards Human-Responsive Geographic Information Displays. Visual Attention Lab, Brigham and Women's Hospital, Harvard University, Boston, MA, Apr. 12, 2017.
- 2016 Geographic Information Displays for Effective and Efficient Reasoning and Decision Making. Keynote. International Workshop: Communicating Climate Change. Connecting Cognitive Science and Climate Science, British Computer Society, London, U.K., Nov. 10, 2016.
- 2016 Big Data-Smart City! Mehr Daten, mehr Information, mehr Weisheit? 1<sup>st</sup> PolitTalk Digitales Zürich, Kanton Zürich Volkswirtschaftsdirektion, Amt für Wirtschaft und Arbeit, University of Zurich, UniTurm, Jul. 5, 2016.
- 2016 Moving Visual Analytics of Movement. Keynote, 7<sup>th</sup> Int. Workshop on Visual Analytics, EuroVA 2016, Groningen, The Netherlands, Jun. 6, 2016.
- 2016 Decision Making with Visual Displays to Guide Movement. Department of Geography, San Diego State University, colloquium series, San Diego, CA, Apr. 8, 2016.

- 2016 Towards Responsive Visual Analytics Designs. Culture Analytics and User Experience Design Workshop, Institute for Pure & Applied Mathematics, NSF Math Institute at the University of California Los Angeles, CA., Apr. 12, 2016.
- 2016 Maps that answer or raise questions. University of Zurich Research Priority Program Language and Space, colloquium series, Department of Linguistics, University of Zurich, Zurich, Switzerland, Mar. 17, 2016.
- 2016 *What is a map and how to read it* and *Process of making a map*. Three invited lectures for UNOSAT Staff and within MSc Training on Geo-Information in Disaster Situations: United Nations Institute for Training and Research. CERN, European Organisation for Nuclear Research, Geneva, Switzerland, Mar. 2, 2016.
- 2016 Evidence-based Design. Invited talk at The Cartographic Summit. The Future of Mapping. Hosted by the International Cartographic Association (ICA) and Esri Inc., Redlands (CA), Feb. 9, 2016.
- 2015 Emotive Visual Display: Design through indoor & outdoor citizen science. Dagstuhl Seminar 15481: Evaluation in the Crowd: Crowdsourcing and Human-Centred Experiments International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, Nov. 23, 2015.
- 2015 Computer cartography depicts the world digitally. Do map users understand these display? Invited Panelist at the 2015 Center for Geographic Analysis Conference: The Lab for Computer Graphics and Spatial Analysis (1965-1991) and Its Legacy. Harvard University, Cambridge (MA), May 1<sup>st</sup>, 2015.
- 2015 Emotion in Motion: Visuo-spatial Decision Making with Dynamic Maps. Invited talk at The Pennsylvania State University, Department of Geography, State College (PA), Mar. 27, 2015.
- 2015 Eintauchen in die virtuelle Welt: Geographie der 4. Dimension. Invited talk at the 2. Hochschultag der Zürcher Mittelschulen, Department of Geography, University of Zurich, Zurich Switzerland, Jan. 29. 2015.
- 2015 Visuo-spatial Decision Making with Well Designed Displays. Invited talk at GeoViz Hamburg 2015. Expert Workshop on supporting decision making through geovisualization: A view from different perspectives. Hafencity University, Hamburg, Germany, Jan. 20. 2015.
- 2014 Karten schaffen Emotionen - Emotionen schaffen Karten. Invited talk at the UZH/ETHZ Collegium Helveticum research colloquium, Zurich, Mar. 20, 2014.
- 2014 The Art and Science of Charting Non-Spatial Data Landscapes. Invited talk at the Media Arts and Technology Graduate Program, University of California Santa Barbara, CA, Jan. 27, 2014 (cancelled due to illness).
- 2013 Emotive map displays. Invited talk at the Anthropology Forum, California State University, Chico, CA, Dec. 12, 2013.
- 2013 Mapping emotions to reason with visual displays. Invited talk at the UCSB Center for Spatial Studies, University of California, Santa Barbara, CA, Dec. 3, 2013.
- 2013 Affective and effective geographic information visualization, Center for Geographic Analysis, Harvard University, Cambridge, MA, Oct. 16, 2013.
- 2013 Geographic Information Visualization. Invited talks at: MIT SENSEable City Lab, Oct. 8 and MIT Perceptual Science Group at the Computer Science and Artificial Intelligence Lab, Cambridge, MA, Oct. 11, 2013.

- 2013 The complexity of design: creating effective and efficient displays. Invited talk at the Gordon Research Conference: Visualization in Science & Education, Bryant University, Smithfield, RI, Jul. 22, 2013.
- 2013 Geographic Information Visualization: Cognitively Inspired Display Design. Invited keynote at the Visualizing Biological Data (VIZBI) 2013 Conference Series by EMBO / NIH. Broad Institute of Harvard University and MIT, Cambridge, MA, Mar. 20, 2013.
- 2013 Cognitive Visualization: Displays that help people think spatially. Geography Department, colloquium series, University of California Santa Barbara, Santa Barbara, CA, Feb. 12, 2013.
- 2012 "Design Intuition Meets Science: Well Designed Map Displays", and "Cartography of Emotion: Color Choices in Maps". Two invited talks at the first InDOG doctoral conference, Department of Geoinformatics, Palacky University, Olomouc, Czech Republic, Oct. 29, 2012.
- 2012 Geographic Information Visualization. Invited talk at the Faculty of Science, University of Zurich, Zurich, Sep. 27, 2012.
- 2012 How we know that maps work. Invited keynote at the AutoCarto International Research Symposium 2012, Columbus, OH, Sep. 18, 2012.
- 2012 Of metaphors, maps and methods: Cognitively inspired and perceptually salient graphic displays. Invited keynote at EARLI: SIG 2 Comprehension of Text and Graphics Meeting 2012: Laboratory of Educational Sciences, Pierre-Mendès-France University, Grenoble, Aug. 29, 2012.
- 2012 Creating geovisual analytics displays that work. Invited keynote at GI\_Forum Symposium & Fachmesse Angewandte Geoinformatik (AGIT) 2012, Salzburg, Jul. 4, 2012.
- 2012 Connecting the dots: network maps and graphs. Dagstuhl Seminar 12261: Putting Data on the Map. International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, Jun. 25, 2012.
- 2012 *What is a map and how to read it* and *Process of making a map*. Two invited lectures within MSc Training on Geo-Information in Disaster Situations: United Nations Institute for Training and Research. CERN, European Organisation for Nuclear Research, Geneva, Switzerland, Mar. 9, 2011.
- 2011 Where Art and Technology Meets Science: Map Displays for Effective and Efficient Spatial Decision-Making, Department of Informatics, colloquium series, University of Zurich, Switzerland, Nov. 10, 2011.
- 2011 The Art and Science of How to Depict Data in Visuo-Spatial Displays. Workshop: Visual Communication of Data in Neuroimaging (and elsewhere): Foundations and Public Perception, Universitärer Forschungsschwerpunkt Ethik, University of Zurich, Switzerland, Jun. 30, 2011.
- 2011 Realism and Perception of Data Quality in Digital Maps. Geodetic colloquium series, Leibniz University, Hannover, Jun. 21, 2011.
- 2011 Géovisualisation: cartographier les phénomènes évolutifs - Du cognitif au sensitif. Summer school lecture series, CNRS/GDR MAGIS, May, 2-6, 2011, Aussois, France.
- 2011 Cognitive Geography. Neuroscience Center Zurich, colloquium series for clinical and experimental neuro-psychology, Zurich, Switzerland, Mar. 31, 2011.
- 2011 *What is a map and how to read it* and *Process of making a map*. Two invited lectures within MSc Training on Geo-Information in Disaster Situations: United Nations

- Institute for Training and Research. CERN, European Organisation for Nuclear Research, Geneva, Switzerland, Mar. 8, 2011.
- 2010 Effective and Efficient Spatio-Temporal Inference Making with Geovisual Analytics Displays. Challenges of Visualizing Biological Data, Biotechnology and Biological Sciences Research Council (BBSRC), Arts and Humanities Research Council, Bristol, UK, Nov. 16, 2010.
- 2010 The Effect of Display Design on Spatio-Temporal Inference Making. Second International Workshop on Validation of Geo-Information Products for Crisis Management, European Commission Joint Research Centre, Ispra, Italy, Oct. 13, 2010.
- 2010 Spatialization - A Live Raft for the Data Tsunami? Alpbach Technology Talks, Working Group Digital vs. reale Worlds - The Limits of Computer Models? Alpbach, Austria, Aug. 27, 2010.
- 2010 Designing Cognitively Inspired Displays for Effective and Efficient Spatio-temporal Inference Making. Department of Geography, The Ohio State University, colloquium series, Columbus, OH, Apr. 22, 2010.
- 2010 Eyewitness News: Spatio-temporal Inference Making with Static and Animated Map Displays. Department of Geography, Michigan State University, colloquium series, East Lansing, MI, Apr. 20, 2010.
- 2009 Visuo-spatial displays. Geographic Information Visualization and Analysis. Invited lecture, Hauptseminar "Karten und Weltbilder in der Frühen Neuzeit", Department of History, RWTH Aachen, Aachen, Germany, Dec. 1, 2009.
- 2009 Surfing the Data Tsunami with Spatial Metaphors. Invited talk, 7th FP's Workshop on Visualization of Controversies "Macospol", Ecole Polytechnique Fédérale de Lausanne (EPFL) Lausanne, May 14, 2009.
- 2009 Designing Cognitively Inspired Geovisualization Displays, invited key note, 9<sup>th</sup> TheoQuant Meeting, Dijon, France, Mar. 4-6, 2009.
- 2008 Spatialization, die räumliche Darstellung von grossen nichträumlichen Datenbanken, colloquium series, Hochschule Karlsruhe - Technik und Wirtschaft Fakultät für Geomatik, Karlsruhe, Dec. 2008.
- 2008 Geographie, UZH Arbeitsstelle für Hochschuldidaktik, colloquium series, University of Zürich, Zürich, Nov. 2008.
- 2008 Digitaler Planet Erde: Orientierungs- und Navigationshilfen im Datentsunami, Geographisch-Ethnographische Gesellschaft Zürich, colloquium series, Zürich, Oct. 2008.
- 2008 Visual Analytics of Visual Geographic Analytics Displays. Department of Geography, University of Basel, colloquium series, Basel, Oct. 2008.
- 2008 Designing Geovisualization Displays that Amplify Spatial Inference Making. Department of Development and Planning, Aalborg University, Lecture, Copenhagen, Denmark, Oct. 2008.
- 2008 Evaluation of Static and Animated Map Displays: An Eyewitness Report. Department of Geography, San Diego State University, colloquium series, San Diego, CA, Aug. 2008.
- 2007 Thematic relevance and perceptual salience in static weather maps. Guest lecture. Seminar on Eye Movement Research in Geovisualization (GEO453), University of Zürich, Zürich, Nov. 2007.

- 2007 Neue Ansätze zur Visualisierung von Raumdaten. Ringvorlesung Geographie mit fachwissenschaftlicher Vertiefung (GEO891), University of Zurich/ETH Zürich, Sep. 2007.
- 2006 Looking through static and dynamic geovisualization displays. Institute for Geoinformatics, University of Münster, colloquium series, Münster, Germany, Dec. 2006.
- 2006 Mapping real and abstract spaces. Center for Cognitive Science, University of Freiburg, colloquium series, Freiburg, Germany, Jul. 2006.
- 2006 Thematic relevance and perceptual salience in static weather maps, Transregional Collaborative Research Center SFB/TR 8 Spatial Cognition: Reasoning, Action, Interaction, University of Bremen, colloquium series, Bremen, Germany, Jun. 2006
- 2006 Informationslandschaften im Datenmeer. Inaugural Lecture (Antrittsvorlesung), University of Zürich, Zürich, May 2006.
- 2005 *How can spatial cognition inform GIScience, and how can GIScience inform spatial cognition?* Dagstuhl Seminar 5491: Spatial Cognition: Specialization and Integration. International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, Dec. 4-9, 2005.
- 2006 Geovisualisierung und Raumkognition: Empirische Forschungsbeispiele und Resultate. Seminarreihe Geomatik an der ETH, Federal Institute of Technology (ETH) Zürich, May 2006.
- 2006 Spatialization - Explorative Datenanalyse mit räumlichen Metaphern. Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), colloquium series, Birmensdorf, Apr. 2006.
- 2004 Spatialization: Using spatial metaphors to represent non-spatial information. Center for Information Technology and Society (CITS), Faculty Lecture Series, University of California Santa Barbara, Santa Barbara, Oct. 2004.
- 2004 Spatialization: Explorative Daten-Analyse mit Räumlichen Metaphern. Invited lecture. Symposium: Perspektiven der Quantitativen Geographie im Bereich sozio-ökonomischer Aspekte der Mensch/Umwelt Beziehung. Universität Zürich, Zürich, May 2004.
- 2004 Spatialization: Using spatial metaphors to represent non-spatial information. University of Redlands/ESRI GIS colloquium series, Redlands, CA, Feb. 2004.
- 2003 Spatialization. Brown Bag Lunch Seminar Series. Geography Department of the University of Zürich, Switzerland, Sep. 2003.
- 2003 Cognitively Plausible Information Visualization. Invited lecture. Queen's University GIS Lab, Kingston, Canada, Mar. 25, 2003.
- 2003 Spatialized Browsing in Large Data Archives. Invited seminar. Queen's Centre for Knowledge-Based Enterprises, Kingston, Canada, Mar 26, 2003.
- 2003 Spatialization: Charting the Sea of Information. Invited keynote. Second National Cartographic Conference (GeoCart 2003). Taupo, New Zealand, Feb. 12-14, 2003.
- 2003 Design Principles for Information Visualization. Lecture. Cognitive Science Seminar on Visualizations as Internal Representations and as Augmentations of Cognition (INT 200B), University of California-Santa Barbara, Santa Barbara.
- 2002 Cartographic Representation. Lecture. Seminar on Internal/External Visualizations (PSY 594HV), University of California-Santa Barbara, Santa Barbara.

- 2002 GIScientifically Informed Information Visualization. Invited lecture. Centre for Advanced Spatial Analysis (CASA), University College London (UCL), London U.K.
- 2002 Information Visualization. Lecture. Interdisciplinary Seminar on Human-Computer Interaction (INT200B/CS 595A), University of California-Santa Barbara, Santa Barbara.
- 2002 RePresentation. Invited keynote. EuroConference on Methods to Define Geovisualisation Contents for Users Needs, Albufueira, Por., Mar. 9-14.
- 2000 Usability Evaluation of Spatial Metaphors for Browsing Large Document Collections. Talk. Department of Geography, University of California-Santa Barbara, Santa Barbara.
- 2000 Evaluation of Spatial Metaphors for Information Access. Invited lecture. Department of Geography, San Diego State University, San Diego.
- 1999 Spatial Metaphors for Browsing Large Data Archives. Invited lecture. Department of Geography, Pennsylvania State University, State College.
- 1999 Current Developments in Academic Cartography. Invited lecture. GEOG 3053 - Cartography I. University of Colorado, Boulder.
- 1999/1998 What is GIS? Invited lecture. GEOG 2053 - Maps and Mapping. University of Colorado, Boulder.
- 1998 Alltag als Doktorandin an der University of Colorado-Boulder. Invited lecture. Brown Bag Lunch Seminar Series. Geography Department of the University of Zürich, Switzerland.
- 1998 Visualization of Passenger Flows on the Swiss Federal Railways Network. Invited lecture. GEOG 5103/2 - Elements of GIS. University of Colorado, Boulder.

---

*other professional activities*

- 2021 Panel Moderator: Interdisciplinary Inaugural Lecture Series, University of Zurich, Zürich, Switzerland, Nov. 13, 2021.
- 2021 Co-Organizer: Pre-conference workshop Social Sensing at GIScience 2020/1, Poznan, Poland, Sep. 27, 2020/1 (online).
- 2013 Instructor: International Spatial Cognition Summer Institute (ISCSI) 2013, University of California Santa Barbara, Santa Barbara, CA, Aug 11-17, 2013.
- 2013 Co-Organizer: Pre-conference workshop on Eye Tracking at ICC Dresden, Aug. 25-30, 2013.
- 2013 Co-Organizer: GeoViz Hamburg 2013. International Workshop on Interactive Maps That Help People Think, HafenCity University, Hamburg, Germany, Mar. 6-8, 2013.
- 2013 Co-Organizer: Drawing Graphs and Maps with Curves. Interdisciplinary Dagstuhl, Seminar 13151, Schloss Dagstuhl, Wadern, Apr. 7-12, 2013.
- 2012 Co-Organizer: Pre-conference workshop on Experimental Methods at AutoCarto 2012, Columbus, OH, Sep. 16, 2012.
- 2009 U.S. NSF Spatial Intelligence and Learning Center (SILC) / DFG SFB/TR 8 Spatial Cognition. Workshop on Visualization and Navigation. New York, NY, Jul. 6-10, 2009.

- 2008 Specialist Meeting on Spatial Concepts in GIS and Design, Invited position statement, National Center for Geographic Information and Analysis (NCGIA), Santa Barbara, CA, Dec. 15-16, 2008.
- 2008 International Symposium on Geographic Information Science, Invited position statement, National Center for Geographic Information and Analysis (NCGIA), Santa Barbara, CA, Dec. 11-12, 2008.
- 2008 U.S. NSF Spatial Intelligence and Learning Center (SILC) / SFB/TR 8 Spatial Cognition. Workshop co-leader. Freiburg, Germany, Sep. 2008.
- 2005 National Summer Workshop: GIS and Population Science. Workshop Instructor. Center for Spatially Integrated Social Science (CSISS), University of California Santa Barbara, CA, Jun. 19-July 2, 2005.
- 2005 Image and Meaning 2. MIT School of Science. Workshop participant. The Getty Center, Los Angeles, CA, Jun. 23-25, 2005 (refereed abstract).
- 2005 EnVision05: Exploring a New Visualization Infrastructure Workshop. Invited position statement. Silicon Graphics Campus, Mountain View, CA, Jan. 19, 2005
- 2004 International Geographical Union (IGU). Spatialization of IGU Research Bodies 2000-2004: Connectedness and Reach.  
([http://www.igu-net.org/uk/what\\_is\\_igu/comreachgraph26may.pdf](http://www.igu-net.org/uk/what_is_igu/comreachgraph26may.pdf))
- 2004/2005 National Summer Workshop: Spatial Analysis for the Undergraduate Social Science Curriculum. Workshop Coordinator and Instructor. Center for Spatially Integrated Social Science (CSISS), University of California Santa Barbara, CA.
- 2001/2002 National Summer Workshop: Map Making and Visualization of Spatial Data in the Social Sciences. Workshop Coordinator and Instructor. Center for Spatially Integrated Social Science (CSISS), University of California Santa Barbara, CA.

---

*professional service*

- editorship Associate Editor, Visual Communication - Frontiers in Communication Journal.
- editorial board Annals of the Association of American Geographers (2010-2014), Cartographic Perspectives (-2007, 2011-), Cartographica, Cartography and Geographic Information Science, Cartographic Journal, Computers, Environment and Urban Systems (-2020), Int. Journal of Cartography, Int. Journal of Geographic Information Science (IJGIS), Journal of Spatial Information Science, Spatial Cognition and Computation, Transactions in GIS (2000-2013), Revue Internationale de Géomatique.
- reviewing Annals of the Association of American Geographers, Applied Cognitive Psychology, Cartography and Geographic Information Science, Cartographic Journal, Cartographic Perspectives, Cognitive Research: Principles and Implications, Computers, Environment and Urban Systems, Conference on Visualization and Data Analysis (part of IS&T/ SPIE's International Symposium on Electronic Imaging), Int. Journal of Geographic Information Science, IEEE Computers and Graphics, IEEE Transactions in Visualization and Computer Graphics, IEEE Infovis, Information Visualization, ISPRS Photogrammetry and Remote Sensing, Journal of the Association of American Information Science and Technology, PLOS ONE, Professional Geographer, Spatial Cognition Conference, Spatial Cognition and Computation, Transportation Research C: Emerging Technologies, Topics in Cognitive Science.

Austrian Science Fund, German National Science Fund (DFK), Norwegian Science Foundation Swiss National Research Fund (SNF), U.S. National Science Foundation: NSF Geography and Regional Science Research, CAREER grant program

U.S. National Bizarre Map Challenge, NACIS map competition.

steering cmte. GIScience, COSIT, and Spatial Cognition conference series

program cmte. AGILE, AGIT, Asia-Pacific Symposium on Visualisation (APVIS), Cognitive Society Conference, Conference of Spatial Information Theory (COSIT), Conference on Geographic Information Science (GIScience), Diagrams, Eurographics Emerging area committee, International Conference on Spatial Analysis and Geostatistics (SAGEO), Int. Cartographic Association Conference, Conference on Information Visualization (IV), Geomatik Konferenz, Geoviz Hamburg, International Cartographic Conference, ICA geovis workshops, International Advanced Workshop on Virtual Geographic Environments & Geocollaboration 2003, Chinese University of Hong Kong, Int. Conference on Geoinformatics 2004, Gävle, Sweden, UCGIS Geospatial Visualization & Knowledge Discovery 2003, Lansdowne, VA.

program chairing Int. Conference on Spatial Information Theory (COSIT2022), Kobe, Japan, Sep. 5-9, 2022.

Int. Conference on Spatial Information Theory (COSIT2015), Santa Fe, NM, Sep. 7-11, 2015.

Int. CartoCon 2014 Conference, Olomouc, Czech Republic, Feb. 24-28, 2014.

Int. Conference on Geovisualization (GeoViz 2013), Hamburg, Germany, Mar. 6-8, 2013.

Int. Conference on Geographic Information Science (GIScience 2010), Zurich, Switzerland, Sep. 14-17, 2010.

Int. Conference on Geographic Information Science (AGILE2007), Aalborg, Denmark, May 8-11, 2007.

session organizer Session Series on David Mark, The Thinker 1-3: Does the road cross the park?, Annual Meeting of the Assoc. of the American Geographers, Denver, CO, 2023.

Session Series on Cognition, Behavior, and Representation, Annual Meeting of the Assoc. of the American Geographers, Tampa, FL, 2014.

Session Series on Cognition, Behavior, and Representation, Annual Meeting of the Assoc. of the American Geographers, Los Angeles, CA, 2013.

Panel Session on GIScience and Cartography, GIScience 2012, Columbus, OH, Sep. 18, 2012.

Session Series on Cognition, Behavior, and Representation I-VII, Annual Meeting of the Assoc. of the American Geographers, New York, NY, 2012.

Panel Session on Tribute to Jacques Bertin, 25th International Cartographic Conference, International Cartographic Association, Jul. 3-8, 2011, Paris, France.

Session Series on Cognition, Behavior, and Representation I-IV, Annual Meeting of the Assoc. of the American Geographers, Seattle, WA, 2011.

Featured Symposium on Space-Time Integration in Geography and GIScience. Annual Meeting of the Assoc. of the American Geographers, Seattle, WA, 2011.

Session Series on Geovisualization, Geovisual Analytics, Cognition, Behavior and Representation I-III, Annual Meeting of the Assoc. of the American Geographers, Washington, DC, 2010.

Session Series on Cognition, Behavior, and Representation I-IV, Annual Meeting of the Assoc. of the American Geographers, Las Vegas, NV, 2009.

Cartography Specialty Group Student Paper Competition, Annual Meeting of the Assoc. of the American Geographers, Boston, MA, 2008.

Cognitive Issues in Geographic Information Visualization I & II, Annual Meeting of the Assoc. of the American Geographers, Boston, MA, 2008.

GIS Specialty Group Student Paper Competition, Emerging Themes in GIScience and Systems, Annual Meeting of the Assoc. of the American Geographers, Denver, CO, 2005.

Emerging Themes in GIScience I+II, GIS Specialty Group Student Paper Competition, Annual Meeting of the Assoc. of the American Geographers, Philadelphia, PA, 2004.

Spatialization I & II. Annual Meeting of the Assoc. of the American Geographers, New Orleans, LA, 2003.

Spatialization. Annual Meeting of the Assoc. of the American Geographers, Los Angeles, CA, 2002.

Spatialization, Cognitive Issues in Visualization I & II. Annual Meeting of the Assoc. of the American Geographers, New York, NY, 2001.

scientific boards  
-2017 Maison de Science de L'homme de Dijon (FRA)  
Places and Spaces: Mapping Science (USA)  
New Map Plus Advisory Board, University of Kentucky (USA).

university service UZH Interdisciplinary Committee, UZH Ethics Review Board, UZH Digital Society Initiative: Board of Directors (2016-2021), UZH science faculty: student affairs cmte. (2016-18), UZH science faculty board (2014-2016), UZH science faculty: research committee, teacher education committee, various science faculty search committees.

Search committee member for senior hire in GIScience at Harvard University (2008)

Tenure and promotion case reviewer (various across the globe).

Board member of the women scientist mentoring program "FrauschafftWissen"

department service Head Teaching (2016-2018), Head of Department (2014-2016), IT cmte., teaching cmte., graduate school advisory board, InnoPool review board, InVers delegate, teacher training board, strategy cmte. Examiner for final MSc exams, with minors in geography (2005-2009).

organizer of the department colloquium (ZGK 2006), department excursion (2007), graduate school workshop on funding opportunities (2011), department workshop on performance assessment in teaching (2008).

outreach

DIZH Spotify Channel Schampar Digital. In conversation with Frank Richter and Jessica Reust. On Spotify: <https://t.ly/9b69x>

Spatial Analytics + Data (SAD) Interview Series. In conversation with Rachel Franklin, Daniel Arribas-Bel and Levi John Wolf. On YouTube: <https://youtu.be/eIGPIIFs1V8>

Machen uns Google und Co. dumm? Interview given für Durchblick, Nov. 10, 2020: <https://durchblick.podigee.io/20-macht-uns-google-dumm>

So behalten wir trotz Google Maps unsere Raumvorstellung, Feb. 24, 2019:  
<https://www.higgs.ch/so-behalten-wir-trotz-google-maps-unsere-raumvorstellung/18590/>

SRF Nano (3SAT): Unser biologisches Navigationssystem muss reaktiviert werden, 23.11.2018: <https://www.srf.ch/kultur/wissen/orientierungslose-menschen-unser-biologisches-navigationssystem-muss-reaktiviert-werden>

Stimmt es, dass? Navigationsgeräte unseren Orientierungssinn beeinflussen?  
Article in the UZH Journal, May 2015.

Boom von Navigationssystemen: Unser Orientierungssinn geht auf Krücken. Interview given for Süddeutsche Zeitung.

Navis sind heute für viele Autofahrer unverzichtbare Wegweiser. Verlieren wir durch die digitalen Helfer langsam unseren Orientierungssinn? Interview given for ADAC Motorwelt.

How to Make a Better Map—Using Neuroscience. Interview given for CityLab, The Atlantic.

Die wunderbare Welt der digitalen Karten? Interview given for SRF Wissen Digital.

Die Kartografie im 21. Jahrhundert. Interview given for matrix - computer & neue medien, oe1@ORF.

Examiner for high school final exams in geography (Matura) at local high schools.

Participant with a 3D geowall exhibit for national science and education fairs (basecamp09, Nationaler Zukunftstag).

Landkarten werden nicht aussterben, interview given for science@ORF.

Political realities are off the maps. Article and cartograms on the U.S. Presidential Elections 2004 published in the Santa Barbara News Press, Nov. 8, 2004.

Mapping the Census2000. Eight census maps published in the Santa Barbara News Press, March 30 and April 8, 2001.

blog entries *together with supervisees*

<https://www.geo.uzh.ch/en/department/125/blog/navi.html>

<https://www.geo.uzh.ch/en/department/125/blog/the-eyes-have-it.html>

<https://www.geo.uzh.ch/en/department/125/blog/political-decision-making.html>

<https://www.geo.uzh.ch/en/department/125/blog/pandemic.html>

code <https://gitlab.uzh.ch/giva>

(2000-2005) Regular talks at local elementary schools during Geography Awareness week.

---

### *grants<sup>1</sup>*

2023 Swisstopo NextGen Project (1 year: CHF 100,000)

2018 Co-PI: Swiss National Science Fund (2 years: CHF 250,000)

2017 UZH Teaching Fund (Lehrkredit: CHF 40,000)

---

<sup>1</sup> Only grants as PI, and only a subset as Co-PI are listed. Complete list available here:  
<http://www.research-projects.uzh.ch/a1342.htm>

- 2017 PI: Swiss National Science Fund (2 years: CHF 102,819)
- 2017 PI: ERC Advanced Grant (5 years: EUR 2,5 Mio)
- 2016 UZH Teaching Fund (Lehrkredit: CHF 8000)
- 2016 Co-I: Swiss National Science Fund (3 years: CHF)
- 2014 PI: Swiss National Science Fund (2 years: CHF 172,007)
- 2014 Co-PI: Swiss National Science Fund (3 years: CHF 176,876)
- 2013 Co-PI: Swiss National Science Fund (3 years: CHF 161,400 ).
- 2012 Co-Organizer: Drawing Graphs and Maps with Curves. Interdisciplinary Dagstuhl, Seminar 13151, Schloss Dagstuhl, Wadern, Jul. 4-12, 2013.
- 2011 Co-Investigator: Commission for Technology and Innovation (CTI) (1.5 years: CHF ~ 67'390)
- 2011 Primary Investigator: Swiss National Science Fund (3 years: CHF ~170,000)
- 2009 Primary Investigator: Swiss National Science Fund (2 years: CHF 97,475)
- 2008 Collaborator: EU FP7 VisMaster FET/225429: Visual Analytics - Mastering the Information Age (EUR 10,000)
- 2007 Lotteriefonds des Kantons Zürich for the Stiftung Erziehung zur Toleranz (SET) (6 years: CHF 360,000)
- 2006 Primary Investigator: Swiss National Science Fund (2 years: CHF 97,475)
- 2005 International Cartographic Association U.S. National Committee young scholar travel award
- 2004 Primary Investigator: National Geospatial Intelligence Agency (NGA) NURI (option year: 146,000)
- 2004 Primary Investigator: U.S. National Science Foundation, Geography and Regional Science (3 years: \$180,000)
- 2003 UCSB Junior Faculty Incentive award (summer salary)
- 2001 International Cartographic Association U.S. National Committee young scholar travel award
- 2000 Primary Investigator: National Geospatial Intelligence Agency (NGA) NURI (3 years: \$319,700.
- 2000 European Science Foundation: EURESCO young scientist travel grant
- 1999 Beverly Sears Dean's Small Grant. University of Colorado, Boulder.
- 1996 Canton of Zürich, U.S. travel grant.

---

### *advising*

Habil./HDRexternal member: S. Christophe (IGN, France, 2017).

UZH Ph.D. chair (Fakultätsvertretung/Betreuung): list since 2006 available online at: <https://www.geo.uzh.ch/en/units/gjva/research/PhD-Projects.html>

ongoing: C. Muratori, Q. Ying, D. Zingaro

2023: B. Chen, A. Kapaj, 2020: A. Brügger, I. Lokka. 2019: S. Credé.

2018: K. Bektas, G. Boo. 2017: A. Bruggmann, S. Maggi. 2016: J. Ory (IGN, France),

J. Stirnemann (U./HdK Berne).

2015: B. Weninger (HCU Hamburg, Germany). 2014: P. Crease; 2013: S. DeSabbata, 2012: M. Salvini, J. Wilkening; 2011: H. Kaspar, A-K. Lautschenschütz, 2009: F. Ostermann, 2007: D. Caduff, U.-J. Rüetschi, 2006: C. Keller-Lengen.

committee: S. Müller, W. Wei (UZH epidemiology/biostats, 2020), Y. Rotacher, (UZH USZ/Neuroscience, 2020).

external member at ETH Zurich: A. Reuschel (2013), A. Neumann (2010), T. Dahinden (2008).

external examiner: Aline Menin (Grenoble, France, 2020), Marion Dumont (IGN/Paris Est, France 2018), Cecile Saint Marc, (Grenoble, France, 2017), J. Korpi (AaltoU, Finland, 2015), C. Hoarau (IGN/Paris Est, France, 2015), P. Kettunen (AaltoU, Finland, 2014), F. Dhee (IGN/Paris 1, France, 2013), K. Ooms (UGent, Belgium, 2012), Xia Li (ITC/UTwente, The Netherlands, 2011), E. Chesneau (IGN/Paris Est, France, 2006), S. Christophe (IGN/Paris Est, France, 2009), O. Swienty (TU München, 2008), A. Nielsen (UAalborg, 2008).

M.Sc. chair (Fakultätsvertretung/Betreuung) list since 2006 available online at:

<https://www.geo.uzh.ch/en/units/giva/research/Msc-theses.html>

committee member: W. van der Weijden (EU Cartography MSc), J. Schneider (UZH History, 2013), C. Derungs (2007).

B.S./Dipl. chair (Betreuung): D. Grzetic-Zaman, M. Karcher (2011), S. Kaspar (2010); all School of Applied Science Karlsruhe (Germany)

UCSB Ph.D. committee member: A. Keuper (2004), K. Goldsberry (2007; chair until 2005)

M.A. chair: K. Goldsberry (2004), T. Pingel (2004), A. Boughmann (2006)

committee member: S. Rebich (2006), B. Norton (2002), E. Talassa (MAT, 2002), M. Marsh (2003), A. Nürnberger (2003), J. Corbett (2004)

---

### *professional memberships*

Academia Net (by nomination only)

Sigma Xi honor society (by nomination only)

International Cartographic Association (ICA): Past Vice President and Member of the Executive Committee.

Geovisualization Commission: Corresponding Member;

Cognitive Visualization Commission: Initiator and past 1. Chair.

Deutsche Kartographische Gesellschaft für Kartographie (DGfK). Kommission: Forschung in der Kartographie. Board Member.

Schweiz. Gesellschaft für Kartographie (SGK) (Swiss Society of Cartography)

North American Cartographic Society (NACIS)

Canadian Association of Cartography (CCA)

Association of American Geographers (AAG)

Registered in the Naturwissenschafterinnenkartei (NAWIKa) of the Swiss Academy of Sciences. A Database containing background information on Swiss women scientists.