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*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.

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*related training*

- May 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.

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*employment*

- present 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. Sevrük.

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### *teaching experience*

#### UZH:

- regular courses BSc: Intro. Cartography & Geovisualization (GEO115), Empirical Methods I (GEO216)  
MSc: Geovisualization (GEO454), PhD: Promotion Seminar II.

#### UCSB:

- 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.

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### *academic honors and achievements*

- Fall 2008 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).
- Spring 1998 Award: Association of the American Geographers, GIS Specialty Group. Best Student Paper (see Fabrikant, S.I. 2000).
- Spring 1998 National Geographic Society Geography Award. An Interactive map animation on *Sea Surface Brightness Temperatures* won first place. Co-authored with Michael J. Rock.
- 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.

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### *publications*

- refereed Hegarty, M., Canham, M., and **Fabrikant, S.I.** (2010). Thinking about the Weather: How Display Salience 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 adequate 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)
- 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*. (<http://dx.doi.org/10.1002/asi.21227>, 2009)
- 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. (CDROM, refereed abstract).
- 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.
- 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.
- 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.**, 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.
- 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.
- 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.
- 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.**, 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.** (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.
- 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.
- 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.
- 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, refereed abstract).
- 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.** (2004). Abstraction and Scale in Spatialization. *Proceedings, Second National Cartographic Conference (GeoCart 2003)*. Taupo, New Zealand, Feb. 12-14, 2003: 35-43.
- 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.
- 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 Verlag, Berlin, Germany: 316-331.
- 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.
- 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.

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.

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

[Above paper was heavily plagiarized by Eklund P.W. and Akamatsu H., in an invited keynote given by Peter W. Eklund at the First International Symposium on Cyber Worlds (CW'02), Nov. 6-8, Tokyo, Japan, 2002. The paper was removed from the CW'02 conference proceedings.]

**Fabrikant, S. I.** (2000). Spatialized Browsing in Large Data Archives. *Transactions in GIS*, 4(1): 65-78.

refereed (abstract) **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.

**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.

**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

- 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.
- editorship **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.
- books **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)
- non-refereed **Fabrikant, S. I.**, and Lobben, A. (eds.) (2009). Introduction. Special Issue on Cognitive Issues in Geovisualization. *Cartographica*, vol. 44, no. 3: 139-143.
- 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.
- 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.
- 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*.
- Fabrikant, S.I.** (2000) Transitions from Childhood to the Workforce, *Position Paper*. NSF GeoEd Meeting, Santa Barbara, CA, May 27-28, 2000.

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### *conference presentations and invited lectures*

- conferences (refereed) Zanolà, 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\*, 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. (\* 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. (2009) *Spatial Concepts Curriculum for GIS and Design*. Panelist. Annual Meeting of the 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 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 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 American Geographers, San Francisco, CA, Mar. 17-21, 2007.
- Fabrikant, S.I. (2007). *Aus der Werkstatt einer Kartenmacherin*. Invited talk. Interdisziplinäre Fachtagung, Alfred 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). *How can spatial cognition inform GIScience, and how can GIScience inform spatial cognition?* Invited talk. Dagstuhl Seminar No. 05491: Spatial Cognition: Specialization and Integration. International Conference and Research Center for Computer Science, Dec. 4-9, 2005, Schloss Dagstuhl, Wadern, Germany.
- 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 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 American Geographers, New Orleans, LA, Mar. 5-8, 2003.
- Fabrikant, S. I. (2003). *Spatialization: Charting the Sea of Information*. Invited keynote. Second National Cartographic Conference (GeoCart 2003). Taupo, New Zealand, Feb. 12-14, 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. (2002). *RePresentation*. Invited keynote. EuroConference on Methods to Define Geovisualisation Contents for Users Needs, Albufueira, Por., Mar. 9-14.
- 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*

- 2009 Fabrikant, S. I. 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 Fabrikant, S. I., Designing Cognitively Inspired Geovisualization Displays, invited key note, 9<sup>th</sup> TheoQuant Meeting, Dijon, France, Mar. 4-6, 2009.
- 2008 Fabrikant, S. I., Spatialization, die räumliche Darstellung von grossen nicht-räumlichen Datenbanken, colloquium series, Hochschule Karlsruhe - Technik und Wirtschaft Fakultät für Geomatik, Karlsruhe, Dec. 2008.
- 2008 Geographie, UZH Arbeitstelle für Hochschuldidaktik, colloquium series, University of Zürich, Zürich, Nov. 2008.
- 2008 Fabrikant, S.I. Digitaler Planet Erde: Orientierungs- und Navigationshilfen im Datentsunami, Geographisch-Ethnographische Gesellschaft Zürich, colloquium series, Zürich, Oct. 2008.
- 2008 Fabrikant, S.I. Visual Analytics of Visual Geographic Analytics Displays. Department of Geography, University of Basel, colloquium series, Basel, Oct. 2008.
- 2008 Fabrikant, S.I. Designing Geovisualization Displays that Amplify Spatial Inference Making. Department of Development and Planning, Aalborg University, Lecture, Copenhagen, Denmark, Oct. 2008.
- 2008 Fabrikant, S.I. 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 Fabrikant, S.I. Thematic relevance and perceptual salience in static weather maps, Lecture. Seminar on Eye Movement Research in Geovisualization (GEO453), University of Zürich, Zürich, Nov. 2007.
- 2007 Fabrikant, S.I. Neue Ansätze zur Visualisierung von Raumdaten. Ringvorlesung Geographie mit fachwissenschaftlicher Vertiefung (GEO891), University of Zurich/ETH Zürich, Sep. 2007.
- 2006 Fabrikant, S.I. Looking through static and dynamic geovisualization displays. Institute for Geoinformatics, University of Münster, colloquium series, Münster, Germany, Dec. 2006.
- 2006 Fabrikant, S.I. Mapping real and abstract spaces. Center for Cognitive Science, University of Freiburg, colloquium series, Freiburg, Germany, Jul. 2006.
- 2006 Fabrikant, S.I. 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 Fabrikant, S.I. Informationslandschaften im Datenmeer. Inaugural Lecture (Antrittsvorlesung), University of Zürich, Zürich, May 2006.
- 2006 Fabrikant, S.I. Geovisualisierung und Raumkognition: Empirische Forschungsbeispiele und Resultate. Seminarreihe Geomatik an der ETH, Federal Institute of Technology (ETH) Zürich, May 2006.
- 2006 Fabrikant, S.I. Spatialization - Explorative Datenanalyse mit räumlichen Metaphern. Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), colloquium series, Birmensdorf, Apr. 2006.
- 2004 Fabrikant, S.I. 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 Fabrikant, S.I. 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 Fabrikant, S.I. Spatialization: Using spatial metaphors to represent non-spatial information. University of Redlands/ESRI GIS colloquium series, Redlands, CA Feb. 2004.
- 2003 Fabrikant, S. I. Spatialization. Brown Bag Lunch Seminar Series. Geography Department of the University of Zürich, Switzerland, Sep. 2003.
- 2003 Fabrikant, S. I. Cognitively Plausible Information Visualization. Invited lecture. Queen's University GIS Lab, Kingston, Canada, Mar 25, 2003.
- 2003 Fabrikant, S. I. Spatialized Browsing in Large Data Archives. Invited seminar. Queen's Centre for Knowledge-Based Enterprises, Kingston, Canada, Mar 26, 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.
- 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*. Talk. Department of Geography, San Diego State University, San Diego.
- 1999 *Spatial Metaphors for Browsing Large Data Archives*. Talk. Department of Geography, Pennsylvania State University, State College.
- 1999 *Current Developments in Academic Cartography*. Invited lecture. GEOG 3053 – Cartography I. University of Colorado, Boulder.
- Fall, Summer 1998 *What is GIS?* Invited lecture. GEOG 2053 – Maps and Mapping. University of  
Fall 1997 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.

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### *other professional activities*

- 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.

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### *professional service*

- editorial board* Annals of the Association of American Geographers, Cartographic Perspectives (-2007), Cartographica, Computers, Environment and Urban Systems, Journal of Spatial Information Science, Transactions in GIS, Revue Internationale de Géomatique.
- reviewing* Annals of the Association of American Geographers, Applied Cognitive Psychology, Cartography and Geographic Information Science, Cartographic Perspectives, 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, Professional Geographer, Spatial Cognition Conference, Spatial Cognition and Computation, Transportation Research C: Emerging Technologies, Topics in Cognitive Science.  
U.S. National Science Foundation: NSF Geography and Regional Science Research, CAREER grant program, Austrian Science Fund.
- program cmte.* AGILE (Programme Co-Chair 2007), Asia-Pacific Symposium on Visualisation (APVIS), 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. Conference on Information Visualization (IV), 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 Workshop 2003, Lansdowne, VA.
- program chair* Int. Conference on Geographic Information Science GIScience 2010, Sep. 14-17, 2010, Zurich, Switzerland.
- session organizer* Session Series on Cognition, Behavior, and Representation I-VI, Annual Meeting of the Assoc. of the American Geographers, Boston, MA, 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.

community outreach/service 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.

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

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### *grants*

- 2009 Primary Investigator: Swiss National Science Fund (2 years: CHF 97,475)
- 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.

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### *advising*

- UZH Ph.D. chair (Fakultätsvertretung): A-K. Lautschenschütz, J. Wilkening, M. Salvini, F. Ostermann (2009), D. Caduff (2007), U.-J. Rüetschi (2007), C. Keller-Lengen (2006).  
  
external reader: S. Christophe (IGN, France, 2009), A. Neumann, T. Dahinden (2008) (both ETH Zürich), O. Swienty (TU München, 2008), A. Nielsen (University of Aalborg, 2008), E. Chesneau (IGN France, 2006).
- M.S. chair (Fakultätsvertretung): A. Gnos, O. Abel-Wahab, S. Maggi, S. Zanola, C. Gabathuler (2009), S. Garlandini (2009), S. Hinn (2009), M. Chopard (2008).  
  
committee member: C. Derungs (2007)
- UCSB Ph.D. committee member: A. Keuper (2004), K. Goldsberry (2007), 5 students (ongoing)
- 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)

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### *professional memberships*

International Cartographic Association (ICA) Commission on Visualization and Virtual Environments, corresponding 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 Naturwissenschaftlerinnenkartei (NAWIK) of the Swiss Academy of Sciences. A Database containing background information on Swiss women scientists.

sf/jan. 2010