

GEORGE H. ALLEN

Department of Geography
Texas A&M University
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APPOINTMENTS

- Assistant Professor**, Texas A&M University 2018-present
Department of Geography
Water Management & Hydrological Science Program
- Postdoctoral Researcher**, California Institute of Technology 2017-18
Jet Propulsion Laboratory, Terrestrial Hydrology Group
Supervisor: Cedric H. David; Group Supervisor: James S. Famiglietti

EDUCATION

- Ph.D.** University of North Carolina at Chapel Hill, Geological Sciences 2017
Dissertation: Global Quantification and Analysis of Fluvial
Geomorphology and Hydrology Using Satellite Remote Sensing
Committee: Tamlin M. Pavelsky (chair), Lawrence E. Band,
Jonathan M. Lees, Laura J. Moore, Karl W. Wegmann
- M.S.** University of North Carolina at Chapel Hill, Geological Sciences 2012
Thesis: Lithologic and Tectonic Controls on Bedrock Channel Form at the
Himalayan Front
Committee: Jason B. Barnes (chair), Eric Kirby, Tamlin M. Pavelsky
- B.S.** University of California at Davis, Geology 2008
Emphasis: Quantitative Geology/Geophysics
Advisor: David A. Osleger

HONORS, AWARDS, AND FELLOWSHIPS

- Paul C. Hardin Dissertation Year Fellowship 2016-17
NC Space Grant Graduate Research Fellowship 2016
Inductee, UNC Royster Society of Fellows 2016
UNC Future Faculty Fellowship 2015
G. Herbert Stout Award for Innovative Student Papers at 2015 NC GIS Conference 2015
UNC Geological Sciences Ingram Graduate Research Award 2015
Best Oral Presentation Award at the UNC Anadarko Symposium 2015
Best Physical Sciences Talk at the UNC Academic Research Conference 2015
UNC GIS Day Competition, Innovative Use of GIS Award 2014

REFEREED JOURNAL ARTICLES

Google Scholar Profile: <https://scholar.google.com/citations?user=WVQjxmIAAAAJ>

- Borges, A.B., Darchambeau, F., Lambert, T., Morana, C., **Allen, G.H.**, Tambwe, E., Sembaito, A.T., Mambo T., Wabakhangazi J.N., Descy, J.P., Teodoru, C.R., Bouillon, S., (accepted), Spatial and temporal variations of dissolved greenhouse gases (CO₂, CH₄, N₂O) in the Congo River network. *Biogeochemistry*.
- Barefoot, E.A., Pavelsky, T.M., **Allen, G.H.**, Zimmer, M., McGlynn, B., (2019), Temporally Variable Stream Width and Surface Area Distributions in a Headwater Catchment. *Water Resources Research*. <https://doi.org/10.1029/2018WR023877>
- Lin, P., Pan, M., Beck, H., Yang, Y., Yamazaki, D., Frasson, R., David, C.H., Durand, M., Pavelsky, T.M., **Allen, G.H.**, Gleason, C., Wood, E., (2019), Global reconstruction of naturalized river flows at 2.94 million reaches. *Water Resources Research*. <https://doi.org/10.1029/2019WR025287>
- Yang, X., Pavelsky, T.M., **Allen, G.H.**, Donchyts, G., (2019), RivWidthCloud: Automated Google Earth Engine algorithm for river width extraction from remotely sensed imagery. *IEEE Geoscience and Remote Sensing Letters*. <https://doi.org/10.1109/LGRS.2019.2920225>
- Yamazaki D., Ikeshima, D., Sosa, J., Bates P.D., **Allen, G.H.**, Pavelsky, T.M., (2019), MERIT Hydro: A high-resolution global hydrography map based on latest topography datasets. *Water Resources Research*. <https://doi.org/10.1029/2019WR024873>
- Frasson, R.P.M., Pavelsky, T.M., Fonstad, M., Durand, M.T., **Allen, G.H.**, Schumann, G., Lion, C., Beighley, R.E., Yang, X., (2019), Global relationships between river width, slope, catchment area, meander wavelength, sinuosity, and discharge. *Geophysical Research Letters*. <https://doi.org/10.1029/2019GL082027>
- Shen, X., Anagnostou, E.N., **Allen, G.H.**, Brakenridge, R., Kettner, A., (2019), Near-Real-Time Non-obstructed Flood Inundation Mapping using Synthetic Aperture Radar. *Remote Sensing of the Environment*. <https://doi.org/10.1016/j.rse.2018.11.008>
- Pitcher, L.P., Pavelsky, T.M., Smith, L.C., Moller, D.K., Altenau, E.H., **Allen, G.H.**, Lion, C., Butman, D., Cooley, S.W., Fayne, J., Bertram, M., (2019), AirSWOT InSAR mapping of surface water elevations and hydraulic gradients across the Yukon Flats Basin, Alaska. *Water Resources Research*. <https://doi.org/10.1029/2018WR023274>
- Allen, G.H.**, Pavelsky, T.M., (2018), Global extent of rivers and streams. *Science*. <http://doi.org/10.1126/science.aat0636> (cover article)
- Allen, G.H.**, David, C.H., Andreadis, K.M., Hossain, F., Famiglietti, J.S., (2018), Global estimates of river flow wave travel times and implications for low-latency satellite data. *Geophysical Research Letters*. <http://doi.org/10.1029/2018GL077914>
- Allen, G.H.**, Pavelsky, T.M., Barefoot, E.A., Lamb, M.P., Butman, D., Tashie, A., Gleason, C.J., (2018), Similarity of stream width distributions across headwater systems. *Nature Communications*. <http://doi.org/10.1038/s41467-018-02991-w>
- Altenau, E., Pavelsky, T.M., Moller, D., Lion, C., Pitcher, L., **Allen, G.H.**, Bates, P., Calmant, S., Durand, M., Smith, L., (2017), AirSWOT measurements of river water surface elevation and slope: Tanana River, AK. *Geophysical Research Letters*. <http://doi.org/10.1002/2016GL071577>

- Yoon, Y., Beighley, R.E., Lee, H., Pavelsky, T.M., **Allen, G.H.**, (2015), Estimating Flood Discharges in Reservoir-Regulated River Basins by Integrating Synthetic SWOT Satellite Observations and Hydrologic Modeling. *Journal of Hydrologic Engineering*. [http://doi.org/10.1061/\(ASCE\)HE.1943-5584.0001320](http://doi.org/10.1061/(ASCE)HE.1943-5584.0001320)
- Allen, G.H.**, Pavelsky, T.M., (2015), Patterns of river width and surface area newly revealed by the satellite-derived North American River Width (NARWidth) data set. *Geophysical Research Letters*. <http://doi.org/10.1002/2014GL062764>
- Pavelsky, T.M., Durand, M.T., Andreadis, K.M., Beighley, R.E., Paiva, R.C.D., **Allen, G.H.**, Miller, Z.F., (2014), Assessing the Potential Global Impact of SWOT River Observations. *Journal of Hydrology*. <http://doi.org/10.1016/j.jhydrol.2014.08.044>
- Miller, Z.F., Pavelsky, T.M., and Allen G.H., (2014), Quantifying river form variations in the Mississippi Basin using remotely sensed imagery. *Hydrology and Earth System Sciences*. <http://doi.org/10.5194/hess-18-4883-2014>
- Allen, G.H.**, Barnes, J.B., Pavelsky, T.M., Kirby, E., (2013), Lithologic and tectonic controls on bedrock channel form at the northwest Himalayan front. *Journal of Geophysical Research Earth Surface*. <http://doi.org/10.1002/jgrf.20113>

BOOK CHAPTERS

- Pavelsky, T.M., **Allen, G.H.**, Miller, Z.F., (2014), Spatial Patterns of River Width in the Yukon River Basin. Lakshmi, V., Alsdorf, D., Anderson, M., Biancamaria, S., Cosh, M., Entin J., Huffman, G., Kustas, W., van Oevelen P., Painter T., Parajka, J., Rodell, M., Rüdiger, C. (Eds.), *Remote Sensing of the Terrestrial Water Cycle*. (pp. 131-141). American Geophysical Union (AGU). <http://doi.org/10.1002/9781118872086>

MANUSCRIPTS IN REVIEW

- Yang, X., Pavelsky, T.M., **Allen, G.H.**, (in revision), The past and future of global river ice. *Nature*.
- Sikder, M.S., David, C.H., **Allen, G.H.**, Qiao, X., Nelson E.J., Matin M.A., (in revision), Evaluation of Available Global Runoff Datasets through a River Model in Support of Transboundary Water Management in South and Southeast Asia. *Frontiers in Environmental Science*.
- Coss S., Durand M., Yi Y., Jia Y., Guo Q., Tuozzolo S., Shum C.K., **Allen G.H.**, Calmant S., and Pavelsky, T.M., (in revision), Global River Radar Altimetry Time Series (GRRATS): New River Elevation Earth Science Data Records for the Hydrologic Community. *Earth System Science Data*.
- Gleason, C.J., Hagemann, M.W., Beighley, R.E., **Allen, G.H.**, Yuta Ishitsuka, Dongmei Feng, Peirong Lin, Pavelsky, T.M., (in review), Combining big-data remote sensing, global hydrologic modelling, and river routing to improve daily discharge estimates across an entire large watershed. *Journal of Hydrology*.

GRANT PROPOSALS

PI on NOAA Texas Sea Grant “Rapid Detection of Plastic Debris along the Texas Gulf Coast” (encouraged for full submission)	2019
PI on TAMU X-Grant “Developing a CubeSat to Track the Global Movement of Water, Carbon, and Sediment across Landscapes” \$1.2M (not funded)	2019
Co-I on Alfred P. Sloan Foundation Sensor Technologies to Monitor Energy or Environmental Systems “Long-term hydrological and geochemical monitoring of freshwater bodies at high spatio-temporal resolutions, within a machine learning framework” \$1.462M (not funded)	2019
PI on TAMU T3 Grant “Estimating Texas Reservoir Storage Loss using Satellite Remote Sensing” \$30,000 (not funded)	2018
PI on TAMU PESCA Grant Program “Developing a Method for the Rapid Detection of Freshwater Plastic Pollution” \$25,000 (funded)	2018
Co-I on NASA Terrestrial Hydrology Program Grant #17-THP17-0012 “Filling the space/time gaps between surface water retrievals” Work Commitment (FTE): 0.125 on \$479,978 (funded)	2017
UNC Preston and Mary Martin Graduate Student Research Grant “Characterizing the distribution of stream size in headwater catchments” \$1,200 (funded)	2015
GSA Graduate Student Research Grant “Characterizing the distribution of stream surface area in small watersheds” \$1,200 (funded)	2015
Martin Graduate Student Research Grant “Quantitative mapping of bedrock river channel response to variations in substrate lithology and rock uplift in the Himalayan front, northwest India” \$4,000 (funded)	2012
GSA Graduate Student Research Grant “Bedrock river response to active folding at the Himalayan Front, northwest India” \$2,000 (funded)	2011

PROFESSIONAL ACTIVITIES AND SERVICE

Professional Membership, American Geophysical Union (AGU)	2011-19
Member, AGU Hydrology Section Surface Water Technical Committee	2017-19
Guest Editor, <i>Remote Sensing</i>	2018-19
Journal Referee	
Publons Profile: https://publons.com/researcher/1367803/george-h-allen	
<i>Environmental Research Letters</i> (8 manuscripts)	<i>Journal of Hydrometeorology</i> (4)
<i>IEEE Geoscience and Remote Sensing Letters</i> (2)	<i>Remote Sensing</i> (4)
<i>Hydrology and Earth Systems Sciences</i> (1)	<i>Natural Hazards</i> (1)
<i>Remote Sensing of Environment</i> (1)	<i>Journal of Hydrology</i> (1)
<i>Earth System Science Data</i> (1)	<i>Earth Surface Dynamics</i> (1)
<i>Hydrological Processes</i> (1)	<i>Geophysical Research Letters</i> (1)
Invited Participant, DOE-Sponsored workshop, <i>Leveraging Distributed Research Networks to Understand Watershed System</i>	2019
Invited Participant, NASA-Funded workshop, <i>Remote Sensing of Inundation Extent in Wetlands, Lakes, and Rivers</i>	2018
Invited Participant, NASA-Funded workshop, <i>Inland Water Global HydroBioGeoChemistry</i>	2018

TEACHING EXPERIENCE

2019 Spring	Instructor	GEOG 312: Data Analysis in Geography
	Instructor	GEOG 361: Remote Sensing in Geosciences/ GEOG 651: Remote Sensing for Geographic Analysis
	Guest Lecturer	AERO 402: Aerospace Vehicle Design - Spacecraft Design
2018 Fall	Instructor	GEOG 361: Remote Sensing in Geosciences/ GEOG 651: Remote Sensing for Geographic Analysis
	Guest Lecturer	GEOL 610: Geographical Methods and Theory
2016 Fall	Guest Lecturer	GEOL 483: GIS and Remote Sensing
2015 Fall	Instructor	GEOL 483: GIS and Remote Sensing
2014 Fall	Guest Lecturer	GEOL 483: GIS and Remote Sensing
2013 Fall	Guest Lecturer	GEOL 483: GIS and Remote Sensing
	Guest Lecturer	GEOL 417: Geomorphology
2012 Spring	Teaching Assistant	GEOL 101L: Introduction to Geology Lab (1 section)
	Teaching Assistant	GEOL 483: GIS and Remote Sensing
2011 Fall	Teaching Assistant	GEOL 110: Earth and Climate for Science Majors
	Teaching Assistant	GEOL 101L: Introduction to Geology Lab (2 sections)
2011 Spring	Teaching Assistant	GEOL 101L: Introduction to Geology Lab (3 sections)
2010 Fall	Teaching Assistant	GEOL 101L: Introduction to Geology Lab (2 sections)
	Teaching Assistant	GEOL 110: Geology of the Carolinas (field course)
2010 Spring	Instructor	English and Western Culture, Dept. of Foreign Languages, Guangxi Normal University, Chongzuo, Guangxi, China

UNIVERSITY SERVICE

Co-Chair, TAMU Dept. of Geography Colloquia Committee	2019-present
Member, TAMU Dept. of Geography Space Committee	2019-present
TAMU GIS Day Presenter and Google Earth Engine Workshop Lead	2018
UNC Career Services Office of Graduate and Pre-professional Advising	2013-16
Chair, Recruiting Committee	2015-16
Chair, Advertising and Outreach Committee	2014-15

THESES SUPERVISED

Ryan Riggs (Ph.D. in Geography, expected 2023): radar and optical remote sensing of river discharge for hydrological data assimilation

OTHER MENTORSHIP EXPERIENCE

Member of 3 TAMU Ph.D. Committees	2018-present
Research Supervisor of 3 TAMU undergraduate research projects	2018-present
Mentor, Royster Advanced Mentoring Program	2016-17
Co-advisor to an undergraduate thesis project, published in <i>Water Resource Research</i>	2014-16
Research Supervisor of 12 undergraduates at UNC	2012-16
Pre-graduate Advisor, UNC Office of Graduate and Pre-professional Advising	2013-16

INVITED TALKS AND SEMINARS

South American Water from Space Conference, Manaus, Brazil, Nov. 4-7, 2019
Institute for Sustainable Communities Distinguished Speaker Series, Texas A&M University,
College Station, TX, Nov. 19, 2019
University of North Texas Department of Geography and the Environment Crosscurrents
Seminar, Denton, TX, Oct. 18, 2019
NASA/CNES SWOT Science Team Meeting, Montreal, Canada, Jun. 26-29, 2018
Inland Water Global HydroBioGeoChemistry Workshop, University of Colorado, Boulder, CO,
May. 24-25, 2018
Training on transboundary streamflow forecasting tools, Flood Forecasting and Warning Centre,
Dhaka, Bangladesh, Apr. 25, 2018
Whole Earth Seminar, University of California at Santa Cruz, Department of Earth and Planetary
Sciences, Jan. 23, 2018
Riverine Carbon Emissions Workshop, Yale School of Forestry and Environmental Studies, Yale
University, New Haven, CT, Oct. 18-20 2017
Seeing Water from Space High School Educational Development Workshop, Chapel Hill, NC,
Aug. 12-13, 2015
North Carolina GIS Conference, Raleigh, NC, Feb. 26-27, 2015
Seeing Water from Space High School Educational Development Workshop, Chapel Hill, NC,
Aug. 12-13, 2014

FIELD CAMPAIGNS

Team Leader, Headwater stream hydromorphology surveying, KS, CA, AK, NC	2015
Field Assistant, NASA AirSWOT Alaska Campaign, AK	2015
Team Leader, Tectonic Geomorphology of the Siwalik Hills, NW India	2011-12

SIGNIFICANT DIGITAL PRODUCTS

Yamazaki D., Ikeshima, D., Sosa, J., Bates P.D., **Allen, G.H.**, Pavelsky. T.M., (2019), MERIT
Hydro. http://hydro.iis.u-tokyo.ac.jp/~yamada/MERIT_Hydro
Allen, G.H., Pavelsky, T.M., (2018), Global River Widths from Landsat (GRWL) Database.
Zenodo. <https://doi.org/10.5281/zenodo.1297434>
Allen, G.H., , (2018), Global Map of River Flow Wave Travel Times. Zenodo.
<https://doi.org/10.5281/zenodo.1219784>

SOFTWARE LANGUAGES AND PROGRAMS

Proficient: R, IDL, ArcGIS, ENVI, Google Earth Engine Javascript API, Git, Linux Shell
Familiar: Python, HTML, CSS, QGIS

SELECTED RESEARCH MEDIA COVERAGE

AGU EOS Research Spotlights, “A More Accurate Global River Map” [link]	2019
Futurity, “Global Water Map Could Warn of Future Floods” [link]	2019
Texas A&M Today, “New Global Water Map Could Predict Flood Events” [link]	2019
KBTX-TV, “A&M researcher helps to develop map that better predicts flooding” [link]	2019
NASA Earth Observatory, “Fizzy Tropical Rivers” [link]	2018
World Economic Forum, “Rivers cover a lot more of the Earth than we originally thought. Here's why that matters” [link]	2018
Gizmodo, “Earth Has Many More Rivers and Streams Than We Thought, New Satellite Study Finds” [link]	2018
The BCS Eagle, “Texas A&M researcher: Waterways and their environmental impact underestimated” [link]	2018
NASA Earth Observatory, “The Water is Wider” [link]	2018
Inquisitr, “New Study Suggests Earth Has Almost 45 Percent More Rivers Than Once Thought” [link]	2018
Texas A&M Today, “Texas A&M Study: Rivers, Streams Cover Larger Portion Of Earth’s Surface Than Previously Thought” [link]	2018
Science News Magazine, “Earth’s rivers cover 44 percent more land than we thought” [link]	2018
CNES (French Space Agency) Aviso Image of the Month “As the Flood Flows” [link]	2018
NASA FEATURE, “Before the Flood Arrives” [link]	2018
UNC Institute for the Environment Feature Article, “UNC-Chapel Hill study finds common width among headwater streams” [link]	2018
Landsat Q&A website, “Measuring the Wide World of Rivers” [link]	2017
UNC Endeavors Magazine, “The Weight of the Water on Their Shoulders” [link]	2016
Interviewee, WCHL FM in Chapel Hill, NC, Carolina Connection Student Radio, “UNC researcher works to understand droughts” [link]	2016
The Great Lakes Echo, “Mapping great rivers” [link]	2015
Interviewee, KUAC FM in Fairbanks, Fairbanks, “NASA Tracks Alaska Waters” [link]	2015
NASA Earth Observatory, “A Satellite View of River Width” [link]	2015
Wired Magazine, “New Map Plots North America’s Bounty of Rivers” [link]	2015

PUBLISHED CONFERENCE ABSTRACTS

- Rosentreter, J.A., Borges, A.V., Raymond, P.A., Deemer, B.R., Holgerson, M.A., Liu, S., Song, C., Duarte, C.M., **Allen, G.H.**, Olefeldt, D., Battin, T.I., Eyre, B.D., (2019) Aquatic Ecosystems are the Largest Source of Methane on Earth. *ASLO Ocean Sciences Meeting*, San Diego, CA, Feb. 16–21, 2020
- Allen G.H.**, Yang, X., Lin, P., Pan, M., Holliman, J., Yamazaki, D., Liu, S., Raymond, P., (2019) Seasonal variations in global river and stream inundation extent. *AGU 2019 Fall Meeting*, San Francisco, CA, Dec. 9–13
- Selva, D., **Allen, G.H.**, (2019) Tradespace exploration for a hyperspectral smallsat mission to follow the SWOT altimetry mission. *AGU 2019 Fall Meeting*, San Francisco, San Francisco, CA, Dec. 9–13
- Marzadri, A., Amatulli, G., Tonina, D., Bellin, A., **Allen, G.H.**, Shen, L.Q., Raymond, P.A., (2019) Hyporheic zone is the source of nearly 50% of N₂O emissions at the global scale. *AGU 2019 Fall Meeting*, San Francisco, CA, Dec. 9–13
- Yang X., Pavelsky, T.M., **Allen, G.H.**, (2019) The past and future of global river and lake ice. *AGU 2019 Fall Meeting*, San Francisco, CA, Dec. 9–13
- Liu, S., Kuhn, C., **Allen, G.H.**, Butman, D.E., Amatulli, G., Lin, P., Pan, M., Yamazaki, Raymond, P.A., (2019) Global River Flow Regimes and Implications on River CO₂ Emission Dynamics. *AGU 2019 Fall Meeting*, San Francisco, CA, Dec. 9–13
- Yamazaki, D., Sosa, J., Bates, P.D., **Allen, G.H.**, Pavelsky, T.M., Eilander, D., Biancamaria, S., Shiozawa, T., (2019) MERIT Hydro: a new global hydrography map based on multiple satellite observations, and its application to model-satellite integration in global river hydrodynamic simulations. *AGU 2019 Fall Meeting*, San Francisco, San Francisco, CA, Dec. 9–13
- Lin, P., Pan, M., Frasson, R.P.M., **Allen, G.H.**, Zeng, Z., Wood, E.F., (2019) Data-driven prediction of global river width. *AGU 2019 Fall Meeting*, San Francisco, CA, Dec. 9–13
- Striegl, R., Foks, S., **Allen, G.H.**, (2019) Carbon dioxide and methane exchange with rivers and streams in the Upper Mississippi River network. *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico, Feb. 23–Mar. 2
- Allen, G.H.**, Pavelsky, T.M., Gleason C.J., Yang X., (2018) Global patterns of river width-discharge scaling relationships: a data fusion approach. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- Raymond, P.A, Liu, S., **Allen, G.H.**, (2018) Stream and River Methane Emissions. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- David, C.H., **Allen, G.H.**, Emery, C.M., Matin, M.A., Nelson, J., Jones, N., Zaitchik, B.M., Gatlin, P.N., Ellenburg, W.L., (2018) Historical reconstruction and near-term forecasts of surface water in South Asia. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14

- Yamazaki D., Aires, F., Prigent, C., **Allen, G.H.**, Pavelsky, G.H. (2018) Classification of water bodies at global scale by integration of satellite observation and geodatabases. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- Alenau, E.H., Pavelsky, T.M., **Allen, G.H.**, Yamazaki, D., Durand, M.T., Frasson, R.P.M, Yang, X., Lion, C., Beighley, E., (2018) . *AGU 2018 Fall Meeting, Washington D.C.*, Washington D.C., Dec. 10–14
- Gleason, C.J., Hagemann, M.W., Beighley, R.E., **Allen, G.H.**, Pavelsky, T.M., (2018) Combining big-data remote sensing, AMHG, and river routing to estimate daily discharge over an entire river network: a SWOT template. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- Coss, S.P., Durand, M.T., Gou, Q., Jia, Y., Shum, C.K., **Allen, G.H.**, Pavelsky, T.M., Yang, X., Getirana, A., (2018) River Channel Storage Change: a Critical Component of Terrestrial Water Storage in Major World Rivers. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- Pavelsky, T.M., **Allen, G.H.**, Yang, X., Barefoot E.A., (2018) The Global Extent of Rivers and Streams: From Static to Dynamic. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- Yang X., Pavelsky, T.M., **Allen, G.H.**, (2018) The past and future of global river ice. *AGU 2018 Fall Meeting*, Washington D.C., Dec. 10–14
- Allen, G.H.**, David, C.H., Andreadis, K.M., Emery, C.M., Famiglietti, J.S., (2017) Characterizing Global Flood Wave Travel Times to Optimize the Utility of Near Real-Time Satellite Remote Sensing Products. *AGU 2017 Fall Meeting*, New Orleans, LA, Dec. 11–15 (oral presentation)
- Famiglietti, J.S., David, C.H., Reager, J.T., Oaida, C., Stampoulis, D., Levoe, S., Liu, P., Trangsrud, A., Basilio, R.R., **Allen, G.H.**, Crichton, D.J., Emery, C.M., Farr, T., Granger, S.L., Hobbs, J., Malhotra, S., Osterman, G.B., Rueckert, M., and Turmon, M., (2017) The Western States Water Mission: A Hyper-Resolution Hydrological Model and Data Integration Platform for the Western United States. *AGU 2017 Fall Meeting*, New Orleans, LA, Dec. 11–15
- Emery, C.M., David, C.H., Turmon, M., Hobbs, J., **Allen, G.H.**, and Famiglietti, J.S., (2017) Development Of A Data Assimilation Capability For RAPID. *AGU 2017 Fall Meeting*, New Orleans, LA, Dec. 11–15
- Pavelsky, T.M., Lion, C., **Allen, G.H.**, Durand, M.T., Schumann, G., Beighley, R.E., Yang, X., (2017) Global relationships in river hydromorphology. *AGU 2017 Fall Meeting*, New Orleans, LA, Dec. 11–15
- Yang, X., Pavelsky, T.M., **Allen, G.H.**, and Donchyts, G., (2017) Measuring river from the cloud - River width algorithm development on Google Earth Engine. *AGU 2017 Fall Meeting*, New Orleans, LA, Dec. 11–15

- Coss, S.P., Durand, M.T., Yi, Y., Guo, Q., Shum, C.K., **Allen, G.H.**, and Pavelsky, T.P., (2017) Channel Storage change: a new remote sensed surface water measurement. *AGU 2017 Fall Meeting*, New Orleans, LA, Dec. 11–15
- Allen, G.H.**, Pavelsky, T.M., Barefoot, E.A., Tashie, A., Butman, D., (2016) Similarity of Stream Width Distributions Across Headwater Systems. *AGU 2016 Fall Meeting*, San Francisco, CA, Dec. 12–16
- Barefoot, E.A., Pavelsky, T.M., **Allen, G.H.**, Zimmer, M., McGlynn, B., (2016) Stream width dynamics in a small headwater catchment. *AGU 2016 Fall Meeting*, San Francisco, CA, Dec. 12–16
- Altenau, E., Pavelsky, T.M., Moller, D., Lion, C., Pitcher, L., **Allen, G.H.**, Bates, P., Calmant, S., Durand, M., Smith, L., (2016) Novel AirSWOT Measurements of River Height and Slope, Tanana River, AK. *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18
- Lion, C., Pavelsky, T.M., **Allen, G.H.**, Beighley, R.E., Schumann, G.J.-P., Durand, M., (2016), *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18
- Coss, S., Tuozzolo, S., Durand, M., Pavelsky, T.M., **Allen, G.H.**, Calmant, S., Yi, Y., Jia, Y., Guo, Q., Shum, C.K., (2016) GRRATS: A new approach to Inland altimetry processing for major world rivers. *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18
- Allen, G.H.**, Pavelsky, T.M., (2015) Characterizing worldwide patterns of fluvial geomorphology and hydrology with the Global River Widths from Landsat (GRWL) database. *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18
- Lion, C., **Allen, G.H.**, Beighley, R.E., Pavelsky, T.M., (2015) Developing a new global network of river reaches from merged satellite-derived datasets. *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18.
- Pavelsky, T.M., **Allen, G.H.**, (2015) Recent Advances in Global Measurement and Application of River Widths. *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18.
- Beighley, R.E., Yoon, Y., Lee, H., Pavelsky, T.M., **Allen, G.H.**, (2015) Characterizing regulated reservoirs dynamics in regional to global scale hydrologic models. *AGU 2015 Fall Meeting*, San Francisco, CA, Dec. 14–18
- Allen, G.H.**, Pavelsky, T.M., (2015) Total surface area of North American rivers and streams larger than previously thought. *2015 North Carolina GIS Conference*, Raleigh, N. Carolina, Feb., 26–27 (invited oral presentation)
- Allen, G.H.**, Pavelsky, T.M., (2014) Patterns of river width and surface area newly revealed by the satellite-derived North American River Width (NARWidth) dataset. *AGU 2014 Fall Meeting*, San Francisco, CA, Dec. 9–13. (oral presentation)
- Allen, G.H.**, Pavelsky, T.M., (2014) Scaling river width and surface area from continental river networks to first-order streams. *2014 CUAHSI Biennial Colloquium*, Shepherdstown, WV, July 28–30
- Allen, G.H.**, Pavelsky, T.M., Miller, Z.F., (2013) Quantifying river widths of North America from satellite imagery. *AGU 2013 Fall Meeting*, San Francisco, CA, Dec. 9–13
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