

EDUCATION

Doctor of Philosophy, University of Washington, 2009
Dissertation Advisor: John Miyamoto,
Title: *Testing the Similarity Heuristic for Conjunction Errors and Other
Related Probabilistic Reasoning Errors*

Bachelor of Mathematics 1988
University of Waterloo, Waterloo, ON, Canada

PROFESSIONAL EXPERIENCE

Affiliate Assistant Professor/Senior Research Scientist, University of Washington, Seattle, WA, *Human Centered Design & Engineering (HCDE) Department*. 2018 - present

Senior Research Scientist, University of Washington, Seattle, WA, *Applied Physics Laboratory (APL)* 2012- present

Lecturer, University of Washington, Seattle, WA, *HCDE* Winter 2020

Lecturer, University of Washington, Seattle, WA, *Psychology* 2014 - 2015

IC Postdoctoral Fellowship, University of Washington, Seattle, WA, *The Information School, Institute for National Security Education and Research (INSER)*. Projects involved using natural language processing tools to examine emerging online communities and identify existing and potential leaders. 2011 - 2012

Research Associate, Laboratory Manager, University of Washington, *Department of Psychology, Decision Making Under Uncertainty Laboratory* 2009 - 2011
Laboratory manager responsible for guiding both graduate and undergraduate students in various multi-disciplinary research projects that required applying traditional decision theory to improve decision-making under risk in the domain of weather forecasting. Projects funded by the National Science Foundation.

Instructor and Teaching Assistant, University of Washington, Seattle, WA, *Department of Psychology*. 2001 – 2007
Instructor for Human Performance Laboratory and Psychology Writing Course. Teaching assistant for Statistics, Research Methods, Cognitive Psychology, and Developmental Psychology.

Business Systems Analyst, Various Private Sector Organizations, *Canada and USA*. 1988 - 2001

GRANTS AND CONTRACTS

PI: Coronavirus Risk Communication: How Age and Communication Format Affect Risk Perception and Behaviors (*\$49,133*) *National Science Foundation* 2020 - 2022

Co-PI: Deployment of the Washington State Virtual Coordination Center (VCC) for Multimodal Integrated Corridor Management (*\$3,424,361*) *Federal Highway Administration* 2020 - 2023

PI: Public Interpretation and Use of Evolving Probabilistic Tornado Forecasts in the Southeastern United States (\$397,957) <i>National Oceanic and Atmospheric Administration</i>	2020 - 2024
PI: Understanding and Enhancing Public Interpretation and Use of Probabilistic Tornado Warnings in the Southeastern United States (\$299,969) <i>National Oceanic and Atmospheric Administration</i>	2017 - 2020
PI: CANUS Maritime Information Sharing: Operational Strategies (\$260,479) <i>National Maritime Intelligence-Integration Office (NMIO)</i>	2019 - 2020
PI: CANUS Maritime Information Sharing Pilot Project: Puget Sound (\$450,000) <i>National Maritime Intelligence-Integration Office (NMIO)</i>	2017 - 2018
PI: 2016 National Maritime Forum (\$119,601) <i>National Maritime Intelligence-Integration Office (NMIO)</i>	2016 - 2017

RESEARCH INTERESTS

Science Communication
 Decision Making Under Uncertainty
 Computer-supported cooperative work

PEER-REVIEWED PUBLICATIONS

- Qin, C., Joslyn, S., **Savelli, S.**, Demuth, J., Morss, R., Ash, K. (Accepted May 28, 2023). The impact of probabilistic tornado warnings on risk perceptions and responses. *Journal of Experimental Psychology: Applied*.
- Joslyn, S., Qin, C., Han, J.H., **Savelli, S.**, & Agrawal, N. (2023). Reducing vaccine hesitancy by explaining vaccine science. *Journal of Experimental Psychology: Applied*.
- Joslyn, S., **Savelli, S.**, Duarte, H.A., Burgeno, J., Qin, C., Han, J.H. & Gulasik, G. (2021). COVID-19: Risk perception, risk communication, and behavioral intentions, *Journal of Experimental Psychology: Applied*. DOI: [10.1037/xap0000398](https://doi.org/10.1037/xap0000398)
- Joslyn, S. & **Savelli, S.** (2021). Visualizing uncertainty for non-expert end users: The challenge of the deterministic construal error. *Frontiers in Computer Science: Human-Media Interaction*. <https://doi.org/10.3389/fcomp.2020.590232>
- Childs, S.J., Demuth, J.L., Morss, R.E., Ash, K., **Savelli, S.**, Joslyn, S., & Qin, C. (in preparation). A qualitative analysis of risk assessment and responses to probabilistic tornado warnings. *Weather, Climate, and Society*.
- Ganji, A., Wilson, T., Dailey, D., **Savelli, S.**, & Haselkorn, M. (2019). Cause and effect: A qualitative analysis of obstacles to information sharing during a regional disaster exercise. Paper presented at 16th International Conference on Information Systems for Crisis Response and Management, Valencia, Spain, May 19-22.

- Savelli, S.** & Joslyn, S. (2013). The advantages of predictive interval forecasts for non-expert users and the impact of visualizations. *Applied Cognitive Psychology*, 27, 527-541.
- Joslyn, S., Nemec, L., & **Savelli, S.** (2013). The benefits and challenges of predictive interval forecasts and verification graphics for end-users. *Weather and Forecasting*, 5, 133-147.
- Kim, J., **Savelli, S.**, Dombroski, C., & Fathalian, A. (2012). Certainty affect detection in informal text. *In the AMCIS 2012 Proceedings*. Paper 11.
<http://aisel.aisnet.org/amcis2012/proceedings/VirtualCommunities/11>
- Savelli, S.** & Joslyn, S. (2012). Boater safety: Communicating weather forecast information to high stakes end users. *Weather, Climate, and Society*, 4, 7-19.
- Joslyn, S., **Savelli, S.**, & Nadav-Greenberg, L. (2011). Reducing probabilistic weather forecasts to the worst-case scenario: Anchoring effects. *Journal of Experimental Psychology: Applied*, 17, 342-353.
- Joslyn, S. & **Savelli, S.** (2010). Communicating forecast uncertainty: Public perception of weather forecast uncertainty. *Meteorological Applications*, 17, 180-195.
- Simon, M., Houghton, S., **Savelli, S.** (2003). Out of the Frying Pan...? Why Small Business Managers Introduce High Risk Products, *Journal of Business Venturing*, 18, 419-440.
- Simon, M., Elango, B., Houghton, S., **Savelli, S.** (2002). The Successful Product Pioneer: Maintaining Commitment While Adapting to Change, *Journal of Small Business Management* 40, 187-203.

PRESENTATIONS, TECHNICAL REPORTS & WHITE PAPERS

- Qin, C., Joslyn, S., **Savelli, S.**, Demuth, J.L., & Morss, R. (2023). Evolving Probabilistic Tornado Warnings and User Understanding. Poster presentation at Psychonomics 2023 Annual Meeting in San Francisco, CA on November 16-19, 2023.
- Savelli, S.**, Qin, C., Joslyn, S., Demuth, J.L., Morss, R. (2022). Public Interpretation and Use of Evolving Probabilistic Tornado Forecasts in Southeastern USA: Pilot Study. Presentation at the Vortex SE/USA Workshop held in Santa Fe, NM on October 23, 2022.
- Qin, C., Joslyn, S., **Savelli, S.**, Demuth, J.L., Morss, R., Ask, K. (2020). Probabilistic Tornado Warning. Poster presentation submitted to Psychonomics, 18 – 22 November 2020, Virtual Presentation of poster took place on November 21, 2020.
- Joslyn, S., **Savelli, S.**, Qin, C., Demuth, J.L., Morss, R., Ask, K. (2020). The impact of color-coded probabilistic tornado warnings on risk perceptions and responses, Part I: Experiment, Presentation at American Meteorological Society Annual Meeting, January 2020, Boston.
- Demuth, J.L., Morss, R., Ask, K., Savelli, S., Joslyn, S., Qin, C., (2020). The impact of color-coded probabilistic tornado warnings on risk perceptions and responses, Part II: Interviews, Presentation at American Meteorological Society Annual Meeting, January 2020, Boston.

- Savelli, S.**, Joslyn, S., Qin, C., Demuth, J.L., Morss, R., Ask, K. (2019). Communicating Probabilistic Tornado Forecasts: Does Numeracy Matter? Poster presentation submitted to Society for Judgment and Decision Making Annual Meeting, 15 – 19 November 2019, Montreal, Canada.
- Qin, C., Joslyn, S., **Savelli, S.**, Demuth, J.L., Morss, R., Ask, K. (2019). Probability Tornado Warning. Poster presentation submitted to the Psychonomics Annual Meeting, 15 – 19 November 2019, Montreal, Canada.
- Demuth, J.L., **Savelli, S.**, Joslyn, S., Qin, C., Morss, R., Ash, K., Lazrus, H., Vickery, J., Smith, DI, Anderson, K., Palen, L., Henderson, J. (2018). Risk, information, and vulnerability for evolving tornado threats. Presentation given at the American Meteorological Society Severe Local Storms conference, 25 October, Stowe, VT. <https://ams.confex.com/ams/29SLS/webprogram/Paper348786.html>
- Demuth, J.L., Joslyn, S., **Savelli, S.**, Qin, C., Morss, R., Ash, K. (2018). A 30% chance of a tornado?: Assessing public understanding, risk perception, and responses to probabilistic tornado warnings. Society for Risk Analysis annual meeting, 3 December, New Orleans, LA.
- Haselkorn, M. & **Savelli, S.** (2018). CANUS Maritime Information Sharing Pilot Project Puget Sound: Evaluation and Recommendations, *A report prepared for the National Maritime Intelligence-Integration Office*, November 2018
- Haselkorn, M., **Savelli, S.** & Yancey, S. (2018). Haselkorn, M., Savelli, S. & Yancey, S. (2018). Coordinated Traffic Incident & Congestion Management (TIM-CM): Mitigating Impacts of Major Traffic Incidents in the Seattle I-5 Corridor, *A report prepared for the Washington State Department of Transportation*, January 2018.
- Haselkorn, M., **Savelli, S.** & Yancey, S. (2018). Beyond Incident Response: Mitigating Impacts of Major Traffic Incidents in the Seattle I-5 Corridor, *A report prepared for the Mobility Innovation Center, University of Washington*, January 2018.
- Marshall, M., Haselkorn, M., **Savelli, S.** & Yancey, S. (2016). Challenges and Opportunities of Current & Emergent Maritime Capabilities: Exploring the Intersection of Technology and Policy, *A report prepared for the National Maritime Intelligence-Integration Office 2016 Global Maritime Forum*, 15-16 November 2016.
- Haselkorn, M., Butler, K., Zachry, M., Zito, B., **Savelli, S.**, Kirby, E., ..., Braxton, M. (2015). Maritime operational information sharing analysis: Year 2. *A report prepared for the Department of Homeland Security Interagency Operations Center, the National Maritime Intelligence-Integration Office, and the Program Manager for the Information Sharing Environment*, Submitted September, 2015.
- Savelli, S.** & Jones, D.W. (2015). The weakest link: Promoting a cybersecurity culture. *A White Paper prepared for the Office of Naval Research*, Submitted May 2015.
- Savelli, S.**, Ewell, C.V. & Jones, D.W. (2015). Communicating cybersecurity threat intelligence to decision makers. *A White Paper prepared for the Office of Naval Research*, Submitted May 2015.

- Jones, D.W., **Savelli, S.**, McLaughlin, J. & Maclean, S. (2015). Achieving cybersecurity situational awareness for military decision makers. *A White Paper prepared for the Office of Naval Research, Submitted May 2015.*
- Kim, J., **Savelli, S.** & Dombroski, C. (2012). Cognitive processes of information security responders: Creating situation awareness. *A White Paper prepared for the Air Force Office of Scientific Research, Submitted April 2012.*
- Savelli, S.** & Joslyn, S. (November 2011). Does anchoring affecting a numeric estimate also affect decisions based on that estimate. *Presentation at the 2011 Annual Meeting of the Society for Judgment and Decision Making, Seattle, WA.*
- Joslyn, S. & **Savelli, S.** (June 2011). Visualization: Is it really the best way to communicate forecast uncertainty to non-expert end users? *Poster presentation at the Naturalistic Decision-Making conference in Orlando, FL.*
- Savelli, S.** & Joslyn, S. (June 2011). Reducing probabilistic weather forecast uncertainty to the worst-case scenario. *Presentation at the National Unified Operational Prediction Capability (NUOPC) Workshop. Seattle, WA.*
- Joslyn, S., Leclerc, J. & **Savelli, S.** (November 2010). The impact of forecast uncertainty on decision making. *Presentation at the 2010 Annual Meeting of the Psychonomics Society, St. Louis, MO.*
- Nemec, L., **Savelli, S.** & Joslyn, S. (November 2010). Can people understand verification information for probabilistic weather forecasts? *Presentation at the 2010 Annual Meeting of the Psychonomics Society, St. Louis, MO.*
- Savelli, S.** & Joslyn, S. (March 2010). Public perception of weather forecast uncertainty. *Presentation at the 2010 Pacific Northwest Weather Workshop, Seattle, WA.*
- Joslyn, S., **Savelli, S.**, & Nadav-Greenberg, L. (July, 2009). Impact of forecast uncertainty on decisions involving costs and losses. *Poster at the Society for Applied Research on Memory and Cognition 7th Biannual Conference, Kyoto, Japan.*
- Savelli, S.** & Joslyn, S. (June 2009). Visualizing forecast uncertainty for a non-expert web audience. *Poster Presented at the 9th Bi-annual International Conference on Naturalistic Decision Making, Covent Garden, London, UK.*
- Savelli, S.**, Joslyn, S., Nadav-Greenberg, L. & Chen, Q. (November 2008). Presenting only the worst-case scenario in probabilistic weather forecasts: Anchoring effects. *Poster Presented at the November 2008 Annual Meeting of the Psychonomics Society, Chicago, IL.*
- Savelli, S.** (May 2008). Testing the similarity heuristic for conjunction errors and other probabilistic reasoning errors. *Presentation at the 2008 Northwest Cognition and Memory Conference, Seattle, Washington, 2008.*
- Savelli, S.** & Miyamoto, J. (November 2003). Are Causal and Counterfactual Judgments mediated by the same mechanism? *Presentation at the 2003 Annual Meeting of the Society for Judgment and Decision Making, Vancouver, B.C., Canada.*

Savelli, S., Simon, M., & Houghton, S. (2001). Out of the frying pan...? Why small business executives Sometimes Introduce High Risk Products. *Presentation at USASBE/SBIDA 2000 Annual Conference*, San Antonio, TX.

COURSES TAUGHT

Experimental Research Methods
Introductory Statistics
Cognitive Psychology

PROFESSIONAL SERVICES

Frontiers in Psychology - Cognitive Science: Review Editor
Ad Hoc Reviewer: *Weather Climate and Society, Journal of Cognitive Psychology, Meteorological Applications, Bulletin of the American Psychological Society, Journal of Cognitive Engineering and Decision Making*

ASSOCIATION MEMBERSHIPS

Society for Judgment and Decision-Making
Psychonomics Society

Updated 09/20/2023