L. NIKLAS E. ELMQVIST

College of Information Studies
University of Maryland, College Park
Hornbake Building, South Wing
4130 Campus Drive, College Park, MD 20742, USA
Website: https://sites.umiacs.umd.edu/elm/

Office (HBK 2117H): +1 (301) 405-7414
Cell: +1 (765) 418-5677
Fax: +1 (301) 314-9145
E-mail: elm@umd.edu
Twitter: @NElmqvist

EDUCATION

Chalmers University of Technology	Göteborg, Sweden	2006	Ph. D. in Computer Science
Chalmers University of Technology	Göteborg, Sweden	2001	M. Sc. in Comp. Sci. & Eng.
Chalmers University of Technology	Göteborg, Sweden	2001	B. Sc. in Comp. Sci. & Eng.

- Ph.D. dissertation: "*3D Occlusion Management and Causality Visualization,*" School of Computer Science & Engineering, Chalmers University of Technology, Göteborg, Sweden, Dec. 2006 (ISBN 91-7291-869-1)
- Ph.D. Advisor: Professor Philippas Tsigas
- Ph.D. Defense: December 19, 2006 (Opponent: Professor Doug A. Bowman, Virginia Tech)

PROFESSIONAL EXPERIENCE

University of Maryland College Park, MD, USA
Full Professor (with tenure) August 2019 – present
Associate Professor (with tenure) August 2014 – August 2019

- Faculty member in the College of Information Studies (2014–present)
- Affiliate professor in the Department of Computer Science (2014–present)
- Member of the University of Maryland Institute for Advanced Computer Studies (UMIACS) (2014–present)
- Director of the Human-Computer Interaction Laboratory (HCIL) (2016–present)

Purdue University West Lafayette, IN, USA
Associate Professor (with tenure) August 2014
Assistant Professor (tenure-track) August 2008 – August 2014

- Faculty member in the School of Electrical and Computer Engineering

Microsoft Research – INRIA Center Paris, France
Postdoctoral Research Fellow June 2007 – August 2008

- Member of the Aviz research group, mentored by Dr. Jean-Daniel Fekete

INRIA/LRI at Université Paris-Sud Paris, France
Postdoctoral Research Fellow January 2007 – June 2007

- Member of the Aviz/In-Situ research groups, mentored by Dr. Jean-Daniel Fekete

Georgia Institute of Technology Atlanta, GA, USA
Visiting Scholar Spring 2006

- Visiting member of the Information Interfaces research group

Chalmers University of Technology Göteborg, Sweden
Ph.D. Student September 2001 – December 2006

- Member of the Distributed Computing and Systems research group, advised by Dr. Philippas Tsigas

PUBLICATIONS

- In all publications, my name is underlined.
- I follow the convention where the first author is the lead author, but the last author is often the most senior author with a supervisory role of the project. In my work, the first author is often a student I am supervising.
- Students or postdoctoral scholars are marked with an asterix (*); students or postdocs under my direct supervision are marked with a dagger (†).
- My primary area of publication is computer science, where conferences papers are often counted as having equal or higher prominence to journal publications. These conference papers are strictly peer-reviewed with at least three external reviewers and have acceptance rates of 30% or lower.
- Acceptance rates are given for all conference papers (if known); these are specific to each year.
- Impact factors are specified (if known) using the Clarivate Analytics Journal Citation Report (JCR) at the time of recording.

Journal Papers (peer-reviewed)

J73. Zhe Cui†, Jayaram Kancherla*, Kyle W. Chang*, Niklas Elmqvist, Héctor Corrada Bravo. Proactive Visual and Statistical Analysis of Genomic Data in Epiviz. *Bioinformatics*, btz883, 2019. (Impact Factor 4.531)

J72. Ninger Zhou, Lorraine Kisselburgh, Senthil Chandrasegaran†, Karthik Badam†, Niklas Elmqvist, Karthik Ramani. Using Social Interaction Trace Data and Context to Predict Collaboration Quality and Creative Fluency in Collaborative Design Learning Environments. *International Journal of Human-Computer Studies*, to appear.

J71. Nicole Jardine*, Brian Ondov†, Niklas Elmqvist, Steven Franconeri. The Perceptual Proxies of Visual Comparison. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2019), 26(1):386–396, 2020. (Impact Factor 3.078) (**Honorable mention award**)

J70. Andrea Batch†, Andrew Cunningham, Maxime Cordeil, Niklas Elmqvist, Tim Dwyer, Bruce H. Thomas, Kim Marriott. There Is No Spoon: Evaluating Performance, Space Use, and Presence with Expert Domain Users in Immersive Analytics. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2019), 26(1):536–546, 2020. (Impact Factor 3.078)

J69. Amira Chalbi*, Jacob Ritchie*, Deok Gun Park†, Jungu Choi†, Nicolas Roussel, Niklas Elmqvist, Fanny Chevalier. Common Fate for Animated Transitions in Visualization. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2019), 26(1):1012–1021, 2020. (Impact Factor 3.078)

J68. Jinho Choi*, Sanghun Jung*, Deok Gun Park†, Jaegul Choo, Niklas Elmqvist. Visualizing for the Non-Visual: Enabling the Visually Impaired to Use Visualization. *Computer Graphics Forum* (Proc. IEEE EuroVis 2019), 38(3):249–260, 2019. (Impact Factor 2.046)

J67. Calvin Yau*, Morteza Karimzadeh*, Chittayong Surakitbanharn*, Niklas Elmqvist, David S. Ebert. Bridging the Data Analysis Communication Gap Utilizing a Three-Component Summarized Line Graph. *Computer Graphics Forum* (Proc. IEEE EuroVis 2019), 38(3):375–386, 2019. (Impact Factor 2.046)

J66. Andreas Mathisen*, Tom Horak*, Clemens Nylandsted Klokmose, Kaj Grønbæk, Niklas Elmqvist. InsideInsights: Integrating Data-Driven Reporting in Collaborative Visual Analytics. *Computer Graphics Forum* (Proc. IEEE EuroVis 2019), 38(3): 649–661, 2019. (Impact Factor 2.046)

J65. Zhe Cui†, Sriram Karthik Badam†, Adil Yalcin†, Niklas Elmqvist. DataSite: Proactive Visual Data Exploration with Computation of Insight-based Recommendations. *Information Visualization*, 18(2):251–267, 2019. (Impact Factor 0.923)

J64. Sriram Karthik Badam†, Zhicheng Liu, Niklas Elmqvist. Elastic Documents: Coupling Text and Tables through Contextual Visualizations for Enhanced Document Reading. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2018), 25(1):661–671, 2019. (Impact Factor 3.078)

J63. Sriram Karthik Badam†, Andreas Mathisen*, Roman Rädle*, Clemens Nylandsted Klokmose, Niklas Elmqvist. Vistrates: A Component Model for Ubiquitous Analytics. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2018), 25(1):586–596, 2019. (Impact Factor 3.078)

J62. Brian Ondov[†], Nicole Jardin[*], Niklas Elmqvist, Steven Franconeri. Face to Face: Evaluating Visual Comparison. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2018), 25(1):861–871, 2019. (Impact Factor 3.078)

J61. Biswaksen Patnaik[†], Andrea Batch[†], Niklas Elmqvist. Information Olfactation: Harnessing Scent to Convey Data. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2018), 25(1):726–736, 2019. (Impact Factor 3.078)

J60. Zhe Cui[†], Shivalik Sen[†], Sriram Karthik Badam[†], Niklas Elmqvist. VisHive: Supporting Web-based Visualization through Ad-hoc Computational Clusters of Mobile Devices. *Information Visualization*, 18(2):195–210, 2019. (Impact Factor 0.923)

J59. Justin Wagner[*], Florin Chelaru[*], Jayaram Kancherla[*], Joseph N. Paulson, Alexander Zhang, Victor Felix. Anup Mahurkar, Niklas Elmqvist, Héctor Corrada Bravo. Metaviz: interactive statistical and visual analysis of metagenomic data. *Nucleic Acids Research*, 46(6):2777–2787, 2018. (Impact Factor 11.561)

J58. Deok Gun Park[†], Steven Drucker, Roland Fernandez, Niklas Elmqvist. ATOM: A Grammar for Unit Visualization. *IEEE Transactions on Visualization & Computer Graphics*, 24(12):3032–3043, 2018. (Impact Factor 3.078)

J57. Fanny Chevalier, Nathalie Henry Riche, Basak Alper, Catherine Plaisant, Jeremy Boy, Niklas Elmqvist. Observations and Reflections on Visualization Literacy at the Elementary School Level. *IEEE Computer Graphics & Applications*, 38(3):21–29, 2018. (Impact Factor 1.64)

J56. Sriram Karthik Badam[†], Niklas Elmqvist. Visfer: Camera-based Visual Data Transfer for Cross-Device Visualization. *Information Visualization*, 18(1):68–93, 2019. (Impact Factor 0.923)

J55. Deok Gun Park[†], Seungyeon Kim[*], Jurim Lee[*], Jaegul Choo, Nicholas Diakopoulos, Niklas Elmqvist. ConceptVector: Text Visual Analytics via Interactive Lexicon Building using Word Embedding. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2017), 24(1):361–370, 2018. (Impact Factor 3.078)

J54. Andrea Batch[†], Niklas Elmqvist. The Interactive Visualization Gap in Initial Exploratory Data Analysis. *IEEE Transactions on Visualization & Computer Graphics* (Proc. VAST/InfoVis/SciVis 2017), 24(1):278–287, 2018. (Impact Factor 3.078)

J53. M. Adil Yalcin[†], Niklas Elmqvist, Benjamin B. Bederson. Keshif: Rapid and Expressive Tabular Data Exploration for Novices. *IEEE Transactions on Visualization & Computer Graphics*, 24(8):2339–2352, 2018. (Impact Factor 3.078)

J52. Tak Yeon Lee[*], Alison Smith[*], Kevin Seppi, Niklas Elmqvist, Jordan Boyd-Graber, Leah Findlater. The human touch: How non-expert users perceive, interpret, and fix topic models. *International Journal of Human-Computer Studies*, 105:28–42, 2017. (Impact Factor 2.300)

J51. Senthil Chandrasegaran[†], Sriram Karthik Badam[†], Lorraine Kisselburgh, Karthik Ramani, N. Elmqvist. Integrating Visual Analytics Support for Grounded Theory Practice in Qualitative Text Analysis. *Computer Graphics Forum* (Proc. IEEE EuroVis 2017), 36(3):201–212, 2017. [46/170, 27% acc. rate] (Impact Factor 2.046)

J50. Sriram Karthik Badam[†], Niklas Elmqvist, Jean-Daniel Fekete. Steering the Craft: UI Elements and Visualizations for Supporting Progressive Visual Analytics. *Computer Graphics Forum* (Proc. IEEE EuroVis 2017), 36(3):491–502, 2017. [46/170, 27% acc. rate] (Impact Factor 2.046)

J49. Senthil Chandrasegaran[†], Sriram Karthik Badam[†], Lorraine Kisselburgh, Kylie Peppler, Niklas Elmqvist, Karthik Ramani. VizScribe: A Visual Analytics Approach to Understand Designer Behavior. *International Journal of Human-Computer Studies*, 100:66–80, 2017. (Impact Factor 2.300)

J48. Minjeong Kim[*], Kyeongpil Kang[*], Deok Gun Park[†], Jaegul Choo, Niklas Elmqvist. TopicLens: Efficient Multi-Level Visual Topic Exploration of Large-Scale Documents. *IEEE Transactions on Visualization and Computer Graphics* (Proc. VAST/InfoVis/SciVis 2016), 23(1):151–160, 2017. [33/157, 21% acc. rate] (Impact Factor 3.078)

J47. Alison Smith[*], Tak Yeon Lee[*], Forough Poursabzi-Sangdeh[*], Jordan Boyd-Graber, Niklas Elmqvist, Leah Findlater. Evaluating Visual Representations for Topic Understanding and Their Effects on Manually Generated Labels. *Transactions of the Association for Computational Linguistics*, 5:1-15, 2017.

J46. Ben Shneiderman, Catherine Plaisant, Steven Jacobs, Niklas Elmqvist, Nicholas Diakopoulos. Grand challenges for HCI researchers. *ACM Interactions*, 23(5):24–25, 2016.

J45. Udayan Umapathi[†], Niklas Elmqvist. Mushaca: A 3-Degrees-of-Freedom Mouse Supporting Rotation. *International Journal of Human-Computer Interaction*, 32(6):481–492, 2016. (Impact Factor 1.259)

J44. M. Adil Yalcin[†], Niklas Elmqvist, Benjamin B. Bederson. AggreSet: Rich and Scalable Set Exploration using Visualizations of Element Aggregations. *IEEE Transactions on Visualization and Computer Graphics* (Proc. VAST/InfoVis/SciVis 2015), 22(1):688–697, 2016. [39/178, 22% acc. rate] (Impact Factor 3.078)

J43. Sujin Jang[*], Niklas Elmqvist, Karthik Ramani. MotionFlow: Visual Abstraction and Aggregation of Sequential Patterns in Human Motion Tracking Data. *IEEE Transactions on Visualization and Computer Graphics* (Proc. IEEE VAST/InfoVis/SciVis 2015), 22(1):21–30, 2016. [31/149, 21% acc. rate] (Impact Factor 3.078)

J42. William Z. Bernstein[*], Devarajan Ramanujan[*], Devadatta M. Kulkarni, Jeffrey Tew, Niklas Elmqvist, Fu Zhao, Karthik Ramani. Mutually Coordinated Visualization of Product and Supply Chain Metadata for Sustainable Design. *Journal of Mechanical Design*, 137(12):121101, 2015. (Impact Factor 2.783)

J41. Zhenpeng Zhao[†], William Benjamin[*], Niklas Elmqvist, Karthik Ramani. Sketcholution: Interaction Histories for Sketching. *International Journal of Human-Computer Studies*, 82:11–20, October 2015. (Impact Factor 2.300)

J40. Jungu Choi[*], Deok Gun Park[†], Yuetling Wong[†], Eli Raymond Fisher[†], Niklas Elmqvist. VisDock: A Toolkit for Cross-Cutting Interactions in Visualization. *IEEE Transactions on Visualization & Computer Graphics*, 21(9):1087–1100, 2015. (Impact Factor 3.078)

J39. Samah Gad[*], Waqas Javed[†], Sohaib Ghani[†], Niklas Elmqvist, Tom Ewing, Keith N. Hampton, Naren Ramakrishnan. ThemeDelta: Dynamic Segmentations over Temporal Topic Models. *IEEE Transactions on Visualization & Computer Graphics*, 21(5):672–685, 2015. (Impact Factor 3.078)

J38. Yuetling Wong[†], Jieqiong Zhao[†], Niklas Elmqvist. Evaluating Social Navigation Visualization in Online Geographic Maps. *International Journal of Human-Computer Interaction*, 31(2):118–127, 2015. (Impact Factor 1.259)

J37. Sriram Karthik Badam[†], Eli Raymond Fisher[†], Niklas Elmqvist. Munin: A Peer-to-Peer Middleware for Ubiquitous Analytics and Visualization Spaces. *IEEE Transactions on Visualization & Computer Graphics*, 21(2):215–228, 2015. (Impact Factor 3.078)

J36. Niklas Elmqvist, Ji Soo Yi. Patterns for Visualization Evaluation. *Information Visualization*, 14(3):250–269, 2015. (Impact Factor 0.923)

J35. Sungahn Ko[*], Jieqiong Zhao[†], Jing Xia[*], Shehzad Afzal[*], Xiaoyu Wang, Greg Abram, Niklas Elmqvist, Len Kne, David Van Riper, Kelly Gaither, William Tolone, William Ribarsky, David S. Ebert. VASA: Interactive Computational Steering of Large Asynchronous Simulation Pipelines for Societal Infrastructure. *IEEE Transactions on Visualization & Computer Graphics* (Proc. IEEE VAST/InfoVis/SciVis 2014), 20(12):1853–1862, 2014. [33/146, 23% acc. rate] (Impact Factor 3.078)

J34. Krishna C. Madhavan, Niklas Elmqvist, Mihaela Vorvoreanu, Xin Chen[*], Yuetling Wong[†], Hanjun Xian[*], Zhihua Dong[*], Aditya Johri. DIA2: Web-based Cyberinfrastructure for Visual Analytics of Funding Portfolios. *IEEE Transactions on Visualization & Computer Graphics* (Proc. IEEE VAST/InfoVis/SciVis 2014), 20(12):1823–1832, 2014. [33/146, 23% acc. rate] (Impact Factor 3.078)

J33. Jonathan C. Roberts, Panagiotis D. Ritsos, Sriram Karthik Badam[†], Dominique Brodbeck, Jessie Kennedy, Niklas Elmqvist. Visualization Beyond the Desktop – The Next Big Thing. *IEEE Computer Graphics & Applications*, 34(6):26–34, 2014. (Impact Factor 1.64)

J32. Eli Raymond Fisher[†], Sriram Karthik Badam[†], Niklas Elmqvist. Designing Peer-to-Peer Distributed User Interfaces: Case Studies on Building Distributed Applications. *International Journal of Human-Computer Studies*, 72(1):100–110, 2014. (Impact Factor 2.300)

J31. Sohaib Ghani[†], Bum chul Kwon[*], Sukwon Lee[*], Ji Soo Yi, Niklas Elmqvist. Visual Analytics for Multimodal Social Network Analysis: A Design Study with Social Scientists. *IEEE Transactions on Visualization and Computer Graphics* (Proc. IEEE SciVis/InfoVis/VAST 2013), 19(12):2032–2041, 2013. [32/125, 26% acc. rate] (Impact Factor 3.078)

J30. Niklas Elmqvist, Pourang Irani. Ubiquitous Analytics: Interacting with Big Data Anywhere, Anytime. *IEEE Computer*, 46(4):86–89, 2013. (Impact Factor 1.94)

J29. Waqas Javed[†], Niklas Elmqvist. ExPlates: Spatializing Interactive Analysis to Scaffold Visual Exploration. *Computer Graphics Forum* (Proc. IEEE EuroVis 2013), 32(2):441–450, 2013. [49/177, 28% acc. rate]

J28. Stephen MacNeil[†], Niklas Elmqvist. Visualization Mosaics for Multivariate Visual Exploration. *Computer Graphics Forum*, 32(6):38–50, 2013. (Impact Factor 2.046)

J27. Waqas Javed[†], Niklas Elmqvist. Stack Zooming for Multi-Focus Interaction in Skewed-Aspect Visual Spaces. *IEEE Transactions on Visualization and Computer Graphics*, 19(8):1362–1374, 2013. (Impact Factor 3.078)

J26. Krishna C. Madhavan, Mihaela Vorvoreanu, Niklas Elmqvist, Aditya Johri, Naren Ramakrishnan, G. Alan Wang, Ann McKenna. Portfolio Mining. *IEEE Computer*, 45(10):95–99, 2012. (Impact Factor 1.94)

J25. Shehzad Afzal[*], Ross Maciejewski, Yun Jang, Niklas Elmqvist, David S. Ebert. Spatial Text Visualization Using Automatic Typographic Maps. *IEEE Transactions on Visualization and Computer Graphics* (Proc. IEEE SciVis/InfoVis 2012), 18(12):2556–2564, 2012. [44/178, 25% acc. rate] (Impact Factor 3.078)

J24. Bum chul Kwon[*], Waqas Javed[†], Sohaib Ghani[†], Niklas Elmqvist, Ji Soo Yi, David S. Ebert. Evaluating the Role of Time in Investigative Analysis of Document Collections. *IEEE Transactions on Visualization and Computer Graphics*, 18(11):1992–2004, 2012. (Impact Factor 3.078)

J23. Brian Bowman[†], Niklas Elmqvist, T. J. Jankun-Kelly. Toward Visualization for Games: Theory, Design Space, and Patterns. *IEEE Transactions on Visualization and Computer Graphics*, 18(11):1956–1968, 2012. (Impact Factor 3.078)

J22. KyungTae Kim[†], Niklas Elmqvist. Embodied Lenses for Collaborative Visual Queries on Tabletop Displays. *Information Visualization*, 11(4):319–338, 2012. (Impact Factor 0.923)

J21. Sohaib Ghani[†], Niklas Elmqvist, Ji Soo Yi. Perception of Animated Node-Link Diagrams for Dynamic Graphs. *Computer Graphics Forum* (Proc. IEEE EuroVis 2012), 31(3):1205–1214, 2012. [55/202, 27% acc. rate] (Impact Factor 2.046)

J20. Niklas Elmqvist, David S. Ebert. Leveraging Multidisciplinarity in a Visual Analytics Graduate Course. *IEEE Computer Graphics & Applications*, 32(3):84–87, May/June 2012. (Impact Factor 1.94)

J19. Niklas Elmqvist, Andrew Vande Moere, Hans-Christian Jetter[*], Daniel Cernea[*], Harald Reiterer, T. J. Jankun-Kelly. Fluid Interaction for Information Visualization. *Information Visualization*, 10(4):327–340, 2011. (Impact Factor 0.923)

J18. Petra Isenberg, Niklas Elmqvist, Daniel Cernea[*], Jean Scholtz, Kwan-Liu Ma, Hans Hagen. Collaborative Visualization: Definition, Challenges, and Research Agenda. *Information Visualization*, 10(4):310–326, 2011. (Impact Factor 0.923)

J17. Sohaib Ghani[†], Nathalie Henry Riche, Niklas Elmqvist. Dynamic Insets for Context-Aware Graph Navigation. *Computer Graphics Forum* (Proc. IEEE EuroVis 2011), 30(3):861–870, 2011. [54/190, 28% acc. rate] (Impact Factor 2.046)

J16. Niklas Elmqvist, Pierre Dragicevic, Jean-Daniel Fekete. Color Lens: Adaptive Color Scale Optimization for Visual Exploration. *IEEE Transactions on Visualization and Computer Graphics*, 17(6):795–807, 2011. (Impact Factor 3.078)

J15. Waqas Javed[†], Bryan McDonnel[†], Niklas Elmqvist. Graphical Perception of Multiple Time Series. *IEEE Transactions on Visualization and Computer Graphics* (Proc. IEEE Vis/InfoVis 2010), 16(6):927–934, 2010. [35/135, 26% acc. rate] (Impact Factor 3.078)

J14. Ji Soo Yi, Niklas Elmqvist, Seungyoon Lee. TimeMatrix: Visualizing Temporal Social Networks Using Interactive Matrix-Based Visualizations. *International Journal of Human-Computer Interaction*, 26(11–12):1031–1051, 2010. (Impact Factor 1.259)

J13. Anastasia Bezerianos, Fanny Chevalier, Pierre Dragicevic, Niklas Elmqvist, Jean-Daniel Fekete. GraphDice: A System for Exploring Multivariate Social Networks. *Computer Graphics Forum* (Proc. IEEE EuroVis 2010), 29(3): 863–872, 2010. [48/164, 29% acc. rate] (Impact Factor 2.046)

J12. Niklas Elmqvist*, Jean-Daniel Fekete. Hierarchical Aggregation for Information Visualization: Overview, Techniques and Design Guidelines. *IEEE Transactions on Visualization and Computer Graphics*, 16(3):439–454, 2010. (Impact Factor 3.078)

J11. Niklas Elmqvist*, Yann Riche*, Nathalie Henry*, Jean-Daniel Fekete. Mélange: Space Folding for Visual Exploration. *IEEE Transactions on Visualization and Computer Graphics*, 16(3):468–483, 2010. (Impact Factor 3.078)

J10. Bryan McDonnel†, Niklas Elmqvist. Towards Utilizing GPUs in Information Visualization: Model and Implementation. *IEEE Transactions on Visualization and Computer Graphics* (Proc. IEEE Vis/InfoVis 2009), 15(6):1105–1112, 2009. [37/142, 26% acc. rate] (Impact Factor 3.078)

J9. Niklas Elmqvist*, Ulf Assarsson, Philippas Tsigas. Dynamic Transparency for 3D Visualization: Design and Evaluation. *International Journal of Virtual Reality*, 8(1):65–78, 2009. (Impact Factor 0.79)

J8. Niklas Elmqvist*, Pierre Dragicevic, Jean-Daniel Fekete. Rolling the Dice: Multidimensional Visual Exploration using Scatterplot Matrix Navigation. *IEEE Transactions on Visualization and Computer Graphics* (Proc. IEEE Vis/InfoVis 2008), 14(6):1141–1148, 2008. [28/107, 26% acc. rate] **(Best paper award)** [1/28, 3.6% acc. rate] (Impact Factor 3.078)

J7. Niklas Elmqvist*, Philippas Tsigas. A Taxonomy of 3D Occlusion Management for Visualization. *IEEE Transactions on Visualization and Computer Graphics*, 14(5):1095–1109, 2008. (Impact Factor 3.078)

J6. N. Elmqvist*, John Stasko, Philippas Tsigas. DataMeadow: A Visual Canvas for Analysis of Large-Scale Multivariate Data. *Information Visualization*, 7(1):18–33, 2008. (Impact Factor 0.923)

J5. Nathalie Henry*, Howard Goodell*, Niklas Elmqvist*, Jean-Daniel Fekete. 20 Years of Four HCI Conferences: A Visual Exploration. *International Journal of Human-Computer Interaction*, 23(3):239–285, 2007. (Impact Factor 1.259)

J4. Niklas Elmqvist*, Philippas Tsigas. View-Projection Animation for 3D Occlusion Management. *Computers & Graphics*, 31(6):864–876, 2007. (Impact Factor 1.200)

J3. Niklas Elmqvist*, Philippas Tsigas. CiteWiz: A Tool for the Visualization of Scientific Citation Networks. *Information Visualization*, 6(3):215–232, 2007. (Impact Factor 0.923)

J2. Niklas Elmqvist*, Eduard Tudoreanu. Occlusion Management in Immersive and Desktop 3D Virtual Environments: Theory and Evaluation. *International Journal of Virtual Reality*, 6(2):21–32, 2007. **(Best paper award)** [1/29, 3.5% acc. rate] (Impact Factor 0.79)

J1. Niklas Elmqvist*, Philippas Tsigas. Animated Visualization of Causal Relations through Growing 2D Geometry. *Information Visualization*, 3(3):154–172, 2004, Palgrave Macmillan. (Impact Factor 0.923)

Conference Papers (strictly peer-reviewed)

C59. Andrea Batch†, Biswaksen Patnaik†, Moses Akazue, Niklas Elmqvist. Scents and Sensibility: Evaluating Information Olfactation. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, to appear, 2020. (conditional)

C58. Zhe Cui†, Jayaram Kancherla*, Héctor Corrada Bravo, Niklas Elmqvist. Sherpa: Leveraging User Attention for Computational Steering in Visual Analytics. In *Proceedings of the IEEE Symposium on Visualization in Data Science*, to appear, 2019. [9/27, 33% acc. rate]

C57. Tom Horak*, Andreas Mathisen*, Clemens Nylandsted Klokmose, Raimund Dachselt, Niklas Elmqvist. Vistribute: Distributing Interactive Visualizations in Dynamic Multi-Device Setups. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, paper no. 616 (13 pages), 2019. [705/2960, 24% acc. rate]

C56. Pranathi Mylavarapu†, Adil Yalcin, Xan Gregg, Niklas Elmqvist. Ranked-List Visualization: A Graphical Perception Study. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, paper no. 192 (12 pages), 2019. [705/2960, 24% acc. rate]

C55. Subramanian Chidambaram*, Yunbo Zhang, Venkatraghavan Sundararajan*, Ana M. Villanueva*, Niklas Elmqvist, Karthik Ramani. Shape Structuralizer: Design, Fabrication and Exploring Structurally-Sound Scaffolded Constructions using 3D Mesh Models. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, paper no. 663 (12 pages), 2019. [705/2960, 24% acc. rate]

C54. Zhenpeng Zhao[†], Rachael Marr[†], Jason Shaffer, Niklas Elmqvist. Understanding Partitioning and Sequence in Data-Driven Storytelling: The Case for Comic Strip Narration. In *Proceedings of the iConference*, Lecture Notes in Computer Science, vol. 11420, pp. 327–338, 2019. [45/133, 34% acc. rate]

C53. Andrea Batch[†], Hanuma Teja Maddali[*], Kyungjun Lee[*], Niklas Elmqvist. Gesture and Action Discovery for Evaluating Virtual Environments with Semi-Supervised Segmentation of Telemetry Records. In *Proceedings of the IEEE Conference on Artificial Intelligence & Virtual Reality*, pp. 1–10, 2018.

C52. Sigfried Gold[†], Andrea Batch[†], Robert McClure, Guoqian Jiang, Hadi Kharrazi, Rishi Saripalle, Vojtech Huser, Chunhua Weng, Nancy Roderer, Ana Szarfman, Niklas Elmqvist, David Gotz. Clinical Concept Value Sets and Interoperability in Health Data Analytics. In *Proceedings of the Annual AMIA Symposium*, 2018.

C51. Senthil Chandrasegaran[†], Devarajan Ramanujan, Niklas Elmqvist. How Do Sketching and Non-Sketching Actions Convey Design Intent? In *Proceedings of the ACM Conference on Designing Interactive Systems*, pp. 373–385, 2018. **(Honorable mention award)** [23% acc. rate]

C50. Jiawei Zhang[*], Chittayong Surakitbanharn, Niklas Elmqvist, Ross Maciejewski, Zhenyu Quan, David Ebert. TopoText: Context-Preserving Semantic Exploration Across Multiple Spatial Scales. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, paper no. 37 (13 pages), 2018. **(Honorable mention award)** [25.7% acc. rate]

C49. Tom Horak[*], Sriram Karthik Badam[†], Niklas Elmqvist, Raimund Dachselt. When David Meets Goliath: Combining Smartwatches with a Large Vertical Display for Visual Data Exploration. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, paper no. 19 (13 pages), 2018. **(Honorable mention award)** [25.7% acc. rate]

C48. Sriram Karthik Badam[†], Zehua Zeng[†], Emily Wall[*], Alex Endert, Niklas Elmqvist. Supporting Team-First Visual Analytics through Group Activity Representations. In *Proceedings of Graphics Interface*, pp. 208–213, 2017.

C47. Senthil Chandrasegaran[†], Sriram Karthik Badam[†], Ninger Zhou[*], Zhenpeng Zhao[†], Lorraine Kisselburgh, Kylie Peppler, Niklas Elmqvist, Karthik Ramani. Merging Sketches for Creative Design Exploration: An Evaluation of Physical and Cognitive Operations. In *Proceedings of Graphics Interface*, pp. 115–123, 2017.

C46. M. Adil Yalcin[†], Niklas Elmqvist, Benjamin B. Bederson. Raising the Bars: Evaluating Treemaps vs. Wrapped Bars for Dense Visualization of Sorted Numeric Data. In *Proceedings of Graphics Interface*, pp. 41–49, 2017.

C45. Cecil Piya[*], Vinayak, Senthil Chandrasegaran[†], Niklas Elmqvist, Karthik Ramani. Co-3Deator: A Team-First Collaborative 3D Design Ideation Tool. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 6581–6592, 2017. [25% acc. rate]

C44. Jiawei Zhang[*], Abish Malik[*], Benjamin Ahlbrand[*], Niklas Elmqvist, Ross Maciejewski, David S. Ebert. TopoGroups: Context-Preserving Visual Illustration of Multi-Scale Spatial Aggregates. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 2940–2951, 2017. [25% acc. rate]

C43. Matthias Nielsen[*], Niklas Elmqvist, Kaj Grønbæk. Scribble Query: Fluid Touch Brushing for Multivariate Data Visualization. In *Proceedings of the Australian Conference on Human-Computer Interaction*, pp. 381–390, 2016.

C42. Sriram Karthik Badam[†], Feresteh Amini[*], Niklas Elmqvist, Pourang Irani. Supporting Visual Exploration for Multiple Users in Large Display Environments. In *Proceedings of the IEEE Conference on Visual Analytics Science & Technology*, 2016. [48/157, 31% acc. rate]

C41. Sriram Karthik Badam[†], Jieqiong Zhao[†], Niklas Elmqvist, David S. Ebert. TimeFork: Interactive Prediction of Time Series. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 5409–5420, 2016. [23.4% acc. rate]

C40. Deok Gun Park[†], Simranjit Singh[*], Nicholas Diakopoulos, Niklas Elmqvist. Supporting Comment Moderators in Identifying High Quality Online News Comments. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 1114–1125, 2016. [23.4% acc. rate] (**Honorable mention award**)

C39. Deok Gun Park[†], Jungu Choi[*], Niklas Elmqvist. ParallelSpaces: Simultaneous Exploration of Feature and Data for Hypothesis Generation. In *Proceedings of the Hawaii International Conference on System Sciences* (Visual Analytics Minitrack), 2016.

C38. Alexandru Dancu[*], Mickaël Fourgeaud[*], Mohammad Obaid[*], Morten Fjeld, Niklas Elmqvist. Map Navigation Using a Wearable Mid-air Display. In *Proceedings of the ACM Conference on Human-Computer Interaction with Mobile Devices and Services*, pp. 71–76, 2015. [59/234, 25% acc. rate]

C37. Sriram Karthik Badam[†], Niklas Elmqvist. PolyChrome: A Cross-Device Framework for Collaborative Web Visualization. In *Proceedings of the ACM Conference on Interactive Tabletops and Surfaces*, pp. 109–118, 2014. [32/112, 29% acc. rate]

C36. Sujin Jang[*], Niklas Elmqvist, Karthik Ramani. GestureAnalyzer: Visual Analytics for Exploratory Analysis of Gesture Patterns. In *Proceedings of the ACM Symposium on Spatial User Interfaces*, pp. 30–39, 2014. [19/62, 31% acc. rate]

C35. Sriram Karthik Badam[†], Senthil Chandrasegaran[*], Niklas Elmqvist, Karthik Ramani. Tracing and Sketching Performance using Blunt-Tipped Styli on Direct-Touch Tablets. In *Proceedings of the ACM Conference on Advanced Visual Interfaces*, pp. 193–200, 2014. [31/110, 28% acc. rate]

C34. Zhenpeng Zhao[†], Sriram Karthik Badam[†], Senthil Chandrasegaran[*], Deok Gun Park[†], Niklas Elmqvist, Lorraine Kisselburgh, Karthik Ramani. skWiki: A Multimedia Sketching System for Collaborative Creativity. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 1235–1244, 2014. [471/2064, 22.8% acc. rate]

C33. William Benjamin[*], Senthil Chandrasegaran[*], Devarajan Ramanujan[*], Niklas Elmqvist, S.V.N. Vishwanathan, Karthik Ramani. Juxtapoze: Supporting Serendipity and Creative Expression in Clipart Compositions. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 341–350, 2014. [471/2064, 22.8% acc. rate]

C32. Ahmad M. M. Razip[*], Abish Malik[*], Shehzad Afzal[*], Matthew Potrawski, Ross Maciejewski, Yun Jang, Niklas Elmqvist, David Ebert. A Mobile Visual Analytics Approach for Law Enforcement Situation Awareness. In *Proceedings of the IEEE Pacific Symposium on Visualization*, pp. 169–176, 2014. [29/99, 29% acc. rate]

C31. Devarajan Ramanujan[*], William Benjamin[*], William Z. Bernstein[*], Niklas Elmqvist, Karthik Ramani. ShapeSift: Suggesting Sustainable Options in Design Reuse from Part Repositories. In *Proceedings of the ASME Conference on IDETC/CIE*, 2013. (**Best paper award**)

C30. Will McGrath[†], Brian Bowman[†], David McCallum[*], Juan David Hincapié-Ramos[*], Niklas Elmqvist, Pourang Irani. Branch-Explore-Merge: Facilitating Real-Time Revision Control in Collaborative Visual Exploration. In *Proceedings of the ACM Conference on Interactive Tabletops and Surfaces*, pp. 235–244, 2012. [30/103, 29% acc. rate]

C29. Abish Malik[*], Ross Maciejewski, Yun Jang, Whitney Huang[*], Niklas Elmqvist, David S. Ebert. A Correlative Analysis Process in a Visual Analytics Environment. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 33–42, 2012. [29/104, 28% acc. rate]

C28. Sundar Murugappan[*], Vinayak[*], Niklas Elmqvist, Karthik Ramani. Extended Multitouch: Recovering Touch Posture and Differentiating Users using a Depth Camera. In *Proceedings of the ACM Symposium on User Interface Software and Technology*, pp. 487–496, 2012. [62/289, 21% acc. rate]

C27. Waqas Javed[†], Sohaib Ghani[†], Niklas Elmqvist. GravNav: Using a Gravity Model for Multi-Scale Navigation. In *Proceedings of the ACM Conference on Advanced Visual Interfaces*, pp. 217–224, 2012. [54/193, 28% acc. rate]

C26. Waqas Javed[†], Sohaib Ghani[†], Niklas Elmqvist. PolyZoom: Multiscale and Multifocus Exploration in 2D Visual Spaces. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 287–296, 2012. [370/1577, 23% acc. rate]

C25. Waqas Javed[†], Niklas Elmqvist. Exploring the Design Space of Composite Visualization. In *Proceedings of the IEEE Pacific Symposium on Visualization*, pp. 1–8, 2012. [30/89, 34% acc. rate]

C24. Sungahn Ko[*], KyungTae Kim[†], Tejas Kulkarni[†], Niklas Elmqvist. Applying Mobile Device Soft Keyboards to Collaborative Multitouch Tabletop Displays: Design and Evaluation. In *Proceedings of the ACM Conference on Interactive Tabletops and Surfaces*, pp. 130–139, 2011. [32/96, 33% acc. rate]

C23. Waqas Javed[†], KyungTae Kim[†], Sohaib Ghani[†], Niklas Elmqvist. Evaluating Physical/Virtual Occlusion Management Techniques for Horizontal Displays. In *Proceedings of INTERACT*, pp. 391–408, 2011. [111/402, 28% acc. rate]

C22. Sohaib Ghani[†], Niklas Elmqvist. Improving Revisitation in Graphs through Static Spatial Features. In *Proceedings of Graphics Interface*, pp. 175–182, 2011. [28/75, 37% acc. rate]

C21. Bum chul Kwon[*], Waqas Javed[†], Niklas Elmqvist, Ji Soo Yi. Direct Manipulation Through Surrogate Objects. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 627–636, 2011. [400/1540, 26% acc. rate]

C20. Pierre Dragicevic, Anastasia Bezerianos, Waqas Javed[†], Niklas Elmqvist, Jean-Daniel Fekete. Temporal Distortion for Animated Transitions. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 2009–2018, 2011. [400/1540, 26% acc. rate]

C19. KyungTae Kim[†], Sungahn Ko[*], Niklas Elmqvist, David Ebert. WordBridge: Using Composite Tag Clouds in Node-Link Diagrams for Visualizing Content and Relations in Text Corpora. In *Proceedings of the Hawaii International Conference on System Sciences* (Visual Analytics Minitrack), pp. 1–8, 2011.

C18. KyungTae Kim[†], Waqas Javed[†], Cary Williams[*], Niklas Elmqvist, Pourang Irani. Hugin: A Framework for Awareness and Coordination in Mixed-Presence Collaborative Information Visualization. In *Proceedings of the ACM Conference on Interactive Tabletops and Surfaces*, pp. 231–240, 2010. [34/120, 28% acc. rate]

C17. Waqas Javed[†], Niklas Elmqvist. Stack Zooming for Multi-Focus Interaction in Time-Series Data Visualization. In *Proceedings of the IEEE Pacific Symposium on Visualization*, pp. 33–40, 2010. [27/84, 32% acc. rate]

C16. Jean-Daniel Fekete, Niklas Elmqvist, Yves Guiard. Motion-Pointing: Target Selection using Elliptical Motions. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 289–298, 2009. [289/1180, 24% acc. rate].

C15. Niklas Elmqvist[*], Jean-Daniel Fekete. Semantic Pointing for Object Picking in Complex 3D Environments. In *Proceedings of Graphics Interface*, pp. 243–250, 2008. [34/85, 39% acc. rate]

C14. Niklas Elmqvist[*], Nathalie Henry[*], Yann Riche[*], Jean-Daniel Fekete. Mélange: Space Folding for Multi-Focus Interaction. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 1333–1342, 2008. [157/714, 22% acc. rate]

C13. Niklas Elmqvist[*], Eduard Tudoreanu, Philippas Tsigas. Evaluating Motion Constraints for 3D Wayfinding in Immersive and Desktop Virtual Environments. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, pp. 1769–1778, 2008. [157/714, 22% acc. rate]

C12. Niklas Elmqvist[*], Thanh-Nghi Do[*], Howard Goodell[*], Nathalie Henry[*], and Jean-Daniel Fekete. ZAME: Interactive Large-Scale Graph Visualization. In *Proceedings of the IEEE Pacific Symposium on Visualization*, pp. 215–222, 2008. [30/99, 30% acc. rate]

C11. Niklas Elmqvist[*], Eduard Tudoreanu, Philippas Tsigas. Tour Generation for Exploration of 3D Virtual Environments. In *Proceedings of the ACM Symposium on Virtual Reality Software & Technology*, pp. 207–210, 2007. [24/75, 32% acc. rate]

C10. Niklas Elmqvist[*], John Stasko, Philippas Tsigas. DataMeadow: A Visual Canvas for Analysis of Large-Scale Multivariate Data. In *Proceedings of the IEEE Symposium on Visual Analytics Science & Technology*, pp. 187–194, 2007. [24/57, 42% acc. rate]

C9. Niklas Elmqvist[*], Ulf Assarsson, Philippas Tsigas. Employing Dynamic Transparency for 3D Occlusion Management: Design Issues and Evaluation. In *Proceedings of INTERACT*, pp. 532–545, 2007. [76/230, 33% acc. rate]

C8. Niklas Elmqvist[*], Philippas Tsigas. TrustNeighborhoods: Visualizing Trust in Distributed File Sharing Systems. In *Proceedings of the Eurographics/IEEE VGTC Symposium on Visualization*, pp. 107–114, 2007. [35/93, 38% acc. rate]

C7. Niklas Elmqvist[*], Philippas Tsigas. A Taxonomy of 3D Occlusion Management Techniques. In *Proceedings of the IEEE Conference on Virtual Reality*, pp. 51–58, 2007. [26/130, 20% acc. rate]

C6. Niklas Elmqvist*, Eduard Tudoreanu. Evaluating the Effectiveness of Occlusion Reduction Techniques for 3D Virtual Environments. In *Proceedings of the ACM Symposium on Virtual Reality Software & Technology*, pp. 9–18, 2006. [26/73, 36% acc. rate]

C5. Niklas Elmqvist*, Philippas Tsigas. View Projection Animation for Occlusion Reduction. In *Proceedings of the ACM Conference on Advanced Visual Interfaces*, pp. 471–475, 2006.

C4. Samuel Sandberg†, Calle Håkansson†, Niklas Elmqvist*, Philippas Tsigas, Fang Chen. Using 3D Audio Guidance to Locate Indoor Static Objects. In *Proceedings of the Human Factors and Ergonomics Society 50th Annual Meeting*, pp. 1581–1584, 2006.

C3. Niklas Elmqvist*. BalloonProbe: Reducing Occlusion in 3D using Interactive Space Distortion. In *Proceedings of the ACM Symposium on Virtual Reality Software & Technology*, pp. 134–137, 2005. [22/61, 36% acc. rate]

C2. Niklas Elmqvist*, Philippas Tsigas. Causality Visualization Using Animated Growing Polygons. In *Proceedings of the IEEE Symposium on Information Visualization*, pp. 189–196, 2003. [29/90, 32% acc. rate]

C1. Niklas Elmqvist*, Philippas Tsigas. Growing Squares: Animated Visualization of Causal Relations. In *Proceedings of the ACM Symposium on Software Visualization*, pp. 17–26, 2003. [20/65, 31% acc. rate]

Books

B1. Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Steven Jacobs, Niklas Elmqvist. *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, 6th edition, Pearson, 2016.

Book Chapters (peer-reviewed)

BC3. Bruce Thomas, Yvonne Jansen, Aurelien Tabard, Pierre Dragicevic, Niklas Elmqvist, Pourang Irani, Dieter Schmalstieg, Gregory Welch. Situated Analytics. In Immersive Analytics, *Lecture Notes of Computer Science*, No. 11190, Springer, 2018.

BC2. Michael Wybrow, Niklas Elmqvist, Jean-Daniel Fekete, Tatiana von Landesberger, Jarke J. van Wijk, Björn Zimmer. Interaction in the Visualization of Multivariate Networks. In *Multivariate Network Visualization*, Lecture Notes in Computer Science 8380, Springer, pp. 97–126, 2014.

BC1. Niklas Elmqvist. Distributed User Interfaces: State of the Art. In *Distributed User Interfaces: Designing Interfaces for the Distributed Ecosystem,* Springer, pp. 1–12, 2011.

Workshop Papers (peer-reviewed)

W15. Andrea Batch†, Niklas Elmqvist. "All Right, Mr. DeMille, I'm Ready for My Closeup:" Adding Meaning to User Actions from Video for Immersive Analytics. In *Proceedings of the Machine Learning from User Interactions* workshop at IEEE VIS 2019.

W14. Yuetling Wong†, Krishna Madhavan, Niklas Elmqvist. Towards Characterizing Domain Experts as a User Group. In *Proceedings of Evaluation and Beyond: Methodological Approaches for Visualization* (BELIV 2018) at IEEE VIS 2018.

W13. M. Adil Yalcin†, Niklas Elmqvist, Benjamin B. Bederson. Cognitive Stages in Visual Data Exploration. In *Proceedings of Beyond Time and Errors: Novel Evaluation Methods for Visualization* (BELIV 2016) at IEEE VIS 2016.

W12. Yuetling Wong†, Niklas Elmqvist. Crowdster: Enabling Social Navigation in Web-based Visualization using Crowdsourced Evaluation. In *Proceedings of Beyond Time and Errors: Novel Evaluation Methods for Visualization* (BELIV 2014) at IEEE VIS 2014.

W11. Deok Gun Park†, Niklas Elmqvist, Lorraine Kisselburgh. VisTwit: Talking Together about News Visualization with Twitter. Workshop paper presented at *NewsVis 2013* at IEEE VIS 2013.

W10. Niklas Elmqvist, Ji Soo Yi. Patterns for Visualization Evaluation. Workshop paper presented at *Beyond Time and Errors: Novel Evaluation Methods for Visualization* (BELIV 2012) at IEEE VisWeek 2012.

W9. Sohaib Ghani†, Niklas Elmqvist, David S. Ebert. MultiNode-Explorer: A Visual Analytics Framework for Generating Web-based Multimodal Graph Visualizations. Workshop paper presented at the *EuroVis Workshop on Visual Analytics* (EuroVA 2012) at EuroVis 2012.

W8. Will McGrath[†], Brian Bowman[†], Niklas Elmqvist, Pourang Irani. Branch-Explore-Merge: Real-time Revision Control for Conflict Resolution in Collaborative Visual Exploration. Workshop paper presented at *Data Exploration for Interactive Surfaces* (DEXIS 2011) at ACM ITS 2011, pp. 32–35, 2011.
W7. Niklas Elmqvist. Embodied Human-Data Interaction. Workshop paper presented at *Embodied Interaction: Theory and Practice in HCI* at ACM CHI 2011.
W6. Niklas Elmqvist. Munin: A Peer-to-Peer Middleware for Ubiquitous Visualization Spaces. Workshop paper presented at *Distributed User Interfaces* (DUI 2011) at ACM CHI 2011.
W5. Niklas Elmqvist. Distributed User Interfaces: State of the Art. Workshop paper presented at *Distributed User Interfaces* (DUI 2011) at ACM CHI 2011.
W4. Niklas Elmqvist. Mutually Linked Studies—Balancing Threats to Internal Validity and Ecological Validity in InfoVis Evaluation. Workshop paper presented at *BEyond time and errors: novel evaLuation methods for Information Visualization* (BELIV 2010*)* at ACM CHI 2010.
W3. KyungTae Kim[†], Tejas Kulkarni[†], Niklas Elmqvist. Interaction Workspaces: Identity Tracking for Multi-user Collaboration on Camera-based Multi-touch Tabletops. Workshop paper presented at *Collaborative Visualization on Interactive Surfaces* (CoVIS 2009) at IEEE InfoVis 2009.
W2. Nathalie Henry[*], Niklas Elmqvist[*], Jean-Daniel Fekete. A Methodological Note on Setting-Up Logging and Replay Mechanisms in InfoVis Systems. Workshop paper presented at *BEyond time and errors: novel evaLuation methods for Information Visualization* (BELIV 2008) at ACM CHI 2008.
W1. Niklas Elmqvist[*], Morten Fjeld, et al. 3DVN: A Mixed Reality Platform for Mobile Navigation Assistance. Workshop paper presented at *Mobile Spatial Interaction* (MSI) at ACM CHI 2007.

Posters and Demos (peer-reviewed)

P4. Sriram Karthik Badam[†], Jieqiong Zhao[†], Niklas Elmqvist, David S. Ebert. TimeFork: Mixed-Initiative Time-Series Prediction. Poster presented at the *IEEE Conference on Information Visualization*, 2014.
P3. Waqas Javed[†], Niklas Elmqvist. TraXplorer: Multi-Focus Interaction in Time-Series Data Visualization. Poster presented at the *IEEE Conference on Information Visualization*, 2009.
P2. Niklas Elmqvist, Philippas Tsigas. TrustNeighborhoods in a Nutshell. Poster presented at the *ACM Symposium on Software Visualization*, pp. 189–190, 2006.
P1. Niklas Elmqvist, Philippas Tsigas. Growing Squares: Visualizing Causal Relations. Demo presented at the *ACM Symposium on Software Visualization*, 2003.

INVITED TALKS

T31. Niklas Elmqvist. #Vis4Good: Data Visualization in Community Service. Invited talk (host: Thomas LaToza), Humanity-Centered Design Seminar, Department of Computer Science, George Mason University (November 10, 2017).
T30. Niklas Elmqvist. #Vis4Good: Data Visualization in Community Service. Invited talk (host: Susanne Bødker, Henrik Korsgaard), Aarhus, Denmark (August 15, 2017).
T29. Niklas Elmqvist. *Visualization for Scientific Discovery*. Invited talk (host: Adam Phillippy), National Institutes of Health, Bethesda, MD, USA (July 19, 2017).
T28. Niklas Elmqvist. *Visualization for Scientific Discovery*. Keynote, Transportation Visualization Midyear Committee Meeting (host: Michael L. Pack), National Academy of Sciences, Washington, DC (July 28, 2016).
T27. Niklas Elmqvist. *Visualization for Scientific Discovery*. Laboratory for Telecommunication Sciences (host: Gerry Baumgartner), University of Maryland, College Park, MD (September 17, 2015).
T26. Niklas Elmqvist. *Visualization for Scientific Discovery*. National Socio-Environmental Synthesis Center (SESYNC) (host: Nick Magliocca), Annapolis, MD (June 1, 2015).
T25. Niklas Elmqvist. *Managing Literacy and Complexity for Casual Visualization*. UMD Visualization Lecture Series, University of Maryland, College Park, MD (September 10, 2014).
T24. Niklas Elmqvist. *Ubiquitous Analytics: Interacting with Big Data Anywhere, Anytime*. HCIL Brown Bag Lecture, University of Maryland, College Park, MD (September 4, 2014).
T23. Niklas Elmqvist. *Visualization is Dead! (Long Live Visualization!)*. School of Computing, University of Utah (host: Chris Johnson), Salt Lake City, UT (March 18, 2014).

T22. Niklas Elmqvist. *Ubiquitous Analytics: Interacting with Data Anywhere, Anytime*. Department of Computer Science, Stony Brook University (host: Yeijin Choi), Stony Brook, NY (February 20, 2014).
T21. Niklas Elmqvist. *Visualization is Dead! (Long Live Visualization!)*. College of Information Studies, University of Maryland at College Park (host: Jen Golbeck), College Park, MD (February 5, 2014).
T20. Niklas Elmqvist. *Ubiquitous Analytics: Interacting with Data Anywhere, Anytime.* SCI Institute, University of Utah (host: Chris Johnson), Salt Lake City, UT (December 11, 2013).
T19. Niklas Elmqvist. *Action-as-Catalyst: The Role of Interaction for Big Data Analytics*. Faculty of Science, University of Ontario Institute of Technology (host: Christopher Collins), Oshawa, ON, Canada (December 6, 2013).
T18. Niklas Elmqvist. *Ubiquitous Analytics: Interacting with Data Anywhere, Anytime*. Science on Tap, Lafayette, IN (April 25, 2013).
T17. Niklas Elmqvist. *Analytics Anywhere, Anytime: Supporting Ubiquitous Sensemaking*. Department of Computer Science, Brown University (host: David Laidlaw), Providence, RI (November 2012).
T16. Niklas Elmqvist. *Analytics Anywhere, Anytime: Supporting Ubiquitous Sensemaking*. Pfister Lab, School of Engineering & Applied Sciences, Harvard University (host: Hanspeter Pfister), Cambridge, MA (November 2012).
T15. Niklas Elmqvist. *It's About Time: Analyzing, Forecasting, and Reasoning with Temporal Data*. Department of Computer Science, University of Texas at Austin (host: Chandrajit Bajaj), Austin, TX (September 2012).
T14. Niklas Elmqvist. *Analytics Anywhere, Anytime: Supporting Ubiquitous Sensemaking*. School of Information, University of Texas at Austin (host: Luis Francisco-Revilla), Austin, TX (September 2012).
T13. Niklas Elmqvist. *Visual Representations and Interaction Techniques for Multiple Time Series*. Department of Computer Science & Engineering, Chalmers University of Technology (host: Philippas Tsigas), Göteborg, Sweden (July 2010).
T12. Niklas Elmqvist. *Visual Summaries: Sustaining the Utility of Information Visualization through Data Abstraction*. Department of Computer Science at University of Illinois (host: Brian Bailey), Urbana-Champaign, IL (April 2010).
T11. Niklas Elmqvist. *CoE Explorer: Visualizing the DHS Centers of Excellence*. Presented at the C2I panel at the U.S. DHS University Network Summit 2010, Washington, D.C. (March 2010).
T10. Niklas Elmqvist. *Dice Everywhere: Generalizing Scatterplot Matrix Navigation to Coordinated Multiple Views*. Microsoft Research (host: Nathalie Henry-Riche), Seattle, WA (December 2009).
T9. Niklas Elmqvist. *Dice Everywhere: Generalizing Scatterplot Matrix Navigation to Coordinated Multiple Views*. Georgia Institute of Technology (host: John Stasko), Atlanta, GA (December 2009).
T8. Niklas Elmqvist. *Visual Representations and Interaction Techniques for Multiple Time Series*. Human-Computer Interaction Laboratory (HCIL), University of Maryland (host: Catherine Plaisant), College Park, MD (September 2009).
T7. Niklas Elmqvist. *Taking Control: Interaction for Visual Exploration*. Department of Computer Science, University of Manitoba (host: Pourang Irani), Winnipeg, MN, Canada (April 2008).
T6. Niklas Elmqvist. *Introduction to Information Visualization*. IT-University (host: Morten Fjeld), Göteborg, Sweden (Sep 2006).
T5. Niklas Elmqvist. *Image-Space Dynamic Transparency for Improved Object Discovery in 3D Environments*. Georgia Institute of Technology (host: John Stasko), Atlanta, GA (March 2006).
T4. Niklas Elmqvist. *Causality Visualization*. Saab Systems, Järfälla, Sweden (January 2006).
T3. Niklas Elmqvist, Robert Karlsson. *3Dwm: The Three-Dimensional Workspace Manager*. LinuxTag 2001, Stuttgart, Germany (July 2001).
T2. Niklas Elmqvist, Robert Karlsson. *3Dwm: The Three-Dimensional Workspace Manager*. Astra-Zeneca, Göteborg, Sweden (May 2001).
T1. Niklas Elmqvist, Robert Karlsson. *3Dwm: The Three-Dimensional Workspace Manager*. Museum of Architecture, Stockholm, Sweden (April 2001).

INVITED WORKSHOPS AND MEETINGS

IW11. SummerPIT 2017, "Participatory Information Technology", Aarhus, Denmark (August 2017).
IW10. Dagstuhl seminar 16231, "Immersive Analytics" (organizers: Tim Dwyer, Nathalie Henry Riche, Wolfgang Stuerzlinger, Bruce Thomas), Dagstuhl, Germany (June 2016).
IW9. Center for Human-Computer Interaction, "What Comes After CHI: PSI (People, Systems, Information)" (organizer: Virginia Tech), Blacksburg, VA (March 2016).
IW8. Humanities Data Visualization Workshop (organizer: Georgia Institute of Technology), Atlanta, GA (March 2016).
IW7. National Science Foundation, "NSF Workshop/Retreat on the Science of Interaction for Visual Analytics" (organizer: VACCINE), Lake Louise, AB, Canada (May 2013).
IW6. Dagstuhl seminar 13201, "Information Visualization - Towards Multivariate Network Visualization" (organizers: Andreas Kerren, Helen C. Purchase, Matthew Ward), Dagstuhl, Germany (May 2013).
IW5. Google Faculty Summit 2012, "New Interactions in the Digital World," Mountain View, CA (July 2012).
IW4. National Science Foundation, "NSF Workshop on Science of Interaction for Data and Visual Analytics" (organizer: VACCINE), Austin, TX (March 2012).
IW3. National Science Foundation, "NSF Workshop on Pervasive Computing at Scale (PeCS)," Seattle, WA (January 2011).
IW2. Dagstuhl seminar 10241, "Information Visualization" (organizers: Andreas Kerren, Catherine Plaisant, John Stasko), Dagstuhl, Germany (June 2010).
IW1. Pacific Northwest National Laboratories, "Precision Information Environments" (organizer: William Pike), Seattle, WA (December 2009).

GRANTS AND CONTRACTS

Research grants

G22. Niklas Elmqvist, "III: Small - DataWorld: Externalizing Hidden Data Flows for Situated Analytics," National Science Foundation (NSF), $500,000 (personal share 100%), Aug. 2019-Jul. 2022.
G21. Reza Ghodssi, William Bentley, Pamela Abshire, Derek Paley, Niklas Elmqvist, "Planning Grant: Engineering Research Center for Adaptive Small-systems for data Analytic Pain Management (ERC-ASAP)", National Science Foundation, $100,000 (personal share 20%), Sep. 2018-Aug. 2019.
G19. Niklas Elmqvist (PI), Catherine Plaisant, "Microbiome Visualization", Center for Health-related Informatics and Bioimaging, University of Maryland, $100,028, Sep. 2018–May. 2019.
G18. Héctor Corrada Bravo (PI), Niklas Elmqvist (Co-PI), Mihai Pop, M. Morgan, "Integrative Visual and Computational Exploratory Analysis of Genomics Data" (R01), National Institutes of Health (NIH) - National Institute of General Medical Services (NIGMS), $1.8M (personal share 33%), Sep. 1, 2015–Aug. 31, 2019.
G17. Niklas Elmqvist (PI), Karthik Ramani (Co-PI), "CHS: Small: C3DaR - Collection, Creation, and Collaboration for Engineering Design and Reflection," National Science Foundation (NSF), $490,089 (personal share $300,000), Aug. 1 2014-Jul. 31 2017.
G16. Krishna Madhavan (PI), Niklas Elmqvist (Co-PI), Mihaela Vorvoreanu (Co-PI), "Supplemental funding to DIA2," National Science Foundation (NSF), $363,820 (personal share $121,273), Aug. 2013-Aug. 2015.
G15. Niklas Elmqvist (PI), Remco Chang (Co-PI), Jian Chen (Co-PI), "Workshop: Doctoral Colloquium at IEEE VIS 2013," National Science Foundation (NSF), $20,000, Jul. 1 2013-Jun. 30, 2014.
G14. Niklas Elmqvist (PI), "CAREER: Ubilytics: Harnessing Existing Device Ecosystems for Anywhere Sensemaking," National Science Foundation (NSF), $480,894, Feb. 2013-Jan. 2018.
G13. Karthik Ramani (PI), Niklas Elmqvist (Co-PI), Lorraine Kisselburgh (Co-PI), "V-ICED: Visually-Integrated Cyber Exploratorium for Design," National Science Foundation (NSF), $750,000 (personal share $180,000), Aug. 2012-Jul. 2015.
G12. Niklas Elmqvist (PI), Karthik Ramani (Co-PI), "EAGER: SkWiki – A Sketch-based Wiki," National Science Foundation (NSF), $200,000 (personal share $125,000), Jul. 2012-Jul. 2014.

G11. Niklas Elmqvist (PI), Leland Wilkinson (Co-PI), Christopher G. Healey (Co-PI), "Workshop: Doctoral Colloquium at IEEE VisWeek 2012," National Science Foundation (NSF), $19,766, Jul. 2012-Jun. 2013.
G10. David Ebert (PI), Niklas Elmqvist (Co-PI), "Visual Analytics for Security Applications (VASA)," Department of Homeland Security (DHS), $300,000 (personal share $40,000), Jun. 2012-Mar. 2013.
G9. Niklas Elmqvist (PI), "Context-Aware Navigation in Large Visual Spaces," Purdue Research Foundation (PRF) research grant, $17,287, Aug. 2012-Jul. 2013.
G8. Krishna Madhavan (PI), Niklas Elmqvist (Co-PI), Mihaela Vorvoreanu (Co-PI), "Deep Insights Anytime, Anywhere (DIA2) – Central Resource for Characterizing the TUES Portfolio through Interactive Knowledge Mining and Visualizations," National Science Foundation (NSF), $1.1M (personal share $300,000), Sep. 2011-Aug. 2015.
G7. Karthik Ramani (PI), Niklas Elmqvist (Co-PI), "Towards Design Aided by Computers (DAC): Pen and Touch-based Interfaces for Design Collaboration," PLM Center of Excellence, $30,000 (personal share $2,500), Jan. 2011-Jul. 2011.
G6. Niklas Elmqvist (PI), "VACCINE Supplemental Funding: COE Explorer," U.S. Department of Homeland Security (DHS), $75,000 (personal share), Sep. 2010-Mar. 2011.
G5. Niklas Elmqvist (PI), "Visualization Mosaics: Effortless View Creation for Sensemaking," Google Research Award, $50,000, Sep. 2010-Aug. 2011.
G4. Niklas Elmqvist (PI), "Visual Summaries: Maintaining the Utility of Visualization through Data Abstraction," Purdue Research Foundation (PRF) research grant, $18,145, Jun. 2010-May 2011.
G3. David Ebert, Tim Collins, Mireille Boutin, William Cleveland, Edward Delp (PIs), Niklas Elmqvist (Co-PI), "VACCINE: Visual Analytics for Command, Control, Interoperability, National Security and Emergencies," U.S. Department of Homeland Security (DHS), $15,000,0000, 6 years (personal share $270,000: 1 graduate research assistant, 25% AY effort, and 2 weeks of summer support for 6 years).
G2. Niklas Elmqvist (PI), "Evaluating the Value and Effectiveness of Visualization," Purdue Research Foundation (PRF) research grant, $18,145, Jun. 2009-May 2010.
G1. Niklas Elmqvist (PI), "Multi-Focus Interaction for Time Series Visualization," Google Research Award, $50,000, Mar. 2009-Feb. 2010.

Equipment grants

EG2. Niklas Elmqvist (PI), NVidia Academic Partnership Program, ~$2,000 (equipment value), Nov 2010.
EG1. Niklas Elmqvist (PI), Robert Karlsson, "Wearable computers equipment grant for the 3Dwm project," Xybernaut GmbH, €12,000 (equipment value), Jan. 1999-Aug. 1999.

Personal grants

PG8. Niklas Elmqvist. International Travel Grant, Purdue College of Engineering, $1,000, 2013.
PG7. Niklas Elmqvist. Summer Faculty Grant, Purdue Research Foundation, $8,000, 2012.
PG6. Niklas Elmqvist. International Travel Grant, Purdue College of Engineering, $1,000, 2010.
PG5. Niklas Elmqvist. Strategic Planning Grant, Purdue College of Engineering, $1,000, 2009.
PG4. Niklas Elmqvist. ACM SigSoft, CAPS Program (ACM SoftVis 2006 attendance), $220, 2006.
PG3. Niklas Elmqvist. Chalmers Research Foundation, Ph.D. Student Grant, 20,000 SEK ($3,000), 2005.
PG2. Niklas Elmqvist. Lars Hierta Memorial Foundation, Independent Scientist, 20,000 SEK ($3,000), 2005.
PG1. Niklas Elmqvist. ACM SigSoft, CAPS Program (ACM SoftVis 2003 attendance), $600, 2003.

HONORS AND AWARDS

- Honorable Mention for Best Paper (2019). IEEE Conference on Information Visualization 2019 (InfoVis), awarded for "The Perceptual Proxies of Visual Comparison" (J71).
- ACM Distinguished Scientist (2018). Association of Computing Machinery, November 2018. (1 of 40 in the world in 2018.)
- Honorable Mention for Best Paper (2018). ACM Conference on Designing Interactive Systems 2018 (DIS), awarded for "How Do Sketching and Non-Sketching Actions Convey Design Intent?" (C51).

- Honorable Mention for Best Paper (2018). ACM Conference on Human Factors in Computing Systems 2018 (CHI), awarded for "TopoText: Context-Preserving Semantic Exploration Across Multiple Spatial Scales" (C50).
- Honorable Mention for Best Paper (2018). ACM Conference on Human Factors in Computing Systems 2018 (CHI), awarded for "When David Meets Goliath: Combining Smartwatches with a Large Vertical Display for Visual Data Exploration" (C49).
- Honorable Mention for Best Paper (2016). ACM Conference on Human Factors in Computing Systems 2016 (CHI), awarded for "Supporting Comment Moderators in Identifying High Quality Online News Comments" (C40).
- IEEE TVCG Best Reviewer Award (2014). Institute of Electrical and Electronics Engineers (given to top four reviewers in 2014; awarded in December 2015).
- Purdue Graduate Student Mentoring Award (2014). Purdue Student Government.
- NSF CAREER (Faculty Early Career Development) award (2013). U.S. National Science Foundation.
- Best Paper Award (2013). ASME Conference on IDETC/CIE 2013, awarded for "ShapeSift: Suggesting Sustainable Options in Design Reuse from Part Repositories" (C31).
- IEEE TVCG Best Reviewer Award (2012). Institute of Electrical and Electronics Engineers (given to top three reviewers among nearly 3,000 reviewers for IEEE TVCG during October 2011 to October 2012).
- ACM Senior Membership (2013). Association for Computing Machinery.
- IEEE Senior Membership (2013). Institute of Electrical and Electronics Engineers.
- The Ruth and Joel Spira Outstanding Teacher Award (2012). Purdue University, School of Electrical and Computer Engineering (for teaching performance in ECE 264, Spring 2011 and 2012).
- Excellence in Research Award (2012). Purdue University, Vice President of Research ($1M+ grant in AY11-12), awarded for DIA2 grant (G8) by National Science Foundation.
- Chicago Alumni New Faculty Award (2010). Purdue University, School of Electrical and Computer Engineering (startup grant funding).
- Seed for Success (2009). Purdue University, Vice President of Research ($1M+ grant in AY08-09), awarded for VACCINE grant (G3) by U.S. Department of Homeland Security.
- Best Paper Award (2008). IEEE Conference on Information Visualization (InfoVis), awarded for "Rolling the Dice: Multidimensional Visual Exploration using Scatterplot Matrix Navigation" (J8).
- Best Paper Award (2008). International Journal of Virtual Reality (2007), awarded for "Occlusion Management in Immersive and Desktop 3D Virtual Environments: Theory and Evaluation" (J2).
- Postdoctoral Fellowship (2007). Microsoft Research – INRIA Centre, 1-year appointment (2007-2008).
- Claes Adelskiöld's Medal (2005). Royal Swedish Academy of Science, 7000 SEK ($1000).

SCIENTIFIC COMMUNITY SERVICE

Journal/series editing

- International Journal of Human-Computer Studies (impact factor 2.863), associate editor, August 2017-present.
- IEEE Transactions on Visualization and Computer Graphics (impact factor 2.168), associate editor, October 2015-present.
- Information Visualization (impact factor 0.767), associate editor, January 2015-present.
- Morgan Claypool Synthesis Lectures on Visualization, co-editor, May 2014-present.

Professional society service

- IEEE Computer Society Publications Board, member at large, January 2016-December 2016.

Conference technical program committee memberships

- IEEE 3DUI program committee member
    - 3DUI 2017 – March 18-19, 2017, Los Angeles, CA
    - 3DUI 2016 – March 19-20, 2016, Greenville, SC

    - 3DUI 2015 – March 23-24, 2015, Arles, France
    - 3DUI 2014 – March 29-30, 2014, Minneapolis, MN
    - 3DUI 2013 – March 16-17, 2013, Orlando, FL
    - 3DUI 2012 – March 4-5, 2012, Orange County, CA
    - 3DUI 2011 – March 20-21, 2011, Singapore
    - 3DUI 2010 – March 20-21, 2010, Waltham, MA
- IEEE BDVA 2018 program committee member (October 17-19, 2018)
- BELIV (Beyond time and errors: novel evaluation methods for visualization) program committee member
    - BELIV 2018 – October 21, 2018, Berlin, Germany
    - BELIV 2016 – October 24, 2016, Baltimore, MD
    - BELIV 2014 – November 10, 2014, Paris, France
    - BELIV 2012 – October 14-15, 2012, Seattle, WA
- ACM CHI program committee member
    - CHI 2020 – April 25-30, 2020, Honolulu, HI, USA – Subcommittee Chair (SC)
    - CHI 2019 – May 4-9, 2019, Glasgow, UK – Associate Chair (AC)
    - CHI 2018 – Apr 21-26, 2018, Montreal, QC, Canada – Associate Chair (AC)
    - CHI 2017 – May 6-11, 2017, Denver, CO, USA – Associate Chair (AC)
    - CHI 2016 – May 7-12, 2016, San Jose, CA, USA – Associate Chair (AC)
    - CHI 2015 – April 18-24, 2015, Seoul, South Korea – Associate Chair (AC)
    - CHI 2014 – April 26-May 1, 2014, Toronto, ON, Canada – Associate Chair (AC)
    - CHI 2012 – May 5-10, 2012, Austin, TX – Associate Chair (AC)
    - CHI 2010 – April 10-15, 2010, Atlanta, GA – Associate Chair (AC)
- ACM CSCW 2019 associate chair (program committee member) (November 9-13, 2019, Austin, TX)
- ACM DIS 2018 associate chair (program committee member) (June 9-13, 2018, Hong Kong, China)
- IEEE EuroVis program committee member
    - EuroVis 2013 – June 17-21, 2013, Leipzig, Germany
    - EuroVis 2012 – June 5-8, 2012, Vienna, Austria
    - EuroVis 2011 – June 1-3, 2011, Bergen, Norway
- Graphics Interface 2011 program committee member (May 25-27, 2011, St. John's, NL, Canada)
- iConference program committee member (March 20-23, 2016, Philadelphia, PA)
- IEEE InfoVis program committee member
    - InfoVis 2015 – October 25-31, 2015, Chicago, IL
    - InfoVis 2014 – November 9-14, 2014, Paris, France
    - InfoVis 2013 – October 13-18, 2013, Atlanta, GA
    - InfoVis 2011 – October 23-28, 2011, Providence, RI
    - InfoVis 2010 – October 24-29, 2010, Salt Lake City, UT
    - InfoVis 2009 – October 12-16, 2009, Atlantic City, NJ
- INTERACT (IFIP Human-Computer Interaction Conference) program committee member
    - INTERACT 2013 – September 2-6, 2013, Cape Town, South Africa
    - INTERACT 2009 – August 24-29, 2009, Uppsala, Sweden
- IEEE LDAV program committee member
    - LDAV 2013 – October 13-14, 2013, Atlanta, GA
    - LDAV 2012 – October 14-15, 2012, Seattle, WA
- NordiCHI 2008 program committee member (October 20-22, 2008, Lund, Sweden)
- IEEE PacificVis program committee member
    - PacificVis 2019 – April 23-26, 2019, Bangkok, Thailand
    - PacificVis 2015 – April 14-17, 2015, Hangzhou, China
    - PacificVis 2014 – March 4-7, 2014, Yokohama, Japan
    - PacificVis 2013 – February 27-March 1, 2013, Sydney, Australia
    - PacificVis 2011 – March 1-4, 2011, Hong Kong, China

    - PacificVis 2010 – March 2-5, 2010, Taipei, Taiwan
    - PacificVis 2009 – April 21-23, 2008, Beijing, China
- IEEE VAST program committee member
    - VAST 2019 – October 20-25, 2019, Vancouver, BC, Canada
    - VAST 2018 – October 21-26, 2018, Berlin, Germany
    - VAST 2015 – October 25-30, 2015, Chicago, IL
    - VAST 2014 – November 9-14, 2014, Paris, France
    - VAST 2012 – October 14-19, 2012, Seattle, WA
    - VAST 2011 – October 23-28, 2011, Providence, RI
    - VAST 2010 – October 24-29, 2010, Salt Lake City, UT

Conference organization

- ACM CHI 2020 subcommittee chair (Visualization subcommittee; equivalent to papers co-chair) (April 25-30, 2020, Honolulu, HI, Hawaii, USA)
- IEEE InfoVis 2018 best papers committee (October 21-26, 2018, Berlin, Germany)
- IEEE InfoVis 2017 papers co-chair (October 1-6, 2017, Phoenix, AZ)
- IEEE InfoVis 2016 papers co-chair (October 23-28, 2016, Baltimore, MD)
- IEEE EuroVis 2016 short papers co-chair (Groningen, the Netherlands)
- IEEE InfoVis 2015 posters co-chair (October 25-30, 2015, Chicago, IL)
- IEEE InfoVis 2014 posters co-chair (November 9-14, 2014, Paris, France)
- IEEE EuroVis 2014 short papers co-chair (June 9-13, 2014, Swansea, United Kingdom)
- IEEE InfoVis 2013 doctoral colloquium chair (October 13-18, 2013, Atlanta, GA)
- IEEE InfoVis 2012 doctoral colloquium chair (October 14-19, 2012, Seattle, WA)
- IEEE InfoVis 2011 exhibits chair (October 23-28, 2011, Providence, RI)
- IEEE InfoVis 2010 tutorials chair (October 24-29, 2010, Salt Lake City, UT)

Conference session chair

- ACM CHI session chair
    - CHI 2014 – Modeling Users and Interaction (May 1, 2014, Toronto, ON, Canada)
    - CHI 2012 – Programming, Performance, and Sensemaking (May 10, 2012, Austin, TX)
    - CHI 2010 – Making Meaning in Large Displays (April 12, 2010, Atlanta, GA)
- IEEE InfoVis session chair
    - InfoVis 2013 – Systems & Sets (October 13-18, 2013, Atlanta, GA)
    - InfoVis 2010 – Multi-dimensional Visualization (October 28, 2010, Salt Lake City, UT)
    - InfoVis 2009 – Multidimensional Data Visualization (October 15, 2009, Atlantic City, NJ)
- ACM ITS 2012 session chair – Understanding Users (November 14, 2012, Boston, MA)
- IEEE VAST session chair
    - VAST 2014 – Visual Analysis of Changes (November 13, 2014, Paris, France)
    - VAST 2012 – Sensemaking and Collaboration (October 17, 2012, Seattle, WA)
    - VAST 2010 – Text Analytics (October 26, 2010, Salt Lake City, UT)

Journal reviewing

- Behaviour & Information Technology (2014)
- BMC Research Notes (2012)
- Computational Statistics (2009)
- Computers & Graphics (2015, 2018)
- IEEE Computer Graphics & Applications (2003, 2014-2019)
- Computer Graphics Forum (2012-2019)
- Empirical Software Engineering (2007)
- Foundations and Trends in Human-Computer Interaction (2012)
- International Journal of Computer Assisted Radiology and Surgery (2010)

- International Journal of Human-Computer Studies (2007-2019)
- Information Visualization (2007-2019)
- Interacting with Computers (2012-2013, 2019)
- Journal of Visual Languages and Computing (2007-2009)
- ACM Transactions on Interactive Intelligent Systems (2012-2014)
- ACM Transactions on Human-Computer Interaction (2011-2015, 2019)
- Tsinghua Science and Technology (2012)
- IEEE Transactions on Visualization and Computer Graphics (2008-2019)
- The Visual Computer (2009)

Conference reviewing
- IEEE Symposium on 3D User Interfaces (2008-2015)
- ACM Conference on Advanced Visual Interfaces (2010-2018)
- ACM Workshop on BEyond time and error in evaLuatIon of Visualization (2010-2014)
- ACM Conference on Human Factors in Computing Systems (2003-2019)
- ACM Conference on Computer Supported Cooperative Work and Social Computing (2008-2011, 2014-2015, 2019)
- Conference of the European Association for Computer Graphics (2008, 2013)
- ACM Conference on Engineering Interactive Computing Systems (2010)
- Eurographics/IEEE VGTC Symposium on Visualization (2009-2019)
- Canadian HCC Society's Graphics Interface conference (2006-2008, 2011, 2015)
- IEEE Conference on Information Visualization (2005, 2007-2015, 2018-2019)
- IFIP Conference on Human-Computer Interaction (2009-2011, 2013)
- IEEE Symposium on Large-Scale Data Analysis and Visualization (2012-2013)
- ACM Conference on Mobile Human-Computer Interaction (2012)
- Nordic Conference on Human-Computer Interaction (2006-2008)
- International Conference on Principles of Distributed Systems (2006)
- IEEE Pacific Visualization Symposium (2008-2015)
- IEEE Conference on Scientific Visualization (2005, 2007-2008)
- ACM Conference on Interactive Tabletops and Surfaces (2009-2012, 2014-2015)
- ACM Conference on Tangible, Embedded, and Embodied Interaction (2011)
- ACM Symposium on User Interface Software and Technology (2008, 2013, 2018)
- IEEE Symposium on Visual Analytics Science and Technology (2006-2015)
- IEEE Workshop on Visualization of Security (2005)
- IEEE Conference on Virtual Reality (2007-2008, 2014)
- ACM Symposium on Virtual Reality Software and Technology (2007)

Grant reviewing
- Agence Nationale de la Recherche (ANR, France) – external reviewer (2014)
- Austrian Science Fund (FWF, Austria) – external reviewer (2013)
- U.S. National Science Foundation (NSF) – panelist (2008, 2011, 2014-2019)
- Swiss National Science Foundation (SNSF, Switzerland) – external reviewer (2009)

ACADEMIC SOCIETY MEMBERSHIPS

Association for Computing Machinery (ACM)
- Distinguished Scientist of the ACM (2018)
- Distinguished Member of the ACM Special Interest Group for Human-Computer Interaction (SIGCHI) (2018)

Institute of Electrical and Electronics Engineers (IEEE)
- Senior Member of the IEEE (2013)
- Senior Member of the IEEE Computer Society (2013)

TEACHING EXPERIENCE

University of Maryland College Park, MD, USA

Course Developer

• *INST 728X Introduction to Game Design*	Spring 2020	New elective graduate course
• *INST 462 Introduction to Data Visualization*	Fall 2017	New elective undergraduate course
• *INST 762 Visual Analytics*	Spring 2016	New experimental graduate course
• *INST 760 Data Visualization*	Fall 2015	New experimental graduate course

Instructor

• *INST 762 Visual Analytics*	Spring 2019	24 graduate students
• *INST 462 Introduction to Data Visualization*	Fall 2018	41 undergraduate students
• *INST 462 Introduction to Data Visualization*	Spring 2018	50 undergraduate students
• *INST 462 Introduction to Data Visualization*	Fall 2017	29 undergraduate students
• *INST 760 Data Visualization*	Fall 2016	30 graduate students
• *INST 728Q Visual Analytics*	Spring 2016	30 graduate students
• *INST 728V Data Visualization*	Fall 2015	~30 graduate students
• *INST 630 Programming for Information Professionals*	Fall 2015	~30 graduate students
• *INST 630 Programming for Information Professionals*	Spring 2015	~30 graduate students
• *INST 630 Programming for Information Professionals*	Fall 2014	30 graduate students

Purdue University West Lafayette, IN, USA

Course Developer

• *ECE 395x Human-Computer Interaction*	Fall 2009	New experimental undergrad course
• *ECE 495E Fundamentals of Computer Graphics*	Fall 2011	New permanent undergrad course
• *ECE 695D Introduction to Visual Analytics*	Fall 2009	New permanent graduate course

Instructor

• *ECE 264 Advanced C Programming*	Spring 2014	60 undergraduate students
• *ECE 264 Advanced C Programming*	Spring 2013	48 undergraduate students
• *ECE 264 Advanced C Programming*	Spring 2012	48 undergraduate students
• *ECE 264 Advanced C Programming*	Spring 2011	38 undergraduate students
• *ECE 364 Software Engineering Tools*	Spring 2010	~60 undergraduate students
• *ECE 495E Fundamentals of Computer Graphics*	Spring 2009	~25 undergraduate students
• *ECE 595E Visualization Techniques*	Fall 2012	16 graduate students
• *ECE 595E Visualization Techniques*	Fall 2010	10 graduate students
• *ECE 695D Introduction to Visual Analytics*	Fall 2013	23 graduate students
• *ECE 695D Introduction to Visual Analytics*	Fall 2011	14 graduate students
• *ECE 695D Introduction to Visual Analytics*	Fall 2009	12 graduate students

Project Advisor

• *Table-It: Kinect-based Conference Meeting System*	AY 2012-13	5 undergraduate students
• *Speech and Audiology Clinic EPICS team*	Spring 2010	12 undergraduate students

Chalmers University of Technology Göteborg, Sweden

Course Developer

• *Simulation Engines*	2003-2005	600 slides, 14 lectures
• *3D Real-Time Graphics*	2002-2003	50 slides, 2 lectures

Instructor

• *Simulation Engines*	Fall 2004	50 students
• *Simulation Engines*	Fall 2005	40 students

Project Advisor

• *Collaborative Editing* (project)	2003-2004	8 students
• *Wearable Platforms for AR & VR* (project)	2002-2003	8 students

Teaching Assistant

• *Object-Oriented Software Engineering*	2002, 2003	100+ undergraduate students
• *Data Structures*	2001	30 undergraduate students

STUDENTS ADVISED

University of Maryland College Park, MD, USA

Graduated Ph.D. Students – Major Advisor (Academic Committee Chair)

- Sriram Karthik Badam (Ph.D. 2019), *Enabling Collaborative Visual Analysis across Heterogeneous Devices*, Department of Computer Science, Apr. 2019. (Major advisor Sep. 2012–May 2019)
    - Now software engineer at Apple, Inc in Cupertino, CA, USA.
- Zhenpeng Zhao (Ph.D. 2019), *Data-driven Storytelling for Casual Users*, Department of Computer Science, Apr. 2019. (Major advisor Dec. 2011–May 2019)
    - Now software engineer at Yahoo! in Sunnyvale, CA, USA.
- Zhe Cui (Ph.D. 2019), *Towards Efficient Presentation and Interaction in Visual Data Analysis*, Department of Electrical and Computer Engineering Mar. 2019. (Major advisor Jan. 2016–May 2019)
    - Now software engineer at Google, Inc in Mountain View, CA, USA.
- Deok Gun Park (Ph.D. 2018), *Visual Analytics for Open-Ended Tasks in Text Mining*, Department of Computer Science, Mar. 2018. (Major advisor Dec. 2012–Mar. 2018)
    - Now assistant professor at University of Texas at Arlington, TX, USA.
- Adil Yalcin (Ph.D. 2016), *Towards Rapid, Effective, and Expressive Visual Data Exploration*, Department of Computer Science, Oct. 2016. (Major advisor Dec. 2014–Oct. 2016)
    - Now CEO at Keshif, LLC, Arlington, VA, USA

Ph.D. Thesis Major Advisor (Academic Committee Chair)

- Sungbok Shin (Ph.D. student), Department of Computer Science, Aug. 2019–present (unfunded graduate research assistant).
- Biswaksen Patnaik (Ph.D. student), Department of Computer Science, Aug. 2019–present (funded graduate research assistant).
- Eric Newburger (Ph.D. student), College of Information Studies, Aug. 2018–present (funded graduate research assistant).
- Brian Ondov (Ph.D. student), Department of Computer Science, Aug. 2017–present (funded graduate research assistant).
- Sigfried Gold (Ph.D. student), College of Information Studies, Aug. 2017–present (funded graduate research assistant).
- Andrea Batch (Ph.D. student), College of Information Studies, Aug. 2016–present (funded graduate research assistant).

- Zehua Zheng (Ph.D. student), Department of Computer Science, Jan. 2016–Aug. 2018 (funded graduate research assistant).

Graduated Ph.D. Students – Academic Committee Member

- Alina Striner (Ph.D. 2019), *Simulating Reality: Training Citizen Scientists to Judge Stream Habitats in Multisensory Virtual Reality*, College of Information Studies, Jul. 2016–Apr. 2019 (Major advisor: Jennifer Preece). (Committee member Jul. 2016–Apr. 2019)
- Matthew Mauriello (Ph.D. 2018), *Designing and Evaluating Next-Generation Thermographic Systems to Support Residential Energy Audits*, Department of Computer Science, Aug. 2018 (Major advisor: Jon Froehlich). (Committee member)
- Justin Wagner (Ph.D. 2018), *Software Infrastructure for Visual and Integrative Analysis of Microbiome Data*, Department of Computer Science, Jun. 2018 (Major advisor: Hector Corrada Bravo). (Committee member)
- Fan Du (Ph.D. 2018), *Explainable Recommendation for Event Sequences: A Visual Analytics Approach*, Department of Computer Science, Mar. 2018 (Major advisor: Ben Shneiderman). (Committee member)
- Uran Oh (Ph.D. 2016), *Accessible On-Body Interaction for People With Visual Impairments*, Department of Computer Science, Oct. 2016 (Major advisor: Leah Findlater). (Committee member Sep. 2016–Oct. 2016)
- Kotaro Hara (Ph.D. 2016), *Scalable Methods to Collect and Visualize Sidewalk Accessibility Data for People with Mobility Impairments*, Department of Computer Science, Aug. 2016 (Major advisor: Jon Froehlich). (Committee member Jul. 2016–Aug. 2016)
- Sana Malik (Ph.D. 2016), *A Visual Analytics Approach to Comparing Cohorts of Event Sequences*, Department of Computer Science, May 2016 (Major advisor: Ben Shneiderman). (Committee member Dec. 2015–May 2016)

Ph.D. and Masters Committee Member

- Currently none.

Purdue University West Lafayette, IN, USA

Graduated Ph.D. Students – Major Advisor (Academic Committee Chair)

- Sohaib Ghani (Ph.D. 2013), *Advanced Visualization, Navigation, and Interaction in Graphs: Theory, Design, and Evaluation*, School of Electrical and Computer Engineering, Purdue University, June 2013.
    - Now research scientist, KAUST, Saudi Arabia
- Waqas Javed (Ph.D. 2013), *Spatializing Visual Exploration: Transforming Interactive Visual Analysis into Spatial Representations to Aid Sensemaking*, School of Electrical and Computer Engineering, Purdue University, May 2013.
    - Now HCI researcher, GE Global Research, San Ramon, CA, USA

Graduated Masters Students – Major Advisor (Academic Committee Chair)

- Sriram Karthik Badam (Masters 2014), *Developing Digital Media Platforms for Early Design*, School of Electrical & Computer Engineering, Purdue University, July 2014.
    - Major advisor, funded research assistant (Sep. 2012–Jul. 2014)
- Udayan Umapathi (Masters 2014), *Realization and Evaluation of a 3-Degrees-of-Freedom Mouse Model*, School of Electrical & Computer Engineering, Purdue University, May 2014.
    - Major advisor, funded research assistant (Oct. 2013–May 2014)
    - Researcher at Hasso-Plattner Institute, Potsdam, Germany in 2014 (advisor: Patrick Baudisch)
    - Now Ph.D. student at MIT Media Lab (advisor: Hiroshi Ishii)
- Salman Javed (Masters 2014), Non-thesis option, School of Electrical & Computer Engineering, Purdue University, May 2014.
    - Major advisor (2011–2014; break 2012–2013)
- KyungTae Kim (Masters 2010), *A Framework to Support Awareness and Coordination in Mixed-Presence Collaborative Information Visualization for Multi-Touch Tabletop Displays*, School of Electrical & Computer Engineering, Purdue University, November 2010.

- Major advisor, funded research assistant (Sep. 2009–Dec. 2010)
- Now CEO of startup company in Seoul, South Korea

Graduated Ph.D. Students – Academic Committee Member

- Sukwon Lee (Ph.D. 2016), *Investigation of Visualization Literacy: A Visualization Sensemaking Model, a Visualization Literacy Assessment Test, and the Effects of Cognitive Characteristics*, School of Industrial Engineering, December 2016. (Committee member Jan. 2013–Dec. 2016)
- Junghoon Chae (Ph.D. 2016), *Visual Analytics of Location-based Social Networks for Decision Support*, School of Electrical & Computer Engineering, August 2016. (Committee member Nov. 2011–Aug. 2016.)
- Sujin Jang (Ph.D. 2016), *Methods for Analyzing Natural Patterns and Physical Ergonomics of Human Gestures in Mid-Air Interaction*, School of Mechanical Engineering, April 2016. (Committee member Oct. 2012–Apr. 2016).
- Ayan Sinha (Ph.D. 2016), *Physics-based Supervised and Unsupervised Learning of Graph Structure*, School of Mechanical Engineering, February 2016. (Committee member Dec. 2011-Feb. 2016)
- Vinayak (Ph.D. 2015), *Embodied Interactions for Spatial Design Ideation: Symbolic, Geometric, and Tangible Approaches*, School of Mechanical Engineering, Nov. 2015. (Committee member Apr. 2011–Nov. 2015)
- Senthil Chandrasegaran (Ph.D. 2015), *Tools and Methods to Analyze Multimodal Data in Collaborative Design Ideation*, School of Mechanical Engineering, November 2015. (Committee member Feb. 2014–Nov. 2015)
- Devarajan Ramanujan (Ph.D. 2015), *Data Representation Methods for Environmentally Conscious Product Design*, School of Mechanical Engineering, August 2015. (Committee member Apr. 2014–Aug. 2015)
- Haeyong Chung (Ph.D. 2015), *Designing Display Ecologies for Visual Analysis*, Department of Computer Science, Virginia Tech, February 2015. (Committee member Oct. 2011–Feb. 2015).
- Samah Gad (Ph.D. 2014), *Expressive Forms of Topic Modeling to Support Digital Humanities*, Department of Computer Science, Virginia Tech, Sep. 2014 (Major advisor: Naren Ramakrishnan). (Committee member Nov. 2012–Sep. 2014)
- Jin Ryong Kim (Ph.D. 2014), *Touch Typing Performance with Sensory Feedback on a Flat Keyboard*, School of Electrical & Computer Engineering, Purdue University, Jul. 2014 (Major advisor: Hong Z. Tan). (Committee member Apr. 2011–Jul. 2014)
- William Benjamin (Ph.D. 2014), *Structure Discovery and Navigation on Shape Data*, School of Mechanical Engineering, Purdue University, Jul. 2014 (Major advisor: Karthik Ramani). (Committee member Aug. 2012–Jul. 2014)
    - Now researcher at National Institute of Standards and Technology
- Sungahn Ko (Ph.D. 2014), *Aided Decision-Making Through Visual Analytics Systems for Large Multi-Variate, Spatiotemporal, Hierarchical and Network Data*, School of Electrical & Computer Engineering, Purdue University, Jul. 2014 (Major advisor: David Ebert). (Committee member Sep. 2011–Jul. 2014)
- Abish Malik (Ph.D. 2014), *Assisted Decision Making Using Multivariate Spatiotemporal Data Through the Application of Visual Analytics*, School of Electrical & Computer Engineering, Purdue University, Jul. 2014 (Major advisor: David Ebert). (Committee member Apr. 2010–Jul. 2014).
    - Now research scientist at Purdue University, West Lafayette, IN
- Hanjun Xian (Ph.D. 2013), *Scholarly Collaboration in Engineering Education: From Big-Data Scientometrics to a User-Centered Software Design*, School of Engineering Education, Purdue University, Oct. 2013 (Major advisor: Krishna Madhavan). (Committee member Dec. 2010–Oct. 2013)
    - Now research software engineer, Bing team, Microsoft Corporation, Redmond, WA
- Jaeyoung Park (Ph.D. 2013), *Effect of Contact Location Information on Haptic Shape Perception*, School of Electrical & Computer Engineering, Jun. 2013 (Major advisor: Hong Z. Tan). (Commiteee member Jan. 2010–Jun. 2013)
    - Now research scientist at Korea Institute of Science and Technology

- Bum chul Kwon (Ph.D. 2013), *Visualization Aids to Support the Consumer Decision Making Process*, School of Industrial Engineering, Purdue University, May 2013. (Major advisor: Ji Soo Yi) (Committee member Jan. 2011–May 2013)
    - Now postdoctoral researcher, University of Konstanz, Germany
- Sundar Murugappan (Ph.D. 2012), *Natural User Interfaces for Engineering Design*, School of Mechanical Engineering, Purdue University, Mar. 2012. (Major advisor: Karthik Ramani) (Committee member 2010–2012)
    - Now User Experience Researcher at GE Global Research, San Ramon, CA
- Yi Fang (Ph.D. 2011), *Heat-Driven Framework for Interpretation of Data in Networks*, School of Mechanical Engineering, Purdue University, Oct. 2011. (Major advisor: Karthik Ramani) (Committee member 2011–2012)
    - Now assistant professor, electrical engineering, New York University Abu-Dhabi

Graduated Masters Students – Academic Committee Member

- Brandon Blaine Gardner (Masters 2014), *Developing an Embedded System Solution for High-Speed, High-Capacity Data Logging for a Size-Constrained, Low-Power Biomechanical Telemetry System*, School of Electrical & Computer Engineering, Purdue University, Apr. 2014. (Committee member Oct. 2012–Apr. 2014)
- Silvia Oliveros-Torres (Masters 2013), *Interactive Multivariate Data Exploration for Risk-based Decision Making*, School of Electrical & Computer Engineering, Purdue University, Apr. 2013. (Committee member Jan. 2011–Apr. 2013)
- Hammad Haseeb (Masters 2013), *Impact of Access Control on Retrieval Performance of Spatiotemporal Data*, School of Electrical & Computer Engineering, Purdue University, Mar. 2013. (Committee member (Nov. 2012–Mar. 2013).
- Arpan Kusari (Masters 2011), School of Civil Engineering, Purdue University, Dec. 2011. Committee member 2011).
    - Now Ph.D. student at University of Houston, Houston, TX.
- Michael Wilga (Masters 2011), School of Visual & Performing Arts, Purdue University, Jul. 2011. (Committee member 2009–2011).
    - Now audio artist at Electronic Arts, San Francisco Bay Area, CA.

Ph.D. Thesis Major Advisor (Academic Committee Chair)

- Yuetling Wong (Ph.D. student), School of Electrical & Computer Engineering, Oct. 2012–present (unfunded graduate research assistant).

Ph.D. and Masters Committee Member

- Cecil Piya (Ph.D. student), School of Mechanical Engineering, Jan. 2014–May. 2017.
- Shuying Feng (Masters student), School of Electrical & Computer Engineering, Oct. 2013–2014.
- Sang Ho Yoon (Ph.D. student), School of Mechanical Engineering, Oct. 2013–2016.
- Rachel Whitson (Masters student), Department of Computer Graphics Technology, Sep. 2013–May. 2014.
- Nadra Guizani (Ph.D. student), School of Electrical & Computer Engineering, Sep. 2012–2014.
- Xin Chen (Ph.D. candidate), School of Engineering Education, Mar. 2012–Sep. 2014.
- Daniel Meija (Ph.D. student), School of Electrical & Computer Engineering, Aug. 2011–2014.
- Matthew Beard (Ph.D. candidate), Department of Forestry and Natural Resources, Mar. 2011–2014.
- Hyungju Park (Ph.D. candidate), School of Electrical & Computer Engineering, Jan. 2011–2014.

Undergraduate Research Advisor

- Eli Raymond Fisher, SRC Fellow, School of Electrical & Computer Engineering, May 2012–Sep. 2013.
    - Now software engineer at Microsoft Corporation
- Brian Bowman, School of Electrical & Computer Engineering, Aug. 2010–May 2012.
    - Now software engineer at Microsoft Corporation
- Will McGrath, School of Electrical & Computer Engineering, Aug. 2010–May 2012.

    - Now Ph.D. student in Computer Science Department at Stanford University
- Stephen MacNeil, School of Electrical & Computer Engineering, Aug. 2009–May 2012.
    - Now Ph.D. student in Department of Computer Science at UNC Charlotte
- Tejas Kulkarni, School of Electrical & Computer Engineering, Jan. 2009–May 2010.
    - Now Ph.D. from Department of Brain and Cognitive Sciences at Massachusetts Institute of Technology (MIT)
- Bryan McDonnel, School of Electrical & Computer Engineering, Jan.–Aug. 2009.
    - Now Associate Developer at Spot Trading LLC

Chalmers University of Technology Göteborg, Sweden

Master's Thesis Advisor (advisory only)
- C. Håkansson and S. Sandberg, *Using 3D Audio Guidance for Static Object Location*, Chalmers University of Technology and IT University, 2006.
- J. Tibell, *Multiplayer Physics*, Department of Computer Science and Engineering, Chalmers University of Technology, 2006.
- T. Bengtsson and H. Svensson, *.NET Platform Evaluation for Spotfire Visualization*, Department of Computer Science and Engineering, Chalmers University of Technology, 2004.
- K. Höök, *Interaction with Products in Immersive 3D Environments*, Department of Computer Science and Engineering, Chalmers University of Technology, 2004.
- M. Kahnberg, *Design and Construction of a Three-Dimensional Role-Playing Game*, Department of Computer Science and Engineering, Gothenburg University, 2004.

PRESS AND MEDIA COVERAGE

TV coverage
- InsideScience TV (2013). "Turning Your World into a Touch Screen," August 14.
- WLFI-TV NewsChannel 18 (2012). "Purdue researchers turn any surface into interactive touch screen," October 12.

Online coverage
- Huffington Post (2017). "7 Cyberlearning Technologies Transforming Education," December 6.
- NSF Discovery (2015). "Tools for real-time visual collaboration", June 10.
- People Behind the Science (2014). "Dr. Niklas Elmqvist: A Picture is Worth a Thousand Words in the Field of Information Visualization," May 19.
- MIT Technology Review (2014). "Making All Your Screens Play Nicely," April 10.
- DISCOVER Magazine Online (2013). "Creating a Touch-Screen on a Countertop," March 18.
- Purdue News (2012). "New interactive system detects touch and gestures on any surface," October 10.
- Journal and Courier Online (2012). "PolyZoom: New Tool from Purdue," May 12.
- Purdue News (2012). "'PolyZoom' is a new tool to view, study graphics," April 24.
- Purdue News (2011). "NSF grant to create new resource to accelerate 'STEM' innovations," October 18.
- Purdue Website (2011). "5 Students Who… Are Innovation Makers," June 1 (on undergraduate advisee Will McGrath's research project).
- Purdue News (2011). "'Surrogates' aid design of complex parts and controlling video games," May 10.
- eCampus News (2011). "New software connects interactive displays online," March 22.
- Purdue News (2010). "Software allows interactive tabletop displays on Web," November 29.
- Chalmers News Service (2006). "Finding your way in Cyberspace," December 12.
- Slashdot (2001). "Slashback: Solidity, Sneakiness, Recovery," November 6.
- Slashdot (2001). "Nicklas [sic] Elmqvist On 3Dwm Project's Progress," August 22.
- LinuxPower (2001). "Adding a new dimension to the desktop with 3Dwm," August 21. (interview)
- Slashdot (2000). "3Dwm Updates," November 3.
- Slashdot (1999). "3D Window Manager," November 3.

Print media coverage

- DISCOVER Magazine (2013), "Computing on the Kitchen Counter," pp. 18-19, April issue.
- Journal and Courier (2012). "PolyZoom: New Tool from Purdue," May 12.
- Purdue Exponent (2010). "Purdue research expands touch technology," December 6.

UNIVERSITY AND DEPARTMENT SERVICE

University of Maryland, College Park UMCP Campus

- Human-Computer Interaction Laboratory (HCIL), director (2016-present)
- Institute for Advanced Computer Studies (UMIACS), Appointment, Promotion, and Tenure (APT) Committee, member (2018-2019).

University of Maryland, College Park College of Information Studies

- Appointment, Promotion, and Tenure Committee (APT), associate chair (2015-2016)
- Merit Pay Committee, member (2015-2016)
- Annual Review Committee, member (2014-2015)
- Master of Science in Human-Computer Interaction Program Committee
    - Director (2014-2018)
    - Member (2018-present)
- Programs, Curricula & Courses Committee, member (2014-2018)
- Master of Information Management Program Committee, member (2014-2015)

Purdue University College of Engineering

- Strategic Planning Team – Virtual Reach and Web Presence, member (Fall 2009)
- Perception-based Engineering Faculty Search Committee, member (2009-2010)

Purdue University School of Electrical and Computer Engineering

- Purdue Hacker Club, Faculty Advisor (2013-2014)
- ECE Graduate Committee, member (2011-2014)
- ECE Graduate Admissions Committee, member (2008-2014)
- ECE Faculty Search Committee, member (2008, 2009, 2010, 2012, 2013)

Chalmers University of Technology Department of Computer Science & Engineering

- Graduate Committee, Ph.D. student representative (2003-2006)
- Distributed Computing and Systems Seminar, coordinator (2004-2006)
- Graduate Admissions Committee for Interaction Design master's program, member (2004-2005)