

## Resume - David G. Tarboton

August 2018

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

### Address:

Utah Water Research Laboratory  
Department of Civil and Environmental Engineering  
Utah State University  
Logan, UT, 84322-4110

Phone: (435)-797-3172  
Email: dtarb@usu.edu  
<http://hydrology.usu.edu/dtarb/>

### 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 in Datametrics, (Computer Science), University of South Africa, December 1984.  
B.Sc Eng, Civil Engineering, University of Natal, Durban, South Africa, December 1981.

### Professional Experience:

February 1990 to Present, Assistant to Associate to Full Professor, Utah Water Research Laboratory and Department of Civil and Environmental Engineering, 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.  
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.

### Honors and Awards

Fellow of the American Geophysical Union, elected 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 Outstanding Researcher 2014-2015  
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 2004-2005.  
American Geophysical Union Editors Citation for Excellence in Refereeing for outstanding service to the authors and readers of Water Resources Research, 1993.

**Selected Refereed Publications** (from over 70 total refereed. Many available online at <http://hydrology.usu.edu/dtarb/>)

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>.
- Yi, H., R. Idaszak, M. Stealey, C. Calloway, A. L. Couch and D. G. Tarboton, (2018), "Advancing distributed data management for the HydroShare hydrologic information system," Environmental Modelling & Software, 102: 233-240, <https://doi.org/10.1016/j.envsoft.2017.12.008>.
- Morsy, M. M., J. L. Goodall, A. M. Castronova, P. Dash, V. Merwade, J. M. Sadler, M. A. Rajib, J. S. Horsburgh and D. G. Tarboton, (2017), "Design of a metadata framework for environmental models with an example hydrologic application in HydroShare," Environmental Modelling & Software, 93: 13-28, <http://dx.doi.org/10.1016/j.envsoft.2017.02.028>.
- Goodall, J. L., V. Merwade, I. Zaslavsky, D. G. Tarboton, J. S. Horsburgh, D. P. Ames and A. Couch, (2017), "Hydrologic Information Systems. ," Chapter 7 in Handbook of Applied Hydrology, Edited by V. P. Singh, McGraw Hill, p.7-1 to 7-9.
- Idaszak, R., D. G. Tarboton, H. Yi, L. Christopherson, M. J. Stealey, B. Miles, P. Dash, A. Couch, C. Spealman, D. P. Ames and J. S. Horsburgh, (2016), "HydroShare - A case study of the application of modern software engineering to a large distributed federally-funded scientific software development project," Chapter 10 in Software Engineering for Science, Edited by J. Carver, N. P. C. Hong and G. K. Thiruvathukal, Taylor&Francis CRC Press, p.219-236
- Horsburgh, J. S., M. M. Morsy, A. M. Castronova, J. L. Goodall, T. Gan, H. Yi, M. J. Stealey and D. G. Tarboton, (2015), "Hydroshare: Sharing Diverse Environmental Data Types and Models as Social Objects with Application to the Hydrology Domain," JAWRA Journal of the American Water Resources Association, <http://dx.doi.org/10.1111/1752-1688.12363>
- You, J., D. G. Tarboton and C. H. Luce, (2014), "Modeling the snow surface temperature with a one-layer energy balance snowmelt model," Hydrol. Earth Syst. Sci., 18(12): 5061-5076, <http://dx.doi.org/10.5194/hess-18-5061-2014>.
- Mahat, V. and D. G. Tarboton, (2012), "Canopy radiation transmission for an energy balance snowmelt model," Water Resour. Res., 48: W01534, <http://dx.doi.org/10.1029/2011WR010438>.
- Tesfa, T. K., D. G. Tarboton, D. W. Watson, K. A. T. Schreuders, M. E. Baker and R. M. Wallace, (2011), "Extraction of hydrological proximity measures from DEMs using parallel processing," Environmental Modelling & Software, 26(12): 1696-1709, <http://dx.doi.org/10.1016/j.envsoft.2011.07.018>.
- Horsburgh, J. S., D. G. Tarboton, D. R. Maidment and I. Zaslavsky, (2008), "A Relational Model for Environmental and Water Resources Data," Water Resour. Res., 44: W05406, <http://dx.doi.org/10.1029/2007WR006392>.
- Tarboton, D. G., (1997), "A New Method for the Determination of Flow Directions and Contributing Areas in Grid Digital Elevation Models," Water Resources Research, 33(2): 309-319.