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Danielle Albers Szafir is an Assistant Professor in the Department of Computer Science and ATLAS Institute at the University of Colorado Boulder. She is also an affiliate professor and member of the founding faculty of the Department of Information Science and Fellow in the Institute of Cognitive Science. She received a B.S. in Computer Science at the University of Washington as a NASA Space Grant Scholar and a Ph.D. in Computer Sciences at the University of Wisconsin-Madison, where her dissertation received a VGTC Doctoral Dissertation Award Honorable Mention.

Szafir develops interactive visualization systems and techniques for exploring large and complex data in domains ranging from biology to the humanities. Her work focuses on increasing the scalability and comprehensibility of information visualization by quantifying perception and cognition for design. Her research sits at the intersection of information visualization, data science, and cognitive science. Active research topics include exploratory analytics, interactive machine learning, data literacy and accessibility, visual cognition, and immersive visualization using mixed reality and tangible interfaces. This work has been integrated into leading tools such as D3 and Tableau and received awards at IEEE VIS, IEEE VR, and IS&T Color and Imaging. She was named to the Forbes 30 Under 30 Class of 2018 for Science. Her work is funded by the NSF, US Air Force, and the Coleman Institute.

Educational Background

- 2009–2015 Ph.D. in Computer Sciences, University of Wisconsin-Madison
Minor studies in Perceptual Psychology and Art History
Dissertation: "Utilizing Color for Perceptually-Driven Data Visualization"
Dissertation Committee: Profs. Michael Gleicher, Steven Franconeri, Bilge Mutlu, Robert Roth, & Kevin Ponto
- 2009–2011 Master of Science in Computer Sciences, University of Wisconsin-Madison
- 2007–2009 Bachelor of Science in Computer Science, University of Washington
NASA Space Grant Scholar & Dean's List Member
Minor in Mathematics

Employment History

- 2020–Present Assistant Professor, Computer Science & ATLAS Institute, University of Colorado Boulder
Courtesy Appointments in Information Science & the Center for Research Data & Digital Scholarship
Fellow in the Institute of Cognitive Science
- 2015–2019 Assistant Professor & Founding Faculty Member, Information Science, University of Colorado Boulder
Courtesy Appointments in Computer Science & the Center for Research Data & Digital Scholarship
Fellow in the Institute of Cognitive Science & ATLAS Institute
- 2010–2015 Research Assistant, Department of Computer Sciences, University of Wisconsin-Madison
 - 2013 Research Intern, Tableau Software, Menlo Park, CA
 - 2012 Software Development Intern, Google, Inc., Madison, WI
 - 2009 Software Development Intern, Boston Scientific, Redmond, WA
- 2008–2009 Software Development Intern, Aptio, Bellevue, WA

Honors & Awards

- 2020 Best Paper Award Honorable Mention, *IEEE VIS Information Visualization*
- 2020 Best Paper Award Nominee, *IEEE Conference on Virtual Reality (IEEE VR)*
- 2018 Forbes 30 Under 30 for Science, *Forbes Magazine*
- 2017 Best Paper Award, *IEEE VIS Information Visualization*
- 2016 Doctoral Dissertation Award Honorable Mention, *IEEE VGTC Visualization & Graphics Pioneers*
- 2014 MERL Best Student Paper Award, *IS&T 22nd Color and Imaging Conference*
- 2014 Best Presentation Award Honorable Mention, *McPherson Eye Research Institute*
- 2013 Best Poster Award, *IEEE VIS Scientific Visualization*
- 2010–2012 BACTER Institute Research Fellow
- 2007–2009 NASA Space Grant Scholar
- 2007–2009 Dean's List, University of Washington

Funding

- Federal Grants
- EAGER: Home-Based DIY Interactive Information Physicalization for Young Children and their Parents
National Science Foundation #2040489
Investigators: Ellen Do (PI) & Danielle Albers Szafer (Co-PI)
Duration: 10.2020–09.2022
Amount: \$300,000
- Collaborative Research: Integrating Physical Computing and Data Science in Movement-Based Learning
National Science Foundation #1933961
Investigators: R. Benjamin Shapiro (PI), Danielle Albers Szafer (Co-PI); Edd Taylor (Co-PI), & Michelle Ellsworth (Co-PI). Collaboration with New York University.
Duration: 09.2019–09.2022
Amount: \$426,090
- CHS: Medium: Scaling Qualitative Inductive Analysis through Computational Methods
National Science Foundation #1764089
Investigators: Danielle Albers Szafer (PI), Jed Brubaker (Co-PI), Casey Fiesler (Co-PI), & Michael Paul (Co-PI)
Duration: 09.2018–08.2021
Amount: \$1,070,508
- CHS: Medium: Data-Mediated Communication with Proximal Robots for Emergency Response
National Science Foundation #1764092
Investigators: Daniel J. Szafer (PI), Danielle Albers Szafer (Co-PI), & Christoffer Heckman (Co-PI)
Duration: 09.2018–08.2021
Amount: \$1,194,056
- Collaborative Analyst-Machine Perception for Robust Data Fusion
United States Air Force SMC-RSX
Investigators: Nisar Ahmed (PI) & Danielle Albers Szafer (Co-PI)
Subcontractor: Lockheed Martin Space Systems
Duration: 06.2017–06.2018
Amount: \$353,936

CRII: CHS: Data-Driven Automation of Color Encodings for Data Visualization
National Science Foundation #1657599
Investigator: Danielle Albers Szafir
Duration: 09.2017–02.2020
Amount: \$174,925

Intramural Grants Understanding Visual Analytics Approaches for People with Intellectual & Developmental Disabilities

The Coleman Institute for Intellectual & Developmental Disabilities
Investigator: Danielle Albers Szafir (PI)
Duration: 10.2018–09.2019
Amount: \$46,034

Computing support for Digital Humanities at CU
University of Colorado Boulder Innovative Seed Grant

Investigators: Vilja Hulden (PI), Danielle Albers Szafir, Orrie Gartner, Thea Lindquist, Jordan Boyd-Graber, Martha Palmer
Duration: 06.2017–05.2018
Amount: \$46,009

FieldView: Using Mobile Devices to Blend Data Collection and Analysis for Field Research
University of Colorado Boulder Innovative Seed Grant

Investigators: Danielle Albers Szafir (PI) & Daniel J. Szafir (Co-PI)
Duration: 07.2016–12.2017
Amount: \$30,000

Digital Humanities Research Network
Andrew W. Mellon Workshop Grant

Investigators: Molly Wright Steenson (PI), Catherine DeRose (PI), Danielle Albers Szafir, Eric Alexander, Joshua Armstrong, Mattie Burkert, Brandee Easter, Jesse Stommel, Mark Vareschi
Duration: 09.2014–08.2015
Amount: \$7,500

Corporate Gifts Information Visualization Hackathon Sponsorship. Zayo Group, 08.2019, \$5,000.

Information Visualization Hackathon Sponsorship. Zayo Group, 01.2017, \$10,000.

Travel Grants Schloss-Dagstuhl NSF Support Grant. National Science Foundation, 10.2017.

IEEE VIS Doctoral Colloquium Travel Fellowship. IEEE VIS, 10.2013.

Fellowships BACTER Research Fellowship. Department of Energy & the BACTER Institute. 06.2010–05.2012.

NASA Space Grant Fellowship. NASA, 09.2007–06.2009.

Under Review CAREER: HCC: Developing Perceptually-Driven Tools for Estimating Visualization Effectiveness

Recommended for Funding

Agency: National Science Foundation

Investigator: Danielle Albers Szafir, CU Boulder

Duration: 09.2021–08.2026

Amount: \$564,851

Operator-Machine Collaborative Interface for Enhanced Data Fusion

Agency: United States Air Force SMC-RSX

Investigators: Nisar Ahmed (PI), Danielle Albers Szafir (Co-PI), Lockheed Martin Space Systems (Sub-contractor)

Duration: 01.2021–12.2023

Amount: \$794,570

HCC: MEDIUM: TRACTS: Teleoperated Robots for Augmenting Child Therapists using Speech and Language Pathology

Agency: National Science Foundation

Investigators: Ellen Do (PI), Danielle Albers Szafir (Co-PI), & Aubrey Schick (Co-PI). Collaborative proposal with Colorado School of Mines & CU-Anschutz

Duration: 09.2021–08.2024

Amount: \$689,065

Collaborative Human-Machine Training Analytics

Agency: United States Army

Investigators: Danielle Albers Szafir (PI), Nisar Ahmed (Co-PI), Bradley Hayes (Co-PI), Daniel J. Szafir (Co-PI)

Duration: 01.2021–12.2021

Amount: \$314,312

Scholarly Works

Note that ^(s) indicates student co-authors at the time of publication for works published as a faculty member. Acceptance rates listed where available. Note that papers appearing in the IEEE VIS Conference are published as an issue of *IEEE Transactions on Visualization and Computer Graphics*, and papers in the Eurographics Conference on Visualization (EuroVis) are published as an issue of *Computer Graphics Forum*.

Journal Publications M. Elliott^(s), C. Xiong^(s), C. Nothelfer, & **D. Albers Szafir**. "A Design Space of Vision Science Methods for Visualization Research." *IEEE Transactions on Visualization & Computer Graphics (TVCG)*, 2021 (in press).

> *Special Issue: Proceedings of IEEE VIS 2020. Acceptance Rate: 25%*

> **Best Paper Honorable Mention (Top 5 papers of 250 submissions)**

K. Reda & **D. Albers Szafir**. "Rainbows Revisited: Modeling Effective Colormap Design for Graphical Inference." *IEEE Transactions on Visualization & Computer Graphics (TVCG)*, 2021 (in press).

> *Special Issue: Proceedings of IEEE VIS 2020. Acceptance Rate: 25%*

J. Muesing^(s), N. Ahmed, L. Burks^(s), M. Iuzzolino^(s), & **D. Albers Szafir**. "Fully Bayesian Human-Machine Data Fusion for Robust Online Dynamic Target Characterization." *Journal of Aerospace Information Systems*, 2021 (in press).

D. Albers Szafir, F. Samsel, S. Zeller, & R. Saltus. "Enabling Crosscutting Visualization for Geoscience." *Computer Graphics & Applications*, 41(1): 49–57, 2021.

M. Whitlock^(s), J. Mitchell^(s), N. Pfeufer^(s), B. Arnot^(s), R. Craig^(s), B. Wilson^(s), B. Chung^(s), & **D. Albers Szafir**. "MRCAT: In Situ Prototyping of Interactive AR Environments." *Lecture Notes in Computer Science*, 12190, 2020.

> *Special Issue: Proceedings of HCII 2020: Virtual, Augmented and Mixed Reality Design and Interaction.*

S. Smart^(s), K. Wu^(s), & **D. Albers Szafir**. "Color Crafting: Automating the Construction of Designer Quality Color Ramps." *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 26(1): 1215–1225, 2019.

> *Special Issue: Proceedings of IEEE VIS 2019. Acceptance Rate: 25%*

M. Whitlock^(s), K. Wu^(s), & **D. Albers Szaifir**. "Designing for Mobile and Immersive Visual Analytics in the Field." *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 26(1): 503–513, 2019.

> *Special Issue: Proceedings of IEEE VIS 2019. Acceptance Rate: 25%*

B. Lee, K. Isaacs, **D. Albers Szaifir**, G.E. Marai, C. Turkay, M. Tory, S. Carpendale, & A. Endert. "Broadening the Intellectual Diversity of Visualization Research Papers." *IEEE Computer Graphics & Applications*, 39(4): 78-85, 2019.

D. Pruss^(s), Y. Fujinuma^(s), M. Paul, A. Daughton^(s), B. Arnot^(s), **D. Albers Szaifir**, & J. Boyd-Graber. "Zika discourse in the Americas: a multilingual topic analysis of Twitter." *PLOS ONE*, 14(5), 2019.

H. Song^(s) & **D. Albers Szaifir**. "Where's My Data? Evaluating Visualizations with Missing Data." *IEEE Transactions of Visualization and Computer Graphics*, 25(1): 914–924, 2019.

> *Special Issue: Proceedings of IEEE VIS 2018. Acceptance Rate: 25.7%*

> *Featured in Visualizing Data's Best of the Visualization Web, October 2018*

A. Sarikaya^(s), M. Gleicher, & **D. Albers Szaifir**. "Design Factors for Summary Visualization in Visual Analytics." *Computer Graphics Forum*, 37(3): 145–156, 2018.

> *Special Issue: Proceedings of EuroVis 2018. Acceptance Rate: 29%*

D. Albers Szaifir. "Modeling Color Difference for Visualization Design." *IEEE Transactions of Visualization and Computer Graphics*, 24(1): 392–401, 2018.

> *Special Issue: Proceedings of IEEE VIS 2017. Acceptance Rate: 22.9%*

> **Best Paper Award (Top paper of 170 submissions)**

D. Albers Szaifir, D. Stuffer^(s), Y. Sohail^(s), & M. Gleicher. "TextDNA: Visualizing Word Usage Patterns with Configurable Colorfields." *Computer Graphics Forum*, 35(3): 421–430, 2016.

> *Special Issue: Proceedings of EuroVis 2016. Acceptance Rate: 26%*

D. Albers Szaifir, S. Haroz, M. Gleicher, & S. Franconeri. "Four Types of Ensemble Coding for Data Visualizations." *Journal of Vision*, 16(11): 1–19, 2016.

> *Featured in Visualizing Data's Best of the Visualization Web, May 2017*

D. Albers Szaifir, A. Sarikaya^(s), & M. Gleicher. "Lightness Constancy in Surface Visualization." *IEEE Transactions on Visualization and Computer Graphics*, 22(9): 2107–2121, 2016.

A. Sarikaya, **D. Albers**, J. Mitchell, & M. Gleicher. "Visualizing Validation of Protein Surface Classifiers." *Computer Graphics Forum*, 33(3): 171–180, 2014.

> *Special Issue: Proceedings of EuroVis 2014. Acceptance Rate: 25%*

D. Albers, C. Dewey, & M. Gleicher. "Sequence Surveyor: Leveraging Overview for Scalable Genomic Alignment Visualization." *IEEE Transactions of Visualization and Computer Graphics*, 17(5): 2392–2401, 2011.

> *Special Issue: Proceedings of IEEE VIS. Acceptance Rate: 25%*

M. Gleicher, **D. Albers**, R. Walker, I. Jusufi, C. Hansen, & J. Roberts. "Visual Comparison for Information Visualization." *Information Visualization*, 10(4): 289–309, 2011.

Peer-Reviewed Archival Conference Papers K. Wu^(s), E. Petersen^(s), T. Ahmad^(s), D. Burlinson^(s), E. S. Tanis, & **D. Albers Szaifir**. "Understanding Data Accessibility for People with Intellectual and Developmental Disabilities." In the *Proceedings of the 2021 Conference on Human Factors in Computing Systems (CHI 2021)*, 2021. Yokohama, Japan (to appear).

> *Acceptance Rate: 26.3%*

W. Payne^(s), Y. Bergner, M. West^(s), C. Chapp^(s), R. B. Shapiro, **D. Albers Szaifir**, E. Taylor, & K. DesPortes. "danceON: Culturally Responsive Creative Computing for Data Literacy." In the *Proceedings of the 2021 Conference on Human Factors in Computing Systems (CHI 2021)*, 2021. Yokohama, Japan (to appear).

> *Acceptance Rate: 26.3%*

B. Ens, B. Bach, M. Cordeil, U. Engelke, M. Serrano, W. Willett, A. Prouzeau, C. Anthes, W. Büschel, C. Dunne, T. Dwyer, J. Grubert, J. Haga, N. Kirshenbaum^(s), D. Kobayashi^(s), T. Lin^(s), M. Olaosebikan, F. Pointecker, D. Saffo^(s), N. Saquib^(s), D. Schmalstieg, **D. Albers Szafir**, M. Whitlock^(s), & Y. Yang. "Grand Challenges in Immersive Analytics." In the *Proceedings of the 2021 Conference on Human Factors in Computing Systems (CHI 2021)*, 2021. Yokohama, Japan (to appear).

> Acceptance Rate: 26.3%

D. J. Szafir & **D. Albers Szafir**. "Connecting Human-Robot Interaction and Data Visualization." In the *Proceedings of the 2021 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2021)*, 2021. Boulder, Colorado (to appear).

> Acceptance Rate: 23%

M. Whitlock^(s), **D. Albers Szafir**, & K. Gruchalla. "HydrogenAR: Interactive Data-Driven Storytelling for Dispenser Reliability." In the *Proceedings of the International Symposium on Mixed and Augmented Reality (ISMAR)*, 2020. Ipojuca, Brazil.

> Acceptance Rate: 19%

M. Whitlock^(s), S. Smart^(s), & **D. Albers Szafir**. "Graphical Perception for Immersive Analytics." In the *Proceedings of IEEE Virtual Reality (VR)*, 2020. Atlanta, Georgia.

> Acceptance Rate: 21%

> **Best Paper Nominee (Top 4.3% of submissions)**

S. Smart^(s) & **D. Albers Szafir**. "Measuring the Separability of Shape, Size & Color in Scatterplots." In the *Proceedings of the 2019 Conference on Human Factors in Computing Systems (CHI 2019)*, 2019. Glasgow, Scotland.

> Acceptance Rate: 23.8%

J. Muesing^(s), L. Burks^(s), M. Iuzzolino^(s), J. Hatlelid, **D. Albers Szafir**, & N. Ahmed. "Fully Bayesian Human-Machine Data Fusion for Robust Dynamic Target Surveillance and Characterization." In the *Proceedings of AIAA SciTech Forum*, 2019. San Diego, California.

M. Whitlock^(s), E. Hanner^(s), J. Brubaker, S. Kane, & **D. Albers Szafir**. "Interacting with Distant Objects in Augmented Reality." In the *Proceedings of IEEE Virtual Reality*, 2018. Reutlingen, Germany.

> Acceptance Rate: 20.6%

C. Diaz^(s), M. Walker^(s), **D. Albers Szafir**, & D. J. Szafir. "Designing for Depth Perceptions in Augmented Reality." In the *Proceedings of the International Symposium on Mixed and Augmented Reality (ISMAR)*, 2017. Nantes, France.

> Acceptance Rate: 26%

D. Albers Szafir, M. Stone, & M. Gleicher. "Adapting Color Difference for Design." In the *Proceedings of the IS&T 22nd Color and Imaging Conference*, pp. 228–233, 2014. Boston, Massachusetts.

> **MERL Best Student Paper Award**

M. Stone, **D. Albers Szafir**, & V. Setlur. "An Engineering Model for Color Discriminability as a Function of Size." In the *Proceedings of the IS&T 22nd Color and Imaging Conference*, pp. 253–258, 2014. Boston, Massachusetts.

> Integrated into D3 as d3-jnd and Tableau 10

D. Albers, M. Correll, & M. Gleicher. "Task-Driven Evaluation of Aggregation in Time Series Visualization." In the *Proceedings of the 2014 ACM Annual Conference on Human Factors in Computing Systems (CHI 2014)*, pp. 551–560, 2014. Toronto, Ontario.

> Acceptance Rate: 23%

M. Correll, **D. Albers**, S. Franconeri, & M. Gleicher. "Comparing Averages in Time Series Data." In the *Proceedings of the 2012 ACM Annual Conference on Human Factors in Computing Systems (CHI 2012)*, pp. 1095–1104, 2012. Austin, Texas.

> Acceptance Rate: 23%

Peer- M. Whitlock^(s), D. Leithinger, D. Szafir, & **D. Albers Szafir**. "Toward Effective Multimodal Interaction in Augmented Reality." *4th Workshop on Immersive Analytics: Envisioning Future Productivity for Immersive Analytics at ACM CHI 2020*, 2020. Honolulu, Hawaii.

Workshop
Papers

K. Wu^(s), E.S. Tanis, & **D. Albers Szafir**. "Designing Communicative Visualization for People with Intellectual Developmental Disabilities." *Visualization for Communication (VisComm) at IEEE VIS 2019*, 2019. Vancouver, British Columbia.

H. Muthukrishnan^(s) & **D. Albers Szafir**. "Using Machine Learning and Visualization for Qualitative Inductive Analyses of Big Data." *Machine Learning from User Interaction (MLUI) at IEEE VIS 2019*, 2019. Vancouver, British Columbia.

M. Whitlock^(s) & **D. Albers Szafir**. "Situated Prototyping of Data-Driven Applications in Augmented Reality." *Interaction Design and Prototyping for Immersive Analytics at CHI 2019*, 2019. Glasgow, Scotland.

A. Daughton^(s), D. Pruss^(s), B. Arnot^(s), **D. Albers Szafir** & M. Paul. "Characteristics of Behavior Discourse among Twitter Users Discussing Zika." *2nd Social Media Mining for Health Applications Workshop & Shared Task at the 2017 American Medical Informatics Association Annual Symposium*, pp. 27–31, 2017. Atlanta, Georgia.

D. Albers Szafir & D. Szafir. "Cognitive Load in Visualization: Myths and Misconceptions." *Creation, Curation, Critique and Conditioning of Principles and Guidelines in Visualization (C4PGV)*, 2016. Baltimore, Maryland.

D. Albers Szafir. "Considering Connectivity for Visualization Design." *Human-Computer Interaction Consortium Conference (HCIC)*, 2016. Watsonville, California.

M. Correll, E. Alexander, **D. Albers Szafir**, A. Sarikaya, & M. Gleicher. "Navigating Reductionism and Holism in Evaluation." *BELIV '14: Beyond Time and Errors—Novel Evaluation Methods for Visualization*, pp. 23–26, 2014. Paris, France.

D. Albers. "Perceptually Informed Scalable Sequence Comparison." *IEEE VIS Doctoral Colloquium*, 2013. Atlanta, Georgia.

D. Albers & Michael Gleicher. "Seeing Double: Crowdsourced Models of Color Discrimination." *Midgraph: Midwest Graphics Workshop*, 2012. Chicago, Illinois.

Peer- M. Shi^(s), **D. Albers Szafir**, & E. Alexander. "A Survey of Data and Encodings in Word Clouds." Presented at *Digital Humanities*, 2020. Ottawa, Ontario

Abstracts

D. Burlinson^(s) & **D. Albers Szafir**. "Shape size judgments are influenced by fill and contour closure." Presented at the *Annual Meeting of the Vision Sciences Society (VSS)*, 2020. St. Pete's Beach, Florida.

E. S. Tanis, **D. Albers Szafir**, & K. Wu^(s). "Accessible Data: Understanding Visualization Literacy and Graphical Perceptions of People with Intellectual and Developmental Disabilities." Presented at *American Association on Intellectual and Developmental Disabilities Annual Meeting (AAIDD)*, 2019. Minneapolis, Minnesota.

E. Alexander & **D. Albers Szafir**. "Exploring Crowding Effects on Font Size Encodings." Presented at *VisxVision @ IEEE VIS*, 2018. Berlin, Germany.

A. Kelly^(s), M. Whitlock^(s), B. Nickoloff^(s), A. Lam^(s), **D. Albers Szafir**, & S. Voida. "Becoming Butterflies: Interactive Embodiment of the Butterfly Lifecycle." In the *UbiComp Poster Proceedings*, pp. 93–96, 2017. Maui, Hawaii.

D. Pruss^(s), A. Daughton^(s), B. Arnot^(s), **D. Albers Szafir**, & M. Paul. "Content Analysis of Zika Related Tweets." *American Public Health Association Annual Conference (APHA)*. 2017. Atlanta, Georgia.

D. Albers Szafir. "The Effects of Size and Shape on Color Perception." *Vision Science Society Annual Meeting (VSS)*, 2017. St. Pete's Beach, Florida.

D. Albers Szafir & M. Gleicher. "Visualization-Aware Color Design." In the *EuroVis Poster Proceedings*, pp. 97–99, 2016. Groningen, Netherlands.

D. Albers, M. Correll, M. Gleicher, & S. Franconeri. "Ensemble Processing of Color and Shape: Beyond Mean Judgments." *Journal of Vision*, 14(9): 1056, 2014. St. Pete's Beach, Florida.

D. Albers, A. Sarikaya, & M. Gleicher. "Lightness Constancy in Surface Visualization." *Poster Abstracts of IEEE VIS*, 2013. Atlanta, Georgia.

> **Best Poster Award, Scientific Visualization Track**

A. Sarikaya, **D. Albers**, & M. Gleicher. "Understanding Performance of Protein Structural Classifiers." *Poster Abstracts of IEEE VIS*, 2013. Atlanta, Georgia.

D. Albers, C. Dewey, & M. Gleicher. "Sequence Surveyor: Leveraging Overview for Large-Scale Genomic Alignment Visualization." In the *Proceedings of VizBi 2011: Visualizing Biological Data*, 2011. Boston, Massachusetts.

D. Albers & M. Gleicher. "Poster: Perceptual Principles for Scalable Sequence Alignment Visualization." In the *IEEE Information Visualization Poster Proceedings*, 2010. Salt Lake City, Utah.

D. Albers & M. Gleicher. "Perceptual Principles for Scalable Sequence Alignment Visualization." In the *Proceedings of the 7th Symposium on Applied Perception in Graphics and Visualization*, pp. 164 2010. Los Angeles, California.

Panels, Tutorials, & Symposia F. Samsel, R. Saltus, S. Zeller, & **D. Albers Szafir**. "Optimizing Color's Potential: A Hands-On Tutorial on Color Tools and Strategies Enabling Effective Exploration, Knowledge Extraction and Communicate Your Data and Science." Tutorial at *AGU Fall Meeting*. Virtual Conference, 2020.

F. Samsel, **D. Albers Szafir**, & K. Schloss. "Theory and Application of Visualization Color Tools and Strategies." Tutorial at *IEEE VIS 2020*. Virtual Conference, 2020.

C. Nothelfer, Z. Bylinskii, M. Elliott, C. Xiong, & **D. Albers Szafir**. "Vision and Visualization: Inspiring Novel Research Directions in Vision Science." Symposium at *Vision Sciences Society Annual Meeting*. St. Pete's Beach, FL, 2018.

C. Nothelfer, Z. Bylinskii, M. Elliott, C. Xiong, & **D. Albers Szafir**. "Vision Science Meets Visualization." Panel at *IEEE VIS*. Phoenix, AZ, 2017.

Invited Magazine Articles **D. Albers Szafir**. "The Good, the Bad, and the Biased: Five ways visualizations can mislead (and how to fix them)." *ACM Interactions*, 25(4): 26-33, 2018.

> *Featured on the cover of the July/August issue*

C. Fiesler, W. Aspray, L. Barker, J. Brubaker, L. Devendorf, B. Keegan, L. Palen, M. Paul, **D. Albers Szafir**, R. Roque, R. Robinson, A. Volda, & S. Volda. "Information Science at CU Boulder." *Interactions Magazine*. 24(4), pp. 18-20, 2017.

Dissertation **D. Albers Szafir**. "Utilizing Color for Perceptually-Driven Data Visualization." *University of Wisconsin-Madison*, 2015.

> **IEEE Visualization & Graphics Pioneers Doctoral Dissertation Award Honorable Mention**

> *Committee: Profs. Michael Gleicher (chair), Bilge Mutlu, Steven Franconeri, Robert Roth, & Kevin Ponto*

Publications Under Review & In Preparation M. Walker^(s), Z. Chen^(s), M. Whitlock^(s), D. Blair^(s), **D. Albers Szafir**, C. Heckman, & D. J. Szafir. "Mixed Reality Interface for Human-Robot Field Teams in Large-Scale Outdoor Environments." Under Review for the *IEEE International Conference on Robotics & Automation (ICRA 2021)*.

A. Warden^(s), **D. Albers Szafir**, & J. Witt. "Visualizing Temperature Trends: Higher Sensitivity to Trend Direction with Single-Hue Palettes." Under Review for *Journal of Experimental Psychology: Applied*.

K. Marriott, B. Lee, M. Butler, E. Cutrell, K. Ellis, C. Goncu, M. Hearst, K. McCoy, & **D. Albers Szafir**. "Inclusive Data Visualization for People with Disabilities: A Call to Action." Under review for *Universal Interactions*.

J. Witt & **D. Albers Szafir**. "Improving Empirical Studies of Visualizations with Measures of Sensitivity and Bias." In preparation for *IEEE Transactions on Visualization and Computer Graphics*.

S. Naidu^(s) & **D. Albers Szafir**. "Choosing Effective Highlight Colors for Scatterplots." In preparation for *IEEE Transactions on Visualization and Computer Graphics*.

M. Hong^(s), J. Witt, & **D. Albers Szafir**. "Perceptual Pull Toward Large and Dark Points in Scatterplot Averaging." In preparation for *IEEE VIS 2021*.

Press Coverage "Highlights from IEEE VIS'20 with Miriah Meyer and Danielle Szafir." *Data Stories*, 2020.

"Visualizing Science: How Color Determines What We See." *Eos Science News*, 2020.

"A Snapshot of Current Trends in Visualization." *IEEE Computing Now*, 2018.

"30-Under-30: Science." *Forbes Magazine*, 2018.

"Why Visuals are the Most Important Thing in Brand Storytelling." *Native Advertising Institute*, 2017.

"Grand Challenge expanded and enhanced by new projects." *CU Boulder Today*, 2016.

Invited Talks

Seminars & Colloquia "Driving Scalable Visualization through Perception and Cognition" *SFB-TRR 161 Seminar Series*, University of Stuttgart, Virtual Colloquium. November 9, 2020.

"Driving Scalable Visualization through Perception and Cognition" *Cognitive Science Seminar Series*, Colorado State University, Fort Collins, CO. March 6, 2020.

"Driving Scalable Visualization through Perception and Cognition" *Computer Science Seminar*, University of Nebraska-Lincoln. November 20, 2019.

"Driving Scalable Visualization through Perception and Cognition" *Data-to-Action Speaker Series*, Indiana University-Purdue University Indianapolis, Indianapolis, IN. November 8, 2019.

"Driving Scalable Visualization through Perception and Cognition" *Next in Data Visualization*, Radcliffe Institute for Advanced Study at Harvard University, Cambridge, MA. April 1, 2019.

"Driving Scalable Visualization through Perception and Cognition" *Rising Stars Seminar*, Tufts University, Medford, MA. September 20, 2018.

"Visualization and Perception Across Scales" *Learning from the Science of Cognition and Perception*, National Academy of Sciences, Washington, D.C. January 24, 2018.

"Perceptually-Driven Visualization of Complex Data." Rochester Institute of Technology, Rochester, NY. March 13, 2015.

"Perceptually-Driven Visualization of Complex Data." *Digital Arts Colloquium*, University of Iowa, Iowa City, IA. March 9, 2015.

"Perceptually-Driven Visualization of Complex Data." *Data @ ASU*, Arizona State University, Tempe, AZ. February 26, 2015.

"Perceptually-Driven Visualization of Complex Data." *Information Science Seminar*, University of Colorado Boulder, Boulder, CO. February 18, 2015.

"Color & Size." *Developer's Seminar*, Tableau Software, Palo Alto, CA. December, 2014.

Keynotes "Perceptually-Driven Approaches for Visualizing Biological Data" *Rocky Mountain Genomics Hackcon*, BioFrontiers Institute, Boulder, CO. June 18, 2019.

"Facilitating a Dialogue between People & Data: Lessons in Designing for Big Data." *Rocky Mountain Special Libraries Association Mini-Conference*, Denver, CO. August 11, 2017.

Invited Panels "Evolving the ABCs of Evaluation: Moving beyond A/ B testing to understand how we "see" data." *Vis Evaluation Moving into the Next Decade*, BELIV at IEEE VIS. October 25, 2020.

- "What's Old is New: The Uselessness & Necessity of Replication" *A Roadmap for Replication in Visualization*, BELIV: Evaluation and Beyond—Methodological Approaches for Visualization. October 21, 2018.
- "Visualization and HPC." *Rocky Mountain High Performance Computing Conference*, Boulder, CO. August 17, 2017.
- "Assistant Professors Panel." *CRA New Computing Faculty Workshop*, San Diego, CA. August 8, 2017.
- Invited Conference & Workshop
Talks "(Some) Visualization Challenges for People with Cognitive Disabilities," *MSR Workshop on Accessible Data Visualization*. Microsoft Research. January 14, 2020.
- "Towards Accessible and Inclusive Visualization Design" *Coleman Conference for Cognitive Disabilities and Technology*, Coleman Institute, Westminster, CO. October 18, 2019. (with Keke Wu)
- "Color Perception in Data Visualizations" *Vision and Visualization: Inspiring novel research directions in vision science*, Vision Sciences Society Annual Meeting, St. Pete's Beach, FL. May 18, 2018.
- "Visualization for Pan- and Meta-genomics" *Visualization of Biological Data: Crossroads*, Schloss Dagstuhl Seminar Series, Wardern, Germany. April 21, 2018.
- "Informing Visualization in the Humanities through Perception and Genomics." *Genres of Scholarly Knowledge Production*, Umeå University, Umeå, Sweden. December 12, 2014.
- Miscellaneous "Methods for Data Storytelling" *Boulder/Denver D3.js and Visualization Meet-Up*, Galvanize, Boulder, CO. August 2, 2018.
- "How do we see data? Ensembles, Constancy, & Colors." *Information Visualization Meet-Up, Vision Science Society Annual Meeting*, St. Pete's Beach, FL. May 23, 2017.
- "Enabling a Dialogue between People & Data: Lessons in Designing for Big Data." *Big Data Bootcamp*, Denver, CO. October 2, 2016.
- Intramural Talks "Interactive Visualization for Data-Driven Reasoning" *Center on Personalized Pervasive Intelligence Advances*, PPI Center, Boulder, CO. October 14, 2019.
- "Driving Exploratory Visualization through Perception & Cognition." *ATLAS Seminar*, University of Colorado Boulder. September 25, 2018.
- "Driving Exploratory Visualization through Perception & Cognition." *Information Science Seminar*, University of Colorado Boulder. September 25, 2018.
- "Visualizing Biological Data." *Bioinformatics & Data Science Supergroup*, University of Colorado Boulder. April 30, 2018.
- "Scaling Up Visualization through Visual Cognition." *BioFrontiers Seminar*, University of Colorado Boulder. December 12, 2017.
- "Scaling Up Visualization through Visual Cognition." *Leeds Business Analytics Meet-Up*, University of Colorado Boulder. November 2, 2017.
- "Scaling Up Visualization through Visual Cognition." *Applied Math Seminar*, University of Colorado Boulder. October 6, 2017.
- "DH+Data: How the Digital Humanities shape and are shaped by Data Science." *Official Launch of the Center for Research Data and Digital Scholarship*, University of Colorado Boulder. June 8, 2017.
- "Information Visualization: Designing with Data." *CU-Boulder Data Science Team*, University of Colorado Boulder. February 21, 2017.
- "An Introduction to Data Visualization." *Science Learner's Lunch*, University of Colorado Boulder. March 4, 2016.
- "Perceptually-Driven Information Visualization." *Institute of Cognitive Science Seminar*, University of Colorado Boulder. October 16, 2015.

"Perceptually-Driven Information Visualization." *CU Libraries Research Seminar*, University of Colorado Boulder. November 12, 2015.

"Perceptually-Driven Information Visualization." *Human-Centered Computing Seminar*, University of Colorado Boulder. September 9, 2015.

"Insights at a Glance: Visualization at UW-Madison." *MERI at a Glance*, McPherson Eye Research Institute, Madison, WI. January 29, 2015.

Teaching

Courses Taught

Research-oriented independent studies are not included in this list. 1000-4000 level courses are undergraduate courses; 5000-7000 level courses are graduate courses. Newly developed courses are indicated with a * and include any available catalog description.

Spring 2021 **INFO 4602/5602: Information Visualization**
Projected Enrollment: 65 students (48 undergraduate, 17 graduate)

Fall 2020 **ATLS 4519/5519: Visualization Design Studies*** ([Syllabus](#))
Enrollment: 11 students (7 undergraduate, 4 graduate)
Course Description: Data visualization combines artistic and cognitive principles to help people explore, communicate, and analyze large datasets. Developing effective visualizations often requires working closely with interdisciplinary teams to authentically reflect the needs of a data problem. This course will provide a hands-on introduction to common design methods for creating visualizations in different domains. Students will work with a variety of datasets to generate visualization solutions for different problems leveraging various design methodologies and media. Topics will include data sketching and crafting, task-driven design, cognitively-driven design, and workshop methods.

ATLS 5519: Research Methods* (Co-Instructors: Mirela Alistar & Ellen Do, [Syllabus](#))

Required course for ATLAS Graduate Students

Enrollment: 13 students

Course Description: Research in creative technologies and design draws on methods and techniques from a broad set of fields. The objective of this course is to provide a primer for key methodological approaches used in the field. Students will investigate a broad set of techniques for conducting theoretical, design, and experimental research. They will explore how to formulate and investigate research questions using these methods. Topics covered will include basic research ethics, research project design, approaches to constructing theory, research through design techniques, and methods for experimental study.

Spring 2020 **INFO 3401: Information Exploration** ([Syllabus](#))
Required course for Bachelors of Science in Information Science
Enrollment: 21 students

Fall 2019 **INFO 4602: Information Visualization** ([Syllabus](#))
Enrollment: 32 students

INFO 5602: Information Visualization ([Syllabus](#))
Enrollment: 20 students

Spring 2019 Family Leave. No classes taught.

Fall 2018 **INFO 3401: Information Exploration** ([Syllabus](#))
Required course for Bachelors of Science in Information Science
Enrollment: 16 students

Spring 2018 **INFO 4602/5602: Information Visualization** ([Syllabus](#))
Enrollment: 61 students (28 undergraduate and 33 graduate)

Fall 2017 **INFO 3401: Information Exploration*** ([Syllabus](#))

Required course for Bachelors of Science in Information Science

Enrollment: 9 students

Course Description: Information empowers people to build deeper understandings of the world and make more informed decisions. However, the increasing volume and variety of available information makes it hard for people to make sense of that data. This course will allow you to build the skills necessary to work with stakeholders to explore and build novel insights through data. You will gain hands-on experience with different tools and techniques for exploring information, including statistical methods, qualitative analyses, and visual analytics. You will learn how to generate and synthesize new findings from data, combine information from multiple sources, and identify questions and findings that are directly relevant to people.

CSCI 4999/5999: Independent Study–Computer Graphics Crash Course*

15-week computer graphics intensive course for students conducting research in augmented reality

Enrollment: 2 students

Spring 2017 **INFO 4602/5602: Information Visualization*** ([Syllabus](#))

Enrollment: 41 students

Course Description: Data is everywhere. Charts, graphs, and other types of information visualizations help people to make sense of this data. This course explores the design, development, and evaluation of these information visualizations. By combining aspects of design, computer graphics, HCI, and data science, you will gain hands-on experience with creating visualizations, using exploratory tools, and architecting data narratives. Topics include interactive systems, user-centered and graphic design, graphical perception and cognition, data storytelling, and insight building. Throughout this course, you will work directly with stakeholders to analyze data from a variety of domains and applications. Counts for credit in both INFO and CSCI.

Fall 2016 **INFO 1201: Computational Reasoning I*** (Co-Instructor: Stephen Volda, [Syllabus](#))

Required course for the College of Media, Communication, and Information

Enrollment: 134 undergraduate students

Course Description: Introduces principles of computational thinking through the manipulation, transformation and creation of media artifacts, such as images, sound and web pages. Students will be exposed to a high-level overview of algorithms, functions, data structures, recursion and object-oriented computer programming through a series of assignments that emphasize the use of computation as a means of creative expression.

Guest Lectures

- Fall 2020 "Color Evaluation." CS 7295: *Data Visualization: Evaluation, Methodology, Techniques, & Application* (Northeastern University)
- Fall 2020 "Color in Visualization." CSCI 765: *Data Visualization* (University of Wisconsin-Madison)
- Spring 2020 "Intro to Objects." ATLS 2519: *Computational Foundations II*
- Fall 2018 "Intro to Computer Graphics." CSCI 4830/7000: *Virtual Reality*
- Spring 2018 "Data Visualization." INFO 1121: *Introduction to Information Science: Designing Interactions*
- Spring 2018 "Visual Communication." MUSM 5011: *Introduction to Museum Studies*
- Fall 2017 "Expectation Maximization." INFO 4604/5604: *Applied Machine Learning*
- Fall 2017 "Scaling up Visualization through Visual Cognition" University of Denver INFO 4340: *Data Mining & Visualization*, 2017.
- Fall 2017 "Visual Data Mining." CSCI 4502/5502: *Data Mining*
- Fall 2017 "Meet the Faculty." INFO 7000: *Introduction to Ph.D. Studies*
- Fall 2017 "Meet the Faculty." CSCI 6000: *Introduction to the Computer Science Ph.D. Program*
- Spring 2016 "Technology & Museum Studies." MUSM 5011: *Introduction to Museum Studies*
- Fall 2016 "Early Career Faculty Panel." CSCI 6000: *Introduction to the Computer Science Ph.D. Program*
- Fall 2016 "Model-View-Controller." ATLS 5419: *Introduction to Virtual Reality*
- Spring 2016 "Introduction to Visualization." CMCI 1020: *Concepts & Creativity*
- Fall 2015 "Driving Scalable Visualization with Perception." CSCI 4830: *Big Data & HCI*
- Fall 2015 "The Graphics Pipeline." ATLS 5419: *Introduction to Virtual Reality*
- Fall 2015 "Introduction to Three.js." ATLS 5419: *Introduction to Virtual Reality*

- Spring 2015 "Interaction in Visualization." CS 838: *Visualization*
- Fall 2014 "Color for Computer Graphics." CS 559: *Computer Graphics*
- Fall 2014 "Image Compression." CS 559: *Computer Graphics*
- Spring 2012 "Perceptually-Driven Sequence Visualization." CS 838: *Visualization*

Mentorship & Advising

Post-Doctoral Advisees

2019–Present **David Burlinson**, University of Colorado Boulder

Ph.D. Direct Advisees

- 2020–Present **Sandra Bae**, ATLAS Institute, University of Colorado Boulder
> *Co-advised with Ellen Do*
- 2020–Present **Sagi Shaier**, Computer Science, University of Colorado Boulder
- 2020–Present **Mary West**, Computer Science, University of Colorado Boulder
> *Co-advised with Ben Shapiro and Joel Swanson*
- 2019–Present **Matt Hong**, ATLAS Institute, University of Colorado Boulder
- 2019–Present **Keke Wu**, ATLAS Institute, University of Colorado Boulder
- 2016–Present **Matthew Whitlock**, Computer Science, University of Colorado Boulder
- 2017–2019 **Stephen Smart**, Computer Science, University of Colorado Boulder
- 2016–2017 **Dasha Pruss**, Information Science, University of Colorado Boulder
> *Co-advised with Michael Paul*
> *Joined the University of Pittsburgh Philosophy of Science Ph.D. Program*

Ph.D. Thesis Committee Membership

- 2020–Present **Vivian Lai**, Department of Computer Science, University of Colorado Boulder
Towards Enabling Better Human-AI Collaborations With Interactive Interfaces, Advisor: Chenhao Tan
> *Comprehensive Exam Committee*
- 2020–Present **Nicole Johnson**, ATLAS Institute, University of Colorado Boulder
Title Forthcoming, Advisor: Tom Yeh
> *Qualifying Exam Committee, Comprehensive Exam Committee*
- 2018–2020 **Kirsten Strandjord**, Department of Aerospace Engineering, University of Colorado Boulder
GPS Urban Navigation Utilizing Direct Positioning and Shadow Matching Techniques, Advisor: Penina Axelrad
> *Comprehensive Exam Committee, Dissertation Defense Committee*
- 2018–2019 **Villiam Klein**, Department of Aerospace Engineering, University of Colorado Boulder
Advanced GNSS Multipath Model for GNSS Receivers On-Board the International Space Station, Advisor: Penina Axelrad
> *Comprehensive Exam Committee, Dissertation Defense Committee*
- 2018–2019 **Ashlynn Daughton**, Department of Information Science, University of Colorado Boulder
Accurately Harnessing the Internet for Epidemiological Models, Advisor: Michael Paul
> *Qualifying Exam Committee, Comprehensive Exam Committee, Dissertation Defense Committee*
- 2018 **Charles Luke Burks**, Department of Aerospace Engineering, University of Colorado Boulder
Active Collaborative Sensing, Learning, and Planning in Human-Robot Teams, Advisor: Nisar Ahmed
> *Comprehensive Exam Committee*
- 2018 **Reem Albaghli**, Department of Computer Science, University of Colorado Boulder
A Framework to Design and Evaluate Wearable Interactive Systems for Health, Advisor: Ken Anderson
> *Final Defense Committee*
- 2018 **Xiaolei Huang**, Department of Information Science, University of Colorado Boulder
> *Qualifying Exam Committee*

- 2017 **Brett Roads**, Department of Computer Science, University of Colorado Boulder
The Design of Efficient Training and Decision-Support Systems for Visual Categorization, Advisor: Michael Mozer
 > Proposal Committee & Final Defense Committee
- 2016 **Khalid Alharbi**, Department of Computer Science, University of Colorado Boulder
A Deep and Longitudinal Approach to Mining Mobile Applications, Advisor: Tom Yeh
 > Proposal Committee & Final Defense Committee

Master's Students

- 2020–Present **Emma Petersen**, ATLAS Institute, University of Colorado Boulder
- 2020–Present **Pratik Revankar**, Computer Science, University of Colorado Boulder
- 2020 **Sravanth Yajamanam**, Computer Science, University of Colorado Boulder
- 2019–2020 **Hande Batan**, Information Science, University of Colorado Boulder
- 2019 **Soumyajyoti Bhattacharya**, Computer Science, University of Colorado Boulder
- 2019 **Thanika Reddy**, Computer Science, University of Colorado Boulder
- 2018–2019 **Harshini Muthukrishnan**, Computer Science, University of Colorado Boulder
 > Joined VMWare
- 2018–2019 **Tetsumichi Umada**, Computer Science, University of Colorado Boulder
- 2018–2019 **Sreesha Nath**, Computer Science, University of Colorado Boulder
 > Joined as an Instructor at CU Boulder
- 2018–2019 **Supriya Naidu**, Computer Science, University of Colorado Boulder
 > **Thesis:** *Empirically Modeling Highlight Colors for Data Visualization*
 > Joined as an Instructor at CU Boulder
- 2017–2019 **Keke Wu**, Creative Technologies, University of Colorado Boulder
 > **Thesis:** *Designing Visualization as an Effective Tool of Communication*
 > Joined as a Ph.D. student at CU-Boulder
- 2017–2018 **Justin Chin**, Computer Science, University of Colorado Boulder
 > Joined Talespin
- 2017–2018 **Hayeong Song**, Computer Science, University of Colorado Boulder
 > **Thesis:** *Measuring the Role of Visualization on Missing Values in Time Series Data*
 > Joined the Georgia Tech Computer Science Ph.D. Program
- 2016–2018 **Pratima Sherkane**, Computer Science, University of Colorado Boulder
- 2016–2018 **Hemang Bansal**, Computer Science, University of Colorado Boulder
 > Joined CenturyLink
- 2016–2018 **Michael Iuzzolino**, Computer Science, University of Colorado Boulder
 > Co-advised with Daniel J. Szafir
 > Joined Microsoft Research
- 2017 **Mridula Natarjan**, Computer Science, University of Colorado Boulder
- 2016–2017 **Praveen Devaraj**, Computer Science, University of Colorado Boulder
- 2016–2017 **Yogitha Madhasu**, Computer Science, University of Colorado Boulder
 > Joined VISA
- 2016 **Shashidhar Prabhu**, Computer Science, University of Colorado Boulder

M.S. Thesis Committee Membership

- 2019 **Jeremy Muesing**, Department of Aerospace Engineering, University of Colorado Boulder
Fully Bayesian Human-Machine Data Fusion for Robust Dynamic Target Surveillance and Characterization
 Advisor: Nisar Ahmed

Undergraduate Students

- 2020–present **Kaiya Wahl**, Creative Technology & Design, University of Colorado Boulder
- 2020–present **Tahmina Ahmad**, Computer Science, University of Colorado Boulder
- 2020 **David Blair**, Computer Science, University of Colorado Boulder
- 2019–2020 **Joshua Barber**, Computer Science, University of Colorado Boulder
 > 2018-2019 Discovery Learning Assistant

- 2019–2020 **Keyuan Huang**, Computer Science, University of Colorado Boulder
> 2018-2019 Discovery Learning Assistant
- 2017–2018 **Michael Xiao**, Computer Science, University of Colorado Boulder
> Co-advised with J. Brubaker
> 2017-2018 Discovery Learning Assistant
- 2017–2018 **Ian Fawaz**, Computer Science, University of Colorado Boulder
> Co-advised with J. Brubaker
> 2017-2018 Discovery Learning Assistant
- 2016–2018 **Tetsumichi Umada**, Computer Science, University of Colorado Boulder
> Joined the Computer Science Master's Program at CU Boulder
- 2017 **Wil Braun**, Computer Science, University of Colorado Boulder
- 2017 **Girishkumar Ramkumar**, Computer Science, University of Colorado Boulder
- 2016–2017 **Ryan Mustari**, Applied Mathematics & Economics, University of Colorado Boulder
> 2016-2017 UROP Recipient
- 2016 **Alex Thompson**, Computer Science, University of Colorado Boulder
- 2016 **Connor Mcguinness**, Computer Science, University of Colorado Boulder
> Joined Uber
- 2015–2016 **Yusef Suhail**, Computer Science, University of Wisconsin-Madison
- 2014 **Andrew Hermus**, Computer Science, University of Wisconsin-Madison
> Co-supervised with Eric Alexander
> Joined Microsoft
- 2013 **Benjamin Reddersen**, Computer Science, University of Wisconsin-Madison

Capstone Team Supervision

- 2017–2018 MR-CAT: Mixed Reality Content Authoring Tool. B. Arnot, B. Chung, R. Craig, J. Mitchell, N. Pfeufer, & B. Wilson, Computer Science Senior Projects

Undergraduate Thesis Committee Membership

- 2019 **Catherine Diaz**, Department of Computer Science, University of Colorado Boulder
Perception of Virtual Objects that Receive Shadows in Augmented Reality
Advisor: Daniel J. Szafir

Service to the Professional Community

Organizing Committees

- 2020–present Co-Chair, IEEE VIS Doctoral Colloquium
- 2019–present Co-Chair, VISxVISION Workshop on Novel Directions in Vision Science and Visualization Research at IEEE VIS
- 2019–present Co-Chair, VISxVISION Workshop: Novel Vision Science Research Directions in Visualization at the Vision Sciences Society Annual Meeting
- 2020–present Abstracts Co-Chair, Symposium on Biological Visualization (BioVis@ISMB)
- 2020 Co-Chair Visualization Psychology Workshop at IEEE VIS
- 2020 Best Short Paper Committee, EuroVis
- 2018–2019 Poster Chair, Symposium on Biological Visualization (BioVis@ISMB)
- 2019 InfoVis Best Poster Committee, IEEE VIS
- 2015 Co-Organizer, Going Public: Second Digital Humanities+Art Symposium.

Program Committee Participation

- 2021 ACM CHI: ACM Conference on Human Factors in Computing Systems
- 2017–present Human Computer Interaction Consortium
> Colorado Governing Board Representative
- 2020 BELIV 2020 Workshop at IEEE VIS
- 2018–2020 EuroVis: Eurographics Conference on Visualization
- 2018, 2020 EuroVis: Eurographics Conference on Visualization State-of-the-Art Reports (EuroVis STARS)
- 2017–2019 IEEE VIS Information Visualization

- 2019 ACM CHI: ACM Conference on Human Factors in Computing Systems
- 2018 Information+
- 2017 VDS: Visual Data Science Symposium
- 2017 VISSOFT: IEEE Working Conference on Software Visualization
- 2016–2017 LDAV: IEEE Symposium on Large Data Analysis and Visualization
- 2014–2016 BioVis: Symposium on Biological Data Visualization

Editorships

- 2020–Present Editor, *Visualization Psychology*, Springer Nature
- 2018–2020 Guest Editor, Journal of Vision Special Issue: Vision & Information Visualization

External Advisory Boards

- 2019–2020 Immersive Scholars Framework, Virginia Commonwealth University

Grant Referee Service

- 2020 Reviewer, National Science Foundation
- 2018 Reviewer, National Science Foundation
- 2018 Reviewer, University of Colorado Boulder Research Innovation Office
> *Served on review panels for two programs*
- 2017 Reviewer Ad Hoc, Icelandic Research Foundation
- 2017 Reviewer, National Science Foundation
> *Served on review panels for two programs*
- 2015, 2017 Reviewer Ad Hoc, National Science Foundation

Journal & Conference Referee Service

- 2021 IEEE Conference on Virtual Reality
- 2016–2021 EuroVis: Eurographics Conference on Visualization
> *Special Recognition: 2020*
- 2016–2021 ACM CHI: ACM Conference on Human Factors in Computing Systems
> *Special Recognition: 2016, 2018, 2019, 2020, 2021*
- 2017–2021 IEEE TVCG: IEEE Transactions on Visualization and Computer Graphics
- 2020 ACM UIST: ACM Symposium on User Interface Software and Technology
- 2020 APP: Attention, Perception, & Psychophysics
- 2020 Psychological Science
- 2020 JOSA A: Journal of the Optical Society of America A
- 2020 PLOS One
- 2020 ISMAR: International Symposium on Mixed and Augmented Reality
- 2013–2020 IEEE Information Visualization
> *Special Recognition: 2014, 2015*
- 2018–2019 PeerJ Computational Biology
- 2019 ACM Symposium on Applied Perception
- 2018 IEEE Computer Graphics & Applications
- 2018 Science Advances
- 2018 IEEE TBD: Transactions on Big Data
- 2018 Information+
- 2016–2017 IEEE LDAV: IEEE Symposium on Large Data Analysis and Visualization
- 2015–2017 IEEE VAST: Visual Analytics Science and Technology
- 2017 VDS: Visual Data Science Symposium
- 2017 VISSOFT: IEEE Working Conference on Software Visualization
- 2013–2016 BioVis: Symposium on Biological Data Visualization
- 2016 IEEE RO-MAN: IEEE Conference on Robot and Human Interactive Communication
- 2014, 2016 BMC Medical Informatics and Decision Making
- 2015–2016 Informatics
- 2015 Cartography and Geographic Information Science

Special Interest Group Meeting Organization

- 2018 Co-Organizer, Broadening Intellectual Diversity of Visualization Research Papers, Meet-Up at IEEE VIS
- 2017, 2018 Co-Organizer, Visualization Meets Vision, Meet-Up at IEEE VIS

Outreach

- 2018–present Founding Co-Editor, Multiple Views: Visualization Research Explained
- 2016–2019 Aspirations in Computing Colorado Affiliate Committee, National Center for Women in Technology
- 2018–2019 IEEE Diversity & Inclusivity Mentor
- 2010–2015 ACM-W Mentor, Department of Computer Sciences, University of Wisconsin-Madison

Service to the University

Departmental Service

- 2020–present Curriculum Committee, ATLAS Institute
- 2020–present Graduate Program Committee, Department of Computer Science
- 2020 TAM Director Search Committee, ATLAS Institute
- 2019–2020 Seminar Chair, Department of Information Science
- 2015–2019 Graduate Program Committee, Department of Information Science
- 2016–2018 Curriculum Committee: Computing Core, Department of Information Science
- 2018 Preliminary Exam Co-Chair, Department of Information Science
- 2015–2018 Graduate Program Committee, Department of Computer Science
> *Liason for Information Science.*
- 2017–2018 Faculty Search Committee, Department of Information Science
- 2015–2016 Faculty Search Committee, Department of Information Science
- 2016 - 2017 External Programs Coordinator, Department of Information Science
- 2015–2016 Curriculum Creation Committee, Department of Information Science
> *With other founding faculty, designed novel B.S., M.S., and Ph.D. programs in Information Science, focusing on the intersection of data, people, and technology.*
- Fall 2009 Majors Fair Representative, Department of Computer Sciences, University of Wisconsin-Madison
- Spring 2009 Department Guide, Department of Computer Sciences, University of Washington

College Service

- 2015–2016 Community & Diversity Committee, College of Media, Communication, & Information, University of Colorado Boulder

University Service

- 2017–present Advisory Board Member, Center for Research Data & Digital Scholarship (CRDDS)
- 2017–2020 Digital Humanities Certificate Committee Member
- Spring 2018 Visualization Contest Judge, Center for Research Data & Digital Scholarship (CRDDS)
- 2016–2017 Co-Chair, Digital Humanities Certificate Committee
> *Resulted in creation of a new interdisciplinary graduate certificate program*
- 2016–2017 Faculty Search Committee, Leeds School of Business
- 2015–2016 Research Data Advisory Committee Member
- 2014–2015 Digital Humanities Research Network Founding Member & Coordinator, University of Wisconsin-Madison

Professional & Academic Memberships

- 2010–Present ACM Member
- 2010–Present IEEE Member
- 2017–Present Vision Science Society Member
- 2008–Present Sigma Alpha Lambda Honor Society Member
- 2008–Present Phi Theta Kappa International Honor Society Member
- 2014–2015 IS&T Student Member