Yagmur Derin

Civil and Environmental Engineering, University of Iowa, IA
yagmur-derin@uiowa.edu
https://dryagmurderin.com/ • https://www.researchgate.net/profile/Yagmur-Derin

EDUCATION

Storrs, CT — **University of Connecticut, Civil and Environmental Engineering**
PhD, 2019 — *Thesis Title:* "Characterization and Modeling of Satellite-Based Precipitation Uncertainty over Complex Terrain"
Advisor: Prof. Dr. Emmanouil Anagnostou

Ankara, Turkey — **Middle East Technical University (METU), Geological Engineering**
MSc, 2014 — *Thesis Title:* "Advancement of Satellite-Based Rainfall Applications for Basin-Scale Hydrologic Modeling"
Advisor: Prof. Dr. Koray K. Yilmaz

Ankara, Turkey — **Middle East Technical University (METU), Geological Engineering**
BSc, 2011 — *Design Project:* "Water Supply Design for Industrial Complex in Anamur Plain"

RESEARCH & PROFESSIONAL EXPERIENCE

Iowa City, IA — **University of Iowa, Civil and Environmental Engineering**
Jan. 2026 - present — *Assistant Professor*

Madison, WI — **University of Wisconsin-Madison, Civil and Environmental Engineering**
Nov. 2023 – Jan. 2026 — *Research Scientist*
Supervisor: Prof. Dr. Daniel Wright

Norman, OK — **University of Oklahoma, Advanced Radar Research Center**
Oct. 2019 – Oct. 2023 — P*ost-Doctoral Research Assistant Scientist*
Supervisor: Prof. Dr. Pierre Kirstetter

Storrs, CT — **University of Connecticut, Civil and Environmental Engineering**
Sept. 2014 – Aug. 2019 — *Graduate Research Assistant*

Storrs, CT — **University of Connecticut, Civil and Environmental Engineering**
Jan. 2018 – May 2018 — *Instructor*
Course: Probability and Statistics in Civil Engineering

Storrs, CT — **University of Connecticut, Civil and Environmental Engineering**
Sep. 2017 – Dec. 2017 — *Teaching Assistant*
Course: Probability and Statistics in Civil Engineering

Storrs, CT — **University of Connecticut, Civil and Environmental Engineering**
Jan. 2016 – May 2016 — *Teaching Assistant*
Course: Environmental Modeling

Ankara, Turkey — **Middle East Technical University (METU), Geological Engineering**
June 2011 – June 2014 — *Graduate Research Assistant*

AWARDS

- 2022, International Precipitation Working Group (IPWG) Early Career Scientist Award, First Prize for Outstanding Presentation

- 2022, The Office of the Vice President for Research and Partnerships (OVPRP) Match Program in Support of Postdoctoral Researchers Award, University of Oklahoma
- 2021, The Office of the Vice President for Research and Partnerships (OVPRP) Match Program in Support of Postdoctoral Researchers Award, University of Oklahoma
- 2016, Pre-Doctoral Fellowship for the Spring 2016, in Civil and Environmental Engineering, University of Connecticut
- 2013, European Geosciences Union (EGU) Hydrological Sciences Outstanding Student Poster (OSP) Award

AREAS OF RESEARCH INTEREST

- Remote sensing of hydrometeorology, and hydrology
- Precipitation modeling using stochastic methods of extreme rainfall
- X-band radar retrieval, validation, and application of precipitation
- Satellite remote sensing, retrieval, validation and application of precipitation and surface properties

PUBLICATIONS

Summary Table

Citations: 713, h-index = 10 (Source, Google Scholar, Feb. 2025)

Table of Journals and Impact Factors (2025)

Journal	# Papers	Impact Factor
AMS, Journal of Hydrometeorology	5	4.871
IEEE, Transactions on Geoscience and Remote Sensing	2	8.125
IEEE, Geosciences and Remote Sensing Letters	1	5.343
AGU, Geophysical Research Letters	1	5.58
AGU, Water Resources Research	1	5.4
RMets, Quarterly J. of the Royal Meteorological Society	1	8.9
MDPI, Remote Sensing	1	5.349

Peer-Reviewed Journal Publications

1. **Derin, Y**., P. E. Kirstetter, and D. Faure (submitted): Guiding the improvement of the global precipitation measurement mission over mountainous regions with radar networks and numerical weather models. Submitted to Quarterly Journal of the Royal Meteorological Society, 2025.
2. Peng, K., D. B. Wright, **Y. Derin**, G. A. Alexander, A. Pradhan, D. Zoccatelli, S. H. Hartke, Z. Li, and J, Tan (submitted): Advancing ensemble streamflow prediction through satellite-based precipitation product and model parameter uncertainty quantification. Submitted to Journal of Advances in Modeling Earth Systems 2025.
3. Gourley, J. J., **Y. Derin**, P-E Kirstetter, J. W. Fulton, L. A. Hempel, and B. White, (submitted): Rainfall and extreme hydrologic response captured by a post-wildfire hydrometeorological observatory. Submitted to International Journal of Wildland Fire 2024.
4. Peng, K., D. Wright, **Y. Derin**, S. H. Hartke, Z. Li, and J. Tan, 2024: Large-Scale Benchmarking of a Near-Realtime Global Satellite-Only Ensemble Precipitation Dataset. WRR. 60, e2023WR036756. https://doi.org/10.1029/2023/WR036756
5. **Derin Y**., and P. E. Kirstetter, 2022: Evaluation of IMERG over CONUS complex terrain using environmental variables. *Geophysical Research Letters,* 49, e2022GL100186. https://doi.org/10.1029/2022GL100186
6. Huang Z., **Y. Derin**, P. E. Kirstetter and Y. Li, 2022: Multi-Graph Convolutional Networks for Rainfall Estimation in Complex Terrain. *IEEE Geoscience and Remote Sensing Letters, vol 19, pp 1-5,* doi: 10.1109/LGRS.2022.3212644.
7. **Derin Y**., P. E. Kirstetter, N. Brauer, J. J. Gourley, and J. Wang: Evaluation of IMERG satellite precipitation over the land-coast-ocean continuum – Part 2: Quantification. *Journal of Hydrometeorology,* 23(8), pp.1297-1314, doi: https://doi.org/10.1175/JHM-D-21-0234.1.

8. **Derin Y**., P. E. Kirstetter and J. J. Gourley, 2021: Evaluation of IMERG satellite precipitation over the land-coast-ocean continuum – Part 1: Detection. *Journal of Hydrometeorology,* 22(11), pp. 2843-2859, doi: 10.1175/JHM-D-21-0058.1.
9. **Derin Y**., E. Anagnostou, Ehsan Bhuiyan, J. Kalogiros, M. Anagnostou, 2020: Modeling Passive Microwave Precipitation Retrieval Error over Complex Terrain using a Nonparametric Statistical Technique, *IEEE Transactions on Geoscience and Remote Sensing*, DOI: 10.1109/TGRS.2020.3038343.
10. **Derin Y**., E. Anagnostou, A. Berne, M. Borga, B. Boudevillain, W. Buytaert, C-H. Chang, G. Delrieu, Y. Hong, Y. C. Hsu, W. Lavado-Casimiro, B. Manz, S. Moges, E. I. Nikolopoulos, D. Sahlu, F. Salerno, J-P. Rodríguez-Sánchez, H. J. Vergara and K. K. Yilmaz, 2019: Evaluation of GPM-era Global Satellite Precipitation Products over Multiple Complex Terrain Regions. *Remote Sensing*, 11(24).
11. **Derin Y**., E. Anagnostou, M. Anagnostou and J. Kalogiros, 2019: Evaluation of X-Band Dual-Polarization Radar-Rainfall Estimates from OLYMPEX, *Journal of Hydrometeorology*, 20 (9).
12. **Derin, Y**., Anagnostou E., Anagnostou M. N., Kalogiros J., Casella D., Marra A. C., Panegrossi G., and Sano P., 2018: Passive Microwave Rainfall Error Analysis Using High-Resolution X-Band Dual-Polarization Radar Observations in Complex Terrain. *IEEE Transactions on Geoscience and Remote Sensing*, 56:5, 2565-2586; 10.1109/TGRS.2017.2763622
13. **Derin, Y**., E. Anagnostou, A. Berne, M. Borga, B. Boudevillain, W. Buytaert, C-H. Chang, G. Delrieu, Y. Hong, Y. C. Hsu, W. Lavado-Casimiro, B. Manz, S. Moges, E. I. Nikolopoulos, D. Sahlu, F. Salerno, J-P. Rodríguez-Sánchez, H. J. Vergara, and K. K. Yilmaz, 2016: Multi-regional Satellite Precipitation Products Evaluation over Complex Terrain, *Journal of Hydrometeorology*, 17, 1817-1836.
14. **Derin Y**., and K. K. Yilmaz, 2014: Evaluation of multiple satellite-based precipitation products over complex topography. *Journal of Hydrometeorology*, 15, 1498–1516.

Book Chapters

15. **Derin, Y.,** E. Nikolopoulos and M. N. Anagnostou., 2019: Retrieving Extreme Precipitation with Multiple Satellite-based Precipitation Products, *Extreme Hydroclimatic Events and Multivariate Hazards in a Changing Climate,* Elsevier
16. Anagnostou., M. N., J. Kalogiros, E. Nikolopoulos**, Y. Derin**, E. N. Anagnostou, and M. Borga, 2017: Satellite Rainfall Error Analysis with the Use of High-Resolution X-Band Dual-Polarization Radar Observations Over the Italian Alps, *Perspectives on Atmospheric Sciences*, Springer Atmospheric Sciences, DOI 10.1007/978-3-319-35095-0_39

GRANTS

Received

- *Co-I*, Assessment of Extreme Short-Duration Rainfall and its Drivers to Support Precipitation Frequency and PMP Analyses. NOAA-OAR. $535,785.00 (09/2025-08/2028)
- *PI,* Comprehensive, Physics-Informed Satellite Precipitation Uncertainty Representation and Ensemble Generation. NASA, PMM. $556,601.00 "selected but not funded due to insufficient funds".
- *Co-PI,* Developing a Prototype Data-Driven Stochastic Convective Hazards Emulator. American Family Insurance Funding Initiative through UW-Madison Data Science Institute. $100,000.00 (09/2024-08/2025)
- *Co-PI,* Evaluation of Surface Precipitation Estimates from NASA's Tropical Rainfall Measuring Mission, and Global Precipitation Measurement Mission. NASA – GPM Ground Validation. $80,000.00 (09/2022 – 08/2023)
- *Co-PI,* Evaluation of Surface Precipitation Estimates from NASA's Tropical Rainfall Measuring Mission, and Global Precipitation Measurement Mission. NASA – GPM Ground Validation. $70,000.00 (09/2021 – 08/2022)
- *Co-PI,* Evaluation of Surface Precipitation Estimates from NASA's Tropical Rainfall Measuring Mission, and Global Precipitation Measurement Mission. NASA – GPM Ground Validation. $98,413.00 (06/2020 – 06/2021)
- *Co-PI,* Enhancing Communities Preparedness and Resilience to Post-Wildfire Hydrology in Mountainous Areas, Round 1. NSF – CIVIC. $41,287.00 (02/2021-062021)
- *Co-PI,* Products to Guide Impact-Based Flash Flood Warnings in the National Weather Service. NOAA - The Joint Technology Transfer Initiative (JTTI). $570,664.00 (09/2020 – 08/2023)

PRESENTATIONS

Conference/ Meeting Oral Presentations

1. **(Invited) Derin Y.,** D. Wright, Y. Liu, R. Emberson, L. Andrews, and T. Stanley, (2025). Ensemble-based stochastic downscaling of seasonal predictions of extreme rainfall. American Meteorological Society 105th Annual Meeting, New Orleans, 12-16 January 2025.
2. **Derin Y.,** A. Pradhan, K. Peng, D. Wright, and J. Tan, (2025). Validating a satellite-only ensemble precipitation dataset (STREAM-Sat) against multiple radar networks. American Meteorological Society 105th Annual Meeting, New Orleans, 12-16 January 2025.
3. **Derin Y.,** D. Wright, Y. Liu, R. Emberson, L. Andrews, and T. Stanley, (2024). Stochastic downscaling and ensemble generation of seasonal predictions of extreme rainfall using a space-time nonstationary stochastic rainfall model. American Geophysical Union Fall Meeting, Washington DC, December 9-12, 2024.
4. Dixon, A., **Derin Y**., and P-E. Kirstetter, (2024). Case study of orographic precipitation within measurement gaps of satellite-based precipitation products. American Meteorological Society 104th Annual Meeting, Baltimore, January 28-February 1, 2024.
5. **(Invited) Derin Y**., P-E. Kirstetter, and D. Faure (2023). Guiding the Improvement of the Global Precipitation Measurement Mission (GPM) with Radar Networks and Numerical Weather Models over mountainous regions. American Geophysical Union Fall Meeting, San Francisco, December 11-15, 2023.
6. **Derin Y.,** P-E. Kirstetter, D. B. Wolff, D. Faure, N. Gaussiat, and O. Bousquet (2023). Guiding the Improvement of the Global Precipitation Measurement Mission (GPM) with Radar Networks over France and USA mountainous regions. American Meteorological Society Radar Conference, Minneapolis, MN, 28 August-1 September, 2023.
7. Bodine D. J., T. Y. Yu, Y. Wen, A. Alruzuq, P. Kirstetter, **Y. Derin**, L. Shedd, B. K. Cohen, M. Borowski, M. D. Tzeng, E. D. Mullens, S. Mullens, H. B. Bluestein, R. D. Palmer, and B. L. Cheong (2023). The Research and Educational Activities with the Mobile Rapid Scan X-Band Polarimetric (RaXPol) Radar as an NSF Community Instrument Facility. American Meteorological Society Radar Conference, Minneapolis, MN, 28 August-1 September, 2023.
8. **Derin Y.,** and P-E. Kirstetter (2023). Evaluation of IMERG over mountainous regions using environmental variables. 14th International Precipitation Conference (IPC14), Norman, OK, June 05-09, 2023.
9. Gourley, J. J., K. Howards, D. Wasielewski, **Y. Derin**, P-E. Kirstetter, J. A. Duarte, H. Vergara, J. Fulton, and L. Hempel (2023). Development of a mobile, post-wildfire hydrometeorological observatory. American Meteorological Society 103rd Annual Meeting, Denver, January 8-12, 2023.
10. Yu T-Y., Y. Wen, D. J. Bodine, A. Alruzuq, P-E. Kirstetter, **Y. Derin**, L. Shedd, B. Cohen, M. Borowski, M. D. Tzeng, E. D. Mullens, S. Mullens, R. D. Palmer, and B. Cheong (2023). The mobile rapid scan X-Band polarimetric (RaXPol) Radar as a community instrument facility: virtual radar experiment for sea breeze observations to enhance student learning. American Meteorological Society 103rd Annual Meeting, Denver, January 8-12, 2023.
11. **Derin Y**., P-E. Kirstetter (2022). Evaluation of IMERG over CONUS complex terrain using environmental variables. 10th Workshop on International Precipitation Technical Committee (IPWG) and 6th International Workshop on Space-based Snowfall Measurement (IWSSM) Conference, June 13-17, 2022.
12. **Derin Y**., P-E. Kirstetter (2021). Evaluation of Orographic Precipitation for GPM. American Meteorological Society 101st Annual Meeting, January 9-15, 2021.
13. **Derin Y**., P-E. Kirstetter (2020). Evaluation of IMERGV06B over nontraditional regions using Ground Validation-Multi Radar/Multi-Sensor (GV-MRMS): oceans, American Geophysical Union Fall Meeting, San Francisco, 1-17 December 2020.
14. **Derin Y.,** P-E. Kirstetter (2020). Evaluation of IMERGV05 and IMERGV06 over CONUS mountainous regions, National Weather Association, Tulsa, 13-17 September 2020.
15. **Derin Y**., E. Anagnostou, C. Kummerow, and D. Randel (2018). Characterization of PMW retrieval uncertainty over Complex Terrain. American Geophysical Union Fall Meeting, Washington D.C., 10-14 December 2018.
16. **Derin Y.,** E. Anagnostou, J. Kalogiros, M. Anagnostou, A. C. Marra, G. Panegrossi, V. Levizzani, E. Cattani, D. Casella and P. Sanò, (2017). Characterization of Passive Microwave Precipitation Retrieval Uncertainty over Complex Terrain, American Geophysical Union Fall Meeting, San Francisco, 11-15 December 2017.
17. **Derin Y.,** E. Anagnostou, J. Kalogiros, M. Anagnostou, A. C. Marra, G. Panegrossi, V. Levizzani, E. Cattani, D. Casella and P. Sanò, (2016). Passive Microwave Rainfall Error Analysis using High-Resolution X-band

Dual-Polarization Radar Observations in Complex Terrain, American Geophysical Union Fall Meeting, San Francisco, 12-16 December 2016.

18. **Derin, Y**., Anagnostou, E., Berne, A., Borga M., Boudevillain, B., Buytaert, W., Chang, C., Delrieu, G., Hong, Y., Hsu, Y. C., Lavado-Casimiro, W., Manz, B., Moges, S., Nikolopoulos, E. I., Sahlu, D., Salerno, F., Rodríguez-Sánchez, J., Vergara, H. J., Yilmaz, K. K., (2015). Multi-regional Satellite Precipitation Products Evaluation over Complex Terrain, 7th International Workshop for GPM Ground Validation, Seoul, Korea, 12-14 May 2015.
19. **Derin, Y**., Anagnostou, E., Kalogiros, J., and Anagnostou, M., (2015). Passive Microwave Rainfall Error Analysis using High-Resolution X-band Dual-Polarization Radar Observations in Complex Terrain, European Geosciences Union General Assembly, Vienna, Austria, 12 April – 17 April 2015.
20. Yilmaz K.K. and **Derin, Y**., (2014). Advancement of Satellite-based Rainfall Applications for Hydrologic Modeling in Topographically Complex Regions, European Geosciences Union General Assembly, Vienna, Austria, 27 April – 02 May 2014.
21. **Derin, Y.,** Hatipoglu, E., Sunnetci, M. O., Tanyas, H., Ercan, H., Aktuna, Z., Agouridis, C., Fryar, A. E., Milewski, A., Schroeder, P., Ece O. I. and Yilmaz, K. K., BOOST H2O – Field Training Activities for Hydrologic Science near Lake Iznik, Turkey, American Geophysical Union Fall Meeting, San Francisco, 9-13 December 2013.

Conference/Meeting Posters

22. **Derin Y.,** A. Pradhan, K. Peng, and D. Wright, (2024). Global ground validation of satellite-only ensemble precipitation dataset against multiple radar networks. American Geophysical Union Fall Meeting, Washington DC, December 9-12, 2024.
23. Peng, K., Wright, D. B., Hartke S., Li, Z., Alexander, A., **Derin, Y**., and Tan, J. (2023). Advancing Hydrological Prediction and Decision-making in Ungauged Regions Through Satellite Precipitation Uncertainty Estimation. American Geophysical Union Fall Meeting, San Francisco, December 11-15, 2023.
24. Gourley J. J., K. Howard, D. Wasielewski, **Y. Derin**, P. Kirstetter, J. A. Duarte, H. Vergara, M. A. Wagner, J. Fulton, and L. Hempel (2023). You're using radars for what!?! Measuring hydrologic responses. American Meteorological Society Radar Conference, Minneapolis, MN, 28 August-1 September, 2023.
25. **Derin Y**., P-E. Kirstetter, D. B. Wolff, D. Faure, N. Gaussiat, J. V. Baelen and O. Bousquet (2023). Evaluation of orographic precipitation for global precipitation measurement (GPM) mission over mountainous regions using environmental variables. American Meteorological Society 103rd Annual Meeting, Denver, January 8-12, 2023.
26. Gourley J. J., J. Fulton, L. Hempel, H. Beragra, J. Duarte, **Y. Derin**, and P-E. Kirstetter (2022). First results from a mobile, post-wildfire hydrometeorological observatory, American Meteorological Society 30th Conference on Severe Local Storms, Santa Fe, 24-28 October 2022.
27. Kirstetter P-E., D. B. Wolff, **Y. Derin**, D. Faure, N. Gaussiat, V. Petkovic, J. V. Baelen, O. Bousquet, and J.J. Gourley (2022). Guiding the Improvement of the Global Precipitation Measurement Mission with Radar Networks. 11th European conference on Radar in Meteorology and Hydrology, Locarno, Switzerland, August 29 – September 2, 2022.
28. **Derin Y**., P-E. Kirstetter, and J. J. Gourley (2021). Evaluation of IMERGV06B over oceans, coastal areas and mountainous regions using Ground Validation-Multi Radar/Multi-Sensor (GV-MRMS), American Geophysical Union Fall Meeting, New Orleans, 13-17 December 2021.
29. **Derin Y.,** E. Anagnostou, E. Bhuiyan, M. Anagnostou, J. Kalogiros, (2019). Characterization and Modeling of Satellite-Based Precipitation Uncertainty over Complex Terrain, American Geophysical Union Fall Meeting, San Francisco, 9-13 December 2019
30. **Derin Y.,** E. Anagnostou, J. Kalogiros, M. Anagnostou, (2019). Analysis of X-Band Dual Polarization Radar Observations over Multiple Complex Terrain, American Geophysical Union Fall Meeting, San Francisco, 9-13 December 2019
31. **Derin Y.,** E. Anagnostou, J. Kalogiros, M. Anagnostou, A. C. Marra, G. Panegrossi, V. Levizzani, E. Cattani, D. Casella and P. Sanò, (2015). Passive Microwave Rainfall Error Analysis using High-Resolution X-band Dual-Polarization Radar Observations in Complex Terrain, American Geophysical Union Fall Meeting, San Francisco, 14-18 December 2015.

32. **Derin, Y.,** Milewski, A., Fryar, A. E. and Schroeder, P., (2013) An Integrated Approach for Understanding Anthropogenic and Climatic Impacts on Lakes: A Case study from Lake Iznik, Turkey, American Geophysical Union Fall Meeting, San Francisco, 9-13 December 2013.
33. **Derin, Y.** and Yilmaz K.K., (2013). Advancement of Satellite-based Rainfall Applications for Hydrologic Modeling in Topographically Complex Regions, American Geophysical Union Fall Meeting, San Francisco, 9-13 December 2013.
34. **Derin, Y**. and Yilmaz K.K., (2013). Evaluation and Bias Adjustment of Multiple Satellite-based Precipitation Products over Complex Terrain, European Geosciences Union General Assembly, Vienna, Austria, 7 – 12 April 2013.
35. **Derin, Y.** and Yilmaz K.K., (2012). Evaluation of Multiple Satellite-based Rainfall Products over a Topographically Complex Watershed, European Geosciences Union General Assembly, Vienna, Austria, 22 – 27 April 2012.

TEACHING

2018 **University of Connecticut**: *Instructor* for CE 2251 Probability and Statistics in Civil Engineering (72 undergraduate students and 1 honor undergraduate student), including developing my own lecture material, quizzes, tests, and final project. Student evaluation available.

2017 **University of Connecticut**: *Teaching* assistant for Probability and Statistics in Civil Engineering (undergraduate)

2016 **University of Connecticut:** *Teaching* assistant for Environmental Modeling (undergraduate)

PROFESSIONAL ACTIVITIES AND SERVICE

Conference/Meeting Activities

2023 *Session Chair* for Space-based Precipitation Observations: Innovations for Science and Applications III, American Geophysical Union Fall Meeting, San Francisco, December 11-15, 2023.

2023 *Program and Organizing Committee Co-chair* 14th International Precipitation Conference (IPC14), University of Oklahoma, June 05-09, 2023.

2022 *Session Chair* for Space-based Precipitation Observations: Innovations for Science and Applications IV, American Geophysical Union Fall Meeting, Chicago, December 12-16, 2022.

2022 *Session Chair* for 10th Workshop on International Precipitation Technical Committee (IPWG) and 6th International Workshop on Space-based Snowfall Measurement (IWSSM) Conference, June 13-17, 2022.

Workshops/Field Work

2023/05 *Co-chair*, 14th International Precipitation Conference (IPC14) Early Career and Student Virtual Workshop, May 24, 2013.

2022/08 *Co-chair*, Workshop on Student-led Weather Radar Experiment in Florida
University of Oklahoma and University of Florida

2022/06 Workshop on Observing the Atmospheric Water Cycle of the Earth
Institut Pascal / University Paris Saclay

2021/04 *Co-chair,* Workshop on Enhancing Communities Preparedness and Resilience to Post-Wildfire Hydrology
University of Oklahoma

2018/06 The International Workshop on Small Weather Radars (ISWR) University of Colorado

2014/03 *Led a field trip for My MSC thesis* where I collected data (11 channel cross sections surveyed) from a medium size basin over mountainous terrain (Arac Basin, Turkey)

2013/05 BOOST H20: Hydrogeology Workshop
University of Georgia
Advisors: Prof Adam Milewski and Prof Alan Fryar
Principles and Applications of GIS, Remote Sensing and Hydrological Modeling

2013/06 BOOST H2O: Field training activities in hydrologic science, Iznik Lake, Turkey
Advisors: Prof Adam Milewski and Prof Alan Fryar

2010/08 Surveyor: Evaluating the Economic Value of Environmental Improvements in Gocek Bay, Turkey by Stated Preference Method

Committees

2026 - present *Chair*, American Geophysical Union (AGU), Precipitation Technical Committee
2024 - 2025 *Deputy Chair*, American Geophysical Union (AGU), Precipitation Technical Committee
2024 – present Co-chair, NASA PMM Hydrology Working Group
2022 - present *Co-chair*, International Precipitation Working Group (IPWG) Orographic Precipitation Focus Group
2023 - 2024 *Acting Deputy Chair*, American Geophysical Union (AGU), Precipitation Technical Committee of Fall Meeting sub-committee
2019 - present *Member,* NASA PMM GPM Particle Size Distribution (PSD) Working Group
2018 - present *Member,* NASA PMM Land Surface Working Group
2020 - 2021 *Deputy Chair*, American Geophysical Union (AGU), Precipitation Technical Committee of Award sub-committee
2019 - 2020 *Member*, American Geophysical Union (AGU), Precipitation Technical Committee Students and Early Career sub-committee
2015 - 2019 *Student Member*, American Geophysical Union (AGU), Precipitation Technical Committee Student Member
2020 - 2021 *Member*, NASA, GPM Blind Zone Working Group

Outreach

2023 04-06 *Mentor*, Precipitation Measurement Mission (PMM), Global Precipitation Measurement (GPM) Mentorship Program, Mentored a PhD student. https://gpm.nasa.gov/applications/2023-gpm-mentorship-program/mentors#yagmurderin
2023/01 *Test Administrator*, Science Olympiad, Pembroke Hill Division C Invitational Tournament, Remote Sensing Test Administrator, Kansas City, January 07, 2023.
2022 04-06 *Mentor*, Precipitation Measurement Mission (PMM), Global Precipitation Measurement (GPM) Mentorship Program, Mentored a PhD student. https://gpm.nasa.gov/applications/2022-GPM-mentorship/yagmur-derin
2021-2022 *Volunteer coach* of Science Olympiad Remote Sensing Team at Casady Highschool, Oklahoma City, OK.
2022/01 *Test Administrator*, Science Olympiad, Pembroke Hill Division C Invitational Tournament, Remote Sensing Test Administrator, Kansas City, January 08, 2022.

Membership in Professional Societies

2015- American Geophysical Union (AGU)
2012- European Geosciences Union (EGU)
2021- American Meteorological Society
2021- Earth science Women's Network (ESWN)

Editor/Reviewer

2021- **Review Editor** for Frontiers Climate

2019- **Review Editor** for MDPI Remote Sensing

2014- **Reviewer** for Journal of Hydrology, Journal of Hydrometerology, Water Resources Research, Remote Sensing of Environment, MDPI Remote Sensing, MDPI Atmosphere, Journal of Applied Meteorology and Climatology, Dynamics of Atmosphere and Oceans, International Journal of Remote Sensing and Remote Sensing Letters

TECHNICAL EXPERIENCE

Computer Skills

Programming Languages:
Proficient: Matlab, Unix Shell Scripting (bash), Python (modules: NumPy, SciPy, matplotlib, Jupyter, Tensorflow, conda and Scikit-Learn)
Literate: FORTRAN, R
Hydrologic Modeling Packages: MIKE SHE, MIKE 11, Visual MODFLOW, SWAT
GIS Packages: ArcGIS, MapInfo