

Curriculum Vitae: David G Tarboton

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Current Position

Sant Endowed Professor of Water Resources Engineering, Utah Water Research Laboratory and Department of Civil and Environmental Engineering, Utah State University.

Education

- Sc.D Civil Engineering (Water Resources and Hydrology), Massachusetts Institute of Technology, September 1989, Dissertation: The analysis of river basins and channel networks using digital terrain data, Advisor: Rafael Bras.
- M.S. Civil Engineering, Massachusetts Institute of Technology, May 1987, Thesis: Hydrologic sampling: A characterization in terms of rainfall and basin properties, Advisor: Rafael Bras.
- Diploma Datametrics (Computer Science), University of South Africa, Pretoria, South Africa, December 1984.
- B.Sc Eng Civil Engineering, University of Natal, Durban, South Africa, December 1981.

Expertise

Surface Water Hydrology, Hydrologic Modeling, Hydrologic Information Systems, Terrain Analysis in Hydrology, Stochastic Hydrology, and Snowmelt. My research crosses the disciplinary interface between hydrology and information technology. I focus on advancing the capability for hydrologic prediction by developing models that take advantage of new information and process understanding enabled by new technology. I strive to synthesize modeling and numerical analysis with field observations and hydrologic information systems and tailor software and computing systems to the needs of hydrologists. My teaching includes Physical Hydrology, Applying Geographic Information Systems for Terrain and Watershed Analysis in Hydrology, Engineering Hydrology, Stochastic Hydrology, Probability and Statistics for Engineers, and Hydrologic Modeling. My teaching and research connect in the development of online content in support of active learning in hydrology.

Professional Experience

- July 2022 to Present Sant Endowed Professor of Water Resources Engineering, Department of Civil and Environmental Engineering
- July 2001 to Present Full Professor, Utah Water Research Laboratory and Department of Civil and Environmental Engineering, Utah State University
- July 2019 to 2025 Director, Utah Water Research Laboratory, Utah State University
- August 2014 to May 2015 Visiting professor at the University of North Carolina, Chapel Hill, while on sabbatical leave from Utah State University.
- July 2003 to June 2007 Director of Utah State University Water Initiative.
- November 2002 to April 2003 Chairman of Utah State University Water Initiative Task Force appointed by the University President.

September 1998 to June 2003	Division head for the water engineering division, Utah Water Research Laboratory and Civil and Environmental Engineering, Utah State University.
November 1997 to June 1998	Visiting scientist at the National Institute for Water and Atmospheric Research, Christchurch, New Zealand, while on sabbatical leave from Utah State University.
July 1996-June 2001	Associate Professor, Utah Water Research Laboratory and Department of Civil and Environmental Engineering, Utah State University.
February 1990 to June 1996	Assistant Professor, Utah Water Research Laboratory and Department of Civil and Environmental Engineering, Utah State University.
September-December 1989	Post-Doctoral Associate, Department of Civil Engineering, Massachusetts Institute of Technology, (Taught graduate level course, Numerical Modeling of Physical Systems).
January 1984 - August 1985	Research Officer, National Institute for Transport and Road Research, Pretoria, South Africa. (Research on Pavement Management Systems)
January 1982 - December 1983	Civil Engineering Officer in South African Navy.

Administrative and Leadership Experience

2019 to 2025	Director, Utah Water Research Laboratory, Utah State University
2012-2022	Principal investigator for development of the Consortium of Universities for the Advancement of Hydrologic Sciences, Inc. (CUAHSI) HydroShare hydrologic information system
2007-2011	CUAHSI Hydrologic Information System Project deputy leader.
July 2003 to June 2007	Director of Utah State University Water Initiative.
November 2002 to April 2003	Chairman of Utah State University Water Initiative Task Force appointed by the University President.

Honors and Awards

International Society for Geomorphometry, Lifetime Achievement Award, 2025, in recognition of honorable achievements for the advancements in the field of Geomorphometry.

Utah State University D Wynne Thorne Career Research Award, 2023.

American Water Resources Association, David R Maidment Award for Exemplary Contributions to Water Resources Data and Information Systems, 2020, presented at AWRA Geospatial Water Technology Conference in May 2022.

Utah State University Civil and Environmental Engineering Department Outstanding Graduate Mentor, 2019.

American Geophysical Union, 2018, Elected as Fellow, for fundamental contributions that have advanced hydrologic information systems and hydrologic modeling.

Utah State University Civil and Environmental Engineering Department Outstanding Researcher, 2018.

Consortium of Universities for the Advancement of Hydrologic Science Inc., Community Service Award 2016.

Utah State University Robins Award, Faculty Researcher of the Year, 2015

Utah State University College of Engineering, Faculty Researcher of the Year, 2015

Utah State University Civil and Environmental Engineering Department Outstanding Researcher, 2015.

WC-WAVE keynote speaker for the Winter Tri-State Meeting January 12-13, 2015 Albuquerque, NM

CyberGIS distinguished speaker at NCSA Colloquium, November 14, 2014
CyberGIS keynote speaker at The Second International Conference on CyberGIS and Geodesign, Redlands, California, August 19, 2014, via teleconference.
Keynote presentation at CyberGIS all hands meeting, University of Washington, Seattle, September 16, 2013
Keynote Presentation at 2013 World Environmental & Water Resources Congress Symposium on Cloud Computing in Water and Environmental Engineering and Science, Cincinnati, Ohio, May 20, 2013
Keynote Presentation at CUAHSI Conference on Hydroinformatics and Modeling, Logan, UT, July 17-19, 2013
American Water Resources Association, Utah Section, Award for Outstanding Service in the Academic Sector of Utah's Water Resources Community, May 15, 2007.
Utah State University College of Engineering Outstanding Researcher, 2005.
Utah State University Civil and Environmental Engineering Department Outstanding Researcher, 2005.
Utah State University Civil and Environmental Engineering Department Outstanding Researcher, 2002.
American Geophysical Union Editors Citation for Excellence in Refereeing for outstanding service to the authors and readers of Water Resources Research, 1993.

Professional Society Memberships

American Geophysical Union (1986 - present).
American Society of Civil Engineers (1988 - present).
American Water Resources Association (1990 - present).
Registered Professional Engineer (Utah) (1992 – present). License number 185065-2202.

Publications

Refereed

Nassar, A., D. G. Tarboton, F. Baig, J. Cunningham, A. Patel, J. Halgren, B. Lee, H. Salehabadi, A. M. Castronova and I. Garousi-Nejad, (2026), "A cloud-based JupyterHub platform for community research with the NextGen water resources modeling framework," Environmental Modelling & Software, 203: 107031, <https://doi.org/10.1016/j.envsoft.2026.107031>.
Abugumboz, M. S. and D. G. Tarboton, (2026), "Quantifying evapotranspiration from the wetlands in the peripheral area between the most downstream stream gages and the open water body of the Great Salt Lake," Journal of Hydrology: Regional Studies, 65: 103482, <https://doi.org/10.1016/j.ejrh.2026.103482>.
Nassar, A., D. Tarboton, M. Anderson, Y. Yang, J. B. Fisher, A. J. Purdy, F. Baig, C. He, D. Gochis, F. Melton and J. Volk, (2025), "Intercomparison of the U.S. National water model with OpenET over the Bear River Basin, U.S.," Journal of Hydrology, 656: 132826, <https://doi.org/10.1016/j.jhydrol.2025.132826>.
Salehabadi, H., D. G. Tarboton, K. Wheeler, J. Prairie, R. Smith and S. Baker, (2025), "Developing Storylines of Plausible Future Streamflow and Generating a New Warming-Driven Declining Streamflow Ensemble: Colorado River Case Study," Water Resources Research, 61(1): e2024WR038618, <https://doi.org/10.1029/2024WR038618>.
Choi, Y.-D., I. Maghami, J. L. Goodall, L. Band, A. Nassar, L. Lin, L. Saby, Z. Li, S. Wang, C. Calloway, H. Yi, M. Seul, D. P. Ames and D. G. Tarboton, (2025), "Toward reproducible and interoperable environmental modeling: Integration of HydroShare with server-side methods for exposing

- large-extent spatial datasets to models," *Environmental Modelling & Software*, 183: 106239, <https://doi.org/10.1016/j.envsoft.2024.106239>.
- Salehabadi, H., D. G. Tarboton, K. G. Wheeler, R. Smith and S. Baker, (2024), "Quantifying and Classifying Streamflow Ensembles Using a Broad Range of Metrics for an Evidence-Based Analysis: Colorado River Case Study," *Water Resources Research*, 60(7): e2024WR037225, <https://doi.org/10.1029/2024WR037225>.
- Maghami, I., M. M. Morsy, J. M. Sadler, J. S. Horsburgh, P. K. Dash, Y. Choi, K. Chen, M. Seul, S. Black, D. G. Tarboton and J. L. Goodall, (2024), "An extensible schema for capturing environmental model metadata: Implementation in the HydroShare online data repository," *Environmental Modelling & Software*, 172: 105895, <https://doi.org/10.1016/j.envsoft.2023.105895>.
- Tarboton, D. G., D. P. Ames, J. S. Horsburgh, J. L. Goodall, A. Couch, R. Hooper, J. Bales, S. Wang, A. Castronova, M. Seul, R. Idaszak, Z. Li, P. Dash, S. Black, M. Ramirez, H. Yi, C. Calloway and C. Cogswell, (2024), "HydroShare retrospective: Science and technology advances of a comprehensive data and model publication environment for the water science domain," *Environmental Modelling & Software*, 172: 105902, <https://doi.org/10.1016/j.envsoft.2023.105902>.
- Gan, T., D. G. Tarboton and T. Z. Gichamo, (2023), "Evaluation of Temperature-Index and Energy-Balance Snow Models for Hydrological Applications in Operational Water Supply Forecasts," *Water*, 15(10): 1886, <http://doi.org/10.3390/w15101886>.
- Merck, M. F. and D. G. Tarboton, (2023), "The Salinity of the Great Salt Lake and Its Deep Brine Layer," *Water*, 15(8): 1488, <http://doi.org/10.3390/w15081488>.
- Maghami, I., A. Van Beusekom, L. Hay, Z. Li, A. Bennett, Y. Choi, B. Nijssen, S. Wang, D. Tarboton and J. L. Goodall, (2023), "Building cyberinfrastructure for the reuse and reproducibility of complex hydrologic modeling studies," *Environmental Modelling & Software*, 164: 105689, <https://doi.org/10.1016/j.envsoft.2023.105689>.
- Safaei-Moghadam, A., D. Tarboton and B. Minsker, (2023), "Estimating the likelihood of roadway pluvial flood based on crowdsourced traffic data and depression-based DEM analysis," *Nat. Hazards Earth Syst. Sci.*, 23(1): 1-19, <https://doi.org/10.5194/nhess-23-1-2023>.
- Ahmad, R., Y. D. Choi, J. L. Goodall, D. Tarboton, A. Nassar and T. Malik, (2023), "Improving reproducibility of geoscience models with Sciunit," in *Recent Advancement in Geoinformatics and Data Science*, Edited by X. Ma, M. Mookerjee, L. Hsu and D. Hills, Geological Society of America, [http://doi.org/10.1130/2022.2558\(07\)](http://doi.org/10.1130/2022.2558(07)).
- Knoben, W. J. M., M. P. Clark, J. Bales, A. Bennett, S. Gharari, C. B. Marsh, B. Nijssen, A. Pietroniro, R. J. Spiteri, G. Tang, D. G. Tarboton and A. W. Wood, (2022), "Community Workflows to Advance Reproducibility in Hydrologic Modeling: Separating model-agnostic and model-specific configuration steps in applications of large-domain hydrologic models," *Water Resources Research*, 58(11): e2021WR031753, <https://doi.org/10.1029/2021WR031753>.
- Salehabadi, H., D. G. Tarboton, B. H. Udall, K. G. Wheeler and J. C. Schmidt, (2022), "An Assessment of Potential Severe Droughts in the Colorado River Basin," *JAWRA Journal of the American Water Resources Association*, 58(6): 1053-1075, <https://doi.org/10.1111/1752-1688.13061>.
- Goeking, S. A. and D. G. Tarboton, (2022), "Spatially Distributed Overstory and Understory Leaf Area Index Estimated from Forest Inventory Data," *Water*, 14(15), <http://doi.org/10.3390/w14152414>.
- Gallagher, M. A., E. H. Habib, D. Williams, B. Lane, J. L. Byrd and D. Tarboton, (2022), "Sharing Experiences in Designing Professional Learning to Support Hydrology and Water Resources Instructors to Create High-Quality Curricular Materials," *Frontiers in Education*, 7: 890379, <http://doi.org/10.3389/educ.2022.890379>.

- Goeking, S. A. and D. G. Tarboton, (2022), "Variable Streamflow Response to Forest Disturbance in the Western US: A Large-Sample Hydrology Approach," *Water Resources Research*, 58(6): e2021WR031575, <https://doi.org/10.1029/2021WR031575>.
- Garousi-Nejad, I. and D. G. Tarboton, (2022), "A comparison of National Water Model retrospective analysis snow outputs at snow telemetry sites across the Western United States," *Hydrological Processes*, 36(1): e14469, <https://doi.org/10.1002/hyp.14469>.
- Gallagher, M. A., J. Byrd, E. Habib, D. Tarboton and C. Willson, (2021), "HydroLearn: Improving Students' Conceptual Understanding and Technical Skills in a Civil Engineering Senior Design Course," 2021 ASEE Virtual Annual Conference, Online, July 26-29, <https://peer.asee.org/37265>.
- Lane, B., I. Garousi-Nejad, M. Gallagher, D. Tarboton and E. Habib, (2021), "An open web-based module developed to advance data-driven hydrologic process learning," *Hydrological Processes*, 35(7): e14273, <https://doi.org/10.1002/hyp.14273>.
- Merck, M. F., M. A. Gallagher, E. Habib and D. Tarboton, (2021), "Engineering Students' Perceptions of Mathematical Modeling in a Learning Module Centered on a Hydrologic Design Case Study," *International Journal of Research in Undergraduate Mathematics Education*, 7: 351-377, <http://doi.org/10.1007/s40753-020-00131-8>.
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- Choi, Y.-D., J. L. Goodall, J. M. Sadler, A. M. Castronova, A. Bennett, Z. Li, B. Nijssen, S. Wang, M. P. Clark, D. P. Ames, J. S. Horsburgh, H. Yi, C. Bandaragoda, M. Seul, R. Hooper and D. G. Tarboton, (2021), "Toward Open and Reproducible Environmental Modeling by Integrating Online Data Repositories, Computational Environments, and Model Application Programming Interfaces," *Environmental Modelling & Software*, 135: 104888, <https://doi.org/10.1016/j.envsoft.2020.104888>.
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- Haag, S., D. Tarboton, M. Smith and A. Shokoufandeh, (2020), "Fast summarizing algorithm for polygonal statistics over a regular grid," *Computers & Geosciences*, 142: 104524, <https://doi.org/10.1016/j.cageo.2020.104524>.
- Essawy, B., J. Goodall, D. Voce, M. Morsy, J. Sadler, Y. D. Choi, D. Tarboton and T. Malik, (2020), "A Taxonomy for Reproducible and Replicable Research in Environmental Modeling," *Environmental Modelling & Software*, 134: 104753, <https://doi.org/10.1016/j.envsoft.2020.104753>.
- Gan, T., D. Tarboton, P. Dash, T. Gichamo and J. Horsburgh, (2020), "Integrating hydrologic modeling web services with online data sharing to prepare, store, and execute hydrologic models," *Environmental Modelling & Software*, 130: 104731, <https://doi.org/10.1016/j.envsoft.2020.104731>.
- Gan, T., D. G. Tarboton, J. S. Horsburgh, P. Dash, R. Idaszak and H. Yi, (2020), "Collaborative sharing of multidimensional space-time data in a next generation hydrologic information system," *Environmental Modelling & Software*, 129: 104706, <https://doi.org/10.1016/j.envsoft.2020.104706>.

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- Gichamo, T. Z. and D. G. Tarboton, (2019), "Ensemble Streamflow Forecasting using an Energy Balance Snowmelt Model Coupled to a Distributed Hydrologic Model with Assimilation of Snow and Streamflow Observations," *Water Resources Research*, 55(12): 10813-10838, <https://doi.org/10.1029/2019WR025472>.
- Garousi-Nejad, I., D. G. Tarboton, M. Aboutaleb and A. F. Torres-Rua, (2019), "Terrain Analysis Enhancements to the Height Above Nearest Drainage Flood Inundation Mapping Method," *Water Resources Research*, 55(10): 7983– 8009, <http://doi.org/10.1029/2019WR024837>.
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- Bandaragoda, C. J., A. Castronova, E. Istanbuluoglu, R. Strauch, S. S. Nudurupati, J. Phuong, J. M. Adams, N. M. Gasparini, K. Barnhart, E. W. H. Hutton, D. E. J. Hobley, N. J. Lyons, G. E. Tucker, D. G. Tarboton, R. Idaszak and S. Wang, (2019), "Enabling collaborative numerical Modeling in Earth sciences using Knowledge Infrastructure," *Environmental Modelling & Software*, 120: 104424, <https://doi.org/10.1016/j.envsoft.2019.03.020>.
- Parajuli, K., S. B. Jones, D. G. Tarboton, G. N. Flerchinger, L. E. Hipps, L. N. Allen and M. S. Seyfried, (2019), "Estimating actual evapotranspiration from stony-soils in montane ecosystems," *Agricultural and Forest Meteorology*, 265: 183-194, <https://doi.org/10.1016/j.agrformet.2018.11.019>.
- Xue, Z., A. Couch and D. Tarboton, (2019), "Map based discovery of hydrologic data in the HydroShare collaboration environment," *Environmental Modelling & Software*, 111: 24-33, <https://doi.org/10.1016/j.envsoft.2018.09.014>.
- Zheng, X., D. R. Maidment, D. G. Tarboton, Y. Y. Liu and P. Passalacqua, (2018), "GeoFlood: Large-Scale Flood Inundation Mapping Based on High-Resolution Terrain Analysis," *Water Resources Research*, 54: 10013-10033, <https://doi.org/10.1029/2018WR023457>.
- Zheng, X., D. G. Tarboton, D. R. Maidment, Y. Y. Liu and P. Passalacqua, (2018), "River Channel Geometry and Rating Curve Estimation Using Height above the Nearest Drainage," *JAWRA Journal of the American Water Resources Association*, 54(4): 785-806, <http://doi.org/10.1111/1752-1688.12661>.
- Liu, Y. Y., D. R. Maidment, D. G. Tarboton, X. Zheng and S. Wang, (2018), "A CyberGIS Integration and Computation Framework for High-Resolution Continental-Scale Flood Inundation Mapping," *JAWRA Journal of the American Water Resources Association*, 54(4): 770-784, <https://doi.org/10.1111/1752-1688.12660>.

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Invited Presentations

- Tarboton, D., (2026), "Digital Elevation Models, Geomorphology and Hydrology: A Synergy Shaping Landscapes and Hydrologic Modeling," American Meteorological Society, 106th Annual Meeting, Houston, Texas, January 28, 2026, <https://ams.confex.com/ams/106ANNUAL/meetingapp.cgi/Paper/467927>.
- Tarboton, D. G., (2025), Reflections on Geomorphometry and Hydrology. Keynote presentation at International Society for Geomorphometry Conference, June 12, Perugia, Italy, <https://www.geomorphometry2025.org/>.
- Tarboton, D., (2024), Let the Data Speak. D Wynne Thorne Lecture, Utah State University, April 8. <https://youtu.be/rhwZC6GonR8?feature=shared>

- Tarboton, D., U. Lall, C. Flint, B. Holdaway, R. Morovati, I. Haqiqi, T. Hertel, B. Ghimire, A. Nassar, M. Merck and M. Abualqumboz, (2024), "Seeking Solutions to Restore the Great Salt Lake," I- GUIDE All Hands Meeting, Virtual, March 21, 2024, <https://i-guide.io/i-guide-ahm/i-guide-virtual-all-hands-meeting-2024/>, <https://www.hydroshare.org/resource/1365b150f90440f8af94e938eacb9926/>.
- Tarboton, D., J. S. Horsburgh, D. P. Ames, J. L. Goodall, S. Wang, H. Yi, A. Castronova, M. Seul, M. Ramirez, S. Black, P. Dash, C. Calloway, J. Read and HydroShare development team, (2023), "The CUAHSI HydroShare Platform for Hydrology Data and Model Sharing," Presentation IN13D-0604 at 2023 American Geophysical Union Fall Meeting, San Francisco, <https://agu.confex.com/agu/fm23/meetingapp.cgi/Paper/1336263>, <https://agu23.ipostersessions.com/Default.aspx?s=5F-CE-F2-25-22-63-E9-F9-25-49-D8-FE-88-62-71-F8>.
- Tarboton, D. and Great Salt Lake Strike Team, (2023), "How much water will it take to restore the Great Salt Lake and how to achieve it?," Utah State University Spring Runoff Conference, Logan, UT, March 15, <https://hydrology.usu.edu/dtarb/Tarboton-SRC-March-2023.pdf>.
- Tarboton, D. G. and HydroShare Development Team, (2023), "Data Sharing and Computing: HydroShare as Hydrology Use Case (Invited)," Virtual Presentation to ICICLE: Intelligent CI with Computational Learning in the Environment Artificial Intelligence Institute at the Ohio State University, January 9, 2023, <https://icicle.osu.edu/events>, <https://youtu.be/fDauAMRrtQ>.
- Tarboton, D. G. and HydroShare Development Team, (2022), "Findable, Interoperable, and Reusable data and models in CUAHSI HydroShare (Invited)," Presentation 419-03 at 2022 American Geophysical Union Frontiers in Hydrology, June 22, San Juan, Puerto Rico, <https://agu.confex.com/agu/hydrology22/meetingapp.cgi/Paper/1035621>.
- Ames, D. P. and D. G. Tarboton, (2021), "Enabling the Free Flow of Water Data, Revisited: This is Harder Than We Thought (Invited)," Presentation H21B-01 at 2021 AGU Fall Meeting, New Orleans and Virtual, 14 December, <https://agu.confex.com/agu/fm21/meetingapp.cgi/Paper/796308>.
- Tarboton, D. G., (2021), "HydroShare: A system for data sharing and collaboration in hydrology by hydrologists for hydrologists", Virtual Presentation to University of Saskatchewan Global Institute for Water Security 2021 Distinguished Lecture Series, November 3, 2021, <https://water.usask.ca/events/2021/11/dls8.php>.
- Tarboton, D., The HydroShare team (2021). "What it takes to achieve water data sharing: lessons learned from CUAHSI HydroShare," Invited presentation in EPA NIEHS Risk e-Learning Webinar Series, June 3, 2021, https://clu-in.org/training/webinar/SRPDSP2_060321/, HydroShare, <http://www.hydroshare.org/resource/873072d7c4ed45af86091f877bf5d1da>.
- Salehabadi, H., D. Tarboton and J. C. Schmidt, (2020), The Future Hydrology of the Colorado River Basin. Video presentation to the Colorado River Board of California. <https://youtu.be/D2AFE53jsBI>
- Tarboton, D. G., R. Idaszak, J. S. Horsburgh, D. Ames, J. Goodall, A. L. Couch, P. Dash, H. Yi, C. Bandaragoda, A. M. Castronova, B. Nijssen, R. Hooper, S. Wang, M. Ramirez, J. Sadler, M. Morsy, S. Black, C. Calloway, J. Bales, M. Seul and HydroShare Development Team, (2020), "The HydroShare community platform supporting water resources research," Invited presentation at Science Gateway Computational Institute Federal Agency Workshop, Washington DC, March 4, <https://sciencegateways.org/web/sgci-test/federalworkshop>.
- Tarboton, D., (2019), "Keynote Presentation: Impact of Inland Bathymetry on Applications. Flood inundation, channel hydraulic geometry and flood flow estimates," Inland Bathymetry Workshop, Tuscaloosa, Alabama, September 17-18, <https://www.hydroshare.org/resource/dbce9ef27cde486e9bb6c569ef63c356/>.

- Tarboton, D. (2019), Hydrologic Information Systems: Enabling the Free Flow of Water Data, Utah State University Sunrise Session, August 14, Salt Lake City, <https://research.usu.edu/sunrise/presentations/tarboton-david-hydrologic-information-systems>.
- Tarboton, D., R. Idaszak, J. S. Horsburgh, D. P. Ames, J. L. Goodall, A. Couch, R. Hooper, S. Wang, M. Clark, P. Dash, H. Yi, C. Bandaragoda, A. Castronova, T. Gan, Z. Li, M. Morsy, M. Ramirez, J. Sadler, D. Yin and Y. Liu, (2018), Advancing the capability for collaborative discovery through data and model sharing: The HydroShare example. Invited National Science Foundation Office of Advanced Cyberinfrastructure Webinar, August 16, 2018 https://www.nsf.gov/events/event_summ.jsp?cntn_id=296301&org=NSF, <https://youtu.be/EAVLqllpDRg>.
- Tarboton, D. G., (2018), Web Based Hydrologic Terrain Analysis through HydroShare. Keynote presentation at Geomorphometry, August 13-17. <http://2018.geomorphometry.org/>.
- Tarboton, D., R. Idaszak, J. S. Horsburgh, D. P. Ames, J. L. Goodall, A. Couch, R. Hooper, S. Wang, M. Clark, P. Dash, H. Yi, C. Bandaragoda, A. Castronova, T. Gan, Z. Li, M. Morsy, M. Ramirez, J. Sadler, D. Yin and Y. Liu, (2018), "HydroShare: A Platform for Collaborative Data and Model Sharing in Hydrology," Geoscience Digital Data Resource and Repository Service (GeoDaRRS) Workshop, Invited Presentation, Boulder, Colorado, August 7-9, <https://www2.cisl.ucar.edu/events/workshops/geodarrs-workshop/2018/geoscience-digital-data-resource-and-repository-service-geodarrs-workshop>.
- Tarboton, D. G., (2018), "Invited Presentation on Panel: FEW Data Science Frontiers: Harnessing the Data Revolution for FEW Systems," Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS) 2018 Principal Investigators Workshop, Alexandria, VA, May 16, <https://static1.squarespace.com/static/5a694ca7d55b4168f0ccc9b8/t/5b07125003ce641d148a0a78/1527190097492/INFEWS+PI+Meeting+2018+Program.pdf>.
- Ames, D. P., J. Nelson, N. Jones, D. G. Tarboton, Z. Li, X. Qiao and S. Crawley, (2016), "An Extensible, Modular Architecture Coupling HydroShare and Tethys Platform to Deploy Water Science Web Apps," Invited Abstract H43P-05 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec, <https://agu.confex.com/agu/fm16/meetingapp.cgi/Paper/123660>.
- Habib, E. H., M. Deshotel, D. G. Tarboton, M. F. Merck, U. Lall and D. J. Farnham, (2016), "Student-Centered Modules to Support Active Learning in Hydrology: Development Experiences and Users' Perspectives," Invited Abstract ED52A-04 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec, <https://agu.confex.com/agu/fm16/meetingapp.cgi/Paper/123135>.
- Tarboton, D. G., (2016), "High Resolution Hydrography and Hydrologic Modeling," Presentation to USGS Hydrography Seminar Series, 1/21/2016, <https://dx.doi.org/10.6084/m9.figshare.2066991>.
- Tarboton, D., R. Idaszak, J. Horsburgh, D. Ames, J. Goodall, L. Band, V. Merwade, A. Couch, R. Hooper, D. Maidment, P. Dash, M. Stealey, H. Yi, T. Gan, T. Gichamo, A. Yildirim and Y. Liu, (2015), "Clearing your Desk! Software and Data Services for Collaborative Web Based GIS Analysis ", Invited Abstract IN51C-04 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec, <https://agu.confex.com/agu/fm15/meetingapp.cgi/Paper/76460>.
- Tarboton, D. G., (2015), "Terrain Based Flood Inundation Mapping," Invited presentation at Elevation Hydrology Meeting of the USGS in Reston Virginia, Reston, VA, December 9, 2015.
- Tarboton, D. G., (2015), "A Conceptual Framework for the National Flood Interoperability Experiment (NFIE)," Invited presentation at National Weather Service National Hydrology Program Managers Meeting Tuscaloosa Alabama, May 13, 2015.

- Tarboton, D.G., (2015), "HydroShare: Advancing Collaboration through Hydrologic Data and Model Sharing", Keynote presentation at WC-WAVE Winter Tri-State Meeting January 12-13, 2015 Albuquerque, NM, <http://www.nmepscor.org/content/wc-wave-winter-tri-state-meeting-2015>
- Hawkins, C., J. Vander Laan, S. Dhungel and D. Tarboton, (2014), "Ecological Response to Extreme Flow Events in Streams and Rivers: Implications of Climate Change for Aquatic Biodiversity," Invited Abstract GC34B-05 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Tarboton, D. G., (2014), "HydroShare: Advancing Collaboration through Hydrologic Data and Model Sharing", NCSA Colloquium and CyberGIS Distinguished Speaker Series, University of Illinois, Urbana Champaign, November 14, 2014. http://youtu.be/VXKZ_V5Gac8
- Tarboton, D. G., (2014), "High Performance Hydrologic Terrain Analysis and CyberGIS", CyberGIS'14, The Second International Conference on CyberGIS and Geodesign, Redlands, California, Delivered via web, August 19, 2014. <http://youtu.be/WxuTO4T-nB0>
- Tarboton, D. G., (2014), "Modeling the Hydrology of the Great Salt Lake: What makes the Great Salt Lake go up and down", Great Salt Lake Issues Forum, Salt Lake City, May 8, 2014.
- Mahat, V. and D. G. Tarboton, (2013), "Effect of vegetation on the energy balance and melting of snow in the Rocky Mountains (Invited)," Abstract C41B-0629 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Horsburgh, J. S., A. K. Aufdenkampe, K. A. Lehnert, E. Mayorga, D. G. Tarboton, I. Zaslavsky, D. W. Valentine and T. Whitenack, (2013), "Extending the Interoperability of Sensor and Sample Based Earth Observations using a Community Information Model (Invited)," Abstract H11E-1197 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Tarboton, D. G., R. Idaszak, J. S. Horsburgh, D. Ames, J. L. Goodall, L. E. Band, V. Merwade, A. Couch, J. Arrigo, R. P. Hooper, D. W. Valentine and D. R. Maidment, (2013), "HydroShare: An online, collaborative environment for the sharing of hydrologic data and models (Invited) ", Abstract IN11A-1510 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Tarboton, D.G., (2013), "HydroShare: Advancing Collaboration through Hydrologic Data and Model Sharing", Keynote presentation at CyberGIS all hands meeting, University of Washington, Seattle, September 16, <http://cybergis.cigi.uiuc.edu/cyberGISwiki/doku.php/ahm13/index>.
- Tarboton, D. G., R. Idaszak, J. S. Horsburgh, D. Ames, J. L. Goodall, L. Band, V. Merwade, A. Couch, J. Arrigo, R. Hooper and D. Valentine, (2013), "HydroShare: An Online, Collaborative Environment for the Sharing of Hydrologic Data and Models," CUAHSI Conference on Hydroinformatics and Modeling, Logan, UT, July 17-19, Keynote, <http://www.cuahsi.org/2013Conference-Presentations.aspx>.
- Aufdenkampe, A. K., I. Zaslavsky, K. A. Lehnert, J. S. Horsburgh, E. Mayorga and D. G. Tarboton, (2013), "The Integrated Data Management System for Critical Zone Observatories," CUAHSI Conference on Hydroinformatics and Modeling, Logan, UT, July 16-17, Invited, <http://www.cuahsi.org/2013Conference-Presentations.aspx>.
- Tarboton, D., R. Idaszak, J. Horsburgh, D. Ames, J. Goodall, L. Band, V. Merwade, A. Couch, J. Arrigo, R. Hooper and D. Valentine, (2013), "Community Approaches to Hydrologic Data and Model Sharing Using Cloud Resources," Keynote Presentation at 2013 World Environmental & Water Resources Congress Symposium on Cloud Computing in Water and Environmental Engineering and Science, Cincinnati, Ohio, May 20, 2013, EWRI, ASCE, <http://content.asce.org/conferences/ewri2013/index.html>.
- Tarboton, D. G., D. P. Ames, J. S. Horsburgh and J. L. Goodall, (2012), "Combining data from multiple sources using the CUAHSI Hydrologic Information System (Invited)," Abstract IN11F-03 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.

- Tarboton, D. G., F. L. Ogden, N. Jones and J. S. Horsburgh, (2012), "Advancing Cyberinfrastructure to support high resolution water resources modeling (Invited) ", Abstract IN11B-1463 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Duffy, C., L. N. Leonard, S. Ahalt, R. Idaszak, D. Tarboton, R. P. Hooper and L. E. Band, (2012), "The Essential Terrestrial Variables (ETV's) in Support of a National Framework for Numerical Watershed Prediction (Invited)," Abstract H31N-08 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Tarboton, D. G., D. R. Maidment, I. Zaslavsky, D. P. Ames, J. L. Goodall, R. P. Hooper, and J. S. Horsburgh (2011), The CUAHSI Community Hydrologic Information System (Invited), Abstract IN53D-07 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Horsburgh, J. S., A. K. Aufdenkampe, R. P. Hooper, K. A. Lehnert, K. Schreuders, D. G. Tarboton, D. W. Valentine, and I. Zaslavsky (2011), Advancing an Information Model for Environmental Observations (Invited) Abstract IN32A-03 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Brown, M. E., A. Racoviteanu, D. G. Tarboton, S. Bajracharya, G. A. Artan, M. Shrestha, F. Policelli, S. Habib, and H. Ouyang (2011), Understanding the Contribution of Glacier and Snowmelt in the Himalaya using a Spatially-Distributed Energy Balance Model and Remotely Sensed Data: Implications for Water Security in the Himalayas (Invited), Abstract GC21D-04 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Tarboton, D. G., (2011), "Managing Hydrologic Data, Observations and Terrain Analysis," Invited presentation at the Cyberinfrastructure Summer Institute for Geoscientists, San Diego Supercomputer Center, San Diego, August 9, http://www.geongrid.org/index.php/education/summer_institute/csig_2011.
- Horsburgh, J. S., D. G. Tarboton, D. R. Maidment, I. Zaslavsky, D. P. Ames, J. L. Goodall and R. P. Hooper, (2011), "Advancing A Services Oriented Architecture for Sharing Hydrologic Data," (Invited) European Geophysical Union General Assembly, Vienna, April 6, Geophysical Research Abstracts 13, EGU2011-5312, <http://meetingorganizer.copernicus.org/EGU2011/EGU2011-5312.pdf>.
- Horsburgh, J. S., A. Spackman Jones, D. K. Stevens, D. G. Tarboton and N. O. Mesner, (2010), "A Study of High Frequency Water Quality Observations in the Little Bear River Utah, USA," Invited Abstract B42C-07 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Tarboton, D. G., D. R. Maidment, I. Zaslavsky, J. S. Horsburgh, T. Whiteaker, M. Piasecki, J. L. Goodall, D. W. Valentine and T. Whitenack, (2009), "Sharing Hydrologic Data with the CUAHSI Hydrologic Information System " *Eos Trans. AGU*, 90(52): Fall Meet. Suppl. Abstract H51H-0854 (Invited).
- Maidment, D. and D. Tarboton, (2009), *State and Regional Hydrologic Information Systems*. CUAHSI Cyberseminar presentation, May 15. <https://www.cuahsi.org/education/cyberseminars/state-and-regional-hydrologic-information-systems>.
- Tarboton, D. G. and C. H. Luce, (2008), "A Parsimonious Energy Balance Snowmelt Model and its use in Spatially Distributed Modeling," *Eos Trans. AGU*, 89(53): Fall Meet. Suppl., Abstract H31J-06 (Invited)
- Tarboton, D. G., J. S. Horsburgh, T. L. Whiteaker, D. R. Maidment and I. Zaslavsky, (2008), "Accessing and Sharing Data Using the CUAHSI Hydrologic Information System," *Eos Trans. AGU*, 89(53): Fall Meet. Suppl., Abstract C21A-0504 (Invited).
- Tarboton, D. G., D. R. Maidment, I. Zaslavsky, M. Piasecki and J. Goodall, (2008), "Developing a community hydrologic information system," *EGU General Assembly 2008*, Vienna, April 14-18, Geophysical Research Abstracts, SRef-ID: 1607-7962/gra/EGU2008-A-09191. (Invited presentation)

- Tarboton, D., (2007), "Integrated Water Science in the Great Salt Lake Basin" Invited presentation at Bonneville Chapter of the American Fisheries Society, Annual Meeting, Logan, Utah March 21, 2007.
- Tarboton, D., (2007), "Developing a Community Hydrologic Information System" Invited Seminar presented at Massachusetts Institute of Technology, March 9, 2007.
- Tarboton, D., (2007), "A Community Data Model for Hydrologic Information Systems" Invited Seminar presented at University of Iowa, March 2, 2007.
- Luce, C., D. Tarboton and J. McNamara, (2006), "Advancing the physical basis of depletion curves to improve curve estimation and snowmelt modeling," Eos Trans. AGU, 87(52): Fall Meet. Suppl., Abstract C41E-04 (Invited).
- Tarboton, D., (2006), "Hydrologic Terrain Analysis in ArcGIS." University of Redlands/ESRI Invited Colloquium Presentation, June 28, 2006.
http://www.institute.redlands.edu/msgis/colloquium_2006.htm.
- Tarboton, D G, C Luce, (2004), "Snow, Snow Packs and Runoff," invited presentation at Mountain Climate Sciences Symposium, May 25-27, Kings Beach, Lake Tahoe.
- Tarboton, D. G., (2001), "Fractal River Networks," Invited presentation at European Geophysical Society XXVI General Assembly, Nice, France, March 25-30.
- Prasad, R., D. G. Tarboton, G. E. Liston, C. H. Luce and M. S. Seyfried, (1999), "Testing a Blowing Snow Model Against Distributed Snow Measurements at Upper Sheep Creek," Invited Presentation at AGU Fall Meeting, San Francisco, December 13-17.
- Luce, C., D. G. Tarboton and K. Cooley, (1998), "Sub-grid Parameterization for Modelling Snow Properties and Melt," Invited Presentation at AGU Fall Meeting, San Francisco, December 6 to 10.
- Tarboton, D. G. and U. Shankar, (1998), "The Identification and Mapping of Flow Networks from Digital Elevation Data," Invited Presentation at AGU Fall Meeting, San Francisco, December 6 to 10.
- Tarboton, D. G., K. Williams and C. Luce, (1996), "Development and Testing of a Parsimonious Energy Balance Snowmelt Model," Eos Trans. AGU, 77(46): AGU Fall Meeting Suppl., F219, Invited presentation at American Geophysical Union Fall Meeting.
- Tarboton, D. G., C. M. U. Neale, R. Prasad, C. Luce, K. Williams, K. Cooley, G. Flerchinger, C. Hanson, M. Seyfried and C. W. Slaughter, (1996), "Scaling Up Spatially Distributed Hydrologic Models of Semi-Arid Watersheds," Eos Trans. AGU, 77(22): Western Pacific Geophysics Meeting Suppl., W34, Invited presentation at Western Pacific Geophysics Meeting, July 1996.
- McDonnell, J. J., C. M. U. Neale, D. G. Tarboton, P. V. Unnikrishna, G. A. Artan, T. H. Jackson and K. R. Cooley, (1993), "Spatially-distributed Measurements and Modeling using Isotope Tracing, Airborne Remote Sensing and Surface/Subsurface flux Measurements," Invited presentation at EGS meeting, Annales Geophysicae, 11(14): EGS Meeting Suppl., C296.
- Bras R. L., D. G. Tarboton and C. E. Puente, Hydrologic Sampling: A characterization in terms of Rainfall and basin properties, (invited paper), U.S.-Japan seminar, Hawaii, January 1987.
- Bras R. L., C. E. Puente, and D. G. Tarboton, Regionalization of Sampling Criteria in Hydrology, (invited paper), Second Scientific Assembly of the International Association of Hydrological Sciences, Budapest, Hungary, July, 1986.

Conference Presentations and Abstracts

- Tarboton, D., A. Nassar, H. Salehabadi, P. Dash, A. Patel, F. Baig, S. Wang and A. Castronova, (2026), "Enabling Community Collaboration and Open Science in Hydrology through Data and Model Sharing with CUAHSI HydroShare," American Meteorological Society, 106th Annual Meeting,

- Houston, Texas, January 27, 2026,
<https://ams.confex.com/ams/106ANNUAL/meetingapp.cgi/Paper/470335>.
- Turner, L., E. Habib, D. G. Tarboton, C. Di Vittorio, C. Maiorca and M. Gallagher, (2025), "HydroLearn: A Collaborative Platform for Co-Created, Peer-Reviewed, Learning Modules," American Geophysical Union, Fall Meeting, New Orleans, December 15, 2025,
<https://agu.confex.com/agu/agu25/meetingapp.cgi/Paper/1976841>.
- Morovati, R. and D. Tarboton, (2025), "A Multi-Indicator Approach to Seasonal Streamflow Forecasting in Snow-Dominated Watersheds of the Intermountain West," American Geophysical Union, Fall Meeting, New Orleans, December 16, 2025,
<https://agu.confex.com/agu/agu25/meetingapp.cgi/Paper/1953543>.
- Nassar, A., D. Tarboton, F. Baig, A. Patel, A. Castronova, J. Halgren, J. Cunningham, I. Garousi-Nejad, B. Lee and B. Duvvuri, (2025), "Enabling Community Research with the Next Generation National Water Modeling Framework on through Streamlined Workflows," American Geophysical Union, Fall Meeting, New Orleans, December 17, 2025,
<https://agu.confex.com/agu/agu25/meetingapp.cgi/Paper/1963191>.
- Tarboton, D., A. Nassar, A. Castronova, A. Patel, F. Baig, H. Salehabadi, M. Abualqumboz, P. Dash and J. Horsburgh, (2025), "Enabling Community Research with the Next Generation National Water Modeling Framework on HydroShare-Linked Computing Platforms," AWRA 2025 Annual Water Resources Conference, Westminster, Colorado, November 10, 2025,
<https://www.hydroshare.org/resource/0580878f98d548b08923b780e667c396/>.
- Tarboton, D., J. S. Horsburgh, A. Nassar, P. Dash, H. Salehabadi, J. Read, I. Garousi-Nejad, A. Castronova, C. Cogswell, S. Wang, F. Baig and A. Patel, (2025), "Enabling collaboration through data and model sharing with CUAHSI HydroShare," Presentation at CIROH Developers Conference, Burlington, Vermont, May 28-30.
- Salehabadi, H., D. G. Tarboton, K. Wheeler, J. Prairie, R. Smith and S. Baker, (2025), "Developing Storylines of Plausible Future Streamflow and Generating a New Warming-Driven Declining Streamflow Ensemble: Colorado River Case Study," ASCE World Environmental and Water Resources Congress 2025, Anchorage, Alaska, May 18-21, <https://alaska2025.eventscribe.net/>.
- Abualqumboz, M., D. Tarboton and S. Goeking, (2025), "Investigating streamflow response to forest changes in the Western United States using a modelling approach," EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-14020, <https://doi.org/10.5194/egusphere-egu25-14020>
- Tarboton, D., P. D. Brooks, B. T. Neilson, W. Anderegg, W. P. Johnson, S. E. Null, K. D. Perry, M. Yost, C. Hasenyager, L. Ahmadi, C. Strong, T. Davis and The Great Salt Lake Strike Team, (2024), "Collaboration Between University and State Agency Researchers and Policy Experts has Synthesized Essential Data and Insights to Engage with Policy Makers in Evaluating Options for Restoring Great Salt Lake," American Geophysical Union, Fall Meeting, Washington, DC, December 11, 2024, <https://agu.confex.com/agu/agu24/meetingapp.cgi/Paper/1753262>.
- Horsburgh, J., K. Lehnert, J. S. Read, C. Calloway, S. Black, M. Ramirez, L. Profeta, C. B. Cogswell, A. Bogan, P. Ji, D. G. Tarboton, M. Seul and P. K. Dash, (2024), "Lessons Learned from Developing and Operating the Critical Zone Collaborative Network Data Cyberinfrastructure," American Geophysical Union, Fall Meeting, Washington, DC, December 10, 2024,
<https://doi.org/10.22541/essoar.173457141.17661792/v1>.
- Abualqumboz, M. and D. G. Tarboton, (2024), "Quantifying Evapotranspiration from the Peripheral Wetland Areas near the shores of the Great Salt Lake," American Geophysical Union, Fall Meeting, Washington, DC, December 13, 2024,
<https://agu.confex.com/agu/agu24/meetingapp.cgi/Paper/1543280>.

- Tarboton, D., J. S. Horsburgh, S. Wang, J. Read, I. Garousi-Nejad, A. Castronova, C. Cogswell, A. Nassar, H. Salehabadi, P. Dash and F. Baig, (2024), "Enabling collaboration through data and model sharing with CUAHSI HydroShare," Poster presented at CIROH Science Meeting, Tuscaloosa, Alabama, Oct 14-17.
- Vernon, L., B. Neilson, D. Tarboton and B. Johnson, (2024), "Update of the Great Salt Lake Strike Team," Utah Groundwater Conference, Salt Lake City, Utah, August 6, 2024, https://agwt.org/sites/2024_ut_gw_conference_program_7.pdf.
- Merck, M. F. and D. G. Tarboton, (2024), "Evaluating Variations in Great Salt Lake Inflow to Infer Human Consumptive Water Use, A Volume Reconstruction Approach," Presentation 406-04 at 2024 American Geophysical Union Water Science Conference, St Paul, Minnesota, June 27, 2024, <https://agu.confex.com/agu/hydrology24/meetingapp.cgi/Paper/1503013>.
- Merck, M. and D. Tarboton, (2024), "Volume Reconstruction of Inflows to the Great Salt Lake from 1847 to present and Inferences on Consumptive Water Use," Utah State University Spring Runoff Conference, Logan, UT, March 27, https://hydrology.usu.edu/dtarb/Tarboton_SRO_GSLFocus-3-27-24.pptx.
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Research Grants

- Utah Department of Natural Resources, Division of Forestry, Fire and State Lands. Initial Assessment of Farmington Bay Impoundment for Dust Mitigation. \$9896, David Tarboton, Bethany Neilson, 8/1/2025-12/31/2025.
- Utah Department of Natural Resources, Division of Forestry, Fire and State Lands. Newfoundland Evaporation Basin Surface Water Availability. \$9503, David Tarboton, Bethany Neilson, 8/1/2025-12/31/2025.
- National Oceanic and Atmospheric Administration as subaward from University of Alabama Cooperative Institute for Research to Operations in Hydrology. Extend NextGen calibration methods to include measurements of evapotranspiration and snow. \$133,907, David Tarboton, Ayman Nassar, 10/1/2025-7/31/2026. NOAA award NA22NWS4320003, University of Alabama subaward A25-0366-S016.
- National Oceanic and Atmospheric Administration as subaward from University of Alabama Cooperative Institute for Research to Operations in Hydrology. Establishing Collaborative Pathways for Advancing Community Hydrofabrics. \$199,873 to USU from \$800,000 total, Tony Castronova, Irene Garousi-Nejad, Arpita Patel, James Halgren, David Tarboton, 7/1/2025-3/31/2027. NOAA award NA22NWS4320003, University of Alabama subaward A25-0366-S016.
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National Oceanic and Atmospheric Administration as subaward from University of Alabama Cooperative Institute for Research to Operations in Hydrology. Advancing Knowledge Transfer of the NextGen Framework to Operational Hydrologists through HydroLearn Modules. \$26,330 to USU from \$295,206 total, Courtney Di Vittorio, David Tarboton, Emad Habib, Cat Maiorca, 7/1/2025-6/30/2026. NOAA award NA22NWS4320003, University of Alabama subaward A25-0364-S007.

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US Bureau of Reclamation. Cataloguing and Generating Hydrology Scenarios in the Colorado River, \$198,571, David Tarboton, 8/1/2021-1/31/2024. US. Dept of Interior grant R21AC10342-00.

National Science Foundation. Collaborative Research: Network Hub: Enabling, Supporting, and Communicating Critical Zone Research, \$1,118,096, Jeffery S. Horsburgh, David Tarboton, 9/1/2020-8/31/2025, NSF Award ICER 2012748. USU part of NSF Collaborative award led by Jerad Bales, CUAHSI, Co-PI Elizabeth Boyer (ICER 2012893, \$3,177,074) with partner collaborative award to Kerstin Lehnert (OAC 2012593, \$698,957).

National Science Foundation. The Urban Flooding Open Knowledge Network (UF-OKN): Delivering Flood Information to AnyOne, AnyTime, AnyWhere, \$281,770, Jeffery S. Horsburgh, David Tarboton, subcontract from University of Cincinnati (PI Lilit Yeghiazarian), 9/1/2020-8/31/2021, NSF Award OAI 2033607.

National Science Foundation. Convergence Accelerator Phase I (RAISE): The Urban Flooding Open Knowledge Network, \$119,306, David Tarboton, Jeffery S. Horsburgh, subcontract from University of Cincinnati (PI Lilit Yeghiazarian), 9/10/2019-5/31/2021, NSF Award OAI 1937099.

National Science Foundation. EarthCube Data Capabilities: Collaborative Research: Integration of Reproducibility into Community CyberInfrastructure, \$305,747, David Tarboton, 9/1/2019-8/31/2022, NSF Award ICER 1928369. USU is the lead for other partner collaborative awards to Tanu Malik, de Paul University (ICER 1928288, \$331,932), Jonathan Goodall, University of Virginia (ICER 1928315, \$276,662).

The Catena Foundation. Future of the Colorado River, \$150,000, John C Schmidt, David Tarboton. 11/27/18-1/15/2020.

National Science Foundation. Collaborative Research: Framework: Software: NSCI: Computational and data innovation implementing a national community hydrologic modeling framework for scientific discovery, \$339,985, David Tarboton, 10/1/2018-9/30/2022, NSF award OAC 1835569. USU part of NSF Collaborative award led by Reed Maxwell (OAC 1835903, \$901,394) with other partner collaborative awards to Ilkay Altintas (OAC 1835855, \$397,684), Catherine Olschanowsky, Alejandro Flores (OAC 1845704, \$700,000), Laura Condon, Michelle Strout (OAC 1835794 \$699,587), Paul Constantine (OAC 1835864, \$350,000), Jerad Bales (OAC 1835818, \$196,235).

The Walton Family Foundation. Future of the Colorado River, \$250,067, John C Schmidt, Bethany Neilson, David Rosenberg, David Tarboton. 7/1/2018-6/30/2019.

National Science Foundation. RAPID: Archiving and Enabling Community Access to Data from Recent US Hurricanes, \$200,000, David Tarboton, Jerad Bales, Ray Idaszak, David Maidment, 10/1/2017-9/30/2018. NSF award OAC 1761673.

National Science Foundation. Collaborative Research, HydroShare: Cyberinfrastructure for Advancing Hydrologic Knowledge through Collaborative Integration of Data Science, Modeling and Analysis, \$2,760,000. David G Tarboton, Dan Ames, Martyn Clark, Alva Couch, Jeffery S. Horsburgh. 10/1/2017-9/30/2021, NSF award OAC 1664061. Partner Collaborative Awards OAC 1664018, \$540,000, Ray Idaszak, Michael J. Stealey, Hong Yi, and OAC 1664119, \$700,000, Shaowen Wang.

National Science Foundation. Collaborative Research: Improving Student Learning in Hydrology & Water Resources Engineering by Enabling the Development, Sharing and Interoperability of Active Learning Resources, \$249,312, David G. Tarboton, 9/1/2017-8/31/2021, NSF Award DUE 1725989. USU portion of collaborative award with lead PI Emad Habib (University of Louisiana) and Dan Ames (Brigham Young University).

US Army Corps of Engineers, Snowmelt Testing and Validation for HEC-HMS, \$41,558, David Tarboton, 7/12/17-1/12/2018.

William Penn Foundation (subcontract via Stroud Water Research Center). Wiki Watershed Web Toolkit for Advancing Water Quality Restoration in Delaware River Basin, \$240,000, David G. Tarboton, Jeff Horsburgh, 2/1/2017-1/31/2019.

National Science Foundation, EarthCube Building Blocks: Collaborative Proposal: GeoTrust: Improving Sharing and Reproducibility of Geoscience Applications, \$140,000, David G Tarboton, 9/1/2016-8/31/2018, NSF award ICER 1639655. USU portion of collaborative award lead by Tanu Malik.

William Penn Foundation (subcontract via Stroud Water Research Center), Model My Watershed SRAT/Mapshed, \$25,000, David G Tarboton, 7/15/2016-3/31/2017.

National Science Foundation (subcontract via University of Illinois), Interoperating CyberGIS and HydroShare for Integrated Food, Energy and Water Research, \$171,034, David G Tarboton, 7/1/2015-6/30/2016.

US Army Corps of Engineers, TauDEM Enhancement, \$37,010, David G. Tarboton, 5/22/2015-11/21/2015.

NASA/Riverside Technology Inc., Advancing Water Supply Forecasts in the Colorado River Basin for Improved Decision Making, \$325,291, David G. Tarboton, 3/18/2015-3/17/2019.

State of Utah/CH2MHill, Integrated Water Resources Management Model for the Great Salt Lake Basin, \$52,000, David G Tarboton, 3/24/2015-12/31/2016.

William Penn Foundation (subcontract via Stroud Water Research Center), Delaware River Basin Model My Watershed, \$88,811, David G Tarboton, 5/1/2014-4/30/2016.

US Dept. of Agriculture, Forest Service, Rocky Mountain Research Station, GRAIP Model Software Reprogramming, \$60,000, David G Tarboton, 4/14/2014-12/31/2015

Utah Department of Natural Resources, Climate variability impacts for Utah's Great Salt Lake with proposed causeway modifications, \$50,927, Sarah Null and David G Tarboton, 7/1/2014-6/30/2015.

Utah Department of Natural Resources, How do changes to the causeway in Utah's Great Salt Lake affect water and salt flow in Gilbert and Gunnison Bays?, \$56,949, Sarah Null and David G Tarboton, 7/1/2013-7/1/2014.

National Science Foundation, Integrated Data Management System for Critical Zone Observatories, Anthony Aufdenkampe, \$1,503,590 to Stroud Water Research Center, 8/1/2012-7/31/2014, subaward to Utah State University Jeffery S Horsburgh, David G Tarboton, \$100,002.

National Science Foundation, Developing a Community Information Model and Supporting Software to Extend Interoperability of Sensor and Sample Based Earth Observations, \$551,176, Jeffery S Horsburgh, Anthony K Aufdenkampe, Kerstin A Lehnert, Emilio Mayorga, Ilya Zaslavsky, David G Tarboton, 8/1/2012-7/31/2014.

XSEDE: Terrain analysis using digital elevation models, David G. Tarboton, Allocation of 50,000 compute units and extended collaborative support on SDSC Appro Linux Cluster (Trestles), 11/15/12-5/15/2014.

National Science Foundation, Collaborative Research: SI2-SSI: An interactive software infrastructure for sustaining collaborative community innovation in the hydrologic sciences, \$2,401,939, David G. Tarboton, Daniel P. Ames, Jennifer Arrigo, David R. Maidment, Jonathan L. Goodall, 7/1/2012-6/30/2017, NSF Award OCI-1148453. Partner Collaborative Award OCI-1148090, \$2,128,078, Ray Idaszak.

National Science Foundation, Collaborative Research: Development of Adaptable Web Modules to Stimulate Active Learning in Hydrology using Data and Model Simulations, \$106,203.00, D.G. Tarboton, 10/01/2011-9/30/2015, NSF award DUE-1122812. USU portion of collaborative award with lead PI Emad Habib (University of Louisiana) and Upmanu Lall (University of Columbia).

National Science Foundation, Collaborative Research: CI-WATER, Cyberinfrastructure to Advance High Performance Water Resource Modeling, \$3,435,873, N. Jones (BYU), D.G. Tarboton, L. Hunter (UU), J. Nelson (BYU), S. Corbato (UU), 9/1/2011-8/31/2014. Tarboton is PI of USU subaward \$924,000. NSF award EPSC-1135482. Partner Collaborative Award EPSC-1135483, \$2,564,127, Fred Ogden.

US Army Corps of Engineers, Advancing the integration of terrain analysis and hydrologic modeling using parallel processing, \$81,805, D.G. Tarboton, D. Watson, 9/12/2011-8/11/2012, Award # W912HZ-11-P-0338.

NASA, Extending Utah Energy Balance Snowmelt Model to Glacial Melt Calculations in HIMALA, \$139,988, D.G. Tarboton, 6/2/2011-12/30/2013, Award # NNX11AK03G.

Biowest, Great Salt Lake Modeling, \$57,363, D.G. Tarboton, 9/2009-9/2014.

US Geological Survey, NIDIS Drought Index Information System Development, \$190,154, D.G. Tarboton and J.S. Horsburgh, 1/2010-8/2012.

National Science Foundation, subaward from supplement to Boulder Creek Critical Zone Observatory for Development of Critical Zone Observatory Desktop Software, \$65,000, D.G. Tarboton and J.S. Horsburgh, 1/2010-8/2011.

US Army Corps of Engineers, Advancing the Integration of Terrain Analysis and Hydrologic Modeling Using Parallel Processing, \$83,430, D.G. Tarboton and D Watson, 9/2009-2/2011.

US Forest Service, GRAIP Model Software Updates, \$12,000, D.G. Tarboton, 8/2010-3/2014.

Environmental Protection Agency, Consequences of Global Climate Change for Stream Biodiversity, \$789,532, C.P. Hawkins, D.G. Tarboton, J Jin, 8/2009 – 7/2013. \$177,666 for hydrologic modeling components.

US Forest Service, Understanding Trends in Western Water Balances, \$153,996, D.G. Tarboton, 9/2009-11/2012

UC Santa Barbara, Science Plan of the WATer and Environmental Research Systems Network, \$31,095 Subcontract on NSF project, D. G. Tarboton and J. S. Horsburgh, 10/08-12/09.

State of Utah, An Internet Based Great Salt Lake Information System, \$67,897, J.S. Horsburgh and D. G. Tarboton, 9/08-6/09.

Inland Northwest Research Alliance, ICEWATER Information Systems Support, \$146,000, D. G. Tarboton and J. S. Horsburgh, 11/08-12/10.

US Army Corps of Engineers, Advanced Terrain Analysis in Hydrology using Parallel Processing, \$99,981, D. G. Tarboton and D Watson, 09/08-09/09.

Consortium of Universities for the Advancement of Hydrologic Science, Inc., WATERS Network Conceptual Design, \$109,435, D. G. Tarboton, 6/07-7/08.

US Forest Service, GIS Based Analysis Tools for Forest Roads II, \$15,000, D. G. Tarboton, 6/07-4/08.

National Science Foundation, CUAHSI Hydrologic Information System, D. R. Maidment, D. G. Tarboton, I. Zaslavsky, J. Goodall, M. Piasecki, \$4,500,000 to the University of Texas at Austin for the Period 1/15/2007-12/31/2011. \$497,423 subaward to Utah State University.

National Science Foundation, Tools for Environmental Observatory Design and Implementation: Sensor Networks, Dynamic Bayesian Nutrient Flux Modeling, and Cyberinfrastructure Advancement, \$350,000, D. S. Stevens, D. G. Tarboton, J. S. Horsburgh, N. Mesner, 11/06-10/08.

National Science Foundation, Development of Informatics Infrastructure for the Hydrologic Sciences, P.I. David Maidment, University of Texas at Austin. Subaward to Utah State University, \$86,325, D. G. Tarboton, 3/04-10/07.

US Forest Service, GIS Based Analysis Tools for Forest Roads, \$35,000, D. G. Tarboton, 1/03-12/06.

Ohio State University subcontract on National Science Foundation Antarctic LTER, Modeling Melt Water Generation and Stream Flow Variability in a Polar Desert, Taylor Valley, Antarctica, \$18,800, M. Gooseff, D. G. Tarboton. 2003-2004.

Environmental Protection Agency, Testing Watershed Classifications Relevant to Bioassessment, Conservation Planning, and Watershed Restoration, \$883,515, Charles P. Hawkins, D. G. Tarboton, Yong Cao, Michelle Baker, John Schmidt, Jonathan Higgins, Mary Lammert, R. Jan Stevenson, 2003-2006.

National Weather Service, COMET outreach program, Online Instructional Module on Rainfall Runoff Modeling, \$35,000, D. G. Tarboton, C. Hult, M. Zachry, D. Brandon, 9/2001-3/2003.

U.S. Geological Survey, Development of a GIS-Based Approach for Better Statewide Water Use Estimation, \$275,000, M. McKee, D. G. Tarboton, L. Austin, H. Hadley, 9/2000-9/2003.

Whatcom County, WRIA 1 Watershed Management Project, \$2,319,446, T. Hardy, M. McKee, D. Stevens, D. G. Tarboton, M. Kemblowski, J. Kaluarachchi, D. Sorenson, 2000-2007.

- U.S. Geological Survey, Source Water Protection Assessment Tools Development, \$204,372, D. Sorenson, R. Sims, J. Sims, J. Kaluarachchi, M. Kemblowski, D. G. Tarboton, U. Lall, R. Dupont, 7/1999-6/2000.
- USDA Quantifying the Exposure of Streams to Sediment Inputs From Managed Forests, A Risk-Based Approach, \$270,000, R. T. Pack, D. G. Tarboton, L. Benda, 1999-2002.
- INEEL, Development of a User Driven Decision Support System for Water Availability and Quality Management, \$2 275 000, U. Lall, D. Stevens, R. Price, D. G. Tarboton, J. Kaluarachchi, Q. Weninger, T. Glover, G. Urroz, 1997-2000.
- National Aeronautical and Space Administration, Snow Hydrology: The parameterization of subgrid processes within a physically based snow energy and mass balance model, \$163 000, D. G. Tarboton, K Elder, D. Cline, C. Luce, 1998-2001.
- National Aeronautical and Space Administration, Investigation of Physical Process Dynamics during Cold Season Flooding, \$36 000, M. Seyfried, P. Dawson, G. Flerchinger, C. Hanson, J. McNamara and D. G. Tarboton, 1998-2001.
- National Science Foundation, International programs division, Spatially Distributed Hydrologic Models and Spatial Patterns, Cooperative project travel funds for sabbatical in New Zealand, \$13,900, D. G. Tarboton, 1997 to 1998. NSF Award OISE 9724720
- USGS, Biogeochemical Research at the Noland Divide Watershed, Great Smoky Mountains National Park, \$100,503 (USU portion), H. Van Miegroet, D. G. Tarboton, N Nicholas, I Creed, 1997-2000.
- Forest Renewal of British Columbia, Improvements of Terrain Stability Classification Methods using a DEM-derived stability index, \$139,659, R. T. Pack and D. G. Tarboton, 1997-1998.
- National Science Foundation/EPA, Scaling up Spatially Distributed Hydrologic Models of Semi-Arid Watersheds, \$330,000, Tarboton, D. G., C. M. U. Neale, Keith R. Cooley, Mark S. Seyfried, G. Flerchinger, C. Hanson, C. W. Slaughter, 1995-1998.
- National Science Foundation, Geomorphological Processes, Scale and the Evolution of Fluvial Landforms, \$44,204, D.G. Tarboton, 1994-1995. NSF Award EAR 9318977
- U.S. Geological Survey, Non-parametric stochastic simulation of streamflow in the Colorado River, \$200,000, D. G. Tarboton, U. Lall, 1992-1995.
- U.S. Geological Survey, A Spatially Distributed Water Balance based on Physical, Isotopic and Airborne Remotely Sensed Data, \$350,000, C. M. U. Neale, D. G. Tarboton, J. J. McDonnell, 1991-1994.
- USU Faculty research grant, Snowmelt energy balance, the turbulent fluxes, \$12,000, D. G. Tarboton, 1992-1993.
- U.S. Forest Service, Development of Mountain Climate Generator and Snowpack Model for Erosion Predictions in the Western United States using WEPP, \$700,000, D. S. Bowles, U. Lall, G. Bingham, D. G. Tarboton, 1991-1996. (My role in this was development of the snowmelt component.)
- U.S. Geological Survey, Coping with Severe Sustained Drought in the Southwestern United States, \$430,000, L. D. James, F. Gregg, D. G. Tarboton, D. R. Kendall, B. Harding, H. J. Vaux, D. T. Patten, T. C. Modde, R. S. Krannich, D. H. Getches, 1990-1993. (My role in this was the hydrology and consisted of identification of drought scenario's for analysis based on tree ring data and statistical disaggregation of these to give source inflows for the Colorado River System Simulation model.)
- USU Faculty research grant, Distributed hydrologic modeling using digital topographic and geographic data, \$15,000, D. G. Tarboton, 1990-1992.

Teaching

At Utah State University

- CEE6930 Special Problems: Advanced Hydrology through CUAHSI Virtual University, Fall 2019-2025
- CEE3430, Engineering Hydrology, Junior level basic hydrology, Spring, 1991-1994, Fall 1995-1996, Spring 1999, Spring 2011-2012, Spring 2014, 2016, 2018.
- CEE6400, Physical Hydrology, Graduate level, Fall, 1994-1996, Fall 1998-2003, 2008-2009, 2011-2013, 2016.
- CEE6440, GIS in Water Resources, Fall 1999-2006, 2008-2018. Online course in partnership with David Maidment at the University of Texas.
- CEE6110, Probability and Statistics for Engineers, Fall 2005-2006.
- CEE7430, Stochastic Hydrology, Spring 2002, 2004, 2009.
- ENG103, Digital Computer Utilization (computer programming), Winter, 1995-1997.
- CEE641, Surface Runoff Hydrology, Winter, 1996.
- CEE646, Hydrologic Time Series Analysis, Graduate level, Winter, 1990-1994.
- CEE645, Hydrologic Modeling, Graduate level, Spring, 1994.
- CEE746, Advanced topics in Hydrology, Fractals and Scaling. Advanced graduate level, Fall, 1992.
- HON250, Introduction to Earth Systems Science, Freshman/sophomore level, Winter, 1992 (one of 6 faculty that team taught this)
- WS405, Climate hydrologic interactions, Spring 1992 (one of 6 faculty that team taught this)

At MIT

- 1.121, Numerical Modeling of Physical Systems, Fall 1989.

Short Courses and Workshops

- Gallagher, Melissa A, Emad Habib, Courtney DiVittorio, Irene Garousi-Nejad, Cat Maiorca, David Tarboton (2024). Introduction to HydroLearn: Workshop presented as part of CIROH Developers Conference May 30, 2024, https://ciroh.ua.edu/wp-content/uploads/2024/05/CIROH_DevCon_Agenda_Print_20240524.pdf
- Tarboton, D., A. M. Castronova, I. Garousi-Nejad, F. Baig (2024). Enabling collaboration through data and model sharing with CUAHSI HydroShare: Workshop presented as part of CIROH Developers Conference May 29, 2024, HydroShare, <http://www.hydroshare.org/resource/7477452a93e04b1099a3879353c2253a>
- Tarboton, D., J. S. Horsburgh, I. Garousi-Nejad (2023). HydroShare for CIROH Workshop presented as part of the CIROH 1st Annual Training and Developers Conference 2023, HydroShare, <http://www.hydroshare.org/resource/93de08193cf1433d923163d76a7e0cfd>
- Lectures on Modeling at Watershed Scale as part of course on Trends in water, energy and CO2 accounting: from high resolution field measurements to remote sensing techniques at the University of Cordoba, Spain from June 6-14, 2012
- Lectures on Hydrology in Stream Restoration Short Course, Utah State University, June 2006.
- Three 2-day short courses to Tampa Bay Water on Time Series Analysis, June 12-13, August 21-22, 2003 and March 9-11, 2004.
- Distributed Modeling in Hydrology using Digital Data and Geographic Information Systems, a short course given at the University of Padua, Italy from May 15 to 26, 2000.

Professional Activities

Great Salt Lake Basin Integrated Plan Steering Committee. July 2023 to present.

Great Salt Lake Strike Team. August 2022 to present.

Utah State University Janet Quinney Lawson Institute for Land, Water, and Air Internal Steering Committee, 2022-2025.

American Water Resources Association, Chair of David Maidment Symposium at AWRA Geospatial Water Technology Conference, Austin, Texas, May 12, 2022.

American Geophysical Union, Chair of Earth and Space Science Informatics Fellows Committee, 2019-2023.

American Geophysical Union, Publications Committee, 2020 to 2023.

American Water Resources Association 2019 Planning Committee for Annual Water Resources Conference, November 3-6, Salt Lake City, Student Activity Co-Chair and Utah Water Research Lab Tour organizer.

National Science Foundation workshop on Integrated Hydro-Terrestrial Modeling. Sept 4-6, 2019. Alexandria, VA.

National Institutes for Water Resources (NIWR). Represent UWRL in this organization. 2019-2025 Convener for CUAHSI workshop to envision a terrestrial modeling system to encode and formalize the knowledge from WSC and INFEWS projects, March 21-22, 2019 at RENCi, University of North Carolina, in Chapel Hill

Planning Committee for 2019 EarthCube All Hands Meeting, June 12-14, 2019, Denver.

Planning Committee for 2018 EarthCube All Hands Meeting, June 6-8, 2018, Washington DC.

Community Advisory Committee for Water Prediction for NOAA National Water Center, 2017-2023.

American Geophysical Union, Convener and Chair for special session "Transforming Hydrologic Prediction and Decision Making: Cyberinfrastructure IV" held at AGU Fall Meeting, San Francisco, December 2016.

CyberGIS Center NSF Workshop on Food Energy Water Research Cyberinfrastructure, May 22-23, 2016, Scottsdale, Arizona, Co-Organizer with Shaowen Wang.

American Geophysical Union, Co-chair for special session "Addressing the Challenges of Big and Complex Data to Advance Hydrologic Understanding" held at AGU Fall Meeting, San Francisco, December 2015.

Organized 3rd CUAHSI Conference on HydroInformatics, July 15-17, 2015, University of Alabama & the National Water Center, Tuscaloosa, Alabama.

Associate Editor for Hydrological Processes, 2014-present.

American Geophysical Union Hydrology Section Surface Water Technical Committee member, 2013-2015.

Technical Program Committee, 2014 AWRA Spring Specialty Conference Geographic Information Systems (GIS) and Water Resources VIII, Snowbird, Utah, May 12-14, 2014.

Member of External Advisory Committee for EPSCoR RII Track-2 project, Western Consortium for Watershed Analysis, Visualization and Exploration (WC-WAVE), the Western Consortium of Idaho, Nevada, and New Mexico, 2014-2015.

Host for 2013 CUAHSI Conference on Hydrologic Information Systems and Modeling, July 17-19, 2013,
https://www.cuahsi.org/uploads/library/2013_Conference_on_Hydroinformatics_Agenda.pdf

Organizer and Committee Chair for USU Spring Runoff Conference, April 9-10, 2013

Served on organizing committee for EarthCube End-User Workshop "EarthCube Modeling Workshop for the Geosciences", April 22-23, 2013 Boulder, Colorado.

Panelist for USU Research Week Panel on NSF opportunities, April 6, 2012.

Organizer and Committee Chair for USU Spring Runoff Conference, April 3-4, 2012.

Plenary Session Panelist, 2012 AWRA Spring Specialty Conference Geographic Information Systems (GIS) and Water Resources VII, New Orleans, Louisiana, March 26-28, 2012.
<http://www.awra.org/proceedings/Spring2012/plenary.html>

Program Chair for Water Data Integration, 2012 AWRA Spring Specialty Conference Geographic Information Systems (GIS) and Water Resources VII, New Orleans, Louisiana, March 26-28, 2012. <http://www.awra.org/meetings/Spring2012/committee.html>

Member of Utah State University Graduate Program Review Task Force 2011-2012.

Member of Willard Spur Science Panel, Utah Division of Water Quality, 2011- 2016.
<https://deq.utah.gov/legacy/destinations/g/great-salt-lake/willard-spur/panel/index.htm>

Invited clinic on TauDEM at Community Surface Dynamics Modeling System (CSDMS) Annual Meeting, October 28-30, 2011, Boulder Colorado. (<http://csdms.colorado.edu/>)

Convener for CUAHSI conference on Hydrologic Data and Information Systems held at Utah State University, Logan, Utah, June 22-24, 2011 (<http://his.cuahsi.org/conference2011/>).

Member of Open Topography Advisory Committee 2010-2012 (<http://www.opentopography.org/>).

Member of External Advisory Committee for EPSCoR RII Track-2 project, Cyberinfrastructure Development in the Western Consortium of Idaho, Nevada, and New Mexico, 2010-2013.

Organizing committee for NSF Workshop on Creating Scientific Software Innovation Institutes for Sustained Cyberinfrastructure Achievement and Excellence, Meeting held October 4-5, 2010, Arlington, VA.

Member of organizing committee for "Tough Choices - Land use under a changing climate", U.S. German workshop held in Berlin, October 2-3, 2008, <http://usg08.nkgcf.org/>.

Member of WATER and Environmental Research Systems (WATERS) Network design team 2007-2009 (<http://www.watersnet.org/>). Co-author for draft Science, Education, and Design Strategy for the WATER and Environmental Research Systems Network (SEDS <http://www.watersnet.org/docs/SEDS-20080227-draft.pdf>) and Living in the Water Environment: the WATERS Network Science Plan (http://www.watersnet.org/docs/WATERS_Network_SciencePlan_2009May15.pdf)

Member of National Research Council Committee on Water Resources Activities at the U.S. Geological Survey, 2006 – 2009 (<https://nap.nationalacademies.org/catalog/12672/toward-a-sustainable-and-secure-water-future-a-leadership-role>)

Member of Unidata Policy Committee, 2006 – 2012.

Peer Reviewer for US Army Corps of Engineers Louisiana Coastal Protection and Restoration (LACPR) preliminary technical report (PTR), <http://lacpr.usace.army.mil/>, 2006.

Consortium of Universities for the advancement of Hydrologic Sciences Inc. (CUAHSI), Elected to Board of Directors for term 2005 – 2007.

Organized CUAHSI National Workshop on Hydrologic Observatories held at Utah State University August 23-25, 2004.

Member of National Research Council Committee on River Science at the U.S. Geological Survey, 2004 – 2006 (<https://nap.nationalacademies.org/catalog/11773/river-science-at-the-us-geological-survey>)

Steering Committee, NSF Supported Center for Airborne Laser Mapping, 2003 – 2006.

Director of Utah State University Water Initiative, 2003-2007.

Chair of Utah State University Water Task Force to report to University president on ways to enhance the strength of Utah State University in the study of water, November 2002 – April 2003.

Member of National Research Council Committee on Water Resources Research at the U.S. Geological Survey, 2002 – 2003.

Member of Humboldt Watersheds Independent Scientific Review Panel, North Coast Regional Water Quality Control Board, California. August, 2002 – August 2003.

Visiting Scientist, National Institute for Water and Atmosphere, Christchurch, New Zealand, July 2002. Collaborated in the development of a hydrologic model for the entire islands of New Zealand.

Utah State University Representative to the Consortium of Universities for the Advancement of Hydrologic Science Incorporated (CUAHSI), 2001 – present.

Visiting Professor in the Department of Land and Agroforest Environment at the University of Padova to present short course entitled "Distributed Modeling in Hydrology using Digital Data and Geographic Information Systems", May 15 to 26, 2000.

Invited participant in U.S. Army Symposium on Hydrologic Modeling of Diverse Regions with Sparse and Uncertain Data, November 8-9, 1999, Vicksburg Mississippi.

Associate Editor for Water Resources Research, 1998 – 2003.

Reviewer for the following Journals:

Water Resources Research, Journal of Hydrology, Advances in Water Resources, Journal of Climate, ASCE Journal of Water Resources Planning and Management, Journal of Geophysical Research, Water Resources Bulletin, Geological Society of America Bulletin, Earth Surface Processes and Landforms, Computers and Geosciences, Journal of Hydrometeorology, Mathematical Geology, Geoinformatica, Transactions in GIS, Journal of Hydrologic Engineering, Proceedings of the National Academy of Sciences, Journal of the American Water Resources Association, Environmental Modelling and Software

Proposal reviewer for:

National Science Foundation, National Oceanic and Atmospheric Administration, National Space Administration, Environmental Protection Agency, USDA National Research Initiative.

Member of National Science Foundation Water Sustainability and Climate Program Panel, February 2012

Member of National Science Foundation Hydrologic Sciences Program Panel, October 2010

Member of National Science Foundation Hydrologic Sciences Program Panel, October 2009

Member of National Science Foundation Dynamics of Coupled Natural and Human Systems review panel, March 2007.

Member of U.S. Environmental Protection Agency Understanding Ecological Thresholds Through Retrospective Analysis panel, November 2004.

Member of U.S. Environmental Protection Agency Global Change for Aquatic Ecosystems panel, July 2001.

Member of U.S. Environmental Protection Agency Aquatic Ecosystems Classification and Reference Conditions panel, July 2000.

Member of U.S. Environmental Protection Agency Competitive Graduate Environmental Study Fellowships panel, March 1999.

Member of U.S. Environmental Protection Agency regional ecosystems review panel, June 1996.

Member of National Oceanic and Atmospheric Administration, Land Surface Processes review panel, 1992.

American Geophysical Union Hydrology Section Surface Water committee.

Organized special session on Precipitation in topographically diverse regions, Fall 1991.

Organized special session on Snow Hydrology, Fall 1993.

Deputy chair 1994-1996.

Chair 1996-1998.

American Water Resources Association

Technical program committee for the AWRA 1995 spring symposium.

Technical program committee for AWRA 2012 Spring specialty conference on Geographic Information Systems and Water Resources

Consulting

For Silver Tip Solutions, Seattle, Review of Refined Water Budget for WRIA1 and Water Demand for the Lower Nooksack Sub-basin, January to October 2012.

Landslide hazard mapping based on slope and contributing area, for Terratech, British Columbia, 1996.

Streamflow modeling for Idaho Power Company. Lower Salmon falls hydropower plant re-licensing, 1995.

Graduate Students Supervised.

Alaa Hassan	MS, 1992	The Application of Nonparametric Density Estimation in a Stochastic Disaggregation Model
Tanveer Chowdhury	MS, 1993	Energy Balance Snowmelt Modeling for Erosion Prediction
Thomas H Jackson	PhD, 1994	A Spatially Distributed Snowmelt-Driven Hydrologic Model applied to the Upper Sheep Creek Watershed
Padinare V Unnikrishna	PhD, 1995	Stable Isotope Tracer Study of Flow Generation Mechanisms in a Small, Semiarid Mountain Watershed (Jeff McDonnell was dissertation director)
Ashish Sharma	PhD, 1996	Nonparametric Approaches for Simulation of Streamflow Sequences
Kevin Williams	MS, 1998	The Development and Validation of a Model for the Spatial Distribution of Snowmelt Based on Topography and Point Melt Measurements
Charlie Luce	PhD, 2000	Scale Influences on the Representation of Snowpack Processes.
Rajiv Prasad	PhD, 2001	Watershed-Scale Hydrology: Influences of Spatial Variability of Snowpack in a Semi-Arid, Mountainous Environment.
Erkan Istanbuluoglu	PhD, 2003	Quantification of Stream Sediment Inputs From Steep Forested Mountains
Jinsheng You	PhD, 2004	Snow Hydrology: The parameterization of subgrid processes within a physically based snow energy and mass balance model
Kiran Chinnayakanahalli	MS, 2004	An Objective Method for the Intercomparison of Terrain Stability Models and Incorporation of Parameter Uncertainty
Greg Loscher	MS, 2006	Hydrologic Analysis of a Steep Forested Watershed Using Spatially Distributed Measurements of Soil Moisture and Soil Infiltration Properties
Ibrahim Mohammed	MS, 2006	Modeling the Great Salt Lake
Ajay Prasad	MS, 2007	A tool to analyze environmental impacts of roads on forest watersheds

Nduhiu Gathuma	MS, 2007	An Application of The Topnet Model to the Deer Creek Watershed at Mount Sterling, Ohio. Plan B report.
Christina Bandaragoda	PhD, 2008	Distributed Hydrologic Modeling For Streamflow Prediction At Ungauged Basins
Jeff Horsburgh	PhD, 2009	Hydrologic Information Systems: Advancing Cyberinfrastructure for Environmental Observatories
Kiran Kumar Chinnayakanahalli	PhD, 2010	Characterizing Ecologically Relevant Variations in Streamflow Regimes
Teklu Tesfa	PhD, 2010	Distributed Hydrological Modeling Using Soil Depth Estimated from Landscape Variable Derived with Enhanced Terrain Analysis
Vinod Mahat	PhD, 2011	Effect of Vegetation on the Accumulation and Melting Of Snow at the TW Daniels Experimental Forest
Ibrahim Mohammed	PhD, 2012	Relationships between Runoff, Land Cover and Climate in the Semi-Arid Intermountain Region of the Western U.S.A.
Aaron Byrd	PhD, 2013	Functional Ontologies And Their Application To Hydrologic Modeling: Development Of An Integrated Semantic And Procedural Knowledge Model And Reasoning Engine
Sulochan Dhungel	MS, 2014	Prediction of Climate Change Effects on Streamflow Regime Important to Stream Ecology
Avirup Sen Gupta	PhD, 2014	Improving the Physical Processes and Model Integration Functionality of an Energy Balance Model for Snow and Glacier Melt
Nazmus Sazib	PhD, 2016	Physically Based Modelling of the Impacts of Climate Change on Streamflow Regime
Prasanna Dahal	MS, 2018	Advancing The Implementation of Hydrologic Models as Web-Based Applications
Kshitij Parajuli	PhD, 2018	Advancing Methods to Quantify Actual Evapotranspiration in Stony Soil Ecosystems
Tseganeh Gichamo	PhD, 2019	Advancing Streamflow Forecasts Through the Application of a Physically Based Energy Balance Snowmelt Model With Data Assimilation and Cyberinfrastructure Resources
Tian Gan	PhD, 2019	Advancing Cyberinfrastructure for Collaborative Data Sharing and Modeling in Hydrology
Irene Garousi-Nejad	PhD, 2022	Improving Flood Inundation and Streamflow Forecasts in Snowmelt Dominated Regions
Sara Goeking	PhD, 2022	Quantification of Hydrologic Response to Forest Disturbance in Western U.S. Watersheds
Madeline Merck	PhD, 2023	Surface Water Hydrology Within the Great Salt Lake Basin
Homa Salehabadi	PhD, 2024	Assessment of Future Streamflow in the Colorado River Basin with Some Implications for Water Management

Bhuvan Ghimire	MS, 2025	Investigating Changes in Hydroclimate, Land Cover, and Evapotranspiration Across the Great Salt Lake Basin and its Major Subbasins
Reza Morovati	MS, 2025	Evaluating use of multiple hydrologic storage indicators to enhance streamflow forecasting