

PUBLICATIONS

[J = Journal, C = Conference, D = Data/Other Publication]

[J.4] *[In preparation for ACM Transactions on Interactive Intelligent Systems]* **Sutter, C.**, Wirz, C. D., Sulia, K., Bassill, N. P., & Thorncroft, C. D. (2025) *User-Centered Development of an Intelligent Road Surface Condition Machine Learning Tool with the New York State Department of Transportation*.

[J.3] *[Under review in International Journal of Transportation Science and Technology (IJTST)]* **Sutter, C.**, Sulia, K., Bassill, N. P., Wirz, C. D., Thorncroft, C. D., Rothenberger, J., Przybylo, V., Cains, M. G., Radford, J., & Evans, D. A. (2025) *Road Surface Condition Detection with Machine Learning using New York State Department of Transportation Camera Images and Weather Forecast Data*. Preprint available at: <https://arxiv.org/abs/2510.06440>

[D.2] **Sutter, C.**, Sulia, K., Bassill, N. P., Wirz, C. D., Przybylo, V., Cains, M. G., Radford, J., Evans, D. A., & Thorncroft, C. D. (2025). *Datasheet: Hand-Labeled Road Surface Conditions in New York State Department of Transportation Camera Images* [Data paper]. Zenodo. <https://zenodo.org/records/17080580>

[D.1] **Sutter, C.**, Sulia, K., Bassill, N. P., Thorncroft, C. D., Wirz, C. D., Przybylo, V., Cains, M. G., Radford, J., & Evans, D. A. (2025). *Quantitative Content Analysis Data for Hand Labeling Road Surface Conditions in New York State Department of Transportation Camera Images* [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.15257486>

[C.8] **Sutter, C.**, Sulia, K., Bassill, N. P., Wirz, C. D., & Thorncroft, C. D. (18 Feb 2025). *A Machine Learning Approach to Automated Road-Surface Condition Predictions in Collaboration with the New York State Department of Transportation* [Seminar presentation]. NOAA Hydrometeorology Testbed, 2024-2025 HMT Seminar Series. <https://www.wpc.ncep.noaa.gov/hmt/seminars.shtml>

[C.7] **Sutter, C.**, Sulia, K., Bassill, N. P., Wirz, C. D., & Thorncroft, C. D. (13 Jan 2025). *Lessons Learned in Developing an Automated Road Surface Classification Tool using Machine Learning for the New York State Department of Transportation* [Conference poster]. 105th AMS Annual Meeting, New Orleans, LA, Jan 2025. <https://ams.confex.com/ams/105ANNUAL/meetingapp.cgi/Paper/451176>

[C.6] **Sutter, C.**, Sulia, K., Bassill, N. P., Wirz, C. D., & Thorncroft, C. D. (2 Oct 2024). *Leveraging Machine Learning with the New York State Department of Transportation to Enhance Understanding of Road Surface Conditions* [Conference presentation]. CIWRO Workshop on Science, Predictability, Operations, Preparation and Response for High Impact Weather, 2-4 Oct, 2024, Albany, NY 12222

[J.2] Wirz, C. D., **Sutter, C.**, Demuth, J. L., Mayer, K. J., Chapman, W. E., Cains, M. G., et al. (2024). *Increasing the reproducibility and replicability of supervised AI/ML in the Earth systems science by leveraging social science methods*. Earth and Space Science, 11, e2023EA003364. <https://doi.org/10.1029/2023EA003364>

[C.5] **Sutter, C.**, Sulia, K. J., Bassill, N. P., Thorncroft, C. D., Przybylo, V., Wirz, C. D., Cains, M. G., Radford, J. T., & Evans, D. A. (31 Jan 2024). *Improving Generalizability of Road Condition Classification Models for Department of Transportation Camera Images* [Conference presentation by Dr. Kara Sulia]. 104th AMS Annual Meeting, Baltimore, MD, 28 Jan - 1 Feb 2024. <https://ams.confex.com/ams/104ANNUAL/meetingapp.cgi/Paper/438154>

[C.4] **Sutter, C.**, Sulia, K. J., Bassill, N. P., Thorncroft, C. D., Przybylo, V., Wirz, C. D., Cains, M. G., Radford, J. T., & Evans, D. A. (14 Nov 2023). *Machine Learning-Driven Detection of Road Surface Conditions in Department of Transportation Camera Images* [Conference presentation]. 24th Northeast Regional Operational Workshop, Albany, NY, 14-15 Nov 2023. <https://www.weather.gov/aly/nrow24>

[J.1] Bostrom, A., Demuth, J., Wirz, C., Cains, M., Schumacher, A., Madlambayan, D., Bansal, A. S., Bearth, A., Chase, R., Crosman, K. M., Ebert-Uphoff, I., Gagne II, D. J., Guikema, S., Hoffman, R., Johnson, B. B., Kumler-Bonfanti, C., Lee, J. D., Lowe, A., McGovern, A., Przybylo, V., Radford, J., Roth, E., **Sutter, C.**, Tissot, P., Roebber, P., Stewart, J. Q., White, M., & Williams, J. K. (2023). *Trust and trustworthy artificial intelligence: A research agenda for AI in the environmental sciences*. Risk Analysis, online first. <https://doi.org/10.1111/risa.14245>

[C.3] **Sutter, C.**, Sulia, K. J., Przybylo, V., Bassill, N. P., Thorncroft, C. D., Wirz, C. D., & Cains, M. G. (9 Jan 2023). *Automated Detection of Road Conditions from Department of Transportation Camera Images* [Conference presentation]. American Meteorological Society 103rd Annual Meeting, Denver, CO, 8-12 Jan 2023. <https://ams.confex.com/ams/103ANNUAL/meetingapp.cgi/Paper/418646>

[C.2] Przybylo, V., **Sutter, C.**, Wirz, C. D., Cains, M. G., & Sulia, K. J. (9 Jan 2023). *Detecting the Presence of Precipitation in New York State Mesonet Imagery at Night using Convolutional Neural Networks* [Conference poster]. Artificial Intelligence Conference, American Meteorological Society 103rd Annual Meeting, Denver, CO, 8-12 Jan 2023

[C.1] Ferrera, V., Rothenberger, J. C., Wilson Reyes, M., **Sutter, C.**, Fagg, A. H., & Diochnos, D. I. (12 Jan 2023). *Classifying Road Surface Conditions with Self-Trained Artificial Intelligence* [Conference presentation]. American Meteorological Society 103rd Annual Meeting, Denver, CO, 8-12 Jan 2023