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Education

Purdue University
- Doctor of Philosophy (Ph.D.) in Civil Engineering — 2019
- Master of Science (M.S.) in Civil Engineering — 2014

Indian Institute of Technology Roorkee (IIT), India
- Bachelor of Technology (B.Tech.) in Civil Engineering — 2012

Work Experience

Virginia Tech
- Assistant Professor (Tenure-Track), Civil and Environmental Engineering — 2022 – present
- Research Assistant Professor, Civil and Environmental Engineering — 2019 – 2021

Purdue University
- Graduate Research Assistant, Civil Engineering — 2013 – 2019

Czech Technical University
- Research Intern, Prague, Czech Republic — 2011

Awards And Honors

- A. Ivan Johnson Award for Young Professionals, American Water Resources Association — 2022
- PhD Dissertation Award, Runner-up Universities Council on Water Resources (UCOWR) — 2020
- Nellie Munson Teaching Assistant Award, Purdue University — 2018
- Dorothy Faye Dunn Fellowship, Purdue University — 2018
- Marc and Carol Gill Endowment Fellowship in Civil Engineering, Purdue University — 2018
- Outstanding Reviewer Contribution, Journal of Hydrology — 2018
- Best Graduate Student Paper Award, American Society of Civil Engineering (ASCE) World Environmental and Water Resources Congress — 2017
- Pathfinder Fellowship, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) — 2017
- Jacques W. Delleur Award in Hydraulics and Hydrology, Purdue University — 2017
- Lyles Teaching Fellowship, Purdue University — 2017
- Best Graduate Student Paper Award, ASCE World Environmental and Water Resources Congress — 2015

Professional Skills

HEC-RAS 1D/2D; Interconnected Channel & Pond Routing (ICPR) 1D/2D Linux Simulation Engine; XP-SWMM; PC-SWMM; SWAT; HEC-HMS; ArcGIS Pro; QGIS; HY-8; MATLAB; SAS; Python; and GMS

Grant Funding

Virginia Tech

Co-PI, "An integrated framework to quantify and improve the climate change resiliency of combined sewer overflow systems in the Northeast Ohio Regional Sewer District" Ohio Sea Grant Commission with PI Lilit Yeghiazarian — 2022 – 2024, $160,000

Co-PI, "Occoquan Model Development and Support for Fiscal Year 2023" through Occoquan Monitoring Lab
Northern Virginia Regional Commission with PI Stanley Grant — 2022 – 2023, $116,000

Co-PI, "Identification of cost-effective green stormwater infrastructure to mitigate flooding in Houston's vulnerable communities and improve Galveston Bay fisheries"
Texas A&M University/DOC-NOAA with PI Jessica Eisma — 2022 – 2024, $300,000

Co-PI, "Identification of cost-effective, climate-informed green infrastructure adaptations to reduce flood risk in Houston's vulnerable communities"
NOAA Climate Program Office, Adaptation Science Program with PI Jessica Eisma — 2021 – 2023, $299,466

VT PI & Senior Person, "NSF Convergence Accelerator Pilot Phase II: The Urban Flooding Open Knowledge Network (UF-OKN) Delivering Flood Information to AnyOne, AnyTime, AnyWhere"
NSF Award# 2033607 with PI Lilit Yeghiazarian — 2020 – 2023, $5,300,000

VT PI & Senior Person, "Convergence Accelerator Phase I (RAISE) The Urban Flooding Open Knowledge Network"
NSF Award #1937099 with PI Lilit Yeghiazarian — 2019 – 2020, $1,000,000

Professional Service

Journal Editorship

Associate Editor, Journal of American Water Resources Association (JAWRA) — 2022 – present

Special Issue Editor, "Water Risk Under a Rapidly Changing World", Journal of American Water Resources Association (JAWRA) Featured Collection — 2022 – 2023

Peer Review (95 reviews)

Water Resources Research (1) — 2023

Journal of Hydrology (2); Climate Dynamics (1); International Journal of Hydrology Science and Technology (3); Hydrologic Sciences Journal (1); Water Resources Research (1); Journal of Flood Risk Management (1) — 2022

Water Resources Research (2); Journal of Hydrology (4); Water (2); Journal of American Water Resources Association (1); Sustainability (1); ISPRS International Journal of Geoinformation (5); Canadian Water Resources Journal (2); Hydrological Processes (1); Sensors (2); Journal of Flood Risk Management (1) — 2021

Nature – Scientific Data (2); Hydrological Processes (1); Water (17); Environmental Monitoring and Assessment (1); Natural Hazards and Earth System Sciences (1) Journal of Hydrology (7); Geomatics, Natural Hazards and Risk (1); Geosciences (1); Sustainability (2); Climate (1); Forests (1); Journal of American Water Resources Association (1); Frontiers in Earth Science (1); Journal of Flood Risk Management (1)	2020
Journal of American Water Resources Association (2); Canadian Journal of Civil Engineering (2); Mathematical Problems in Engineering (1); Natural Hazards and Earth System Sciences (2); Journal of Hydrology (6); Journal of Hydraulic Research (1); Current World Environment (1); Geomatics, Natural Hazards and Risk (1)	2019
Journal of Hydrology (7); Journal of Hydraulic Research (1); Geomatics, Natural Hazards and Risk (1)	2018
Journal of Hydrology (1)	2017

Committee Service

Conference General Co-Chair, Conference Planning Committee AWRA 2024 Geospatial Water Technology Conference, Orlando, FL	2022 – present
Member, EWR Graduate Admissions Committee, CEE, Virginia Tech	2022 – present
Co-Chair, American Water Resources Association's (AWRA) Technology Committee	2021 – present
Technical Advisory Committee, Texas Integrated Flooding Framework, Texas Water Development Board (TWDB)	2021 – present
Member, American Water Resources Association's (AWRA) Future Risk Committee	2021 – present
Technical Program Co-Chair, Conference Planning Committee AWRA 2022 Spring Specialty Conference: Water Risk Under a Rapidly Changing World, Tuscaloosa, AL	2021 – 2022
Technology Committee Member, Conference Planning Committee AWRA 2022 Geospatial Water Technology Conference, Austin, TX	2021 – 2022
Student Activities Chair, Conference Planning Committee AWRA 2020 Virtual Geospatial Water Technology Conference	2019 – 2020

Conference Session Convener, National

Session Chair, "Innovations in Operational Flood Forecasting, Real-Time Response, and Risk Mitigation", American Geophysical Union (AGU) Fall Meeting 2022	2022
Session Co-Chair, "Data-Driven Approaches for Flood Observation, Model Validation, and Uncertainty Quantification", American Geophysical Union (AGU) Fall Meeting 2022	2022
Session Chair, "Urban Flooding Open Knowledge Network: Delivering Flood Information to Anyone, Anytime, Anywhere", 2021 AWRA Virtual Annual Water Resources Conference	2021
Session Chair, "An Automated Framework for Flood Modeling and Forecasting using Geospatial Descriptors and the Interconnected Channel and Pond Routing (ICPR) Model", 2021 AWRA Virtual Annual Water Resources Conference	2021
Session Chair, "Advances in Integrated and Coupled Systems Modeling for Improved Urban Flood Risk and Impact Assessment", American Geophysical Union (AGU) Fall Meeting 2020	2020

Student Project, Thesis, & Dissertation Committees

Chair, Advisory Committee, PhD

Rezvane Ghorbani (Virginia Tech CEE Ph.D.)	2023 – present
Vishwa Shah (Virginia Tech CEE Ph.D.)	2022 – present

Chair, Advisory Committee, Masters

Erin Lee (Virginia Tech CEE M.S.)	2023 – present
Momtaz Jahan (Virginia Tech CEE M.S.)	2022 – present

Member, Advisory Committee, PhD

Md Abu Bakar Siddik (Virginia Tech CEE Ph.D., Advisor: Landon Marston)	2023 – present
Charlie Wendell Grinton, Jr. (Virginia Tech CEE Ph.D., Advisor: Freddy Paige)	2022 – present
Megan Harris (Virginia Tech CEE Ph.D., Advisor: John Little)	2022 – present
Mahsa Samadi Darafshani (University of Texas Arlington CEE Ph.D., Advisor: Jessica Eisma)	2022 – present
Jessica Seersma (Colorado State University CEE Ph.D., Advisor: Venkatesh Merwade)	2020 – present
Paul Chilton (Virginia Tech Geosciences Ph. D., Advisor: Robert Weiss)	2020 – present
Conrad Brendel (Virginia Tech CEE Ph.D., Advisor: Randel Dymond)	2019 – 2020

Member, Advisory Committee, Masters

Melissa Stacy (Virginia Tech CEE M.S., Advisor: Stanley Grant)	2022 – present
Sarah Adams (Virginia Tech CEE M.S., Advisor: Jennifer Irish)	2022 – present
Alex Miller (Virginia Tech CEE M.S., Advisor: Landon Marston)	2022 – present
Jaclyn McCarthy (Virginia Tech CEE M.S., Advisor: Landon Marston)	2021 – 2022
Karsten Zuidema (Virginia Tech CEE M.S., Advisor: Landon Marston)	2021 – 2022
Ahmed S. Ahmed (Virginia Tech CEE M.S., Advisor: Tripp Shealy)	2020 – 2021
Alireza Moghaddasi (Virginia Tech BSE, M.Eg., Advisor: Robert Grisso)	2019 – 2020

Postdoctoral Advising

Lalit Pal (Virginia Tech CEE)	2022 – present

Professional Affiliations

Member, American Water Resources Association (AWRA)	2018 – present
Member, American Geophysical Union (AGU)	2016 – present
Associate Member, American Society of Civil Engineers (ASCE)	2015 – present
Member, Environmental and Water Resources Institute (EWRI)	2015 – present

Teaching Experience

Virginia Tech

Instructor, CEE 3314 Water Resources Engineering	Spring 2023
Instructor, CEE 4304/5334 Hydrology/Quantitative Hydrology	Fall 2022

Instructor, CEE 5244 Advanced GIS in Hydrologic Analysis — Spring 2022

Instructor, CEE 5244 Advanced GIS in Hydrologic Analysis — Fall 2021

Instructor, CEE 5244 Advanced GIS in Hydrologic Analysis — Spring 2021

Purdue University

Lyles Teaching Assistant, CE 340 Hydraulics — Fall 2017

Graduate Teaching Assistant, CE 298 Basic Mechanics II Dynamics — Spring 2017

Publications And Presentations

Journal Articles Google Scholar (389 citations)

15. Kohanpur, A., **Saksena, S.,** Dey, S., Johnson, J.M., Riasi, S., Yeghiazarian, L., & Tartakovsky, A. (2023) Urban Flood Modeling: Uncertainty Quantification and Physics-Informed Gaussian Processes Regression Forecasting. *Water Resources Research*, 59 (3), https://doi.org/10.1029/2022WR033939.
14. Paranjape, V.V., Henao-Guerrero, N., Menciotti, G., and **Saksena, S.** (2023) Esophageal Doppler-derived indices and arterial load variables provide useful hemodynamic information during assessment of fluid responsiveness in anesthetized dogs undergoing acute changes in blood volume. *American Journal of Veterinary Research*, 84 (3), https://doi.org/10.2460/ajvr.22.11.0198.
13. Paranjape, V.V., Henao-Guerrero, N., Menciotti, G., and **Saksena, S.** (2023) Volumetric evaluation of fluid responsiveness using a modified passive leg raise maneuver during experimental induction and correction of hypovolemia in anesthetized dogs. *Veterinary Anaesthesia and Analgesia*, (in press) https://doi.org/10.1016/j.vaa.2023.02.009.
12. Dey, S., **Saksena, S.,** Winter, D., Merwade, V., and McMillan, S. (2022) Incorporating Network Scale River Bathymetry to Improve Characterization of Fluvial Processes in Flood Modeling. *Water Resources Research*, 58 (11), https://doi.org/10.1029/2020WR029521.
11. Paranjape, V.V., Shih, A., Garcia-Pereira, F., and **Saksena, S.** (2022) Transpulmonary ultrasound dilution is an acceptable technique for cardiac output measurement in anesthetized pigs. *American Journal of Veterinary Research*, 83 (6), PMID: 35524964, https://doi.org/10.2460/ajvr.21.11.0189.
10. Johnson, J.M, Narock, T., Singh, J., Fils, D., Clarke, K.C., **Saksena, S.,** Shepard, A., Arumugam, S., and Yeghiazarian, L. (2022) Knowledge Graphs to support real-time flood impact evaluation. *AI Magazine*, 43, pp. 40-45, https://doi.org/10.1002/aaai.12035.
9. **Saksena, S.,** Merwade, V., and Singhofen, P.J. (2021) An Alternative Approach for Improving Prediction of Integrated Hydrologic-Hydraulic Models by Assessing the Impact of Intrinsic Spatial Scales. *Water Resources Research*, 57 (10), https://doi.org/10.1029/2020WR027702.
8. Eisma, J., **Saksena, S.,** and Merwade, V. (2021) Assessing the Impact of Land Cover, Soil, and Climate on the Storage Potential of Dryland Sand Dams. *Frontiers in Water*, 3, https://doi.org/10.3389/frwa.2021.671455.
7. **Saksena, S.,** Dey, S., Merwade, V., and Singhofen, P.J. (2020) A Computationally Efficient and Physically Based Approach for Urban Flood Modeling Using a Flexible Spatiotemporal Structure. *Water Resources Research*, 56, https://doi.org/10.1029/2019WR025769.
6. **Saksena, S.,** Merwade, V., and Singhofen, P.J. (2019) Flood Inundation Modeling and Mapping by Integrating Surface and Subsurface Hydrology with River Hydrodynamics. *Journal of Hydrology*, 575, pp. 1155-1177, https://doi.org/10.1016/j.jhydrol.2019.06.024.

5. Dey, S., **Saksena, S.,** and Merwade, V. (2019) Assessing the Effect of Different Bathymetric Models on Hydraulic Simulation of Rivers in Data Sparse Regions. *Journal of Hydrology,* 575, pp. 838-851. https://doi.org/10.1016/j.jhydrol.2019.05.085.
4. Frisbee, M.D., Meyers, Z.P., Miller, J.B., Box, C.L., Stewart-Maddox, N.S., Larson, E.B., Granger, D.E., **Saksena, S.,** Dey, S., and Frisbee, E. (2019) Processes Leading to the Reactivation of a Sinkhole in Buried Karst and the Subsequent Drying of Waterfalls in a Small Catchment Located in Northern Indiana, USA. *Journal of Cave and Karst Studies*, 81 (2), pp. 69-83. http://dx.doi.org/10.4311/2017ES0116.
3. Jafarzadegan, K., Merwade, V., and **Saksena, S.** (2018) A Geomorphic Approach to 100-Year Floodplain Mapping for the Conterminous United States. *Journal of Hydrology*, 561, pp. 43-58, https://doi.org/10.1016/j.jhydrol.2018.03.061.
2. **Saksena, S.,** and Merwade, V. (2017) Deterministic Approach to Identify Ordinary High-Water Marks using Hydrologic and Hydraulic Attributes. *Journal of Irrigation and Drainage Engineering*, 143 (5), 04016084. https://doi.org/10.1061/(ASCE)IR.1943-4774.0001148.
1. **Saksena, S.,** and Merwade, V. (2015) Incorporating the Effect of DEM Resolution and Accuracy for Improved Flood Inundation Mapping. *Journal of Hydrology*, 530, pp. 180-194, https://doi.org/10.1016/j.jhydrol.2015.09.069.

Conference Papers

2. **Saksena, S.,** and Merwade, V. (2017) Integrated Modeling of Surface-Subsurface Processes to Understand River- Floodplain Hydrodynamics in the Upper Wabash River Basin. *World Environmental and Water Resources Congress 2017*, pp. 60–68
1. **Saksena, S.** (2015) Investigating the Role of DEM Resolution and Accuracy on Flood Inundation Mapping. *World Environmental and Water Resources Congress 2015*, pp. 2236-2243

Book Chapter

1. **Saksena, S.,** and Merwade, V. (2022) Application of Physically Based Distributed Flood Models for Large-Scale Flood Simulations. *In Flood Handbook, 1st Edition, Taylor & Francis Group*, https://doi.org/10.1201/9780429463938.

Technical Reports and Magazine Articles

5. **Saksena, S.** (2020) Flood Prediction in a Changing World: Time to Break Traditions. *American Water Resources Association IMPACT Magazine, 22 (2)*
4. Johnson, J.M., **Saksena, S.,** Yeghiazarian, L., Mer wade, V., Arumugam, S., Back, S., Bales, J., Cai, X., Fils, D., Hahmann, T., Horsburgh, J.S., Huang, Z., Huang, R., Mazrooei, A., Onda, K., Ranjithan, R., Riasi, M. S., Rice, S., Shafiee-Jood, M., Shepherd, A., Singhofen, P., Stephan, S., Tarboton, D., and Tartakovsky, A. (2020) Moving from Information to Insight by Linking Urban and Hydrologic Systems through the Urban Flooding Open Knowledge Network. *American Water Resources Association IMPACT Magazine, 22 (2)*
3. Lyn, D., **Saksena, S.,** Dey, S., and Merwade, V. (2019) A Laboratory Study for Apron-Riprap Design for Small Culverts. *Joint Transportation Research Program Publication No. FHWA/IN/JTRP-2019/16, Purdue University, West Lafayette, IN*
2. Lyn, D., Dey, S., **Saksena, S.,** and Merwade, V. (2018) Assessment of HY-8 and HEC-RAS Bridge Models for Large-span Water-encapsulating Structures. *Joint Transportation Research Program Publication No. FHWA/IN/JTRP-2018/14, Purdue University, West Lafayette, IN*

1. **Saksena, S.,** and Merwade, V. (2015) Relating Design Storm Events to Ordinary High-Water Marks in Indiana. *Joint Transportation Research Program Publication No. FHWA/IN/JTRP-2015/19, Purdue University, West Lafayette, IN*

Manuscripts in Review

4. Pal, L., **Saksena, S.,** Dey, S., Merwade, V., & Ojha, C. (n.d.). Comprehensive Framework for Assessment of Urban Flood Response to Changing Climate. *Submitted to Water Resources Research* (under review)
3. Lyn, D., Dey, S., **Saksena, S.,** & Merwade, V. (n.d.). Culvert vs Bridge Hydraulics for larger-span (or short) culverts. *Submitted to Journal of Hydraulic Engineering* (under review)
2. Johnson, J.M., Coll, J., Clarke, K., Afshari, S., **Saksena, S.,** and Yeghiazarian, L. (n.d.) Determining Feature Based Hydraulic Geometry and Rating Curves using a Physically Based, Computationally Efficient Framework. *Submitted to Water* (under review)
1. Paranjape, V.V., Henao-Guerrero, N., Menciotti, G., **Saksena, S.**, and Agostinho, M. (n.d.) Agreement between Electrical Cardiometry and Pulmonary Artery Thermodilution for Measuring Cardiac Output in Isoflurane-Anesthetized Dogs. *Submitted to Animals* (under review)

Conference Presentations (*indicates presenting author)

55. **Saksena, S.*** (2022) Urban Flooding Open Knowledge Network (UFOKN): Current Products and Future Functionalities. *AGU Fall Meeting 2022, Chicago, IL*.
54. Dey, S.*, **Saksena, S.**, and Merwade, V. (2022) Developing Accuracy Benchmarks for Conceptual River Bathymetry to Improve Large-Scale Hydrologic and Hydrodynamic Modeling. *AGU Fall Meeting 2022, Chicago, IL.*
53. Dey, S.*, **Saksena, S.**, Merwade, V., and Yeghiazarian, L. (2022) AutoRAS – An Automated HEC-RAS based Short-Range Flood Forecast System at Building Level Resolution. *AGU Fall Meeting 2022, Chicago, IL.*
52. Pal, L.*, Dey, S., **Saksena, S.**, Merwade, V., and Ojha, C.S.P. (2022) Comprehensive Urban Flood Assessment Framework to Incorporate the Influence of Changing Climate. *AGU Fall Meeting 2022, Chicago, IL*.
51. Merwade, V.*, **Saksena, S.**, Dey, S., Li, P.C., and Huang, T. (2022) Improving Streamflow and Flood Predictions Through Computational Simulations, Machine Learning and Uncertainty Quantification. *AGU Fall Meeting 2022, Chicago, IL.*
50. **Saksena, S.***, and Yeghiazarian, L. (2022) The Urban Flooding Open Knowledge Network: Delivering Flood Information to Anyone, Anytime, Anywhere. *AWRA 2022 Annual Water Resources Conference, Seattle, WA.*
49. Seersma, J.*, Merwade, V., and **Saksena, S.** (2022) Resharing the Regulatory Framework: An Equitable Fully Distributed Integrated Water Resources Management Approach Applied to Optimal Green Infrastructure Selection. *AWRA 2022 Annual Water Resources Conference, Seattle, WA.*
48. Dey, S., **Saksena, S.***, and Merwade, V. (2022) Improving Surface-Subsurface Process Characterization Through Efficient Bathymetric Incorporation in Large-scale Hydrologic and Hydrodynamic Models. *AWRA 2022 Annual Water Resources Conference, Seattle, WA.*
47. Dey, S., **Saksena, S.***, Merwade, V., and Yeghiazarian, L. (2022) Hydraulic Models & Enhancing Feature Level Flood Forecasting in Near Real Time through Efficient Integration of National Water Model and HEC-RAS. *AWRA 2022 Annual Water Resources Conference, Seattle, WA.*

46. **Saksena, S.*,** Yeghiazarian, L., Johnson, M., and Shepherd, A. (2022) Urban Flooding Open Knowledge Network: Future Tools, Functionalities and Products. *AWRA 2022 Geospatial Water Technology Conference, Austin, TX.*
45. Dey, S.*, **Saksena, S.**, and Merwade, V. (2022) Improving Surface-subsurface Process Characterization through Efficient Bathymetric Incorporation in Large-scale Hydrologic and Hydraulic Models. *AWRA 2022 Geospatial Water Technology Conference, Austin, TX.*
44. Li, P.C.*, **Saksena, S.**, Dey, S., and Merwade, V. (2022) Novel Hydrologic Soil Classification Method Using Unsupervised Clustering Techniques and gSSURGO Data to Improve Soil Parameterization in the Conterminous United States. *AWRA 2022 Geospatial Water Technology Conference, Austin, TX.*
43. Dey, S.*, **Saksena, S.**, and Merwade, V. (2022) SPRING - An Automated and Flexible Framework for Developing Large-scale 3D Representations of River Network. *AWRA 2022 Geospatial Water Technology Conference, Austin, TX.*
42. **Saksena, S.***, Yeghiazarian, L., Johnson, M., and Shepherd, A. (2022) The Urban Flooding Open Knowledge Network: Delivering Flood Information to Anyone Anytime Anywhere. *AWRA 2022 Spring Conference: Water Risk Under a Rapidly Changing World, Tuscaloosa, AL.*
41. **Saksena, S.***, Dey, S., Merwade, V., Salvi, N.A., Johnson, J.M., and Yeghiazarian, L. (2021) Flood modeling using an integrated hydrosystems approach: moving beyond traditional flood mapping. *AGU Fall Meeting 2021, New Orleans, LA.*
40. Johnson, J.M*, Eyelade, D., Mohudpur, J.S., **Saksena, S**., and Yeghiazarian, L. (2021) Achieving real-time, continental, building level, inundation forecasts using the National Water Model and Open Geospatial Data. *AGU Fall Meeting 2021, New Orleans, LA.*
39. Dey, S*., Liang, C., Merwade, V., and **Saksena, S.** (2021) SPRING – An automated and flexible framework for developing large-scale 3D representations of river network. *AGU Fall Meeting 2021, New Orleans, LA.*
38. Dey, S.*, **Saksena, S.**, Merwade, V., and Singhofen, P. (2021) Effect of bathymetric representation on surface-subsurface process characterization in large-scale hydrologic and hydraulic models. *AGU Fall Meeting 2021, New Orleans, LA.*
37. Li, P.*, **Saksena, S**., Dey, S., and Merwade, V. (2021) Three-dimensional digital soil mapping of soil properties using gSSURGO for improved hydrologic modeling. *AGU Fall Meeting 2021, New Orleans, LA.*
36. Kohanpur, A.H.*, Tartakovsky, A.M., **Saksena, S.**, Dey, S., Johnson, J.M., Yeghiazarian, L., and Riasi, M.S. (2021) Parametric uncertainty quantification in urban flood models. *AGU Fall Meeting 2021*.
35. Riasi, M.S., Parisi, J., **Saksena, S.**, and Yeghiazarian, L. (2021) Role of edge dynamics in controllability of flooding networks. *AGU Fall Meeting 2021, New Orleans, LA.*
34. Merwade, V.*, Yeghiazarian, L., Arumugam, S., Cai, X., Hahmann, T., Shepherd, A., **Saksena, S.,** Johnson, J.M., and Riasi, S. (2021) The Urban Flooding Open Knowledge Network: Delivering Flood Information to Anyone, Anytime, Anywhere. *AGU Fall Meeting 2021, New Orleans, LA.*
33. McMillan, S.K.W.*, Dey, S., Donohue, S., Merwade, V., Montoya, A., Noe, G.B., **Saksena, S.**, and Winter, D. (2021) Floodplain reconnection in agricultural landscapes and tradeoffs in water quality. *AGU Fall Meeting 2021, New Orleans, LA.*
32. **Saksena, S.*,** Dey, S., Merwade, V., and Singhofen, P.J. (2021) Introduction and Significance of an Automated Flood Modeling and Forecasting Framework Using the Interconnected Channel and Pond Routing (ICPR) Model. *2021 AWRA Virtual Annual Water Resources Conference.*
31. **Saksena, S.*** (2021) Future Tools, Functionalities, and Local Applications of the Urban Flooding Open Knowledge Network. *2021 AWRA Virtual Annual Water Resources Conference.*

30. **Saksena, S.*** (2021) The Urban Flooding Open Knowledge Network (UF-OKN): Delivering Flood Information to AnyOne, AnyTime, AnyWhere. *World Environmental & Water Resources Congress 2021 (Virtual).*
29. **Saksena, S.***, Dey, S., Merwade, V., and Singhofen, S., (2021) Flood modeling using an integrated hydrosystems approach: moving beyond traditional flood mapping. *2021 UCOWR/NIWR Virtual Annual Water Resources Conference.*
28. **Saksena, S.*,** Zeng, L., Salvi, N.A., Dey, S., Merwade, V., Ramaswami, A., and Singhofen, P.J. (2020) Comparing simplistic versus complex modeling approaches for simulating localized urban flooding. *AGU Fall Meeting 2020 (Virtual).*
27. Merwade, V.*, Yeghiazarian, L., Arumugam, S., Cai, X., Shepherd, A., Johnson, M.., Hahmann, T., **Saksena, S.,** Singhofen, P., and Riasi, S. (2020) The Urban Flooding Open Knowledge Network: Delivering Flood Information to AnyOne, AnyTime, AnyWhere. *AGU Fall Meeting 2020 (Virtual).*
26. Dey, S.*, **Saksena, S.,** Merwade, V., and Singhofen, P.J. (2020) Enabling Improved Fluvial Process Characterization in Hydrodynamic and Hydrologic Models through Better Representation of River Bathymetry. *AGU Fall Meeting 2020 (Virtual).*
25. McMillan, S.K.*, Dey, S., Donohue, S., Limiac, A., Merwade, V., Montoya, A., Noe, G., **Saksena, S.,** Williams, M., and Winter, D. (2020) Integrating drivers of nutrient biogeochemistry in riverine floodplains to inform restoration design. *AGU Fall Meeting 2020 (Virtual).*
24. **Saksena, S.***, Salvi, N.A., Dey, S., Merwade, V., Singhofen, P.J., Zeng, L., and Ramaswami, A. (2020) Hyper resolution flood modeling and forecasting using an integrated hydrosystems approach. *2020 AWRA Virtual Annual Water Resources Conference.*
23. **Saksena, S.*,** Johnson, M., Singhofen, P.J., Shepherd, A., Merwade, V., and Yeghiazarian, L. (2020) The Urban Flooding Open Knowledge Network: Modeling and Forecasting Capabilities. *2020 AWRA Virtual Annual Water Resources Conference.*
22. **Saksena, S.*,** Dey, S., Salvi, N.A., Merwade, V., Singhofen, P., Zeng, L., and Ramaswami, A. (2020) Hyper-resolution Urban Flood Modeling Using an Integrated Hydrosystems Approach. *2020 AWRA Virtual Geospatial Water Technology Conference.*
21. **Saksena, S.*,** Salvi, N.A., Dey, S., Merwade, V., Singhofen, P., Zeng, L., and Ramaswami, A. (2019) Simulating the Flood Hydrodynamics of Complex Urban Systems Using a Hyper Resolution Integrated Modeling Framework. *AGU Fall Meeting 2019*, *Abstract H13J-1827, San Francisco, CA*
20. Dey, S.*, **Saksena, S.,** Arra, S., Merwade, V., and Singhofen, P. (2019) Quantifying the Effect of River Channel Geometry on Fluvial Interactions across Multiple Spatial Scales. *AGU Fall Meeting 2019*, *Abstract EP53G-2266, San Francisco, CA.*
19. **Saksena, S.*,** Merwade, V., Singhofen, P.J., and Dey, S. (2019) Hyper Resolution Flood Modeling and Mapping using a Computationally-Efficiency Distributed Modeling Approach. *2019 CUAHSI Hydroinformatics Conference, Provo, UT.*
18. Dey, S.*, Merwade, V., and **Saksena, S.** (2019) Incorporating River Geometry in Large Scale Hydrologic and Hydrodynamic Models. *2019 CUAHSI Hydroinformatics Conference, Provo, UT.*
17. **Saksena, S.*,** Dey, S., Merwade, V., Singhofen, P.J., Zheng, L., and Ramaswami, A. (2019) Using a Computationally efficient Model Structure for Integrated Flood Risk Assessment of Urban Environments. *2019 World Environmental and Water Resources Congress, Pittsburg, PA.*
16. Dey, S.*, **Saksena., S.,** and Merwade, V. (2019) Developing High Resolution Stream Network and Riverbanks to Enable Accurate Hydrodynamic Simulations for Large Watersheds. *2019 World Environmental and Water Resources Congress, Pittsburg, PA.*

15. Dey, S.*, **Saksena, S**., and Merwade, V. (2018) An Automated Framework for Creating Hyper Resolution Hydrodynamic Models for Large Watersheds. *AGU Fall Meeting 2018*, *Abstract H32A-05, Washington D.C.*
14. **Saksena, S.*,** Merwade, V., Singhofen, P., and Dey, S. (2018) Enabling a Hyper-resolution Integrated Flood Modeling Framework for Urban Environments. *AGU Fall Meeting 2018*, *Abstract H33S-2314, Washington D.C.*
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