

Jieqiong Zhao

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EDUCATION

06/2013-05/2020	Ph.D. in Electrical and Computer Engineering Advisor: David S. Ebert Thesis title: Visual analytics for decision making in performance evaluation	Purdue University, West Lafayette, IN, USA
09/2011-05/2013	M.S. in Computer Science Master project: Modeling user interactions for complex visual search tasks	Tufts University, Medford, MA, USA
09/2010-06/2011 09/2006-06/2010	M.S. Candidate in Computer Science & Technology Bachelor of Engineering in Software Engineering Thesis title: Natural scene construction and rendering of rain and snow	Zhejiang University of Technology, China

PROFESSIONAL EXPERIENCE

08/2023-present	Augusta University Tenure-Track Assistant Professor School of Computer and Cyber Sciences	Augusta, GA, USA
07/2020-06/2023	Arizona State University, VADER Lab Postdoc Research Associate with Dr. Ross Maciejewski School of Computing and Augmented Intelligence	Tempe, AZ, USA

HONORS AND AWARDS

2020	Award for Effectively Transforming Task Decomposition into Conceptual Design of VAST Challenge, IEEE
2015	Honorable Mention for Compelling Narrative Debrief of VAST Challenge, IEEE
2010	Excellent Graduate awarded by Zhejiang Provincial Higher Education Council
2007, 2008, 2009	Excellent Student Scholarship awarded by Zhejiang University of Technology
2008	Outstanding Student awarded Zhejiang University of Technology

TEACHING EXPERIENCE

Summer 2021	Mentor for five high school students in the seven-week VADER Lab summer research camp
2018, 2019, 2020	Graduate Mentor for three students who received scholarships from Purdue's Discovery Park Undergraduate Research Internship (DURI) Program
Fall 2018	Teaching Assistant for Purdue's Introduction to Visual Analytics ECE695D
2014, 2016, 2017	Graduate Mentor for three students in the Summer Undergraduate Research Fellowship (SURF) internship
2015-2020	Graduate Mentor for eleven undergraduate students participating in the Vertically Integrated Projects (VIP)
Spring 2012	Teaching Assistant for Tufts's Introduction to Programming for Business COMP10

PUBLICATIONS

Journal Papers (peer-reviewed)

- J9. R. Hnatyshyn, J. Zhao, D. Perez, J. Ahrens, and R. Maciejewski. Molsieve: A progressive visual analytics system for molecular dynamics simulations. *IEEE Transactions on Visualization and Computer Graphics*, 2024. To appear
- J8. J. Zhao, Y. Wang, M. V. Mancenido, E. K. Chiou, and R. Maciejewski. Evaluating the impact of uncertainty visualization on model reliance. *IEEE Transactions on Visualization and Computer Graphics*, pp. 1–15, 2023. doi : [10.1109/TVCG.2023.3251950](https://doi.org/10.1109/TVCG.2023.3251950)
- J7. A. Reinert, L. S. Snyder, J. Zhao, A. S. Fox, D. F. Hougen, C. Nicholson, and D. S. Ebert. Visual analytics for decision-making during pandemics. *Computing in Science Engineering*, 22(6):48–59, Nov 2020. doi : [10.1109/MCSE.2020.3023288](https://doi.org/10.1109/MCSE.2020.3023288)
- J6. J. Zhao, M. Karimzadeh, L. S. Snyder, C. Surakitbanharn, Z. C. Qian, and D. S. Ebert. MetricsVis: A visual analytics system for evaluating employee performance in public safety agencies. *IEEE Transactions on Visualization and Computer Graphics*, 26(1):1193–1203, Jan 2020. doi : [10.1109/TVCG.2019.2934603](https://doi.org/10.1109/TVCG.2019.2934603)

- J5. M. Khayat, M. Karimzadeh, **J. Zhao**, and D. S. Ebert. VASSL: A visual analytics toolkit for social spambot labeling. *IEEE Transactions on Visualization and Computer Graphics*, 26(1):874–883, Jan 2020. doi : [10.1109/TVCG.2019.2934266](https://doi.org/10.1109/TVCG.2019.2934266)
- J4. L. Tay, V. Ng, A. Malik, J. Zhang, J. Chae, D. S. Ebert, Y. Ding, **J. Zhao**, and M. Kern. Big data visualizations in organizational science. *Organizational Research Methods*, 21(3):660–688, 2018. doi : [10.1177/1094428117720014](https://doi.org/10.1177/1094428117720014)
- J3. Y. L. Wong, **J. Zhao**, and N. Elmquist. Evaluating social navigation visualization in online geographic maps. *International Journal of Human-Computer Interaction*, 31(2):118–127, Feb 2015. doi : [10.1080/10447318.2014.959106](https://doi.org/10.1080/10447318.2014.959106)
- J2. S. Ko, **J. Zhao**, J. Xia, S. Afzal, X. Wang, G. Abram, N. Elmquist, L. Kne, D. Van Riper, K. Gaither, S. Kennedy, W. Tolone, W. Ribarsky, and D. S. Ebert. VASA: Interactive computational steering of large asynchronous simulation pipelines for societal infrastructure. *IEEE Transactions on Visualization and Computer Graphics*, 20(12):1853–1862, Dec 2014. doi : [10.1109/TVCG.2014.2346911](https://doi.org/10.1109/TVCG.2014.2346911)
- J1. E. T. Brown, A. Ottley, **H. Zhao**, Q. Lin, R. Souvenir, A. Ender, and R. Chang. Finding waldo: Learning about users from their interactions. *IEEE Transactions on Visualization and Computer Graphics*, 20(12):1663–1672, Dec 2014. doi : [10.1109/TVCG.2014.2346575](https://doi.org/10.1109/TVCG.2014.2346575)

Conference Papers (peer-reviewed)

- C7. L. Snyder, **J. Zhao**, A. Reinert, G. Wang, and D. Ebert. PanViz 2.0 : Intregating AI into visual analytics to adapt to the novel challenges of COVID-19. In *Proceedings of the Hawaii International Conference on System Sciences*, pp. 1457–1465. ScholarSpace, Jan. 2021. doi : [10.24251/HICSS.2021.176](https://doi.org/10.24251/HICSS.2021.176)
- C6. **J. Zhao**, M. Karimzadeh, H. Xu, A. Malik, S. Afzal, G. Wang, N. Elmquist, and D. S. Ebert. Route Packing: Geospatially-accurate visualization of route networks. In *Proceedings of the Hawaii International Conference on System Sciences*, HICSS-53, pp. 1370–1379. ScholarSpace, Jan. 2020. doi : [10.24251/HICSS.2020.168](https://doi.org/10.24251/HICSS.2020.168)
- C5. **J. Zhao**, M. Karimzadeh, A. Masjedi, T. Wang, X. Zhang, M. M. Crawford, and D. S. Ebert. FeatureExplorer: Interactive feature selection and exploration of regression models for hyperspectral images. In *Proceedings of the IEEE Visualization Conference*, VIS 2019, pp. 161–165. IEEE, Oct 2019. doi : [10.1109/VISUAL.2019.8933619](https://doi.org/10.1109/VISUAL.2019.8933619)
- C4. A. Masjedi, **J. Zhao**, A. M. Thompson, K. Yang, J. E. Flatt, M. M. Crawford, D. S. Ebert, M. R. Tuinstra, G. Hammer, and S. Chapman. Sorghum biomass prediction using UAV-based remote sensing data and crop model simulation. In *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium*, IGARSS 2018, pp. 7719–7722. IEEE, July 2018. doi : [10.1109/IGARSS.2018.8519034](https://doi.org/10.1109/IGARSS.2018.8519034)
- C3. Z. Zhang, A. Masjedi, **J. Zhao**, and M. M. Crawford. Prediction of sorghum biomass based on image based features derived from time series of UAV images. In *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium*, IGARSS 2017, pp. 6154–6157. IEEE, July 2017. doi : [10.1109/IGARSS.2017.8128413](https://doi.org/10.1109/IGARSS.2017.8128413)
- C2. **J. Zhao**, A. Malik, H. Xu, G. Wang, J. Zhang, C. Surakitbanharn, and D. S. Ebert. MetricsVis: A visual analytics framework for performance evaluation of law enforcement officers. In *Proceedings of the IEEE International Symposium on Technologies for Homeland Security*, HST 2017, pp. 1–7. IEEE, April 2017. doi : [10.1109/THS.2017.7943468](https://doi.org/10.1109/THS.2017.7943468)
- C1. S. K. Badam, **J. Zhao**, S. Sen, N. Elmquist, and D. Ebert. TimeFork: Interactive prediction of time series. In *Proceedings of the ACM Conference on Human Factors in Computing Systems*, CHI '16, pp. 5409–5420. ACM, 2016. doi : [10.1145/2858036.2858150](https://doi.org/10.1145/2858036.2858150)

Posters (peer-reviewed)

- P9. C. Guo, **J. Zhao**, L. Ding, T. Zhang, W. Deng, P. Owusu Attah, X. Guo, X. T. Nguyen, Y. Ju, Z. C. Qian, and Y. V. Chen. Constellation-Builder : A high-level situational awareness and team assembly interface for cybersecurity events. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*. IEEE, Oct 2020 **VAST Challenge 2020 MC3 Award ★**
- P8. W. Hatton, **J. Zhao**, M. B. Gorantla, J. Chae, B. Ahlbrand, H. Xu, S. Chen, G. Wang, J. Zhang, A. Malik, S. Ko, and D. S. Ebert. Visual analytics for detecting communication patterns. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 137–138. IEEE, Oct 2015. doi : [10.1109/VAST.2015.7347648](https://doi.org/10.1109/VAST.2015.7347648) **VAST Challenge 2015 MC2 Honorable Mention ★**
- P7. **J. Zhao**, G. Wang, J. Chae, H. Xu, S. Chen, W. Hatton, S. Towers, M. B. Gorantla, B. Ahlbrand, J. Zhang, A. Malik, S. Ko, and D. S. Ebert. ParkAnalyzer: Characterizing the movement patterns of visitors VAST 2015 mini-challenge 1. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 179–180. IEEE, Oct 2015. doi : [10.1109/VAST.2015.7347669](https://doi.org/10.1109/VAST.2015.7347669)
- P6. J. Chae, G. Wang, B. Ahlbrand, M. B. Gorantla, J. Zhang, S. Chen, H. Xu, **J. Zhao**, W. Hatton, A. Malik, S. Ko, and D. S. Ebert. Visual analytics of heterogeneous data for criminal event analysis VAST challenge 2015 : Grand challenge. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 149–150. IEEE, Oct 2015. doi : [10.1109/VAST.2015.7347654](https://doi.org/10.1109/VAST.2015.7347654)
- P5. S. K. Badam, **J. Zhao**, N. Elmquist, and D. S. Ebert. TimeFork: Mixed-initiative time-series prediction. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 223–224. IEEE, Oct 2014. doi : [10.1109/VAST.2014.7042501](https://doi.org/10.1109/VAST.2014.7042501)

- P4. J. Zhang, S. Afzal, D. Breunig, J. Xia, **J. Zhao**, I. Sheeley, J. Christopher, D. S. Ebert, C. Guo, S. Xu, J. Yu, Q. Wang, C. Wang, Z. Qian, and Y. Chen. Real-time identification and monitoring of abnormal events based on microblog and emergency call data using SMART. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 393–394. IEEE, Oct 2014. doi : [10.1109/VAST.2014.7042582](https://doi.org/10.1109/VAST.2014.7042582)
- P3. J. Xia, **J. Zhao**, I. Sheeley, J. Christopher, Q. Wang, C. Guo, J. Zhang, D. S. Ebert, Y. V. Chen, and Z. C. Qian. AnnotatedTimeTree: Visualization and annotation of news text and other heterogeneous document collections. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 337–338. IEEE, Oct 2014. doi : [10.1109/VAST.2014.7042554](https://doi.org/10.1109/VAST.2014.7042554)
- P2. C. Guo, J. Xia, J. Yu, **J. Zhao**, J. Zhang, Q. Wang, Z. C. Qian, Y. V. Chen, C. Wang, and D. Ebert. AnnotatedTimeTree, Dodeca-Rings Map & SMART: A geo-temporal analysis of criminal events. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*, pp. 303–304. IEEE, Oct 2014. doi : [10.1109/VAST.2014.7042538](https://doi.org/10.1109/VAST.2014.7042538)
- P1. **J. Zhao**, Q. Lin, A. Ottley, and R. Chang. Modeling user interactions for complex visual search tasks. In *Proceedings of the IEEE Conference on Visual Analytics Science and Technology*. IEEE, Oct 2013

Book Chapter

- B1. M. Karimzadeh, **J. Zhao**, G. Wang, L. S. Snyder, and D. S. Ebert. Human-guided visual analytics for big data. In *Big Data in Psychological Research*, pp. 145–177. American Psychological Association, Washington, DC, USA, Jan 2020. doi : [10.1037/0000193-008](https://doi.org/10.1037/0000193-008)

Working Papers

- W3. Y. Ma, **J. Zhao**, F. Lei, Y. Wang, M. V. Mancenido, E. K. Chiou, and R. Maciejewski. Trust and visualization. Edting
- W2. Y. Wang, **J. Zhao**, M. V. Mancenido, E. K. Chiou, and R. Maciejewski. Could visual XAI repair trust? a study on the impact of visual explanations for trust repair in high-stakes AI-enabled task environments. Drafting
- W1. Y. Wang, **J. Zhao**, R. Askin, and R. Maciejewski. A simulation-based approach for quantifying human benefits in interactive label correction. Submitted to IEEE Transactions on Visualization and Computer Graphics (under major revision)

PROFESSIONAL SERVICES

Journal Reviewer

Transactions on Visualization and Computer Graphics
 Computer Graphics Forum
 IEEE Computer Graphics and Applications
 Applied Ergonomics
 IEEE Transactions on Systems, Man and Cybernetics : Systems
 Visual Informatics

Conference Reviewer

The IEEE Conference on Visualization & Visual Analytics (IEEE VIS 2021, 2022, 2023)
 The IEEE Conference on Visual Analytics Science and Technology (IEEE VAST 2018, 2019, 2020)
 The Eurographics Conference on Visualization (EuroVis 2019)
 The IEEE Pacific Visualization Symposium (PacificVis 2020, 2021, 2023)
 Hawaii International Conference on System Sciences (HICSS-53, 54, 55, 57)

Conference

Program Committee for the Visualization Notes Track of PacificVis 2023
 IEEE VIS 2022 Session Chair
 IEEE VIS 2019 Student Volunteer