1. PERSONAL INFORMATION

Name: Jon Derek Loftis
Initial Appointment Date: May 18, 2014
Office: Davis Hall 222
Office Phone: (804) 684-7876

Position: Research Assistant Professor
Center & Section: Center for Coastal Resources Management
                                    Department of Physical Sciences - Ecosystem Health

2. EDUCATION

Ph.D., Marine Science, Virginia Institute of Marine Science, College of William & Mary, 2014
M.Sc., Environmental Science, Christopher Newport University, 2009
B.Sc., Biology, Christopher Newport University, 2007

3. ACADEMIC POSITIONS

07-2020 to present   **Research Assistant Professor**, Center for Coastal Resources Management and Ecosystem Health Section, Virginia Institute of Marine Science, College of William & Mary, VA, USA

01-2020 to 05-2021   **Adjunct Instructor**, Virginia Institute of Marine Science, College of William & Mary, VA, USA. Instructor for: MSCI 698 - GIS for Marine Science

07-2016 to 06-2020   **Assistant Research Scientist**, Virginia Institute of Marine Science, Center for Coastal Resources Management, College of William & Mary, VA, USA

01-2015 to 05-2019   **Adjunct Instructor**, Center for Geospatial Analysis, College of William & Mary, VA, USA. Instructor for: GIS 410/510 - Remote Sensing and GIS 420/520 - Advanced GIS Analysis and Programming

05-2014 to 06-2016   **Post-Doctoral Research Associate**, Virginia Institute of Marine Science, Department of Physical Sciences, College of William & Mary, VA, USA

01-2008 to 05-2016   **Adjunct Instructor**, Department of Organismal and Environmental Biology, Christopher Newport University, VA, USA. Instructor for: BIOL 107 - General Biology 1, BIOL 108 - General Biology 2, BIOL 109L - General Biology Laboratory, BIOL 391WI - Junior Scientific Writing Seminar, and BIOL 491WI - Senior Scientific Writing Seminar

08-2009 to 04-2014   **Ph.D. Graduate Research Fellow**, Virginia Institute of Marine Science, Department of Physical Sciences, College of William & Mary, VA, USA

05-2007 to 07-2009   **Graduate Researcher**, NASA Langley Research Center, Develop National Program, Hampton, VA, USA

03-2007 to 06-2009   **Laboratory Research Scientist**, Thomas Jefferson National Accelerator Facility (Jefferson Lab), Newport News, VA, USA

4. HONORS, PRIZES, AND AWARDS

Professional prizes, awards, honors, editorial positions on scholarly journals, service on review boards outside the college, and offices in professional societies.

2023	IDC Smart Cities North America Winner (Sustainable Infrastructure)
2020-2023	W. Taylor Reveley, III Interdisciplinary Faculty Fellow Award	Award Letter
2020	Future Edge 50 Award	Press/Archive
2019	Invited by NASA to serve as a ROSES Grant Review Panelist for Disasters Program
2019	Green Electronics Council Catalyst Award Honoree	Press/Archive, More Press
2019	VA Governor's Technology Award in Cross-Boundary Collaboration	Press/Archive
2019	VA Governor's Technology Award in Innovative Technology	Press/Archive
2019	Guinness World Record (Most Contributions to an Enviro. Survey)	Press/Archive
2019	ESRI Special Achievement in GIS Award	Press/Archive
2019	VA Commonwealth Research Commercialization Fund Award	Press/Archive
2019	VIMS Dean & Director's Innovation Fund Award	Press/Archive
2018-2020	Invited by NSF for expert panel review in Information and Intelligent Systems (IIS), Cyber-Physical Systems (CPS), and Engineering (ENG) programs for Smart and Connected Community Proposals (3 panels)
2018	Government Innovation Award (Public Sector)	Press/Archive, TV Interview
2018	Smart Cities North America Winner (Smart Water)	Press/Archive, TV Interview
2018	Smart City Infrastructure Challenge Winner (Hampton Roads - RCR)	Press/Archive
2018	Alliance for Innovation (Exemplary Case Study & Innovation Award)	Press/Archive
2018	Smart 50 Award (Networks)	Press/Archive
2018	CIO 100 Awards (Networks)	Press/Archive
2017	GovLoop Top 30 Government Innovation	Press/Archive, TV Interview/Archive
2017	Amazon Web Services' City on a Cloud (Best Practices)	Press/Archive
2017	Replicable Smart City Technology, Global City Teams Challenge	Press/Archive
2016	2nd Prize Market Bridge Challenge (Coastal Resilience Competition)	Press/Archive
2016	VIMS Post-Doc. Travel Grant - $1600 awarded to present at OSM in New Orleans, LA
2016	USignite Travel Grant - $5000 awarded to fund GCTC display booth in Austin, TX
2014	VIMS Student Travel Grant - $600 awarded to present at OSM in Honolulu, HI
2012	MTS/IEEE Oceans '12 Graduate Student Research Competition (3rd Place)
2011	VA Governor's Technology Award in Modeling and Sim. (VIMS Modeling Group)
2009-2010	VIMS Dean's Office Graduate Assistantship Award (Tuition Waiver)
2007-2009	Christopher Newport University Graduate Assistantship Grant (Tuition Waiver)
2008	Green Palooza Award Winner, NASA Climate Change Colloquium
2008	VA Tidewater Chapter Sigma Xi Research Competition (1st Place, Grad Level)
2007	VA Tidewater Chapter Sigma Xi Research Competition (2nd Place, Grad Level)
2007	VA Tidewater Chapter Sigma Xi Research Competition (1st Place, Undergrad)
2003-2007	CNU President's Leadership Program Scholarship

5. CONTRIBUTIONS TO THE EDUCATIONAL PROGRAM (SMS/VIMS REVISION)

6a. **Courses taught (Graduate and Undergraduate)**

01-23 to 05-23	**VIMS MSCI 498/548** *(3 Credit Hours, Enrollment: 2 grad students)* Evaluating Coastal Flooding Resiliency *(50/50 co-taught with Dr. Molly Mitchell)*
01-22 to 05-22	**VIMS MSCI 498/548** *(3 Credit Hours, Enrollment: 5 grad students)* Evaluating Coastal Flooding Resiliency *(50/50 co-taught with Dr. Molly Mitchell)*
01-21 to 05-21	**VIMS MSCI 698** *(3 Credit Hours, Enrollment: 3 grad students)* GIS for Marine Science
01-20 to 05-20	**VIMS MSCI 698** *(3 Credit Hours, Enrollment: 5 grad students)* GIS for Marine Science
01-19 to 05-19	**W&M GIS 420 / 520** *(3 Credit Hours, Enrollment: 14 undergrads, 2 grad students)* Advanced GIS Analysis and Programming
01-18 **to 05-18**	**W&M GIS 420 / 520** *(3 Credit Hours, Enrollment: 15 undergrads, 1 grad student)* Advanced GIS Analysis and Programming
01-19 and 1-20	**Guest Lecturer for UVA CE 6500** (Coastal Environmental Engineering) University of Virginia, Sci., Tech. and Society Program
04-17	**Guest Lecturer for VIMS MSCI 598** (Drones and UAVs) Virginia Institute of Marine Science, Department of Physical Sciences
01-17 to 05-17	**W&M GIS 410 / 510** *(3 Credit Hours, Enrollment: 16 undergrads)* Introduction to Remote Sensing
01-17 and 1-18	**Guest Lecturer for UVA CE 6500** (Coastal Environmental Engineering) University of Virginia, Sci., Tech. and Society Program
01-16 to 05-16	**W&M GIS 410 / 510** *(3 Credit Hours, Enrollment: 16 undergrads)* Introduction to Remote Sensing
06-15 to 8-15	**Regular Guest Lecturer for W&M INDP 598** (GIS Mapping for Marine Research Applications) Center for Geospatial Analysis, College of William & Mary. (Guest lectured for 4 separate class meetings out of 16 classes for Dr. Stu Hamilton's class on the topics of: 1) active remote sensors for water level monitoring, 2) GIS-data filtering methods development of lidar-based topographic digital elevation models and sonar-based bathymetric surfaces, 3) production of hydrodynamic model grids, & 4) real-time sensor mapping).

6b. **Students Mentored (SMS/VIMS Revision)**

1. **Major Advisor**
   N/A

2. **Student Committee Service**
   *denotes SMS/VIMS revision (approved by Provost)
   a. **Alfonso Macias-Tapia**: Ph.D. student at Old Dominion University, (2018-2023), Dissertation Title: *Tidal flooding in the mid-Atlantic region of the US: water quality effects in the lower Chesapeake Bay*
   *Undergraduate Student Advisees
   a. **Dylan Bagarus:** served as senior thesis committee member for undergraduate student

at W&M (2020-2021) on storm surge economic impacts in Charleston, SC (Major Advisor: Dr. Sarah Stafford; co-advised with Dr. Harry Wang).

    b. **Olivia Basco:** served as senior thesis advisor for student at Virginia Tech (2018-2019) and aided her in applying for funds to support 'Catch the King' through her Tide Gauge Installation Scholarship Project in Hampton, VA

    c. **Abhir Karande:** served as senior thesis outside committee member for student at the University of Virginia (2018-2019), Tidewater Machine Learning Sensor Research Project

    d. **David Nicks:** undergraduate student at W&M (2016-2018), working on Maryland Water Quality Modeling project (co-advised with Dr. Harry Wang)

7. FELLOWSHIPS AND GRANTS

Total committed funds since initial research scientist appointment at VIMS in 2016: $0.94M

7a) All fellowships, grants, contracts, etc., awarded by outside agencies. Specify dates, sources, and amounts

1) **PI:** "VA Water Level Sensor Deployment", **$10,000/annually awarded through Coastal Resilience Initiative**, July 2022; continual funding in VA State Budget for CCRM/CCRFR.
2) **PI:** "VA Center for Innovative Technology - Commonwealth Research Commercialization Fund 2019: StormSense-VIMS, using AWS DeepLens AI", **$49,500 awarded by Virginia Center for Innovative Technology**, from July 2019 to July 2023 (Co-PI: Dr. David Forrest).
3) **PI:** "Proposal to Collaborate on Tidal Watershed Monitoring", **$10,000 awarded by Crow's Nest Research Reserve**, from July 2020 to July 2022.
4) **Co-PI:** "The SC storm surge and inundation NOAA EDA project", **$300,000 awarded by NOAA EDA**, from July 2019 to July 2022 (PI: Dr. Harry Wang; Co-PI's Dr. Joseph Zhang & Dr. David Forrest).
5) **Co-PI:** "Land Use Change & Recurrent Flooding Issues in Northern VA (VDOT District 8)", **$75,725 awarded by VDOT**, from January 2021 to March 2022 (PI: Dr. Karinna Nunez).
6) **PI:** "Development of High-Resolution Flood Depth Grids for Guidance in Building-Level Damage Assess. in Newport News, VA for IFLOWS", **$109,000 awarded by FEMA VDEM**, from July 2018 to July 2021 (Co-PI: Marcia Berman).
7) **PI:** "Measuring the Economic Impact of Recurrent Flooding on Workforce Productivity & Property", **$65,000 awarded by NOAA** from January 2019 to December 2021 (Co-PI: Dr. David Forrest).
8) **PI:** "Proposal to NRDC in Support of Six New Water Level Sensors to Monitor & Predict Storm Surge and Sea Level Rise", **$26,000 awarded by Natural Resources Defense Council**, from February 2018 to December 2020.
9) **PI:** "Development of a Street-Scale Hydrodynamic Model, Calibration, and Future Flooding Scenarios for Coastal Hazard Simulations in VA & NC", **$122,000 awarded by the NASA Disasters Program** from July 2017 to June 2018, (Co-PI's: Dr. Harry Wang & Dr. David Forrest).

10) **PI:** "Development of a Street-Scale Hydrodynamic Model, Calibration, and Future Flooding Scenarios for Portsmouth", **$52,000 awarded by the City of Portsmouth** from July 2017 to March 2018 (Co-PI: Dr. David Forrest).

11) **PI:** "Replicable Smart Cities Technology: Global City Teams Challenge - StormSense Project", **$75,000 awarded by National Institute of Standards and Technology** from September 2016 to June 2018 (Co-PI: Dr. David Forrest).

7b) Internally-Funded Projects

1) **PI:** "StormSense-Water Level Sensor Development and Proliferation", **$25,000 awarded by VIMS Foundation**; endowment from the Mars Foundation, from May 2019 to July 2023.

2) **PI:** "Development of the StormSense-VIMS, Video Inundation Monitoring System", **$20,000 awarded by VIMS Dean and Director's Innovation Fund**, from May 2019 to July 2021.

8. RESEARCH

a) Refereed publications in periodicals, chapters in books, law review articles and conference proceedings

1) **Loftis, J.D.** (2022). Exploring Latent Verification Methods for Inundation Forecasting Models through Remote Sensing Networks and Community Science. *Oceans 2022 MTS/IEEE Hampton Roads*, IEEE. DOI

2) Mulholland, M.R., Macías-Tapia, A., and **Loftis, J.D.** (2022). Water quality impacts from tidal flooding in Southern Chesapeake Bay. *Oceans 2022 MTS/IEEE Hampton Roads*, IEEE. DOI

3) **Loftis, J.D.** and Katragadda, S. (2022). A Deep Learning Algorithmic Approach to Develop a Video Inundation Monitoring System. *Oceans 2022 MTS/IEEE Hampton Roads*, IEEE. DOI

4) Abdel-Fattah, T.M. and **Loftis, J.D.** (2022). Comparison of Electrochemical Polishing Treatments between Phosphoric Acid and a Deep Eutectic Solvent for High-Purity Copper. *Sustainable Chemistry*, 3(2), 238-247. DOI

5) Macías-Tapia, A., Mulholland, M.R., Selden, C.R., **Loftis, J.D.**, and Bernhardt, P.W., (2021). Effects of tidal flooding on estuarine biogeochemistry: Quantifying flood-driven nitrogen inputs in an urban, lower Chesapeake Bay sub-tributary. *Water Research*, 201, p.117329. DOI

6) Allen, T., Behr, J., Bukvic, A., Calder, R.S., Caruson, K., Connor, C., D'Elia, C., Dismukes, D., Ersing, R., Franklin, R. and Goldstein, J., **Loftis, J.D.**, et al. (2021). Anticipating and Adapting to the Future Impacts of Climate Change on the Health, Security and Welfare of Low Elevation Coastal Zone (LECZ) Communities in Southeastern USA. *Journal of Marine Science and Engineering*, *9*(11), p.1196. DOI

7) Rawat, P., Anuar, K.A., Yusuf, J-E.W., **Loftis, J.D.**, and Blake, R.N. (2021). Communicating and co-producing information with stakeholders. Chapter 5: Examples of participatory mapping approaches related to sea-level rise risks and impacts. *Communicating Climate Change: Making Environmental Messaging Accessible*, Routledge, p. 79-96. DOI | Book DOI

8) Liu, Z., Wang, H.V., Zhang, Y., Magnusson, L., **Loftis, J.D.**, and Forrest, D. (2020). Cross-scale modeling of storm surge, tide, and inundation in Mid-Atlantic Bight and New York City during Hurricane Sandy, 2012, Estuarine, Coastal and Shelf Science, 233, 106544. DOI

9) **Loftis, J.D.**, Mitchell, M., Schatt, D., Forrest, D.R., Wang, H.V., Mayfield, D., and Stiles, W.A. (2019). Validating an Operational Flood Forecast Model Using Citizen Science in Hampton Roads, VA, USA. *Journal of Marine Science and Engineering.* 7, 242:1-23. DOI

10) Simoniello, C., Jencks, J., Lauro, F.M., **Loftis, J.D.**, Weslawski, J.M., Deja, K., Forrest, D.R., Gossett, S., Jeffries, T.C., Jensen, R.M., Kobara, S., Nolan, L., Ostrowski, M., Pounds, D., Roseman, G., Basco, O., Gosselin, S., Reed, A., Wills, P., and Wyatt, D. (2019). Citizen-Science for the Future: Advisory Case Studies from Around the Globe. *Frontiers in Marine Science*. 6, 225:1-15. [DOI](DOI)

11) **Loftis, J.D.**, and Abdel-Fattah, T. M. (2019). Nanoscale electropolishing of high-purity nickel with an ionic liquid. *International Journal of Minerals, Metallurgy, and Materials*, 26(5), 649-656. [DOI](DOI)

12) Nichols, C.R., Wright, L.D., Bainbridge, S.J., Cosby, A.G., Hénaff, A., **Loftis, J.D.**, Cocquempot, L.M., Katragadda, S., Méndez, G.R., Letortu, P., and Dantec, N.L. (2019). Collaborative Science to Enhance Coastal Resilience and Adaptation. *Frontiers in Marine Science*, 6, 404:1-16. [DOI](DOI)

13) Smith, E.A., Sweet, W., Mitchell, M., Domingues, R., Weaver, C., Baringer, M., Goni, G.J., Haines, J., **Loftis, J.D.**, Boon, J., and Malmquist, D. (2019). Treading Water: Tools to Help US Coastal Communities Plan for Sea Level Rise Impacts. *Frontiers in Marine Science*, 6, 300:1-7. [DOI](DOI)

14) Cohen, S., Raney, A., Munasinghe, D., **Loftis, J.D.**, Molthan, A., Bell, J., Rogers, L., Galantowicz, J., Robert Brakenridge, G., Kettner, A.J., Huang, Y-F., and Tsang, Y-P. (2019). The Floodwater Depth Estimation Tool (FwDET v2.0) for Improved Remote Sensing Analysis of Coastal Flooding. *Natural Hazards Earth Syst. Sci.,* 14, 2053-2065. [DOI](DOI)

15) **Loftis, J.D.**, Mitchell, M., Atkinson, L., Hamlington, B., Allen, T.R., Forrest, D., Updyke, T., Tahvildari, N., Bekaert, D., and Bushnell, M. (2018). Integrated Ocean, Earth and Atmospheric Observations in Hampton Roads, Virginia. *Marine Technology Society Journal*, 52(2), 68-83. [DOI](DOI)

16) **Loftis, J.D.**, Katragadda, K., Rhee, S., and Nguyen, C. (2018). StormSense: A Blueprint for Coastal Flood Forecast Information & Automated Alert Messaging Systems. *SCOPE '18 Proceedings of the 3rd International Workshop on Science of Smart City Operations and Platforms Engineering*, 3(1), 18-22. [DOI](DOI)

17) **Loftis, J.D.**, Forrest, D., Katragadda, K., Spencer, K., Organski, T., Nguyen, C., and Rhee, S. (2018). StormSense: A New Integrated Network of IoT Water Level Sensors in the Smart Cities of Hampton Roads, VA. *Marine Technology Society Journal*, 52(2), 56-67. [DOI](DOI)

18) **Loftis, J. D.**, Wang, H., Forrest, D., Rhee, S., and Nguyen, C. (2017). Emerging Flood Model Validation Frameworks for Street-Level Inundation Modeling with StormSense. *Proceedings of the 2nd International Workshop on Science of Smart City Operations and Platforms Engineering,* ACM. 13-18. [DOI](DOI)

19) **Loftis, J.D.** and Abdel-Fattah, T. M. (2016). Nanoscale electropolishing of high-purity silver with a deep eutectic solvent. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 511, 113-119. [DOI](DOI)

20) **Loftis, J.D.**, Wang, H.V., DeYoung, R.J., and Ball, W.B. (2016). Using Lidar Elevation Data to Develop a Topobathymetric Digital Elevation Model for Sub-Grid Inundation Modeling at Langley Research Center, *Journal of Coastal Research*, SI 76, 134-148. [DOI](DOI)

21) Abdel-Fattah, T. M., **Loftis, J.D.**, and Mahapatro, A. (2015). Nanoscale Surface Pretreatment of Biomedical Co–Cr Alloy. *Journal of Surfaces and Interfaces of Materials*, 3(1), 67-74. [DOI](DOI)

22) Wang, H., **Loftis, J.D.**, Forrest, D., Smith, W., and Stamey, B. (2015). Modeling Storm Surge and inundation in Washington, D.C., during Hurricane Isabel and the 1936 Potomac River Great Flood. *Journal of Marine Science and Engineering*, 3(3), 607-629. [DOI](DOI)

23) Abdel-Fattah, T. M., **Loftis, J.D.**, and Mahapatro, A. (2015). Nanoscale electrochemical polishing and preconditioning of biometallic nickel-titanium alloys, *Nanoscience and Nanotechnology*, 5(2): 36-44. [DOI](DOI)

24) Wang, H., **Loftis, J.D.**, Liu, Z., Forrest, D., and Zhang, J. (2014). Storm Surge and Sub-Grid Inundation Modeling in New York City during Hurricane Sandy. *Journal of Marine Science and Engineering,* 2(1), 226-246. DOI

25) Abdel-Fattah, T. M., **Loftis, J.D.**, and Mahapatro, A. (2011). Nanosized controlled surface pretreatment of biometallic alloy 316L stainless steel. *Journal of Biomedical Nanotechnology*, 7(6), 794-800. DOI

26) Abdel-Fattah, T. M. and **Loftis, J.D.** (2010). Surface characterization of high purity metals of silver and nickel electropolished with an ionic liquid. *ECS Transactions*, 25(39), 57-61. DOI

27) Abdel-Fattah, T. M. and **Loftis, J.D.**, and Mahapatro, A. (2010). Ionic liquid electropolishing of metal alloys for biomedical applications. *ECS Transactions*, 25(19), 57-61. DOI

28) Abdel-Fattah, T. M. and **Loftis, J.D.** (2009). Comparison of the electrochemical polishing of copper and aluminum in acid and acid-free media. *ECS Transactions*, 25(7), 327-332. DOI

b) Books written
N/A

c) Edited volumes
N/A

d) Articles published in non-refereed conference proceedings

1) **Loftis, J.D.** and Forrest, D. (2019). +50,000 Citizen-Science Collected GPS Flood Extents Used to Validate a Street-Level Hydrodynamic Model Forecast of the 2017 King Tide in Hampton Roads, VA, *2019 Ocean Observations Decadal Conference*: Citizen Science Session. DOI

2) **Loftis, J.D.** and Katragadda, S. (2019). StormSense: Integrating Disparate Water Level Sensing Technologies and Communications Protocols for Enhanced Regional Resilience. *2019 Ocean Observations Decadal Conference:* Coastal Resilience and Adaptation Session. DOI

3) Smith, E.A., Mitchell, M., **Loftis, J.D.**, Boon, J., and Malmquist, D. (2019). Answering Society's Call for Sea Level Information on a Community Based Scale. *2019 Ocean Observations Decadal Conference*: Observational Needs/Coastal Sea Level Session. DOI

4) **Loftis, J.D.**, Forrest, D., Wang, H., Rogers, L., Molthan, A., Bekaert, D., Cohen, S., and Sun, D. (2018). October. Communities and Areas at Intensive Risk in the Mid-Atlantic Region: A Reanalysis of 2011 Hurricane Irene with Future Sea Level Rise and Land Subsidence. *Oceans 2018 MTS/IEEE Charleston, 1-7*. IEEE. DOI

5) Rogers, L., Borges, D., Murray, J., Molthan, A., Bell, J., Allen, T., Bekaert, D., **Loftis, J.D**., Wang, H., Cohen, S., and Sun, D. (2018). October. NASA's Mid-Atlantic Communities and Areas at Intensive Risk Demonstration: Translating Compounding Hazards to Societal Risk. *Oceans 2018 MTS/IEEE Charleston*, 1-5. IEEE. DOI

6) **Loftis, J.D.**, Forrest, D.R., Mayfield, D. and Stiles, W.A. (2018). October. A Geospatial Analysis of+ 50,000 Citizen-Science collected GPS Flood Extents and Street-Level Hydrodynamic Model Forecasts during the 2017 King Tide in Hampton Roads, VA. *Oceans 2018 MTS/IEEE Charleston*. IEEE. DOI

7) **Loftis, J.D.**, A. Macias, M. Mullholland, D. Forrest. (2018). A Comparison of Tidewatch inundation predictions and citizen-science flood extent observations during the 2017 king tide in Tidewater Virginia. *2018 Chesapeake Modeling Symposium* Presentation in Evaluating Current and Future Influences on James River Water Quality Condition session. URL

8) **Loftis, J.D.**, H. Wang, Z. Liu, L. Rogers, T. Allen, D. Forrest, and D. Bekaert. (2018). Exploring communities at intensive risk in the lower Chesapeake Bay via reanalysis of 2011

Hurricane Irene with future sea level rise. *2018 Chesapeake Modeling Symposium* Presentation in Current and Emerging Issues in Chesapeake Bay Science and Modeling session. <u>URL</u>

e) Invited scholarly papers and talks

1) **Loftis, J.D.** and Stein, A. (2022). StormSense - Flood Forecasting from Storm Surge, Rain and Tides. Smart City Cluj Innovation Days 2022. Cluj, Romania.
2) **Loftis, J.D.** and Katragadda, S. (2022). Watching the Coast with StormSense. Hampton Roads Sea Level Rise/Flooding Adaptation Forum. Norfolk, VA, USA.
3) **Loftis, J.D.** (2022). StormSense Research Applications. Hampton Roads Sea Level Rise/Flooding Adaptation Forum. Norfolk, VA, USA.
4) **Loftis, J.D.** and Duhring, K. (2022). Catch the King: How to Help Improve Flood Forecast Models by Mapping Flooding using GPS-Enabled Smartphones. VA Master Naturalists Conference. Virginia Beach, VA, USA.
5) **Loftis, J.D.** (2021). Improving Flooding Prediction, Response, and Recovery. MITRE University Information Exchange (UIX) Webinar. Washington, DC, USA.
6) **Loftis, J.D.** (2020). Keynote Speaker: VLWA Virginia Water Conference. Richmond, VA, USA.
7) **Loftis, J.D.** (2019). Forecasting Tidal Flooding: Helping Hampton Roads Prepare for Storms and Rising Seas. VIMS After Hours Lecture Series. Gloucester Point, VA, USA.
8) Greer, C., **Loftis, J.D.**, and Rhee, S. (2018). StormSense: A Blueprint for Coastal Flood Forecast Information and Automated Alert Messaging Systems. Cyber-Physical Systems Symposium. Porto, Italy.
9) **Loftis, J.D.** (2017). Advancing Forecasts through Modeling, Sensors, and Citizen Science. Emerging Leaders Panel Discussion. Capitol Hill Ocean Week. Washington, DC, USA.
10) **Loftis, J.D.** (2016). Modeling of Nuisance Flooding Verified via Crowd-sourced App Data in Norfolk, VA. Old Dominion University GIS Day Presenter and Careers Panel Participant, Norfolk, VA, USA.
11) **Loftis, J.D.** (2015). Development of a Large-Scale Storm Surge and High-Resolution Sub-Grid Inundation Model for Coastal Flooding Applications in an Urban Environment: A Case Study during 2012 Hurricane Sandy. Salisbury University Geography Dept. Seminar, Salisbury, MD.
12) **Loftis, J.D.** (2015). Storm Surge and Street-level Inundation Modeling in New York City during Hurricane Sandy Hampton Roads Sea Level Rise/Flooding Adaptation Forum, Virginia Beach, VA.
13) **Loftis, J.D.**, and Wang, H.V. (2014). Storm Surge and Inundation Sub-Grid Modeling in New York City during Hurricane Sandy. Old Dominion University Coastal Oceanography Dept. Seminar. Norfolk, VA.

f) Contributed scholarly papers and talks

1) Wang, H., **Loftis, J.D.**, Maldonado, B., and Forrest, D. (2022). The Large-Scale Storm Tide and Sub-Grid, Fine-Scale Inundation Modeling for Charleston, Savannah, and the Adjacent Coastal Area. NOAA Resilience in Coastal Environments Summit. Charleston, SC, USA.
2) **Loftis, J.D.**, Wang, H., Maldonado, B., and Forrest, D. (2022). Fine-Scale Sub-Grid Inundation Modeling for Charleston, SC, and Savannah, GA. NOAA Resilience in Coastal Environments Summit. Charleston, SC, USA.

3) **Loftis, J.D.** (2021). Modeling Storm Surge and Sea Level Rise. How Forecasts Help Coastal Areas Prepare for Storms and Rising Seas. VIMS Virtual Marine Science Day Lecture. Gloucester Point, VA, USA.

4) **Loftis, J.D.**, Wang, H., Maldonado, B., and Forrest, D. (2021). Evaluating the Feasibility of the USACE's Proposed Flood Wall for Charleston, SC for Historic Storms. NOAA RICE Resilience Summit. Atlanta, GA, USA.

5) **Loftis, J.D.** (2020). Validating Operational Flood Forecast Hydro Models at the Street-Level Using Sensors and Citizen Science. NSF CoPe Virtual Workshop. Washington, DC, USA.

6) **Loftis, J.D.** (2016). Street-Level Predictive Modeling of Nuisance Flooding Verified via Crowd-Sourced App Data. USGS Water Workshop. Virginia Beach, VA, USA.

7) **Loftis, J.D.**, Wang, H.V., and Forrest, D.R. (2015). Storm Surge and Street-Level Inundation Modeling in Norfolk and Chesapeake, VA during Hurricane Irene. All Hazards Meeting at Hampton Roads Planning District Commission. Chesapeake, VA, USA.

8) **Loftis, J.D.** (2015). Street-Level Predictive Modeling of Nuisance Flooding around Norfolk in Fall 2015, VIMS Physical Sciences Department Seminar, Gloucester Point, VA.

9) **Loftis, J.D.**, Wang, H.V., and Liu, Z. (2014). Hurricane Sandy Storm Surge and Inundation using Sub-Grid Modeling in New York City. VIMS Physical Sciences Department Seminar. Gloucester Point, VA.

g) Reviews of books, software, etc.
   N/A

h) Juried shows, exhibitions, and performances
   N/A

i) Unjuried shows, exhibitions, and performances
   N/A

j) Unrefereed publications not listed above
   N/A

k) Research reports from grant or contract work

1) Behr, J.G., Yusuf, W., McLeod, G., Stafford, S., **Loftis, J.D.**, Anuar, A., and Diaz, R. (2022). A Report Prepared for "COCA/SARP – Measuring the Economic Impact of Recurrent Flooding on Workforce Productivity and Property. Presentations, Lectures, Posters, Reports. 31. 270 pg. [DOI]

2) Wang, H.V., **Loftis, J.D.**, and Maldonado, B. (2022). Report for NOAA RICE for Modeling Storm Tide, Wind Wave Inundation and Beach Erosion. Charleston Aquarium Report. 26 pg.

3) Nunez, K., **Loftis, D.**, and Schatt, D. (2021). Land Use Change and Recurrent Flooding Issues in Northern Virginia - Final Report for the Virginia Transportation Research Council. Center for Coastal Resources Management. Virginia Institute of Marine Science, William & Mary, Gloucester Point, Virginia, p. 1-72.

4) Boon, J.D., Mitchell, M., **Loftis, J.D.**, and Malmquist, D.M. (2018). Anthropocene Sea Level Change: A History of Recent Trends Observed in the U.S. East, Gulf, and West Coast Regions. *Special Report in Applied Marine Science and Ocean Engineering (SRAMSOE).* No. 467. Virginia Institute of Marine Science, College of William and Mary. 1-77. [DOI]

5) **Loftis, J.D.**, Wang, H.V., Hamilton, S.E., and Forrest, D.R. (2018). Combination of Lidar Elevations, Bathymetric Data, and Urban Infrastructure in a Sub-Grid Model for Predicting

Inundation in New York City during Hurricane Sandy. *Computers, Environment, and Urban Systems*. 1-16. PDF

6) **Loftis, J.D.**, and Taylor, G. (2018). Leveraging Web 3D for Street-Level Flood Forecasts. Arc[GIS] User, 21(4): 22-25. PDF

7) Wang, H., Wang, Z., **Loftis, J.D.**, and Teng, Y.C. (2013). Hydrodynamic and water quality modeling and TMDL development for Maryland's coastal Bays system. Final report submitted to Maryland Department of the Environment, *TMDL Technical Development Program*. 1-113. PDF

8) **Loftis, J.D.** (2014). Development of a Large-Scale Storm Surge and High-Resolution Sub-Grid Inundation Model for Coastal Flooding Applications: A Case Study during Hurricane Sandy. Ph.D. Dissertation. *College of William & Mary*. 1-205. DOI

9) **Loftis, J.D.**, Wang, H. and DeYoung, R. (2013). Storm Surge and Inundation Modeling in the Back River Watershed for NASA Langley Research Center. *NASA Technical Report*: NASA/TM-2013-218046. 1-51. PDF

l)   Performances by others of music, poetry, etc. you have written
   N/A

m)   Published software, audio, multimedia, etc. materials
   N/A

n)   Work in progress or submitted

1) **Loftis, J.D.** (2023). Infrastructure Resilience Modeling for Hydrological Extremes Using Hydrodynamic Simulations and Machine Learning. *Planned submission to Estuaries and Coasts in June 2023.*

2) **Loftis, J.D.**, Katragadda, S., and Harman, H. (2023). Model Validation Applications using Integrated Networks of Active and Passive Remote Sensors. To be s*ubmitted to Remote Sensing in July 2023.*

o)   Other scholarly activity, including papers presented at professional meetings and publications of abstracts

1) **Loftis, J.D.** (2021). Real Time Verification of an Automated Inundation Prediction Model via Sensors and Citizen Science. Coastal and Estuarine Research Federation Conference, Virtual Conference Proceedings.

2) **Loftis, J.D.** (2021). Cross-Scale Validation of an Operational Flood Forecast Model using Remote Sensing, Sensors, and Citizen Science. Oceans 2021 IEEE/MTS Conference, San Diego, CA.

3) **Loftis, J.D.** (2020). Crowdsourced Flood Monitoring and Applications for Inundation Model Validation. ESRI User Conference, San Diego, CA.

4) Abdel-Fattah, T.M. and **Loftis, J.D.** (2020). Surface Characterization of High-Purity Copper Electropolishing and Electrodeposition Treatments in an Ionic Liquid. American Chemical Society Meeting, Virtual Conference Proceedings.

5) Abdel-Fattah, T.M. and **Loftis, J.D.** (2020). Nanoscale Electropolishing of High-Purity Aluminum with a Deep Eutectic Solvent. American Chemical Society Meeting, Virtual Conference Proceedings.

6) **Loftis, J.D.**, Wang, H.V., and Forrest, D.R. (2016). Lessons Learned Forecast Modeling 2011 Hurricane Irene, and the Path to Predicting Street-Level Inundation. Atlantic Estuarine Research Society Meeting. Virginia Beach, VA.

7) **Loftis, J.D.** (2016). Towards Predicting Street-Level Inundation: using Operational Forecast Modeling Techniques during 2011 Hurricane Irene in Hampton Roads, VA. Ocean Sciences Meeting. New Orleans, LA.

8) **Loftis, J.D.** (2016). Modeling Street-Level Inundation in Galveston, Texas City, and Houston during 2008 Hurricane Ike: Now and Implications for the Future. Ocean Sciences Meeting. New Orleans, LA.

9) **Loftis, J.D.** (2015). Towards Predicting Street-Level Inundation: using Operational Forecast Modeling Techniques during 2011 Hurricane Irene. VIMS 75th Anniversary Homecoming Conference. Gloucester Point, VA.

10) **Loftis, J.D.** (2014). Representation and Analysis of DataFlow Measurements for the James River Chlorophyll-a Study. Chesapeake Bay Modeling Symposium. Annapolis, MD.

11) **Loftis, J.D.** and Wang, H.V. (2014). High-Resolution Sub-Grid Modeling of Local Inundation in the New York Harbor during 2012 Hurricane Sandy. Ocean Sciences Meeting. Honolulu, HI.

12) Wang, H.V., and **Loftis, J.D.** (2013). Storm Surge and Inundation Modeling in the Back River Watershed for NASA Langley Research Center: Panel 7B: Modeling Techniques/Sensitivity Studies. American Geophysical Union Meeting. San Diego, CA.

13) Wang, H.V., **Loftis, J.D.** Spatial Comparison of a Street-Level Sub-Grid Inundation during 2012 Hurricane Sandy: Panel 9A: Superstorm Sandy. American Geophysical Union Meeting. San Diego, CA.

14) **Loftis, J.D.** and Wang, H.V. (2013). Utilizing Sub-Grid Modeling to Reconstruct the Historic Great Flood of 1936 in the Potomac River Estuary using High-Resolution Lidar-Derived Topography. Atlantic Estuarine Research Society Meeting. Williamsburg, VA.

15) **Loftis, J.D.** and Wang, H.V. (2012). Simulation of Coastal Inundation Instigated by Storm Surge, River Discharge, and Precipitation in the Chesapeake Bay Using Sub-Grid Modeling with Lidar DEMs. IEEE/OES Oceans'12 Conference. Virginia Beach, VA.

16) Wang, H.V., Teng, Y-C., **Loftis, J.D.**, and Forrest, D.R. (2012). Forecast Simulation of Hurricane Irene and Coastal Inundation in Hampton Roads, Virginia. American Geophysical Union Meeting. San Diego, CA.

17) Wang, H.V. and **Loftis, J.D.** Impact of Hurricanes Rita and Ike in the Gulf of Mexico. SURA Coastal Inundation Meeting. Chapel Hill, NC.

18) Wang, H.V., **Loftis, J.D.**, Casulli, V., and Lippert, C. (2010). Simulating Coastal Flooding Caused by Storm Surge and River Discharge in the Chesapeake Bay Using Sub-Grid Modeling. UnTRIM Workshop. Trento, Italy.

19) **Loftis, J.D.** and Abdel-Fattah, T. (2009). Biomedical Applications of Non-Acidic Electrochemical Polishing and Electrochemical Properties of Four Metals with the Use of Nonhazardous Ionic Liquids. American Chemical Society Conference. Washington, DC.

20) **Loftis, J.D.**, McKinney, B., Webb, C., and Wykes, B. (2008). Applications of Remote Sensing in Detecting Mesoscale Features in the Gulf of Alaska. American Geophysical Union Meeting. San Francisco, CA.

21) **Loftis, J.D.** and Abdel-Fattah, T. (2008). Non-Acidic Electrochemical Polishing of Three Metallic Alloys (Won 1st Place at Graduate level). Virginia Tidewater Chapter Sigma Xi Research Fair. Newport News, VA.

22) Roe, Lesa (Director, NASA Langley Research Center) and **Loftis, J.D.** (2008). Implications of Climate Change in Virginia. NASA Presentation to the Virginia General Assembly. Hampton, VA.

23) **Loftis, J.D.** (2008). Investigative Report on Climate Change in VA: Ecological & Economic Impacts. 33rd Annual Hazards Workshop. Boulder, CO.

24) **Loftis, J.D.**, Gregory Stevens, Catherine Lavagnino, and Aleksandar Janjic. (2008). Impact of Climate Change on Hampton Roads, Virginia. Southern Growth Policy Board. Baton Rouge, LA.

PROFESSIONAL SERVICE

9. Professional Service Activities

a) College-wide committee service (SMS/VIMS rev)
1) **2021:** Search committee member and interviewer for the Dean of the School of Marine Science and Director of the Virginia Institute of Marine Science (NTE Faculty Member)

b) SMS/VIMS Governance (SMS/VIMS rev)
2) **2019-present:** VIMS Dive-In Diversity, Equity, and Inclusion Communications Subcommittee
3) **2021-2022:** VIMS Parking Advisory Committee
4) **2017-present:** Regular Search Committee Member and Interviewer for Dr. Joseph Zhang's Hydrodynamic Modeling Research Scientist and PostDoc hires (2017 - Hao-Cheng (Dan) Yu, 2018 - Jiabi Du, 2019 - Zhengui Wang, 2020 - Linlin Cui, 2021 - Wei Huang)
5) **2017-present:** VIMS GIS Workshop Series Course Curriculum Developer and Instructor (2017 - GIS Data Science and Real Time Observations, 2019 - Mapping Interactive Modeling Outputs through Time Aware Layers, 2022 - Constructing Web Maps and Story Maps using ArcGIS Online)
6) **2017-present:** High Performance Computing Committee Member
7) **2014-present:** VIMS GIS User Group Member
8) **2020-2021:** Innovation, Commercialization, & Industry Relations Strategic Planning Team
9) **2020-2021:** Resilience, Conservation, & Restoration Strategic Planning Team

c) Editorial Board Services, review panels, program reviews, national or international research programs (SMS/VIMS rev)

1) **2022-present:** Invited by IEEE Xplore to serve on editorial board for review of papers submitted to Oceans 2022 (Hampton Roads, VA) and Oceans 2023 Conferences (Limerick, UK). Served as Technical Program Chair for the Oceans 2022 Conference in Hampton Roads
2) **2022-present:** Invited to serve on editorial board for the Frontiers in Marine Science- since Fall 2022.

3) **2018-2022:** Invited by NSF for expert panel review in Information and Intelligent Systems (IIS), Cyber-Physical Systems (CPS - 2), and Engineering (ENG) programs for Smart and Connected Community Proposals (4 panels)
4) **2019:** NASA ROSES Grant Review Panelist, Disasters Program
5) **2017-2018:** Science of Smart City Operations and Platforms Engineering International Workshop Program Editorial Board

d) Service to professional societies (SMS/VIMS rev)

1) Serving as Technical Program Chair for the Oceans 2022 conference in Hampton Roads, VA, and assisting the Technical Program Committee for Oceans 2023 in Limerick, UK, hosted by IEEE and the Marine Technology Society.
2) Invited virtual workshop presenter and participant for MITRE UIX Workshop on Improving Flooding Prediction and Response in 2021.
3) Invited workshop panel presenter and participant, National Academies of Science, Engineering, and Medicine for Resilient America in 2020 in Atlanta, GA
4) Invited workshop presenter and participant, National Academies of Science, Engineering, and Medicine for Resilient America in 2019 in Washington, DC
5) Invited by Dewberry to review their January 2020 Report in support of the City of Virginia Beach's "Sea Level Wise" long term resilience and flood mitigation plan
6) Offered expert peer-review for the following related Journals:

   1. Journal of Marine Science and Engineering (11): 2 new reviews in 2022
   2. Journal of Coastal Research (8): 1 new review in 2022
   3. Remote Sensing (5): 1 new review in 2022
   4. Ocean Dynamics (4): 1 new review in 2022
   5. Sensors (3)
   6. Frontiers in Marine Science (4): 1 new review in 2022
   7. Water Resources (3): 1 new review in 2022
   8. Journal of the Marine Technology Society (2)
   9. Natural Hazards and Earth System Sciences (2)
   10. Natural Hazards (2)
   11. Marine Geodesy (1)
   12. Atmosphere (1)
   13. Journal of Disaster Risk Reduction (1)
   14. Resources (1)
   15. Journal of Water Resource and Protection (1)
   16. Frontiers of Earth Science (1)
   17. Geo-spatial Information Science (1)

7) 4 proposal panel discussion reviews for NSF in 2018, 2020, 2021, and 2022.

*ADVISORY SERVICE ACTIVITY (SMS/VIMS REV)

10. Advisory service relative to VIMS state mandates

a) Service to state agencies

1) **2016-present:** advised the City of Virginia Beach on how to best to apply VIMS modeling products and ingest real-time sensor data into their website and mobile apps, as a part of outreach effort on storm surge inundation hazards and StormSense

2) **2016-present:** advised development of the Virginia Coastal Adaptation Data Portal and helped to build and advised updates to web-mapping platform to display street-level inundation forecasts for coastal Virginia for the Commonwealth Center for Recurrent Flooding Resiliency

3) **2017-present:** advised the City of Portsmouth's planning department on their next generation of comprehensive planning with respect to storm surge modeling and sea level rise scenarios

4) **2020-present:** advised VDOT on future frequently inundated roadways in Tidewater VA using Lidar derived digital elevation models with respect to future sea level rise scenarios

5) **2022:** advised Joint Base Langley-Eustis and City of Newport News on their newly-developed Stormwater Management Master Plan, JB Langley-Eustis' Floodplain Management Plan, and Resilience and Climate Change Plans in May 2022

6) **2021:** advised VIMS Advisory Services and the Commonwealth of VA by reviewing and providing comments and feedback on a Report on "Piloting the Development of Future Projected Intensity-Duration-Frequency (IDF) Curves" produced by RAND in April 2021.

7) **2020-2021:** advised VIMS Facilities Management on new VA SLR Regulations and State Statutes pertaining to the proposed elevations and developments of the Acuff Center on Old Ferry Road in Gloucester Point, VA

8) **2016-2020:** advised the City of Norfolk's resilience office regarding updates to their Tidal Inundation Tracking Application Network (TITAN) GIS model based upon data collected from citizen scientists from King Tides and tidal inundation model simulations and planned sensor deployments for StormSense

9) **2018-2019:** advised VIMS EPA/CBPO, VDOT, Virginia Port Authority through multiple modeling projects

10) **2016-2019:** advised the City of Newport News' IT Office and Emergency Managers with VDEM grant applications to aid funding and establishment of StormSense sensor array throughout low-elevation parts of the City

b) Service to legislature

1) **2018-2019:** Was called upon by the Commonwealth Center for Recurrent Flooding Resiliency to develop a report to inform the VA Legislature's Joint Subcommittee on Coastal Flooding of estimated roadside ditch volumes for 8 cities and counties in Virginia's Middle Peninsula and Northern Neck using GIS and Lidar. This information was used to determine potential ecosystem services and legal viability of rural localities to count tidally-flooded roadside ditches as wetlands in pursuit of conservation credits.

2) **2017:** Invited by Congressional Representative Jimmy Panetta (Dist. 20, CA) to participate in three separate exploratory discussions focusing on Climate Change, Sea Level Rise, Sensor Monitoring, & Model Predictions in the Cannon House Office Building in Washington DC

c) Service to industry

1) **2019-present:** advised RISE Resilience Solutions in Norfolk, VA, and served as a technical advisor to private industry teams participating in their Coastal Resilience and Urban Mobility Challenges pertaining to predicting inundation

2) **2020-2022:** provided consulting services to the USGS Richmond Field Office on multiple river gaging projects in pursuit of researching and developing an improved AI/ML next generation water level sensor

3) **2019-2020:** advised Dewberry on development of VA Beach Sea Level Wise Comprehensive plan based upon past modeling simulations for 2016 Hurricane Matthew and sea level rise scenarios
4) **2018-2019:** advised on the long-term feasibility of elevating rapidly eroding and subsiding coastal lands in Mathews Co.

d) **Regional, national or international management commissions or programs**

1) **2019-present:** advised Hampton Roads Planning District Commission Roadway Sensor Advisory Committee on proposed flooded roadway sensor deployments
2) **2019-present:** served on Ocean's 2022 Hampton Roads, VA Conference Steering Committee, Technical Program Chair
3) **2019-2020:** Invited by the National Academies of Science, Engineering, and Medicine to present at two different workshops in Atlanta, GA and Washington, DC to outline the successes of StormSense and Catch the King, in the context of model verification
4) **2018-2020:** Scientific and Technical Advisory Committee Member for Chesapeake Bay Program Partnership, Science Synthesis Team
5) **2016-2019:** Science of Smart City Operations and Platforms Engineering International Workshop Program Review Committee Member

e) **Public outreach (K – 12, private organizations, citizenry)**

1) **2016-present:** Leads tidal flood mapping volunteer training events in the summer and fall annually (34 thus far) at flood prone public places throughout Hampton Roads, VA and via video conferencing apps to train citizen scientists in the proper use of the free "Sea Level Rise" mobile app on iOS and Android platforms in support of Catch the King to help collect large scale observations via smartphone GPS and pictures to help validate and improve VIMS' street-level inundation models
2) **2016-present:** Presents bi-annual updates to community scientists a month after Catch the King and other incidental major flood events to report on VIMS' hydrodynamic model efficacy and comparisons with real-time citizen science data
3) **2020-2022:** Invited by The Weather Channel on multiple occasions during their annual "King Tide Week" to represent a citizen-science tidal flood mapping initiative (Catch the King) and VIMS' hydrodynamic inundation modeling efforts and talk about the value of mapping king tides as a visual representation of future projections for sea level rise in the present. Appeared on 2 different shows in 4 separate live appearances: Friday, 10/16/2020 at 7:40 am on AMHQ, Saturday, 10/17/2020 at 7:40 am on AMHQ, and Sunday, 10/18/2020 at 9:40 am on Weekend Recharge, and Thursday, 10/27/2022 at 9:30 am on AMHQ.
4) **April 2020:** Requested to participate in an interview on NASA TV to talk about hydrodynamic model forecast simulations combining storm surge, sea level rise, land subsidence projections and validation efforts using NASA's remote sensing satellites. The segment on sea level rise aired multiple times in 2020; initially in April, and again in July, September, and November.
5) **March 2020:** Invited by the Virginia Lakes and Watersheds Association to be the morning Keynote Speaker at the 2020 Virginia Water Conference in Richmond, VA, to present recent results of hydrodynamic model simulations from 2019 Hurricane Dorian and Catch the King.
6) **January 2020:** Invited to speak on CBS This Morning as part of a segment entitled: "King Tides: Using an app to measure rising sea levels" to discuss Catch the King, a tidal inundation mapping project leveraging the use of a free mobile app called sea level rise to help validate the accuracy of VIMS' hydrodynamic models.

7) **November 2019:** Invited to present on King Tides and Flood Forecasting at The Hague School, a private High School in Norfolk, VA in 2 science classes: Earth Science and Environmental Science teachers' classrooms

8) **September 2019:** Presented a VIMS After Hours Seminar lecture focused on predicting tidal flooding, featuring modeling efforts compared with drones, sensors, and citizen science

9) **May 2019:** Invited to speak live on Science Friday with Ira Flatow on NPR via WHRO in Williamsburg/Norfolk regarding Catch the King, my successful application to Guinness World Records to get it recognized as the World's Largest Environmental Survey, and how it helps annually validate VIMS' Street-Level Inundation Prediction models

10) **October 2018:** Invited to co-present a plenary presentation at the WEFTEC fall conference in New Orleans alongside Amazon Web Services' WorldWide Public Sector VP to discuss StormSense and smart cities' approaches to leveraging low-cost water level sensors as assimilative data inputs for inundation prediction models

11) **July 2018:** Was invited to speak at the Norfolk Botanical Gardens as part of a summer seminar series on coastal flooding, climate change, and modeling sea level rise

12) **April 2018:** Invited to address graduates at the 2018 graduation ceremony of the VA Master Naturalists (Historic Rivers Chapter) regarding flood modeling and forecast validation using sensors and citizen science regarding data they collected for Catch the King

13) **August 2017:** Asked to present to the Hampton Roads Sanitation District and the Hampton Roads Planning District Commission's Environmental Working Group in Chesapeake regarding the outcome of preliminary water quality modeling research and Measure the Muck water quality samples on future implications of king tide inundation on TMDLs

14) **March 2017:** Invited by the Virginia Science Museum to speak at their climate seminar series on Sea Level Rise and anticipated impacts of future storm surge events in the context of climate change

15) **November 2016:** Invited to present at the Hampton Roads Flood Adaptation Forum on storm surge inundation modeling and data validation methods at Clark Nexsen in VA Beach

16) **June 2016:** Invited to present a departmental seminar in the Geospatial Information Science Department at Salisbury University in Sailsbury, MD on hydrodynamic modeling and mapping

17) **November 2015:** Gave a presentation on "Storm Surge and Street-Level Inundation Modeling in Norfolk and Chesapeake, VA during Hurricane Irene" with Drs. Harry Wang and David Forrest at the Hampton Roads Planning District Commission in Chesapeake

18) **January 2015:** Presented a presentation in at the Hampton Roads Flood Adaptation Forum on storm surge inundation hazards at ODU's VMASC center

19) **Additional Outreach Activities at:** https://www.vims.edu/people/loftis_jd/outreach/