YONAS K. DEMISSIE

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PROFESSIONAL EXPERIENCE

***Assistant Professor**, August 2012 – Present*
- Department of Civil and Environmental Engineering, Washington State University, Richland, WA.

***Guest Faculty and STA Hydrogeologist**, August 2012 – Present*
- Environmental Science Division, Argonne National Laboratory, Argonne, IL.

***Post-Doctoral Research Associate,** July 2009 – August 2012*
- Environmental Science Division, Argonne National Laboratory, Argonne, IL.

***Post-Doctoral Research Associate**, April 2008 – July 2009*
- Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL.

***Research Assistant,** January 2008 – April 2008*
- Illinois State Water Survey, Champaign, IL.

***Assistant Lecturer**, August 1998 – August 1999*
- Department of Agricultural Engineering, Hawassa University, Ethiopia.

EDUCATION

***University of Illinois at Urbana-Champaign**, Ph.D., 2008*
- Department of Civil and Environmental Engineering
- Dissertation title: "Data-driven models to enhance physically-based groundwater model predictions"
- Advisor: Dr. Albert J. Valocchi

***Katholieke Universiteit Leuven and Vrije Universiteit Brussel, Belgium**, M.S. (with distinction), 2001*
- Department of Civil Engineering
- Thesis title: "Development and application of a WetSpass-MODFLOW model for ArcView"
- Advisor: Professor Hilaire De Smedt

***Haramaya University, Ethiopia,** B.S. (with distinction), 1998*
- Department of Agricultural Engineering
- Research project title: "Causes of Lake Awassa water level rises"
- Advisor: Tena A. Agumassie (now at Water and Land Resource Centre, Ethiopia)

***University of Illinois at Urbana-Champaign**, Certificate in Business Administration, 2007*
- College of Business

RESEARCH AREAS

- Urban hydrology (stormwater design and management, flooding risk and resilience analysis, design of green infrastructure)

- Stochastic hydrology (uncertainty analysis, inverse modeling, data assimilation, data mining and machine learning to improve predicting ability of water cycle)
- Hydro-climatology extremes (characterization of extreme storms, floods and droughts)
- Watershed hydrology (characterization of the interactions among water, energy production, land use, and climate change)

AWARDS and HONORS

- First Place Award for Young Scientist at the Sixth International Conference on Environmental Science and Technology, American Academy of Sciences, 2012
- SURGE Fellowship, University of Illinois at Urbana-Champaign, 2003 – 2008
- VLIR Scholarship, Belgian Directorate-General for Development Cooperation, Belgium, 1999 – 2001
- Gold Medal Award for Outstanding Graduate of the Year, Haramaya University, Ethiopia, 1998

AWARDS and HONORS for MY STUDENTS

- Md Rubayet Mortuza won the 2016/2017 Ernest O. Holland scholarship for best thesis
- Md Rubayet Mortuza and Edom Moges both awarded summer fellowships in 2014 and 2015 to work at Argonne and Pacific Northwest National Laboratories.
- Emmanuel Aguilar won the WSU/PNNL distinguished fellowship to financially support his PhD study for four years

PEER REVIEWED PUBLICATIONS

Published:

1) Yigzaw, W., H-Y. Li, **Y. Demissie**, M.I. Hejazi, L.R. Leung, N. Voisin, and R. Payn, 2018. A New Global Reservoir Geometry Dataset for Representing Reservoirs in Land Surface and Earth System Models, *Water Resources Research,* DOI: 10.1029/2017WR022040.
2) Wan, W., J. Zhao, H-Y, Li, A. Mishra, M. Hejazi, H. Lu, **Y. Demissie**, and H. Wang, 2018. A Holistic View of Climate Change and Water Management Impacts on Future Droughts: A Global Multi-Model Analysis, *Journal of Geophysical Research – Atmospheres,* DOI: 10.1029/2017JD027825.
3) Mortuza, R., E. Moges, **Y. Demissie**, and H. Li, 2018. Historical and Future Drought Risk in Bangladesh using Bivariate Regional Frequency Analysis, *Theoretical and Applied Climatology*, DOI: https://doi.org/10.1007/s00704-018-2407-7
4) Moges, E., A. Jared, **Y. Demissie**, E. Yan, 2018. Bayesian Augmented L-Moment Approach for Regional Frequency Analysis, *World Environmental and Water Resources Congress*, DOI: 10.1061/9780784481417.016
5) **Demissie, Y.**, E. Yan, M. Wu. 2017. Hydrologic and water quality impacts of biofuel feedstock production in the Ohio River Basin, *Global Change Biology Bioenergy*, DOI: 10.1111/gcbb.12466.
6) Ye, S., H. Li, L.R. Leung, J. Guo, Q. Ran, **Y. Demissie**, and M. Sivapalan, 2017. Understanding flood seasonality and its temporal shifts within the contiguous United States, *Journal of Hydrometeorology*. DOI: 10.1175/JHM-D-16-0207.1.
7) Wang, W., H. Li, L.R. Leung, **Y. Demissie**, and G. Blöschl, 2017. Nonlinear filtering effects of reservoirs on the flood frequency curves at the regional scale, *Water Resources Research.* DOI: 10.1002/2017WR020871.
8) Wan, W., H. Li, J. Zhao, A. Mishra, L.R. Leung, M. Hejazi, W. Wang, H. Lu, Z. Deng , **Y. Demissie**, H. Wang, 2017. Hydrological Drought in the Anthropocene: Impacts of Local Water

Extraction and Reservoir Regulation in the US, *Journal of Geophysical Research – Atmospheres.* DOI: 10.1002/2017JD026899

9) Moges, E., **Y. Demissie**, H. Li, 2016, Hierarchical mixture of experts and diagnostic modeling approach to reduce hydrologic model structural uncertainty, *Water Resources Research,* DOI: 10.1002/2015WR018266.

10) Li S., L. Xiong, H. Li, L.R. Leung, **Y. Demissie**, 2015. Attributing runoff changes to climate variability and human activities: Uncertainty analysis using four monthly water balance models, *Stochastic Environmental Research and Risk Assessment*, doi: 10.1007/s00477-015-1083-8

11) Ye S., H. Li, S. Li, L.R. Leung, **Y.Demissie**, Q. Ran, G. Blöschl, 2015. Vegetation regulates streamflow intra-annual variability by adapting to climate variations, *Geophysical Research Letters*, doi:10.1002/2015GL066396.

12) Senay, G.B., S. Bohms, N.M. Velpuri, **Y. Demissie**, M. Gebremichael, 2014. Understanding the hydrologic sources and sinks in the Nile Basin: Using multi-source climate and remote sensing datasets, *Water Resources Research*, DOI: 10.1002/2013WR015231.

13) **Demissie, Y.,** A. Valocchi, X. Cai, N. Brozovic, M. Gebremichael, G. Senay, 2014. Parameter estimation of groundwater models under uncertain irrigation data, *Groundwater*, DOI: 10.1111/gwat.12235.

14) Yan, E., **Y. Demissie**, M. Wigmasta, V. Tidwell, C. King, 2013. Potential drought impacts on electricity generation in Texas, *ASME Proceedings*, DOI:10.1115/POWER2013-98318.

15) **Demissie, Y.**, E. Yan, and M. Wu, 2012. Assessing Regional Hydrology and Water Quality Implications of Large-Scale Biofuel Feedstock Production in the Upper Mississippi River Basin, *Environmental Science & Technology*, DOI: 10.1021/es300769k.

16) Wu, M., **Y. Demissie**, and E. Yan, 2012. Simulate impacts of future biofuel production on water quality and water cycle dynamics in the Upper Mississippi River Basin, *Biomass and Bioenergy*, DOI: 10.1016/j.biombioe.2012.01.030.

17) **Demissie, Y.**, E. Yan, and M. Wu, 2012. Effects of biofuel productions in the Ohio River basin's water resources and quality. In: *Environmental Science and Technology*, G. Sorial and J. Hong, Eds. American Science Press, Houston, USA, 2012, Vol. 2, p. 577-582. ISBN: 9780976885344.

18) Wu, M., Y. Chiu, and **Y. Demissie**, 2012. Quantifying the regional water footprint of biofuel using multiple analytical tools, *Water Resources Research*, DOI:10.1029/2011WR011809.

19) **Demissie, Y.**, A. Valocchi, B. Minsker, and B. Bailey, 2009. Integrating a calibrated groundwater flow model with error-correcting data-driven models to improve predictions, *Journal of hydrology*, DOI: 10.1016/j.jhydrol.2008.11.007

20) **Demissie, Y.**, A. Valocchi, B. Minsker, and B. Bailey, 2008. Bias-corrected groundwater model prediction uncertainty analysis. In: J. Refsgaard (Editor), *Calibration and Reliability in Groundwater Modeling: Credibility in Modeling*, IAHS Publ. 320. ISBN: 9781901502497

Submitted or Under Revision:

21) Moges, E., A. Jared, **Y. Demissie**, E. Yan, R. Mortuza, 2018. Improved Regional Frequency Analysis: Bayesian Augmented L-moment Approach with Multiple Diagnostic Performance Measures, *Stochastic Environmental Research and Risk Assessment (in revision)*

22) Moges, E., **Y. Demissie**, H. Li, 2018. Uncertainty propagation in coupled hydrologic models, *Water Resources Research (in revision)*

23) Mortuza, M.R. **Y. Demissie**, H-Y. Li, E. Moges 2018. Regional frequency and Bayesian uncertainty analyses of extreme precipitation in Bangladesh, *Journal of hydrology (submitted)*

24) Abeshu, G. H-Y. Li, E. Brookshire, **Y. Demissie,** X.Chen, and J. Tang, 2018. Catchment-scale water-carbon coupling across the contiguous United States: patterns, process and implications, *Advance Water Resources (submitted).*

In Preparation:

25) **Demissie, Y**., R. Mortuza and E. Moges. Runoff Intensity-Duration-Frequency Curves for designing urban drainage system under anticipated change in extreme rainfall, snow, and landuse, *intended for Water Resources Research.*

26) Mahat, V., A. Jared, E. Moges, E. Yan, **Y. Demissie**, and G. Betrie. Intensity-Duration-Frequency analysis based on surface water input simulated by energy balance snowmelt model, *intended for Journal of hydrology.*

27) Jared, A., E. Moges, E. Yan, and **Y. Demissie**. *Bias-correction of the climate projection data for extreme storm analysis, intended for Journal of Geophysical Research - Atmospheres*

CONFERENCE PROCEEDINGS

1) **Demissie, Y.,** A.Valocchi, X. Cai, N. Brozovic, 2012. Inverse Modeling for Estimating Parameters of Groundwater Models with Uncertain Forcing Data, *Proceedings of CMWR2012: XIX International Conference on Computational Methods in Water Resources*, University of Illinois, June 17--21, 2012.

2) Yoon, H., **Y. Demissie**, S. McKenna, A. Valocchi, C. Werth, 2012. Data worth and optimal sampling analyses to reduce model prediction uncertainty for groundwater transport, *Proceedings of CMWR2012: XIX International Conference on Computational Methods in Water Resources*, University of Illinois, June 17--21, 2012. http://cmwr2012.cee.illinois.edu

3) Valocchi, A., **Demissie, Y**., and Xu, T., 2011. Improving prediction of regional-scale groundwater flow models through exploratory data analysis and complementary modeling, In *Proceedings of MODFLOW and More 2011*: *Integrated Hydrologic Modeling Conference*, E. Poeter, R. Maxwell, M. Hill and C. Zheng (ed.), Golden, CO, June 5-8.

4) Valocchi, A., **Demissie, Y**., Cai, X., and Brozovic, N., 2009. Use of groundwater models for resource assessment of irrigation pumping impacts in semi-arid watersheds: impact of model input and parameter uncertainty, In *Proceedings of National Groundwater Association's Annual Groundwater Summit*, Tucson, Arizona, April 19-23.

5) Valocchi, A. and **Demissie, Y.,** 2008. Dealing with local bias in calibrated groundwater flow models: A case study of Republican River basin, In *Proceeding of MODFLOW and More 2008: Ground Water and Public Policy*, E. Poeter, M. Hill and C. Zheng (ed.), Colorado School of Mines, Golden, CO. May 21-24.

6) **Demissie, Y**., Valocchi, A., Minsker, and B., Bailey, B., 2007. Bias-corrected groundwater model prediction uncertainty analysis, In *Proceedings of International Conference ModelCARE 2007, Calibration and Reliability in Groundwater Modeling, Credibility of Modeling*, Copenhagen, Denmark, September 9-13.

7) **Demissie, Y**., Valocchi, A., Minsker, B., and Bailey, B., 2006. Data--driven modeling approach to enhance MODFLOW head predictions, pp. 51--55 in *Proceedings of MODFLOW and More 2006: Managing Ground--Water Systems*, v. 1, E. Poeter, M. Hill and C. Zheng (ed.), Colorado School of Mines, Golden, CO., May 21-24.

BOOKS

1) Best Practices for Incorporating Non-Stationarity in Extreme Precipitation Design Values, 2018. (*in preparation*). Co-author with K. Kunkel, D. Easterling, D. Lettenmaier, and C. Brown.

TECHNICAL REPORTS

1) **Demissie, Y**. 2017 Linked Rainfall and Runoff Intensity-Duration-Frequency in the Face of Climate Change and Uncertainty, Interim Report for SERDP

2) Yan, E., A. Jared, V. Mahat, E. Moges, **Y. Demissie**, J. Pierce, M. Picel, D. Verner, T.Wall, 2016. Extreme Precipitation and Runoff under Changing Climate in Southern Maine, ANL/EVS-17/1,

Argonne National Laboratory.
http://precip.eas.cornell.edu/docs/Maine%20IDF%20User%20Manual%201-5-2017%20Final.pdf

3) **Demissie, Y**., R. Mortuza, 2016. Development and Update of Rainfall and Runoff Intensity-Duration-Frequency Curves for Washington State Counties in Response to Observed and Anticipated Extreme Rainfall and Snow Events, State of Washington Water Research Center. https://water.usgs.gov/wrri/AnnualReports/2015/FY2015_WA_Annual_Report.pdf.

4) Yan, E., Tidewell, V., King, C., **Demissie, Y.**, Harto, C., & Wigmosta, M., 2013. Impact of Future Climate Variability on ERCOT Thermoelectric Power Generation: In Support of Interconnection-Wide Transmission Planning. Energy and Water in the Western and Texas Interconnects, ANL/EVS/R-13/2, Argonne National Laboratory. http://www.ipd.anl.gov/anlpubs/2013/03/75723.pdf

5) **Demissie, Y**., E. Yan, M. Wu, and Z. Zhang, 2012. Watershed Modeling of Potential Impacts of Biofuel Feedstock Production in the Upper Mississippi River Basin, ANL/EVS/AGEM/ TR-12-07, Argonne National Laboratory. http://www.ipd.anl.gov/anlpubs/2012/08/73898.pdf

6) Harto, C., Yan, E., **Demissie, Y.**, Elcock, Tidwell, V., Hallet, K., Macknick, J., Wilgmosta, M., Tesfa, T., 2011. Analysis of drought impacts on electricity production in the Western and Texas interconnections of the United States, ANL/EVS/R-11/14, Argonne National Laboratory. http://energy.sandia.gov/wp-content/gallery/uploads/Drought-Analysis-Report-Final.pdf

7) Yan, E., **Demissie, Y.**, Franklin, M., Quinn, J., Allison, T., Kotamarthi, R., and Forster, I., 2010. Energy-Water Nexus: A regional scale evaluation of hydrological and economic constraints to energy resource development in the Upper Mississippi River Basin. Energy Initiative at the University of Chicago.

8) **Demissie Y.**, 2006. Data assimilation techniques to enhance numerical model prediction accuracy. University of Illinois.

PRESS RELEASE

1) WSU Insider (February 22, 2017): https://news.wsu.edu/2017/02/22/african-roots-inspire-water-research/

2) Washington State Magazine (Fall 2017): https://magazine.wsu.edu/documents/2017/08/fall-2017-tablet.pdf/

3) WSU CEE 2017 Newsletter: https://vcea.wsu.edu/documents/2017/09/newsletter-cee-2017.pdf/

RESEARCH GRANTS

No	Sponsor	Title	Budget	Start Date	End date	Fraction (Role)	Status	Other PIs/Co PIs
1	DOD SERDP	Linked Rainfall and Runoff Intensity-Duration-Frequency in the Face of Climate Change and Uncertainty	1,017,921	Feb, 2015	Feb, 2019	50% (PI)	Active	E. Yan (ANL), J. Kuiper (ANL)
2	USGS 104(B)	Frequency Analysis of Historic and Future Droughts in Yakima Basin	27,500	May, 2017	Aug, 2018	100% (PI)	Active	J. Adams (WSU) A. Hossain (WSU)
3	WSDA	Advanced Monitoring of Nutrients and Salts Seepage from Dairy Manure Lagoons	116,985	May, 2015	Aug, 2018	10% (Co-PI)	Active	P. Ndegwa (WSU, PI), B. Woodbury (USDA)

4	NSF-CBET	CAREER: Improving prediction and understanding of 21st century water cycle change: A model-data fusion approach	505,120	May, 2019	Aug, 2024	100% (PI)	Pending	
5	DOE-RGMA	Diagnosing the impacts of uncertainty propagation on the water cycle simulated by integrated Earth System Models	1,049,833	Sep, 2018	Aug, 2020	33% (Co-PI)	Pending	H. Li (MSU, PI) R. Leung (PNNL)
6	NSF-NRT	NRT: Science, engineering and social dimensions of green infrastructure for water security	2,993,932	Sep. 2018	Aug. 2025	Senior PI	Pending	B. Jan (WSU, PI) J. Padowski (WSU), and others
7	USGS 104(B)	Development and Update of Rainfall and Runoff Intensity-Duration-Frequency Curves for WA	27,500	Mar 2015	May 2016	100% (PI)	Completed	J. Adams (WSU) A. Hossain (WSU)
8	WSUTC	High Performance Computer Cluster (HPCC) for Research and Educational Uses	10,000	Mar, 2014	Mar, 2015	100% (PI)	Completed	
9	NSF HS	Improving prediction of subsurface flow and transport through exploratory data analysis and complementary modeling,	400,000	Sep, 2010	May, 2015	0% (wrote when I was a grad student)	Completed	A. Valocchi (PI, UIUC) E. Amir (UIUC)
10	UIUC Campus Research Board	Merging physically-based and data-driven models to improve prediction of groundwater systems	25,000	Sep, 2007	May, 2008	100% (PI)	Completed	
11	NSF - CBET	Forest to Farm: Biochar as the Missing Link in the Nexus of Food, Water and Energy, Innovations at the Nexus of Food, Energy and Water,	2,996,314	Jan, 2017	Dec, 2019	75% (PI)	Not Selected	B. Jessica (Heritage U), D. Joan (Heritage U), and others
12	NSF-GEO	CAREER: Managing Uncertainty in Integrated Hydrologic Models through Coupled Model Diagnosis, Parameter Estimation, and Uncertainty	423,620	May, 2017	Aug, 2022	100% (PI)	Not Selected	

		Quantification and Propagation					
13	NSF/ RED	A Project-Driven Global-Education Program to Empower Engineering and Computer Science Students	2,000,000	Aug, 2017	May, 2022	Co-PI	Not Selected	J. Iannelli (WSU, PI) and others
14	USDA-NIFA	Economical-Environmental Friendly Nutrient Export and Utilization for Sustainable Organic Agriculture	999,998	Jun 2017	May, 2020	30% (Co-PI)	Not Selected	P. Ndegwa, (WSU, PI) and others
15	USAID-PEER	Promoting environmental friendly approaches to alleviate Human Health and environmental Impact of Agro-chemicals in Lake Tana Sub-Basin, Ethiopia	2000,000	Aug, 2017	May, 2021	Co-PI	Not Selected	B. Getnet (Addis Ababa U, PI)
16	DOE-EERE	Integrated Process for the Catalytic Conversion of Biomass-Derived Lignin into Hydrocarbon Fuels and Chemicals	1,913,838	Jan, 2017	Dec, 2019	33% (Co-PI)	Not Selected	B. Yang (WSU, PI) and others
17	DOI OSMRE	Integrated Water-Soil-Vegetation Modeling to Evaluate Hydrologic Impacts of Forestry Reclamation Approach in Appalachia	200,000	Jan, 2016	Jan, 2021	50% (Co-PI)	Not Selected	T. Tesfa (PNNL, PI)
18	WSDA	Early-warning of leakage from manure lagoons to avert groundwater pollution	49,958	Feb, 2016	Jan, 2017	30% (Co-PI)	Not Selected	P. Ndegwa, (WSU, PI)
19	DOE-EM	Robotics Traineeship: Robotics Graduate Education Program for Sustainable Workforce in Environmental Cleanup, Restoration and Monitoring,	3,960,000	May, 2016	Aug, 2012	Co-PI	Not Selected	C. Mo (WSU, PI) and others
20	NSF-EAR	CAREER: Confronting Uncertainty in Integrated Earth System and Hydrologic Models	433,874	Aug, 2015	Aug, 2020	100% (PI)	Not Selected	
21	NSF-OCE	EaSM-3: Enhancing Earth System Models to Incorporate and Inform	2,999,252	Jan, 2015	Dec, 2019	10% (Co-PI)	Not Selected	J. Adams (WSU, PI and others

		Natural and Agricultural Resource Management Activities					
22	WSU-SEED Grant	Optimizing Nutrient Management to Improve Water Quality in the Lower Yakima Basin	29,579	May, 2014	Aug, 2015	100% (PI)	Not Selected	
23	NSF REU	Multi-disciplines and Multi-scales Modeling,	298,500	May, 2014	Aug, 2016	Co-PI	Not Selected	M. Osman (PI)
24	NASA-ROSE	A complementary data-mining framework for using remote and in-situ data to improve hydrologic models over managed river systems	1,966,446	Oct, 2014	Sep, 2018	30% (PI)	Not Selected	J. Adams (WSU) and other
25	USGS 104(B)	Predicting Impacts of Biofuel Production on Water Resources under Future Climate Change and Modeling Uncertainty: A Case Study for Yakima River Basin	27,500	Mar, 2013	Feb, 2014	100% (PI)	Not Selected	J. Adams (WSU) A. Hossain (WSU)

INVITED PRESENTATIONS

1) **Demissie, Y.** 2017. Characterizing the changes in extreme storm and flood risk at military installations across the United States, SERDP/ESTCP Symposium, Washington DC, Nov. 28 – 30.
2) **Demissie, Y.,** 2016, Statistics in Practice for Analysis of Climate Impacts, Adaptations, and Mitigations – Panel Session, 7th Annual Northwest Climate Conference, Stevenson, WA, Nov. 14-16.
3) **Demissie, Y.** and E. Moges, 2015, Potential use of diagnostic and dynamic coupling of models for hydro-biochemistry, International Conference on Hydro-Biogeochemical Processes: Mechanisms, Coupling, and Impact, Wuhan, China, Oct. 27-31.
4) **Demissie, Y.** and E. Yan, 2015, Water quality under increased biofuel production and future climate change and uncertainty, AGU Fall Meeting, San Francisco, CA, Dec. 14-15.
5) **Demissie, Y.,** 2013. The Water Footprint of Bioenergy: A watershed assessment for Mississippi River basins, Washington State University, Water Resources/Environmental Graduate Seminar, Washington, Oct. 07.
6) **Demissie, Y.,** 2013. Modeling Hydrology under Uncertain and Limited Data, Pacific Northwest National Laboratory, Washington, April 30.
7) **Demissie, Y.,** 2012. Effect of Biofuel Productions on Water Resources and Quality, Washington State University Tri-city, Graduating Seminar, Washington, September 05.
8) **Demissie, Y.** 2009. Dealing with groundwater model uncertainty beyond parameters, Illinois Water Survey, Champaign, Illinois, June 29.
9) **Demissie, Y.,** 2009. Integrating a calibrated groundwater flow model with error correcting data-driven models to improve predictions and reduce uncertainty, Department of Hydrology & Water Resources, University of Arizona, Arizona, April 20.
10) **Demissie, Y.,** Valocchi, A., 2008. Merging physically-based and data-driven models to improve prediction of groundwater systems, CIMA Research Foundation, Savona, Italy, Sep 19.

11) **Demissie, Y.**, 2007. Bias-corrected prediction uncertainty analysis for groundwater flow models, Hydrosystems Seminar, University of Illinois at Urbana Champaign, Nov. 16.
12) **Demissie, Y.**, 2007. Information theory and data-mining techniques application to groundwater model, Hydrosystems Seminar, University of Illinois at Urbana Champaign, Feb. 09.
13) **Demissie, Y.**, Valocchi, A., 2007. Data-driven models to further improve calibrated groundwater model predictions, Delft, Netherlands, June 12.

CONFERENCE PRESENTATIONS AND ABSTRACTS

1) **Demissie, Y**., MR. Mortuza, E. Yan, A. Jared, 2018. Drainage system and flooding risk under nonstationary climate and storm conditions, SERDP/ESTCP Symposium, Washington DC, Nov. 28 – 30.
2) Yan, E., A. Jared, **Y. Demissie,** E. Moges, and MR. Mortuza, 2018. Development of next-generation intensity-duration-frequency curves under changing climate. AGU Fall Meeting, Washington DC, Dec. 10 – 14.
3) Gebremichael, M., **Y. Demissie**, 2018. Urban Storm Water Management and Flooding under Extreme Precipitation Events in Seattle. AGU Fall Meeting, Washington DC, Dec. 10 – 14.
4) MR. Mortuza, Y. Demissie, 2018. New Drought Index to Characterize Droughts Within a Snowmelt and Reservoirs Dominated Watershed. AGU Fall Meeting, Washington DC, Dec. 10 – 14.
5) **Demissie, Y**., MR. Mortuza, E. Yan, A. Jared, 2018. Current IDF Values and Drainage Designs in a Non-stationary Climate, AGU Fall Meeting, Washington DC, Dec. 10 – 14.
6) Jared, A., E. Yan, **Y. Demissie**, MR. Mortuza, E. Moges, 2018. Development of New Intensity-Duration-Frequency Curves for a Changing Climate. AGU Fall Meeting, Washington DC, Dec. 10 – 14.
7) Yigzaw, W., H. Li, LR. Leung, X. Fang, N. Voisin, M. Hejazi, **Y. Demissie**, 2018. Reservoir Thermal Stratification Model Development and Validation over the Continental US. AGU Fall Meeting, Washington DC, Dec. 10 – 14.
8) **Demissie, Y.** M.R. Mortuza, H. Li, 2017. Comprehensive Characterization of Droughts to Assess the Effectiveness of a Basin-Wide Integrated Water Management in the Yakima River Basin, AGU Fall Meeting, LA, Dec. 11-15.
9) Mortuza, M.R., E. Moges, **Y. Demissie**, E. Yan, H-Y. Li, 2017. The Complex Relationship between Heavy Storms and Floods: Implication on Stormwater Drainage design and Management, AGU Fall Meeting, LA, Dec. 11-15.
10) Abeshu, G.W., H-Y. Li, E.N.J. Brookshire, X. Chen, J. Tang, and **Y. Demissie**, 2017. Catchment-scale water-carbon coupling across the contiguous United States: A data-based analysis, WaterSmart Innovation Conference, Las Vegas, NV, Oct. 4-6
11) Abeshu, G., H-Y Li, W. Yigzaw, M. Hejazi, J. Tang, and **Y. Demissie**, 2017. Reservoir-induced Alterations in Flood Seasonality: Patterns, Processes, and Implications, AGU Fall Meeting, LA, Dec. 11-15.
12) **Demissie, Y.** M.R. Mortuza, E. Moges, and E. Yan, 2017. Vulnerability and Resiliency of Storm water Infrastructures in US Military Installations for Changing Climate, World Environmental & Water Resources Congress, Sacramento, CA, May 21–25.
13) Moges, E., **Y. Demissie,** E. Yan, and A. Jared, 2017. Bayesian Augmented L-moment Approach for Regional Frequency Analysis, World Environmental & Water Resources Congress, Sacramento, CA, May 21–25.
14) **Demissie, Y.** M.R. Mortuza, and E. Yan, 2016. Readiness of Military Installations for Increasing Heavy Storms, AGU Fall Meeting, San Francisco, CA, Dec. 12-16.
15) Mortuza, M.R. and **Y. Demissie**, and H. Li, 2016. Regional Bivariate Drought Risk in Bangladesh, AGU Fall Meeting, San Francisco, CA, December 12-16.

16) Wan, W., H. Li, A. Mishra; H. Mohamad, L.R. Leung, and **Y. Demissie**, 2016. Impacts of Climate and Human-induced Changes on Hydrological Drought in the United States: a modeling study, AGU Fall Meeting, San Francisco, CA, December 12-16.

17) Wang, W., Li , H., Ruby , L.L., Blöschl, ., **Demissie, Y**., & Lu, H. (2016). Reservoirs' Nonlinear Filtering Effects on Flood Frequency Curves. American Geophysical Union AGU Fall Meeting, San Francisco, CA, December 12-16.

18) **Demissie, Y.** and E. Moges, 2015, Potential use of diagnostic and dynamic coupling of models for hydro-biochemistry, International Conference on Hydro-Biogeochemical Processes: Mechanisms, Coupling, and Impact, Wuhan, China, October 27-31.

19) **Demissie, Y.** and M.R. Mortuza, 2015, Updated and Forward Looking Rainfall and Runoff Intensity-Duration-Frequency Curves for Washington State, 6th Annual Pacific Northwest Climate Science Conference, Coeur d'Alene, ID, November 3-5, 2015.

20) **Demissie, Y.** and E. Yan, 2015, Water quality under increased biofuel production and future climate change and uncertainty, AGU Fall Meeting, San Francisco, CA, December 14-15.

21) Mortuza, M.R. and **Y. Demissie**, 2015, A multivariate and probabilistic assessment of drought in the Pacific Northwest under historical and future climate change, AGU Fall Meeting, San Francisco, CA, December 14-15.

22) **Demissie, Y.** and M.R. Mortuza, 2015, Runoff Intensity-Duration-Frequency Curves for Washington State considering the change and uncertainty of observed and anticipated extreme rainfall and snow events, AGU Fall Meeting, San Francisco, CA, December 14-15.

23) Mortuza, M.R. and **Y. Demissie**, 2015, A multivariate drought assessment of the Yakima River Basin under historical and future climate change, 6th Annual Pacific Northwest Climate Science Conference, Coeur d'Alene, ID, November 3-5, 2015.

24) Mortuza, M.R. and **Y. Demissie**, 2014, Multivariate probabilistic assessment of meteorological drought under climate change using copula based regional frequency approach, 5th Annual Pacific Northwest Climate Science Conference, Seattle, WA, September 9-10.

25) Moges, E., **Y. Demissie**, and H. Li, 2014, Hierarchical mixture of experts and diagnostic modeling approach to reduce hydrologic model structural uncertainty, AGU Fall Meeting, San Francisco, CA, December 15-19.

26) Mortuza, M.R., **Y. Demissie**, and H. Li, 2014, Regional frequency and uncertainty analysis of extreme precipitation in Bangladesh, AGU Fall Meeting, San Francisco, CA, December 15-19.

27) Li, S., H. Li, S. Ye, L. R. Leung, L. Xiong, and **Y. Demissie**, 2014, Relating Variations in Streamflow to Variations in Climate in Catchments across the Contiguous United States, AGU Fall Meeting, San Francisco, CA, December 15-19.

28) Senay, G., N.M. Velpuri, S. Bohms, **Y. Demissie**, 2014, and M. Gebremichael, 2014, New insights into hydrologic sources and sinks in the Nile Basin: A multi-source satellite data analysis, AGU Fall Meeting, San Francisco, CA, December 15-19.

29) Lin, J., **Y. Demissie**, E. Yan, J. Bohlke, and N. Sturchio, 2014, Nitrate Sources and Transport in the Upper Illinois River Basin Evaluated with Stable Isotope Ratios and SWAT Modeling, AGU Fall Meeting, San Francisco, CA, December 15-19.

30) Moges, E., H.Li, **Y. Demissie**, and L. R. Leung,, 2014, Anthropogenic influence on stream temperature dynamics, Bioearth Meeting, Pullman, WA, October 6-7.

31) Mortuza, M.R. and **Y. Demissie**, 2014, Copula Based Bivariate Drought Risk Assessment in Bangladesh, Bioearth Meeting, Pullman, WA, October 6-7.

32) **Demissie, Y**., 2013. Water resources under future scenarios of climate change and biofuel development: A case study for Yakima River basin, AUG 2013 Fall Meeting, San Francisco, CA, December 9-13.

33) Yan, E., **Demissie, Y**., Wigmosta, M., Tidewell, V., & King, C., 2013. Potential drought impacts on electricity generation in Texas. ASME 2013 Power Conference, Boston, MA, July 29 - August 1.

34) Yan, E., **Demissie, Y**., 2013. Potential Future Drought Impacts on Water Availability in Texas-Gulf Basin. GSA 2013 Annual Meeting, Denver, CO, October 27 – 30.

35) **Demissie, Y**., Yan, E., and Wu, M., 2012. Optimizing biofuel feedstock production based on impacts on regional water resources and quality, AUG 2012 Fall Meeting, San Francisco, CA, Dec. 3-7.

36) **Demissie, Y**., Yan, E., and Wu, M., 2012. Effects of Biofuel production in the Ohio River Basin's water resources and quality, In Proceedings of the 6th International Conference on Environmental Science and Technology, Houston, TX.

37) **Demissie, Y**., Valocchi, A., Cai, X., and Brozovic, N., 2012. Inverse modeling for estimating parameters of groundwater models with uncertain forcing data, Computational Methods in Water Resources XIX, Champaign, IL, June 17-21.

38) Yoon, H., **Demissie, Y**., McKenna, S., Valocchi, A., and Werth, C., 2012. Data worth and optimal sampling analyses to reduce model prediction uncertainty for groundwater transport, Computational Methods in Water Resources XIX, Champaign, IL, June 17-21.

39) **Demissie, Y.,** Yan, E., and Wu, M., 2012. Effects of Biofuel production in the Ohio River Basin's water resources and quality, 6th International Conference on Environmental Science and Technology, Houston, TX, June 25-29.

40) **Demissie, Y**., Yan, E., and Wu, M., 2012. Assessment of hydrologic system under projected future large-scale biomass production and climate change in Upper Mississippi River Basin, 2012 NGWA Ground Water Summit: Innovate and Integrate, Garden Grove, CA, May 6-10.

41) **Demissie, Y**., Yan, E., and Wu, M., 2012. Large-scale watershed simulation for the Ohio River Basin under current and historical biofuel production, 2012 International SWAT Conference and Workshops, New Delhi, India, July 12-20.

42) Harto, C., **Demissie, Y.**, Yan, E., and Tidwell, V., 2012. Risk in Electricity generation from drought in the western United States, Energy Utility & Environment Conference (EUEC2012), Phoenix, AZ, Jan 30-Feb 01.

43) **Demissie, Y.,** Yan, E., and Wu, M., 2011. Assessment of the projected one billion ton biomass for cellulosic biofuel production and its potential implications on regional water quality and availability, AUG 2011 Fall Meeting, San Francisco, CA, December 5-9.

44) Wu, M., Chiu, Y., and **Demissie, Y.,** 2011. Quantifying life-cycle water footprint of future biofuels from a regional perspective, Life Cycle Assessment XI, October 4-6.

45) **Demissie, Y.,** Zhang Z., Yan, E., and Wu, M., 2011. Watershed modeling to study the water footprint of bioenergy in the Upper Mississippi River Basin, World Environmental and Water Resources Congress, Palm Spring, CA, May 22-26.

46) Valocchi, A., **Demissie, Y.,** Xu, T. 2011. Improving prediction of regional-scale groundwater flow models through exploratory data analysis and complementary modeling, MODFLOW and More 2011, June 5-8.

47) Wu, M., **Demissie, Y.,** and Yan, E., 2011. Multi-generation biofuel productions and their implications in land use, nutrient, flow, and soil runoff, World Environmental and Water Resources Congress, Palm Spring, CA, May 22-26.

48) Wu, M., **Demissie, Y.,** and Yan, E., 2011. Understanding the impact of feedstock production options on water resource and water quality, 33rd Symposium of Biotechnology for Fuels and Chemicals, Seattle, Washington, May 2-5.

49) Bowen, E., Martin, P., Schuble, T., Yan, E., and **Demissie, Y.,** 2010. Scaling up food production in the Upper Mississippi river basin: modeling impacts on water quality and nutrient cycling, AGU 2010 Fall Meeting, San Francisco, CA, December 13-17.

50) **Demissie, Y.,** Yan, E., and Wu, M., 2010. A hydrologic model to quantify large scale biofuel production impact on Upper Mississippi River basin water quality, AGU 2010 Fall Meeting, San Francisco, CA, December 13-17.

51) Franklin, M., Yan, E., and **Demissie, Y.,** 2010. Accounting for downscaling and model uncertainties in examining the impacts of climate change on hydrological systems, AGU 2010 Fall Meeting, San Francisco, CA, December 13-17.

52) Wu, M., **Demissie, Y.**, and Yan, E., 2010. Impact of various biofuel feedstock production scenarios on water quality in the Upper Mississippi River basin, AGU 2010 Fall Meeting, San Francisco, CA, December 13-17.

53) **Demissie, Y.**, Wu, M., and Yan, E., 2010. Water quality modeling for increased biofuel production in Upper Mississippi River basin, Bioenergy for a Sustainable Future, Biomass 2010 conference, Arlington, Virginia, March 30-31.

54) Valocchi, A., **Demissie, Y.**, 2010. Applications of a Complimentary modeling framework to improve regional-scale groundwater prediction, AGU 2010 Fall Meeting, San Francisco, CA, December 13-17.

55) **Demissie, Y.**, and Yan, E., 2010. Assessing future sustainability of watershed: water, biofuel, and climate change, 2010 GSA Denver Annual Meeting, Oct 31– Nov 3.

56) Wu, M., **Demissie, Y.**, and Yan, E., 2010. Analysis of biofuel production scenarios and their regional water quality impact at the Upper Mississippi River basin, GWPC Water/Energy Symposium 2010, September 26-2.

57) Zhang, Z., Wu, M., Yan, E., Johnson, B., **Demissie, Y.**, 2010. Develop the SWAT model to quantify biofuel production related impacts on water quality in the Upper Mississippi River basin, ASABE 2010, Pittsburgh, Pennsylvania, June 20 – 23.

58) Valocchi, A., **Demissie, Y.**, Cai, X., Brozovic, N., 2009. Use of groundwater models for resource assessment of irrigation pumping impacts in semi-arid watersheds: impact of model input and parameter uncertainty, Ground Water Summit: The Science and Engineering Conference, Tucson, Arizona, April 19-23.

59) Brozovic, N., Kuwayama, Y., **Demissie, Y.**, Valocchi, A., Cai, X., 2009. Coupling hydrologic and economic models to reduce parameter and policy uncertainty in resource assessment of irrigation pumping impacts, Coupling Humans and Complex Ecological Landscapes, Snowbird, Utah, April 12-16.

60) Demissie, Y, Valocchi, A., Cai, X., 2008. Impact of model input uncertainty on estimated parameters and results of groundwater models, AGU 2008 Fall Meeting, San Francisco, CA, December 15-19.

61) Valocchi, A. and **Demissie, Y.**, 2008. A complementary modeling framework to quantify and reduce groundwater flow model uncertainty, AGU 2008 Fall Meeting, San Francisco, CA, December 15-19.

62) Valocchi, A. and **Demissie, Y.**, 2008. Dealing with local bias in calibrated groundwater flow models: A case study of Republican River basin, MODFLOW and More 2008: Ground Water and Public Policy, Golden, CO. May 21-24.

63) **Demissie, Y.**, Valocchi, A., Minsker, and B., Bailey, B., 2007. Bias-corrected groundwater model prediction uncertainty analysis, International Conference on ModelCARE 2007: Calibration and Reliability in Groundwater Modeling, Credibility of Modeling, Copenhagen, Denmark, September 9-13.

64) **Demissie, Y.**, Valocchi, A., Minsker, B., and Bailey, B., 2007. Prediction uncertainty analyses for the combined physically-based and data-driven models, AGU 2007 Fall Meeting, San Francisco, CA, December 10-14.

65) **Demissie, Y.**, Valocchi, A., Minsker, B., and Bailey, B., 2006. Data-driven modeling approach to enhance MODFLOW head predictions, MODFLOW and More 2006: Managing Ground-Water Systems, Golden, CO, May 22-24.

TEACHING AND MENTORING

Washington State University, Civil and Environmental Engineering Department, Richland, WA.

Spring 2018	CE 460 Engineering Hydrology (5.0/5.0)
	CE 351 Water Resource Engineering (4.8/5.0)
	CE 580/600 Graduate Seminar (5.0/5.0)
Fall 2017	CE 451/551 Open Channel Flow (5.0/5.0)
	CE 580/600 Graduate Seminar (4.5/5.0)

Spring 2017	CE 351 Water Resource Engineering (5.0/5.0)
	CE 543 Stochastic Hydrology* (4.7/5.0)
	CE 580/600 Graduate Seminar (not available)
Fall 2016	CE 302 Introduction to Surveying (4.8/5.0)
	CE 580/600 Graduate Seminar
Spring 2016	CE 351 Water Resource Engineering (4.9/5.0)
	CE 460/560 Advance Hydrology (5.0/5.0)
	CE 580/600 Graduate Seminar
Fall 2015	CE 302 Introduction to Surveying (4.3/5.0)
	CE 580 Graduate Seminar
Spring 2015	CE 351 Water Resource Engineering (4.3/5.0)
	CE 460/560 Advance Hydrology (5.0/5.0)
	CE 580 Graduate Seminar
Fall 2014	CE 302 Introduction to Surveying (4.5/5.0)
	CE 580/600 Graduate Seminar
Spring 2014	CE 351 Water Resource Engineering* (3.5/5.0)
	CE 543 Stochastic Hydrology* (4.9/5.0)
	CE 580 Graduate Seminar
Fall 2013	CE 302 Introduction to Surveying (4.8/5.0)
	CE 580 Graduate Seminar
Spring 2013	CE 351 Water Resource Engineering* (3.51/5.0)
	CE 302 Introduction to Surveying (4.3/5.0)
	CE 580 Graduate Seminar (Evaluations: not available)

The courses involved teaching through interactive video stream system for the students across the different WSU campuses.

- Developed a new course in Stochastic Hydrology.
- Developed and coordinated a new joint engineering and science seminar (JESS) series: Fall 2013, Spring 2014, Fall 2014
- Mentor 4-6 undergraduate students per semester on carrier options, internships and student employment opportunities, elective course choice, and graduate schools.
- Coordinator for Civil and Environmental Engineering undergraduate and graduate program at Washington State University Tri-cites

***Argonne National Laboratory**, Argonne, IL. Summer 2010, 2011, and 2012*

- Supervised and mentored 2-3 undergraduate students each year from Argonne National Laboratory Educational Programs (DEP) to work on hydrologic and climate models.

***University of Illinois at Urbana-Champaign**, Urbana, IL. Fall 2007 and 2008*

- Assisted (including lecturing, designing and supervising term projects) ground water modeling courses (CE 557 and CEE 457) for graduate and undergraduate students.

***Hawassa University**, Ethiopia 1998 – 1999*

- Taught Fluid Mechanics (Fall 1998), Hydrology (Spring 1999), and Engineering Dynamics (Spring 1999).

SUPERVISE AND COMMITTEE MEMBER

Current Students (Primary Advisor)
1) Md Rubayet Mortuza
   - *Degree:* PhD in Civil and Environmental Engineering, expected graduation in 2018.

- *Dissertation:* Regional frequency and Bayesian analysis for characterizing drought and extreme precipitation under changing climate.
2) Merhawi Gebremichael
   - *Degree:* PhD in Civil and Environmental Engineering, expected graduation in 2019.
   - *Dissertation*: Uses of proxy data for extreme precipitation analysis and associated flooding risk on stormwater drainages
3) Kenny Nyirenda.
   - *Degree:* PhD in Civil and Environmental Engineering, expected graduation in 2020.
   - *Dissertation:* Water quality related to Mining
4) Yasir Abduljallel.
   - *Degree*: PhD Civil and Environmental Engineering, expected graduation in 2019
   - *Dissertation*: Urban hydrology and flooding in changing climate
5) Emmanuel Rendon Aguilar
   - *Degree:* PhD in Civil and Environmental Engineering, expected graduation in 2022.
   - *Dissertation:* TBD.
6) Gao L Dai
   - *Degree*: MSc in Environmental Engineering, expected graduation in 2018
   - *Thesis:* None-thesis.
7) Rakib Siddique
   - *Degree*: MSc in Environmental Engineering, expected graduation in 2019
   - *Thesis:* Identifying flood causing mechanisms in major US Cities.
8) Duo Dong
   - *Degree*: MSc in Environmental Engineering, expected graduation in 2019
   - *Thesis:* TBD.
9) James Reyes
   - *Degree*: BSc in Environmental Engineering, expected graduation in 2019

Past Students (Primary Advisor)

10) Edom Moges,
    - *Degree:* PhD in Civil and Environmental Engineering, expected graduation in 2018.
    - *Dissertation:* Uncertainty propagation through integrated earth system models.
    - *Current position:* Postdoc at UC Berkeley
11) Joseph Morad
    - *Degree*: MSc in Environmental Engineering, Graduated in May 2018
    - *Thesis:* Assessing the effectiveness the pump and treat cleanup at Hanford waste-disposal site.
    - *Current position:* Staff Scientist at PNNL
12) Md Rubayet Mortuza
    - *Degree*: MSc in Civil and Environmental Engineering, Graduated in December 2014
    - *Thesis:* Copula based regional frequency analyses for drought and extreme precipitation events (*Won the 2016/2017 Ernest O. Holland scholarship for best Thesis*)
    - *Current position:* PhD student at Washington State University
13) Denis Mehinagic
    - *Degree*: MSc in Environmental Engineering, Graduated in December 2015
    - *Thesis:* In vitro metabolism of benzo[a]pyrene-7,8-dihydrodiol and dibenzo[def,p]chrysene-11,12 diol in rodent and human hepatic microsomes.
    - *Current position:* Environmental Engineer at Washington State Department of Health
14) Inna Berezovskiy (MSc, Graduated in May 2016), Department of Civil and Environmental Engineering
    - *Degree*: MSc in Civil and Environmental Engineering, Graduated in December 2014

- Thesis: Air monitoring sampling and modeling techniques evaluation for radionuclide air emissions at Hanford Site.
- *Current position:* Patriot Technical Consultants

15) Jose Manuel Chavez
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2018

16) Alex Guzman
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2018

17) Salvador Robles
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2018

18) Emmanuel Rendon Aguilar
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2018

19) Kaleb Mapstead
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2016

20) Francisco Martinez
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2016

21) Abram Valdovinos
- *Degree*: Undergraduate Degree-Seeking - Civil Engineering (Spring 2016)

22) Heather Pina
- *Degree*: BSc in Civil and Environmental Engineering, Graduated May 2015

23) Jeff Bonnett
- *Degree*: BSc in Civil and Environmental Engineering, Graduated in May 2014

Committee Member

1) Saranah Selmi (PhD, Advisor: Dr. Voulgarakis), Department of Mathematics.
2) Rick Cameron (PhD, Advisor: Dr. Felsot), Department of Environmental Science
3) Towsif Bhuiyan (PhD, Advisor: Dr. Hossain), Department of Environmental Science
4) Nazmul Hasan (PhD, Advisor: Dr. Hossain), Department of Civil and Environmental Engineering
5) Sean Sexton (MS, Advisor: Dr. Felsot), Department of Environmental Science.
6) Sayeda Kamrun Nahar (MS, Advisor: Dr. Hossain), Department of Civil and Environmental Engineering.
7) Sayeda Kamrun Nahar (MS, Advisor: Dr. Hossain), Department of Civil and Environmental Engineering.
8) Erik Hawley (MS, Graduated in April 2014), Department of Civil and Environmental Engineering.
9) Lilyann Bauder (MS, Graduated in May 2014), Department of Civil and Environmental Engineering.
10) Erfanul Huq (MS, Graduated in August 2014), Department of Civil and Environmental Engineering.
11) Ross Wickham (MS, Graduated in May 2015), Department of Civil and Environmental Engineering,
12) Sam Cartmell (MS, Graduated in December 2014), Department of Civil and Environmental Engineering.

PROFESSIONAL SERVICES

Journal Reviewer
- Journal of Hydrology
- Water Resources Research
- Advances in Water Resources
- Environmental Science and Technology
- Groundwater
- Stochastic Environmental Research and Risk Assessment
- Journal of Hydrometeorology

- Journal of Water Resources Planning and Management
- Journal of Geophysical Research
- Global Change Biology Bioenergy
- Biomass and Bioenergy
- Theoretical and Applied Climatology

Conference and Workshop Organizer
- Session organizer and chair at AGU Fall 2018 Meeting, Dec. 10-14, 2018, Washington, DC.
- Session organizer and chair at AGU Fall 2017 Meeting, Dec. 11-15, 2017, New Orleans, LA
- Co-organizer international workshop on "Hydro-Biogeochemical Processes: Mechanisms, Coupling and Impact", Oct. 27-29, 2015, Wuhan China

Grant Reviewer and Panelist
- External peer reviewer for EPA's Biofuels and Environment: Second Triennial Report to Congress (Fall 2017)
- NSF Hydrologic Sciences (Fall 2016)
- NSF Graduate Research Fellowships Program (GRFP) (Fall 2017)
- USGS 104g Competitive Research Grants (Spring 2015)
- NSF CRDF Global Fund (Spring 2015)
- CEREO Seed Grant (Fall 2014, 2015)
- WSUTC Chancellor's Seed Grant (Spring 2015)

University committees (University, College, Department, and Campus)
- *University:* Drive to 25- Doctorates Granted Action Team (since Fall 2017)
- *University:* University Academic Integrity Hearing Board (since Fall 2016)
- *University:* 120-Day Study Committee for Faculty and Student Engagement/Productivity (Fall 2014).
- *University:* Reviewer for Undergraduate Research (UGR) Awards (Fall 2017)
- *College:* Search Committee for Voiland College of Engineering and Architecture Dean (Fall 2016)
- *Department:* CEE Graduate Program Committee (2014-2018)
- *Department:* CEE Strategic Plan, Intuitional Effectiveness: Diversity, Integrity, and Openness (Fall 2014)
- *Campus:* Research Council Committee at WSUTC (since Fall 2016)
- *Campus:* Student Retention Committee at WSUTC (since 2015)
- *Campus:* Student Success Council Committee at WSUTC (2013-2015)
- *Campus:* Safety Committee at WSUTC (since Spring 2016)
- *Campus:* Hanford Advisory Board (since Fall 2015)

Leadership
- Coordinator for CEE graduate program at WSUTC (Spring 2014 – Summer 2018)
- Tri-Cities Coordinator for CEE (since Fall 2017)
- State of Washington Water Research Center representative at WSUTC (since Fall 2017)
- President of Ethiopian Geophysical Union – International (ETGUI) (since 2010).
- Executive committee for Center for Environmental Research, Education, and Outreach (CEREO) at Washington State University (since 2013).
- Executive member of Retention Team at WSUTC (since Fall 2015)
- Hanford Advisory Board (since Fall 2015)

PROFESSIONAL AFFILIATIONS

1) Ethiopian Geophysical Union- International (ETGUI) – President (2010-2017)

2) Center for Environmental Research, Education, and Outreach (CEREO) – Executive committee member since 2013
3) American Geophysical Union – Member since 2006
4) American Society of Civil Engineers (ASCE) – Member since 2007
5) American Water Resources Association (AWRA) – Member since 2007
6) National ground water associations (NGWA) – Member since 2006
7) Geological Society of America (GSA) – Member since 2008