



# Joseph Lee Gutenson, PhD

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[https://www.researchgate.net/profile/Joseph\\_Gutenson](https://www.researchgate.net/profile/Joseph_Gutenson)  
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## SUMMARY OF QUALIFICATIONS

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- hydrology and hydraulics
- hydrologic modeling
- riverine hydraulic modeling
- flood damage assessment
- decision support systems
- drinking water distribution system modeling
- knowledge engineering
- economic impact assessment

## EDUCATION

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**The University of Alabama** Tuscaloosa, AL  
*Ph.D. Civil Engineering* 2016  
GPA 3.923/4.000  
Dissertation: Rapid Flood Damage Estimation in Short Lead-Time Scenarios  
Advisor: Andrew N. S. Ernest

**The University of Alabama** Tuscaloosa, AL  
*M.S. Civil Engineering* 2015  
GPA 3.923/4.000

**Western Kentucky University** Bowling Green, KY  
*B.S. Geography* 2010  
GPA 3.65/4.00  
Graduated Magna cum Laude  
Member of the Golden Key International Honor Society  
Member of the Kentucky Academy of Science

## Joseph Lee Gutenson

### EXPERIENCE

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**Research, Applied Technology, Education, Services (RATES), Inc.** Tuscaloosa, AL  
*Chief Science Officer* July 2023 – Present  
40 hours per week

- Developing software to automate hydrologic and hydraulic modeling platforms
- Engineering workflows to perform hydrologic forecasting at stream gage locations
- Building technical proposals that facilitate partnerships between academic, public, and private entities
- Leading junior engineers in their work and in developing their skill sets

**U. S. Army Engineer Research and Development Center (ERDC)** Tuscaloosa, AL  
*Research Civil Engineer (Hydraulics) (DB-0810-04)* June 2020 – July 2023  
40 hours per week

- Investigated new ways of utilizing large spatial extent hydrology and hydraulics for military logistics, power generation, regulatory decision making, and flood prediction
- Managed approximately \$300,000-900,000 of research funding yearly
- Performed hydrologic and hydraulic analysis in data sparse environments
- Participated on collaborative teams to develop and plan research and development activities
- Communicated, both orally and through technical documents, to project members, customers, and the scientific community by presenting research results at technical meetings, workshops, and conferences
- Recruited new talent at technical meetings, workshops, and conferences
- Led and managed tasks assigned by the Branch Chief of the Hydrologic Systems Branch (HSB)

## **Joseph Lee Gutenson**

### **National Oceanic and Atmospheric Administration (NOAA)**

Tuscaloosa, AL

*Hydrologist (GS-1315-14)*

April 2019 – June 2020

40 hours per week

- Performed hydrologic studies as a hydrologic and hydraulic subject matter expert for the Water Prediction Operations Division
- Developed working relationships and engagements by serving as a member of the Integrated Water Resources Science and Services (IWRSS) team responsible for developing standard operating procedures for flood inundation mapping product development amongst Federal partners
- Coordinated the production of technically sound National Water Center flood inundation mapping services documentation
- Led and managed the development of event review workflows to document National Water Model performance during noteworthy flood events
- Led the team responsible for aligning National Water Model evaluation services with the Water Prediction Operations Division requirements
- Led the team developing a dam break assessment program within the Water Prediction Operations Division
- Led the team responsible for improving bankfull detection in the National Water Model visualization services

### **U.S. Army Engineer Research and Development Center (ERDC)**

Vicksburg, MS

*Research Civil Engineer (Hydraulics) (DB-0810-04)*

July 2016 – April 2019

40 hours per week

- Developed new relationships, fostered existing relationships, and pursued technical support opportunities through co-leading the military hydrology group in answering requests for information (RFIs) from military customers
- Performed hydrologic studies such as an analysis generalized reservoir routing schemes for incorporation into the large scale hydrologic forecasting or the downscaling of hydrometeorological forecasts for use in high fidelity riverine hydraulic models
- Communicated both orally and through technical documents to both project members, customers, and the scientific community by presenting research results at technical meetings, workshops, and conferences
- Participated on teams for developing and planning research and development activities
- Recruited new talent at technical meetings, workshops, and conferences
- Assisted in the development of a tool for assessing world class and austere port capacity across the world
- Led and managed tasks assigned by the Branch Chief of the Hydrologic Systems Branch (HSB)

## **Joseph Lee Gutenson**

### **The University of Alabama**

*Graduate Research/Teaching Assistant*

Tuscaloosa, AL

August 2012 – August 2015

20-40 hours per week

- Developed technical research papers and presentations in hydrologic, engineering, and other physical sciences
- Contributed to the developing and planning of research and development activities in hydrologic, engineering, and other physical science fields
- Taught undergraduate courses in engineering and statistics
- Led groups of undergraduate and graduate students in engineering, hydrologic, and other physical science related studies as a part of the National Flood Interoperability Experiment (NFIE)
- Developed a geographic information system (GIS) tool to assess the economic consequences of disruptions to water supply
- Developed a geographic information system (GIS) tool to quickly estimate economic and financial flood damages to residential and commercial buildings using operational hydrologic products and procedures

### **Kentucky Climate Center**

*Undergraduate Research Associate*

Bowling Green, KY

March 2010-December 2010

10 hours per week

- Performed statistical analysis of data regarding the relationship between temperature and energy demand within a project that was a collaborative effort between the Kentucky Climate Center and Bowling Green Municipal Utilities

## **Joseph Lee Gutenson**

### **Western Kentucky University**

*Environmental Support Specialist, Technician, Student Worker*

Bowling Green, KY

March 2009-August 2012

10-40 hours per week

- Assisted in the development of a software program designed to assist drinking water utilities in the event of contamination funded by the Department of Homeland Security through the National Institute for Hometown Security
- Developed 12 Total Maximum Daily Loads (TMDL) for the Panther Creek and Long Falls Creek Watersheds in Daviess and McLean County, Kentucky, under a Kentucky Division of Water grant
- Organized and assembled a series of stakeholder engagement meeting involving drinking water utilities in approximately five states
- Assisted in survey deployment and soil sampling in community of Glendale, Kentucky, for Kentucky Division of Water grant in order to improve septic systems
- Performed cross-sectional analysis and sampling of Bacon Creek in collaboration with Kentucky Division of Water and Kentucky Waterways Alliance
- Assisted in creating curriculum for water and wastewater operator education under a National Science Foundation grant
- Performed microbiological sampling and analysis of drinking water, wastewater, and stormwater
- Presented research results at technical meetings, workshops, and conferences

## Joseph Lee Gutenson

### SKILLS

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- Proficient in ArcGIS for Desktop
- Proficient in QGIS
- Proficient with HEC-RAS (1D and 2D)
- Proficient in programming with Python and R
- Proficient in expert system application and development using CLIPS, PyKE
- Proficient in Microsoft Office Suite – Word, Excel, PowerPoint, Access
- Proficient in several statistical software packages including R, SAS, S-Plus, Minitab, and SPSS
- Experience with the Routing Application for Parallel computation of Discharge (RAPID) software
- Experience in Tethys Platform
- Experience with AutoCAD Civil 3D and Autodesk Revit
- Experience in Drupal CMS and Moodle CMS
- Experience with HEC-FDA, HEC-FIA, and go-consequences
- Experience with HEC-GeoRAS, and HEC-HMS
- Experience with GSSHA
- Experience programming with Microsoft Powershell, Javascript, PHP, Django, and HTML
- Experience in water quality sampling and analysis
- Experience with YSI data loggers and ISCO autosamplers
- Trained in WRF-Hydro

## **Joseph Lee Gutenson**

### **AWARDS**

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- 2023 ERDC Award for Outstanding Innovation in Research and Development in Clean Modular Hydropower
- 2022 ERDC Research and Development Achievement Award for continental scale hydrologic modeling of the Mississippi River Basin
- 2022 Department of the Army Civilian Service Commendation Medal for outstanding performance as a Research Civil Engineer in the U. S. Army Engineer Research and Development Center
- 2021 ERDC Award for Excellence in Operation Support for Military Hydrology reachback support
- 2019 NOAA On-The-Spot Cash Performance Award
- 2019 National Intelligence Meritorious Unit Citation to United States Government Ituango Crisis Support Team for meritorious service
- 2019 ERDC Award for Outstanding Team Effort for participating in Climate Adaptation Mission Planning (CAMP) project
- 2019 ERDC Award for Outstanding Achievement in Technology Transition to Federal Agencies for facilitating the transition of the USACE Model Interface Platform (UMIP) to Federal customers
- 2018 ERDC On-The-Spot Cash Award for Performance for excellence in military reachback support
- 2017 ERDC On-the-Spot Cash Award for investigating novel ways of providing information to downrange army personnel in secure digital environments
- 2015 Science, Mathematics, and Research for Transformation (SMART) Scholarship Recipient
- 2014 3<sup>rd</sup> Place Student Oral Presentation at the Alabama Water Resources Conference

### **CERTIFICATIONS**

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- Top Secret Security Clearance
- Passed the Fundamentals of Engineering (FE) Exam
- Kentucky Microbiology Laboratory Certification Program (KMLCP) Certified Lab Analyst (inactive)

## Joseph Lee Gutenson

### COMMITTEE SERVICE

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- Technical Advisor, Texas Integrated Flooding Framework (TIFF), Technical Advisory Team, 2023-Present
- Alternate Guiding Member, U. S. Army Corps of Engineers (USACE) Groundwater Working Committee, 2021-2023
- Alternate Member, Interagency Council for Advancing Meteorological Services (ICAMS), Subcommittee on Water Information Services, 2021-2023
- Member, U.S. Global Change Research Program (USGCRP), Hydrologic Work Stream, 2022-2023

### COURSES TAUGHT

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- Large Scale Engineering Graphics (Freshmen, Sophomore), The University of Alabama, Fall 2014, Spring 2015
- Engineering Statistics I (Freshmen, Sophomore, Junior, Senior), The University of Alabama, Summer 2014

### STUDENT COMMITTEE SERVICE

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- Mississippi State University, Elissa M. Yeates, Spring 2022, Master's Thesis, **"Development and evaluation of seasonal, continental-scale streamflow forecasts"**

### REVIEWER

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- Peer Reviewed Scientific Journals
  - Geosciences (2022)
  - Hydrology and Earth Systems Sciences (HESS) (2019)
  - Journal of Applied Water Engineering and Research (2020)
  - Journal of Environmental Informatics Letters (2021)
  - Journal of Hydrology (2019, 2022, 2023)
  - Journal of Hydrology: Regional Studies (2022, 2023)
  - Journal of the American Water Resources Association (JAWRA) (2017, 2018)
  - Natural Hazards (2020)
  - Nature: Scientific Reports (2023)
  - Sustainability (2018)
  - Water (2018)
  - Water Policy (2016, 2017, 2020, 2021, 2022)
- Research Proposals



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- USACE ERDC Broad Agency Announcement (BAA) Proposals (2022)
- USACE Civil Works – Research and Development Area (2021)
- Scholarship Programs
  - Science, Mathematics, and Research for Transformation (SMART) Scholarship (2021,2022)

## TRAINING COMPLETED

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- ERDC Leadership Development Program, Level II, 2021.
- National Oceanic and Atmospheric Administration’s (NOAA’s) National Weather Service (NWS) Radar and Applications Course (RAC) - Hydro Track, 2020.
- National Oceanic and Atmospheric Administration’s (NOAA’s) National Weather Service (NWS) Professional Competency Units (PCUs) 1-3, 2019.
- ERDC Leadership Development Program, Level I, 2018.
- Workshop on Watershed Modeling with GSSHA, 2017.

## PEER-REVIEWED JOURNAL ARTICLES

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- Gutenson, J. L., Sparrow, K. H., Brown, S., Wahl, M. D., and K. Gordon, “**Examining the Ability of Continental-Scale Hydrologic Modeling to Predict Daily Streamflow Percentiles**”, Journal of the American Water Resources Association (JAWRA), early view. DOI: 10.1111/1752-1688.13189
- Gangrade, S., Ghimire, G. R., Kao, S., Morales-Hernández, M., Tavakoly, A. A., Gutenson, J. L., Sparrow, K. H., Darkwah, G. K., Kalyanapu, A. J., and M. L. Follum, “**Unraveling the 2021 Central Tennessee Flood Event Using a Hierarchical Multi-Model Inundation Modeling Framework**”, Journal of Hydrology, 625(Part B), 130157. DOI: 10.1016/j.jhydrol.2023.130157
- Follum, M. L., Scott, J. D., Lewis, J. W., Gutenson, J. L., Tavakoly, A. A., and M. D. Wahl, “**Towards a continental-scale riverine bathymetry dataset using readily-available data and simple hydraulic models**”, Journal of Hydrology, 623, 129769. DOI: 10.1016/j.jhydrol.2023.129769
- Gutenson, J. L., Staebell, K. A., Wahl, M. D., Petri, A. C., and M. P. Duczynski, “**A practical evaluation of micro-hydrokinetic power potential for the Continental United States**”, Journal of Hydrology: Regional Studies, 47, 101402. DOI: 10.1016/j.ejrh.2023.101402
- Tavakoly, A. A., David, C. H., Gutenson, J. L., Wahl, M. D., and M. L. Follum, “**Development of Non-Data Driven Reservoir Routing in the Routing Application for Parallel computation of Discharge (RAPID) Model**”, Environmental Modeling and Software, 105631. DOI: 10.1016/j.envsoft.2023.105631
- Gutenson, J. L., Tavakoly, A. A., Islam, M. S., Wahl, M. D., Wing, O. E. J., Lehman, W. P., Hamilton, C. O., and T. C. Massey, “**Comparison of Estimated Flood Exposure and Consequences Generated by Different Event-Based Inland Flood Inundation**”

## Joseph Lee Gutenson

- Maps**", Natural Hazards and Earth Systems Sciences (NHES), 23, 261–277, 2023. DOI: 10.5194/nhess-23-261-2023.
- Jafarzadegan, K., Muñoz, D., Moftakhari, H., Gutenson, J., Savant, G., and H. Moradkhani, "**Real-Time Coastal Flood Hazard Assessment using DEM-based Hydrogeomorphic Classifiers**", Natural Hazards and Earth Systems Sciences (NHES), 22(4), DOI: 10.5194/nhess-22-1419-2022, 2022.
  - Tavakoly, A. A., Gutenson, J. L., Lewis, J., Follum, M. L., Rajib, A., LaHatte, W. C., and C. O. Hamilton, "**Direct Integration of Numerous Dams and Reservoirs Outflow in Continental Scale Hydrologic Modeling**", Water Resources Research, 57(9). DOI: 10.1029/2020WR029544, 2021.
  - Gutenson, J. L., Ernest, A. N. S., Bearden, B. L., Fuller, C., and J. Guerrero, "**Integrating Societal and Scientific Elements into Sustainable and Effective Water Resource Policy Development**", Journal of Environmental Informatics Letters, 4(2). DOI: 10.3808/jeil.202000048, 2020.
  - Gutenson, J. L., Tavakoly, A. A., Wahl, M. D., and M. L. Follum, "**Comparison of Generalized Non-Data-Driven Lake and Reservoir Routing Models for GlobalScale Hydrologic Forecasting of Reservoir Outflow at Diurnal Time Steps**", Hydrology and Earth Systems Sciences (HESS), 24(5). DOI: 10.5194/hess-24-2711-2020, 2020.
  - Follum, M. L., Tavakoly, A. A., Gutenson, J. L., and R. Vera, "**Flood Inundation Mapping of Low-, Medium-, and High-Flow Events Using the AutoRoute Model**", Natural Hazards and Earth Systems Sciences (NHES), 20(2). DOI: 10.5194/nhess-20-625-2020, 2020.
  - Moynihan, G. P., Zhang, X., Ernest, A. N. S., and J. L. Gutenson, "**Application of Expert System Technology for the Decontamination of Water Distribution Networks**", Archives of Business Research, 7(7). DOI: 10.14738/abr.77.6777, 2019.
  - Zhang, X., Moynihan, G. P., Ernest, A. N. S., and J. L. Gutenson, "**Evaluation of the Benefits of Using a Backward Chaining Decision Support System for Local Flood Forecasting and Warning**", Expert Systems, 35(4). DOI: 10.1111/exsy.12261, 2018.
  - Zhang, X., Moynihan, G. P., Ernest, A. N. S., and J. L. Gutenson, "**An Expert System for Local Flood Response Coordination and Training**", Engineering Management Research 6(2). DOI: 10.5539/emr.v6n2p1, 2017.
  - Gutenson, J. L., A. N. S. Ernest, A. A. Oubeidillah, L. Zhu, X. Zhang, and S. T. Sadeghi, "**Rapid flood damage prediction and assessment using public domain cadastral and address point data with fuzzy logic algorithms**", Journal of the American Water Resources Association (JAWRA), DOI: 10.1111/1752-1688.12556, 2017.
  - Gutenson, J. L., A. A. Oubeidillah, A. N. S. Ernest, L. Zhu, X. Zhang, and S. T. Sadeghi, "**Investigating uncertainty in developing regional building inventories for flood damage prediction**", Natural Hazards Review, DOI: 10.1061/(ASCE)NH.1527-6996.0000240, 2016.
  - Gutenson, J. L., A. N. S. Ernest, J. R. Fattic, L. E. Ormsbee, A. A. Oubeidillah, and X. Zhang, "**Water expert: a conceptualized framework for development of a rule-based decision support system for distribution system decontamination**", Drink. Water Eng. Sci., DOI: 10.5194/dwes-8-9-2015, 2015.

PROCEEDINGS

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- Gutenson, J. L., A. A. Tavakoly, T. C. Massey, G. Savant, A. S. Tritinger, M. B. Owensby, M. D. Wahl, and M. S. Islam, “**Investigating Modeling Strategies to Couple Inland Hydrology and Coastal Hydraulics to Better Understand Compound Flood Risk**”, World Environmental and Water Resources Congress 2021: Hydraulics and Waterways, pp. 64-75, 2021.
- Loney, D. A., Byrd, A. R., Gutenson, J. L., and E. E. Race, “**Determining Extreme Flows Using Entropy Theory**”, Federal Interagency Sedimentation and Hydrologic Modeling Conference, 2019.
- Gutenson, J. L., M. D. Wahl, M. P. Geheran, M. W. Farthing, and M. L. Follum, “**Using Global Hydrometeorologic Forecasts as a Boundary Condition for Two-Dimensional HEC-RAS Modeling in Data Sparse Environments**”, World Environmental and Water Resources Congress 2018: International Perspectives, History and Heritage, Emerging Technologies, and Student Papers, pp. 250-262, 2018.
- Gutenson, J. L., Follum, M. L., Snow, A. D., and M. D. Wahl, “**Large-Scale Flood Inundation Modeling in Data Sparse Environments using TanDEM-X Terrain Data**”, 2017 CUAHSI Hydroinformatics Conference, Open Water Journal 4(2), 2017.
- Gutenson, J. L., A. A. Oubeidillah, P. Hicks, L. Durham, A. N. S. Ernest, L. Zhu, and X. Zhang, “**Using Hazus-MH and HEC-RAS to Evaluate Real World Flooding Events in the Upper Alabama River Watershed**”, World Environmental and Water Resources Congress 2015: Floods, Droughts, and Ecosystems, pp. 1607-1627, 2015.
- Gutenson, J. L., J. R. Fattic, and A. N. S. Ernest, “**Best Practice Protocols for Response and Recovery Operations in Contaminated Water Systems**”, Water Contamination Emergencies: Managing the Threats, pp. 132-138, 2013.
- Fattic, J. R., A. N. S. Ernest, and J. L. Gutenson, “**Water and Wastewater Technician Education**”, 2013 Annual Conference & Exposition, Atlanta, Georgia, American Society for Engineering Education, 06/2013.
- Gutenson, J. L., A. N. S. Ernest, and J. R. Fattic, “**Creating a Water and Wastewater Educational Program with Incorporated Experiential Training**”, 2012 Annual Conference & Exposition, San Antonio, Texas, American Society for Engineering Education, 06/2012.
- Gutenson, J. L., “**Utilizing University Resources in a Mutually Beneficial Interdisciplinary Partnership to Determine Marketability of Intellectual Property: A Case Study**”, 2012 International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, 03/2012.
- Fattic, J. R., A. N. S. Ernest, and J. L. Gutenson, “**Industry and Institutional Partnerships for the Water Training Institute**”, 2012 Conference for Industry and Education Collaboration, Orlando, Florida, American Society for Engineering Education, 02/2012.
- Fattic, J. R., A. N. S. Ernest, and J. L. Gutenson, “**Development of an Advanced Technological Education Center for Water Treatment**”, 2011 Annual Conference & Exposition, Vancouver, British Columbia, American Society for Engineering Education, 06/2011.

## Joseph Lee Gutenson

### TECHNICAL REPORTS

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- Sparrow, K. H., Gutenson, J. L., Wahl, M. D., and K. A. Cotterman, "**Evaluation of Hydroclimatic and Hydrologic Tools to Support the U.S. Army Corps of Engineers Regulatory Program**", 09/2022.

### TECHNICAL NOTES

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- Gutenson, J. L., Hamilton, C. O., and J. C. Deters, "**Antecedent Precipitation Tool (APT) Version 2.0: Technical and User Guide**", 06/2023.
- Gutenson, J. L., and J. C. Deters, "**Antecedent Precipitation Tool (APT) Version 1.0: Technical and User Guide**", 02/2022.

### LETTER REPORTS

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- Hargis, B. H., Yeates, E. M., Byrd, A. R., and J. L. Gutenson, "**Estimating Channel/Port Depth Using Visual Vessel Length in Data-Deficient Environments**", 10/2019.

### OTHER PUBLICATIONS

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- Gutenson, J. L., "**The State of Workforce Affairs**", Water & Waste Digest, 04/2011.

### POSTERS AND PRESENTATIONS

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- Lytle, S. E., Gutenson, J. L., Tavakoly, A. A., Arias-Roman, S., and S.-H. Kao, "**Using Downscaled National Hydrologic Projections to Assess Climate Change–Induced Scour Risk to Bridges**", 2023 American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, 12/2023.
- Follum, M. L., Tavakoly, A. A., Gutenson, J. L. and L. Read, "**Ensemble Flood Inundation Maps for use in Local-to Continental-Scale Forecasting Frameworks**", 2022 American Geophysical Union (AGU) Fall Meeting, Chicago, IL, 12/2022.
- Tavakoly, A. A., David, C. H., Gutenson, J. L., Wahl, M. D., and M. L. Follum, "**Development of Non-Data Driven Reservoir Routing in the Routing Application for Parallel computation of Discharge (RAPID) Model**", 2022 American Geophysical Union (AGU) Fall Meeting, Chicago, IL, 12/2022.
- Dwivedi, D., Arora, B., Doughty, C., Farthing, M., Gutenson, J., Lee, S., Nico, P. S., Patterson, C., Tartakovsky, D., Waichler, S., and S. Yabusaki "**How vulnerable are coastal sites in the wake of rising sea levels?**", 2022 American Geophysical Union (AGU) Fall Meeting, Chicago, IL, 12/2022.
- Gutenson, J. L., Brown, S., Sparrow, K., Wahl, M. D., and K. Gordon, "**Assessing the Use of Large Spatial Extent Hydroclimatology for U.S. Army Corps of Engineers (USACE) Regulatory Applications**", American Water Resources Association (AWRA) Spring Conference, Tuscaloosa, Alabama, 04/2021.

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- Sparrow, K., Gutenson, J., Wahl, M., and K. A. Cotterman, “**Evaluating Climatic Conditions and Variables in the U.S. Army Corps of Engineers Regulatory Program**”, 2021 American Geophysical Union (AGU) Fall Meeting, New Orleans, Louisiana, 12/2021.
- Lytle, S. A., Tavakoly, A., Gutenson, J. L., Sparrow, K., Geheran, M. P., and S-H. Kao, “**Investigating the Impact of Climate Change on Extreme Flood Conditions Across the Mississippi River Basin**”, 2021 American Geophysical Union (AGU) Fall Meeting, New Orleans, Louisiana, 12/2021.
- Massey, T. C., Bukhari, F., Nadal-Caraballo, N. C., Islam, M. S., Gutenson, J. L., Tavakoly, A., Owensby, M. B., and M. Wahl, “**Flood Risk Management Perspectives on Coastal Model Coupling for Compound Flooding Events**”, 2021 American Geophysical Union (AGU) Fall Meeting, New Orleans, Louisiana, 12/2021.
- Ogden, F. L., Avant, B., Bartel, R., Blodgett, D. L., Clark, E. P., Coon, E., Cosgrove, B. A., Cui, S., Kindl da Cunha, L. L., Farthing, M., Flowers, T., Frame, J. M., Frazier, N. J., Graziano, T. M., Gutenson, J. L., Johnson, D. W., Loney, D., Mattern, D., McDaniel, R., Moulton, J. D., Peckham, S. D., Jennings, K. S., Savant, G., Tubbs, C., Williamson, M., Garrett, J. L., Wood, A., and J. M. Johnson, “**The Next Generation Water Resources Modeling Framework: Open Source, Standards Based, Community Accessible, Model Interoperability for Large Scale Water Prediction**”, 2021 American Geophysical Union (AGU) Fall Meeting, New Orleans, Louisiana, 12/2021.
- Gutenson, J., Tavakoly, A., Islam, M. S., Wing, O., Lehman, W., Wahl, M., and C. Massey, “**Comparison of Flood Inundation Mapping Frameworks for Compound Coastal Floods**”, 2021 American Geophysical Union (AGU) Fall Meeting, New Orleans, Louisiana, 12/2021.
- Gutenson, J. L., A. A. Tavakoly, T. C. Massey, G. Savant, A. S. Tritinger, M. B. Owensby, M. D. Wahl, and M. S. Islam, “**Investigating Modeling Strategies to Couple Inland Hydrology and Coastal Hydraulics to Better Understand Compound Flood Risk**”, World Environmental and Water Resources Congress 2021, online, 06/2021.
- Mason, R., Gutenson, J. L., Lehman, W., and J. Sheeley, “**What’s New (And What Does it Mean)? - Technology Edition**”, 2020 Interagency Flood Risk Management Training Seminars, St. Louis, MO, 02/2020.
- Brown, G. L., Pradhan, N. R., Downer, C. W., and J. L. Gutenson, “**Linking GSSHA to SEDLIB: Improvements to in-stream sediment modeling**”, Federal Interagency Sedimentation and Hydrologic Modeling Conference, 2019.
- Gutenson, J. L., M. D. Wahl, M. P. Geheran, M. W. Farthing, and M. L. Follum, “**Using Global Hydrometeorologic Forecasts as a Boundary Condition for Two-Dimensional HEC-RAS Modeling in Data Sparse Environments**”, World Environmental and Water Resources Congress 2018, Minneapolis, Minnesota, 06/2018.
- Gutenson, J. L., Wahl, M. D., Follum, M. L., Yeates, E.M., Cotterman, K. A., and M. P. Geheran, “**Enhancing U.S. Military Operations through Hydrology and Hydraulics**”, 2018 Water Policy Summit, Tuscaloosa, Alabama, 03/2018.
- Cotterman, K. A., Gutenson, J. L., Pradhan, N. R., and A. R. Byrd, “**Determining the Financial Impact of Flood Hazards in Ungaged Basins**”, 2017 American Geophysical Union (AGU) Fall Meeting, New Orleans, Louisiana, 12/2017.

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- Gutenson, J. L., Byrd, A. R., Brown, D. T., Hargis, B. H., and A. D. Snow, “**A Tool for Assessing Port Capabilities Across the Globe**”, 2017 Free and Open Source Software for Geospatial (FOSS4G) Conference, Boston, Massachusetts, 08/2017.
- Gutenson, J. L., Follum, M. L., Snow, A. D., and M. D. Wahl, “**Large-Scale Flood Inundation Modeling in Data Sparse Environments using TanDEM-X Terrain Data**”, 2017 CUAHSI Hydroinformatics Conference, Tuscaloosa, Alabama, 07/2017.
- Gutenson, J. L., Zhu, L., Ernest, A. N. S., Oubeidillah, A. A., Zhang, X., and G. A. Tootle, “**A Methodology for Forecasting Damage & Economic Consequences to Floods: Building on the National Flood Interoperability Experiment (NFIE)**”, 2015 American Geophysical Union (AGU) Fall Meeting, San Francisco, California, 12/2015.
- Zhang, X., Gutenson, J. L., Ernest, A. N. S., Oubeidillah, A. A., and L. Zhu, “**Developing a Decision Support System for Flood Response: NIMS/ICS Fundamentals**”, 2015 American Geophysical Union (AGU) Fall Meeting, San Francisco, California, 12/2015.
- Zhu, L., Gutenson, J. L., Ernest, A. N. S., Oubeidillah, A. A., Bearden, B., and T. G. Johnson, “**Multi-basin, Multi-sector Drought Economic Impact Model in Python: Development and Applications**”, 2015 American Geophysical Union (AGU) Fall Meeting, San Francisco, California, 12/2015.
- Gutenson, J. L., Oubeidillah, A. A., Ernest, A. N. S., Zhu, L., and X. Zhang, “**A Framework for Predicting Damage Assessment During Flooding Events**”, 2015 American Water Resources Association Annual Water Resources Conference, Denver, Colorado, 11/2015.
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