

CONTACT INFORMATION	Memorial University of Newfoundland Faculty of Engineering and Applied Science 240 Prince Phillip Drive St. John's NL A1B 3X5	<i>Office:</i> (709) 864-2756 <i>E-mail:</i> jadaraio@mun.ca
CURRENT POSITION	<b>Associate Professor</b> Department of Civil Engineering, Memorial University of Newfoundland	2021-present
EDUCATION	<b>Ph.D. Civil and Environmental Engineering - Hydraulics</b> University of Iowa, Iowa City, IA	2009
	<b>M.S. Environmental Engineering</b> University of Connecticut, Storrs, CT	2002
	<b>M.S. Philosophy</b> Rensselaer Polytechnic Institute, Troy, NY	1998
	<b>M.S. Biology</b> New Mexico State University, Las Cruces, NM	1994
	<b>B.S. Environmental and Forest Biology, cum laude</b> State University of New York College of Environmental Science and Forestry, Syracuse, NY	1991
	<b>A S. Liberal Arts and Science/Mathematics and Science</b> State University of New York Rockland Community College, Suffern, NY	1989
PROFESSIONAL EXPERIENCE	<b>Assistant Professor</b> Department of Civil & Environmental Engineering, <i>Memorial University of Newfoundland, St. John's, NL</i>	2015–2021
	<b>Assistant Professor</b> Department of Civil & Environmental Engineering, <i>Rowan University, Glassboro, NJ</i>	2012–2015
	<b>Postdoctoral Research Scholar</b> , North Carolina Cooperative Fish and Wildlife Unit, Department of Biology, <i>North Carolina State University, Raleigh, NC</i>	2010–2012
	<b>Postdoctoral Research Associate</b> , Center for the Management, Utilization, and Protection of Water Resources Department of Biology, <i>Tennessee Technological University, Cookeville, TN</i>	2009–2010
	<b>Adjunct Professor</b> , Department of Earth Sciences, <i>Tennessee Technological University, Cookeville, TN</i>	2010
	<b>Postdoctoral Research Scholar</b> , IIHR-Hydroscience & Engineering, <i>University of Iowa, Iowa City, IA</i>	May, 2009–October, 2009
	<b>Research Assistant</b> , IIHR-Hydroscience & Engineering, <i>University of Iowa, Iowa City, IA</i>	2004–2009
	<b>Instructor</b> , Department of Civil and Environmental Engineering, <i>University of Iowa, Iowa City, IA</i>	2007–2008
	<b>Visiting Graduate Researcher</b> , <i>WL—Delft Hydraulics, Delft,</i> <i>The Netherlands</i>	January, 2006–March, 2006
	<b>Hydraulic Engineer</b> , Sedimentation and River Hydraulics Group, <i>U.S. Bureau of Reclamation, Denver, CO</i>	2002–2004

<b>Research Assistant</b> , Environmental Research Institute <i>University of Connecticut, Storrs, CT</i>	2000–2002
<b>Teaching Assistant</b> , Department of Civil and Environmental Engineering, <i>University of Connecticut, Storrs, CT</i>	2001
<b>Teaching Assistant</b> , Department of Philosophy, <i>University of Connecticut, Storrs, CT</i>	1998–1999
<b>Teaching/Research Assistant</b> , Department of Philosophy, Psychology, and Cognitive Science, <i>Rensselaer Polytechnic Institute, Troy, NY</i>	1996–1998
<b>Research Specialist</b> , USDA-ARS, Jornada Experimental Range, <i>New Mexico State University, Las Cruces, NM</i>	1994–1995
<b>Research Assistant</b> , Department of Fishery and Wildlife Sciences, <i>New Mexico State University, Las Cruces, NM</i>	1994
<b>Research Assistant</b> , Department of Biology, <i>New Mexico State University, Las Cruces, NM</i>	1992–1993

SCHOLARSHIPS  
AND AWARDS

- *CHI University Grant Program Award*, 2020, 2021  
Computational Hydraulics Int.
- *Alliance for Action's 2013 Distinguished Engineering Award* as a collaborator on “Field Reconnaissance of Geotechnical Aspects of October 2012 Hurricane Sandy along the US East Coast. GEER Association Report No. GEER-032.”
- *2013 ASCE ExCEED Teaching Fellow*
- *Best Student Poster Award*, 2009  
Freshwater Mollusk Conservation Society
- *Summer and Short-Term Study Abroad Scholarship*, 2005  
Office for Study Abroad, The University of Iowa, Iowa City, IA
- *Recognition Award*, 2003  
United States Department of Interior, Bureau of Reclamation

RESEARCH  
GRANTS

*Current*

**PI** *Standardized Storm Water Infrastructure Design and Planning Protocols for Capacity Limited Communities and Climate Change Uncertainty*. April 2021–March 2026, NSERC Discovery Grant (\$130,000)

**co-PI** (w/ Alison Leitch and Norm Catto) *Geophysical Investigation of Regions Subject to Coastal Erosion in Bay Bulls, Newfoundland*. February 2021–February 2023, Memorial University of Newfoundland, Seed, Bridge and Multidisciplinary Fund (\$10,000)

**PI** *Watershed Modelling for Stormwater Infrastructure Planning and Design Under Climate Change in Pouch Cove, NL*. October 2020–April 2022. Mitacs Accelerate (\$53,333), Partnership with Town of Pouch Cove

**PI**, *Rural Asset Management in a Changing Climate*. August 2020–August 2021, Mitacs Accelerate (\$30,000). Partnership with non-profit organization Conservation Corps of Newfoundland and Labrador.

**PI**, *A Watershed Approach to Design and Planning for Sustainable Development*. May 2020–August 2021, Harris Centre Thriving Regions Applied Research Fund, Memorial University of Newfoundland (\$15,000)

**Co-PI/Co-Supervisor** (w/Andrew MacDougall at SFXU), *Climate Change Impacts on Biogeochemical Cycles*. January 2020–December 2023, Natural Sciences and Engineering Research

Council of Canada Discovery Grants-Individual, St. Francis Xavier University Sub-Funding (\$60,000)

**Co-PI** (w/ Joel Finnis, Carissa Brown, Martin Day, Barb Neis, Mark Stoddart) *Acting on Weather & Climate: Networks and Infrastructure for Adaptation/Mitigation Decision-making* (\$294,000) May 2020–August 2023. Subproject for the proposal “Future Ocean and Coastal Infrastructures (FOCI): Designing safe, sustainable and inclusive coastal communities and industries for Atlantic Canada” (PI, Lorenzo Moro), Ocean Frontiers Institute (OFI) (\$4,000,000).

**PI**, *Building and sustaining infrastructure resilience through targeted climate adaptation training for professionals in Newfoundland and Labrador*. March 2018–March 2022, Natural Resources Canada (\$539,260 )

**Co-PI** (w/Joel Finnis) *Climate Change Projections for Newfoundland & Labrador*. May 2018–December 2021. Department of Municipal Affairs and Environment, Government of Newfoundland and Labrador (\$35,294)

**PI**, *Watershed and Urban Drainage Modelling Software License for PCSWMM, CHI University Grant Program* \$2160 per year 2020-2022, Renewable

*Completed*

**Collaborator**, *Building Asset Management in Newfoundland and Labrador BAM! NL - Round 2* June 2018–June 2019, Federation of Canadian Municipalities (\$221,920). PI: Dr. Kathleen Parewick, MNL, Dr. Tom Cooper MUN

**PI**, *River Ice Model Development and Hydrotechnical Analysis of the Exploits River near Badger, NL.*, April 2017–April 2019, MUN Seed, Bridge, and Multidisciplinary Fund (\$9,986.33).

**PI**, *Comparison of Hydrologic Model Performance and Skill at Simulating Potential Impacts of Climate Change on Stream Flow*. June 2016–June 2018, MUN Faculty of Engineering and Applied Science Start-up Funding (\$30,000).

**Co-PI** *Climate Change Projections for Newfoundland and Labrador, September 2017–April, 2018* Government of Newfoundland and Labrador (\$42,800). PI: Dr. Joel Finnis, Department of Geography, Memorial University of Newfoundland.

**Co-PI**, *Adaptive Flood Resilience Strategies for Climate Change Impacts of Sea Level Rise and Extreme Precipitation*. January 2016–December 2017, Henry M. Rowan College of Engineering (\$30,000).

**PI**, *Modeling hydrologic and stream temperature response to land-use and climate change in developed and developing watersheds: a comparative analysis*. March 2014–February 2015 New Jersey Water Resources Research Institute (\$20,000)

**Co-PI**, *Collaborative Research: Training Next Generation Faculty and Students to Address the Infrastructure Crisis* August 2015–August 2017, NSF TUES-Type 2 Project PI: Dr. Philip Parker, University of Wisconsin, Platteville

**Co-PI**, *Collaborative Research: Training Next Generation Faculty and Students to Address the Infrastructure Crisis* August 2013–July 2015, NSF TUES-Type 2 Project PI: Dr. Ralph Dusseau, Rowan University (\$29,869)

**PI**, *Development of river hydraulics models and assessment of instream flow changes to land-use*

and climate change in two New Jersey watersheds. July 2013–June 2014, Rowan University Seed Funding Program (\$9960.50)

**PI**, *Assessment of flooding and stormwater drainage at PSEG’s Salem and Hope Creek Generating Station*. September 1, 2013–December 23, 2013, PSEG Nuclear LLC (\$7260). Fall 2013 Engineering Clinic

**Co-PI**, *Scientific Support for the Cumberland Habitat Conservation Plans, 2010-2011*, The Nature Conservancy, Tennessee Chapter (\$268,000). PI: Dr. Hayden Mattingly

PEER-REVIEWED  
JOURNAL  
PUBLICATIONS

15. Mohammadi, A, and **Daraio, JA**. (2021) “Improving the energy efficiency of residential buildings by applying passive and cost-effective solutions in the Humid and Hot region of Iran” *Space Ontology International Journal*.
14. **Daraio, JA**. 2020. Hydrologic Model Evaluation and Assessment of Projected Climate Change Impacts Using Bias-Corrected Stream Flows. *Water* 12(8): 2312, doi: 10.3390/w12082312
13. Nikolaou S., Hashash Y. M. A., Sukumaran B., Sacks A., Burlingame M. J., Baxter C., Bradshaw A., Wooten L., Lacy H., Moss C., **Daraio J. A.**, and O’Rourke T. D. (2020). Geotechnical Effects and a 6-Year Outlook of the 2012 Hurricane Sandy in the Eastern United States. *International Journal of Geoengineering Case Histories*, Volume 5, Issue 4, pp. 106-128, doi: 10.4417/IJGCH-05-04-06
12. Amponsah\*, A O., **JA. Daraio**, and A A. Khan (2019) Implications of Climatic Variations in Temporal Precipitation Patterns for the Development of Design Storms in Newfoundland and Labrador. *Canadian Journal of Civil Engineering*. DOI: 10.1139/cjce-2018-0563
11. **Daraio JA** (2019). Lifelong Learning and Learning for a Living. *Canadian Civil Engineer* 35.7:24-25.
10. **Daraio, JA**. (2017a) Potential Climate Change Impacts on Stream Flow and Groundwater Recharge in Two Watersheds on the New Jersey Coastal Plain. *Journal of Hydrologic Engineering*, 22(6):05017002 DOI: 10.1061/(ASCE)HE.1943-5584.0001500
9. **Daraio, JA**. (2017b) An Open Source Package to Create Input Files for Simulations using the Stream Network Temperature (SNTEMP) Model. *Open Water* 4:1, 89–96. Available at: <http://scholarsarchive.byu.edu/openwater/vol4/iss1/9>
8. **Daraio, JA.**, A. O. Amponsah\*, and K. W. Sears\*. (2017) “Bayesian Hierarchical Regression to Assess Variation of Stream Temperature with Atmospheric Temperature in a Small Watershed.” *Hydrology*, 4(3):44. DOI:10.3390/hydrology4030044 Available at: <http://www.mdpi.com/2306-5338/4/3/44>
7. Fahad\*, G.R., R. Nazari, **J. Daraio**, and D.J. Lundberg (2017). Regional Study of Future Temperature and Precipitation Changes Using Bias Corrected Multi-Model Ensemble Projections Considering High Emission Pathways. *Journal of Earth Science & Climatic Change* 8(9). DOI:10.4172/2329-6542.1000409.
6. **Daraio, JA**, and Bales, J.D. (2014) Effects of land-use and climate change on stream temperature I: Daily flow and stream temperature projections *Journal of the American Water Resources Association*, 50(5):1155–1176 DOI: 10.1111/jawr.12179
5. **Daraio, JA**, and Dusseau, RA (2014) Infrastructure Education Using Extreme Storm Impact *The CIP Report, Center for Infrastructure Protection and Homeland Security*, 148(a):26–28
4. **Daraio, JA.**, Bales, J.D., and Pandolfo\*, T.J. (2014) Effects of land-use and climate change on stream temperature II: Threshold exceedance duration projections for freshwater mussels. *Journal of the American Water Resources Association*, 50(5):1177–1190 DOI:10.1111/jawr.12178
3. **Daraio, JA.**, Weber, L.W., Zigler, S.J., Newton, T.J., and Nestler, J.M. (2012) Sensitivity of unionid dispersal distance and settling distribution to the host fish location and hydraulic conditions at the time of juvenile excystment. *River Research and Applications* 28(5):594–608. DOI: 10.1002/rra.1469

2. **Daraio, JA.**, Weber, L.W., and Newton, T.J. (2010a) Hydrodynamic modeling of juvenile mussel dispersal in a large river: the potential effects of bed shear stress and other parameters. *Journal of the North American Benthological Society* 29(3):838–851.
1. **Daraio, JA.**, Weber, L.W., Newton, T.J., and Nestler, J.M. (2010b) A methodological framework for integrating computational fluid dynamics and ecological models applied to juvenile freshwater mussel dispersal in the Upper Mississippi River. *Ecological Modelling* 221 (2):201–214. DOI: 10.1016/j.ecolmodel.2009.10.008

*Under review/submitted*

**Daraio, JA.** (2020ur2) “Changing the Conversation: Bridging the Uncertainty Gap Between Knowledge and Decision Making for Sustainable Development.” *Socio-Ecological Practice Research*

*Under revision*

Amponsah\*, AO, **JA Daraio**, J Finnis, AA Khan (2020ur) “Effects of Loss Method, Temporal Distribution of Precipitation, and Return Period on Peak Discharge in a Changing Climate.” *Journal of Hydrologic Engineering*.

Saha\*, R, **JA Daraio**, JA Atkinson, V Pashin, L Galagedara. (2020ur) “Historical Analysis and Projections of Climate Parameters and Anomalies in Bangladesh.” *Weather and Climate Extremes*

*In preparation*

Amponsah\*, AO, **JA Daraio**, J Finnis, AA Khan. “Downscaling sub-daily precipitation using a nonparametric disaggregation model with multi-taper method.” Journal TBD.

**Daraio, JA**, T Hauser, and J Roberts. “Bias Correction of Simulated Stream Flow Driven by Dynamically Downscaled GCMs.” To be submitted to *Water Resources Research*.

**Daraio, JA**, T Hauser, and J Roberts. “Potential Climate Change Impacts on Long-Term Hydrologic Indices.” To be submitted to *Water Resources Research*.

**Daraio, JA** “Incorporating Climate Change into Design of Stormwater Infrastructure under Uncertainty” To be submitted to TBD within the next year.

**Daraio, JA** and Sankar,\* D. “Assessing the Performance of Dynamically Downscaled GCM Simulations of Hydrologic Indices using a Regional Approach” To be submitted to *Hydrological Processes*.

Sankar,\* D, J Kennen and **JA Daraio**. (Inprep 1) “Assessing Climate Change Impacts on Instream Biological Indices using EflowStats.” To be submitted to *Freshwater Science* in approximately 4-6 months.

PEER-REVIEWED  
BOOK  
CHAPTERS

Randle, T.J., C.T. Yang, and **J. Daraio** 2006. Erosion and Reservoir Sedimentation, in C.T. Yang (ed.), Erosion and Sedimentation Manual, U.S. Government Printing Office, Washington DC. <http://www.usbr.gov/pmts/sediment/kb/ErosionAndSedimentation/index.html>

PEER-REVIEWED  
BOOK  
REVIEWS

Bringsjord, S and **JA. Daraio** 1999. Eccles-iaistical Dualism: Review of Evolution of the Brain: Creation of the Self by John Eccles. *Psyche: An Interdisciplinary Journal of Research on Consciousness*. 5(10).

PEER-REVIEWED  
CONFERENCE  
PROCEEDINGS

13. Amponsah\*, A, **Daraio JA**, and Khan, AA (2020). “Incorporating Climate Change into Design Storms for Flood Risk Mapping and Infrastructure in Newfoundland and Labrador, Canada” Eighth International Conference on Flood Management (ICFM8): Lowering Risk by Increasing Resilience (Conference to be held in 2021, postponed due to Covid-19.)
12. Amponsah\*, A, **Daraio JA**, and Finnis, J (2020). “Sensitivity of modified Method-of-Fragments disaggregation model to data availability” In Proceedings of the 2020 CSCE

- Annual General Conference. (Conference cancelled due to Covid-19.)
11. Sankar\*, D.L. and **Daraio JA.** (2020). "Assessment of Ecologically Relevant Flow Statistics from Hydrologic Models Driven by Dynamically Downscaled GCMs" In Proceedings of the 2020 CSCE Annual General Conference. (Conference cancelled due to Covid-19.)
  10. **Daraio JA.** (2019). "Simulations and Uncertainty of Historical and Projected Flow Duration Curves using Dynamically Downscaled GCMs." In Proceedings of the 2019 ASCE EWRI World Environmental & Water Resources Congress. DOI: 10.1061/9780784482346.025
  9. **Daraio JA.**, A A. Khan, and J. Finnis. (2019). "Incorporating Climate Change Considerations Into Flood Mapping and Infrastructure Design in Newfoundland and Labrador." Proceedings of the 2019 CSCE Annual General Conference
  8. Sankar\*, D.L. and **Daraio JA.** (2019). "Simulation of Hydro-Ecological Indices in a Long-Term Hydrologic Model Using Downscaled Climate Data." In Proceedings of the 2019 CSCE Annual General Conference
  7. Amponsah\*, A and **Daraio JA** (2017). "Response of stream temperature to precipitation: a case study of the Chestnut Branch, New Jersey, United States." In Proceedings of the 2017 CSCE Annual General Conference
  6. Chowdhury\*, HA and **Daraio JA** 2017. "Watershed Delineation of the Humber River Basin in Newfoundland." Proceedings of the 2017 CWRA National Conference.
  5. **Daraio JA** and RA Dusseau (2015). "Infrastructure Education using the Impacts of Extreme Storms as Case Studies." In Proceedings of the 2015 ASEE Annual Conference and Exposition, DOI:10.18260/p.24302
  4. Hashash, Y.M.A., S. Nikolaou, B. Sukumaran, A Sacks, M. Burlingame, C. Baxter, A. Bradshaw, L. Wooten, H. Lacy, C. Moss, **J. Daraio**, T.D. O'Rourke (2014). "Selected Effects of the 2012 Hurricane Sandy along the US East Coast A Geotechnical Perspective." In GEO-CONGRESS 2014 KEYNOTE LECTURES, p. 28. 2014
  3. **Daraio, JA.**, Weber, L.J., (2009). Coupling Computational Fluid Dynamics and Ecological Models: Juvenile Mussel Dispersion and Settling in the Upper Mississippi River. In: Proceedings of The 7th International Symposium on Ecohydraulics: Science and Information Technologies for Sustainable Management of Aquatic Ecosystems. CD ROM
  2. **Daraio, JA.**, Y. Morales-Chaves, A. Mynett, and L. Weber (2006). Ecohydraulics in the Mississippi River: Freshwater Mussel Dynamics Model. In: Voinov, A., Jakeman, A J., Rizzoli, A E. (eds). Proceedings of the iEMSs Third Biennial Meeting: "Summit on Environmental Modelling and Software". International Environmental Modelling and Software Society, Burlington, USA, July 2006. CD ROM.
  1. Hunter S, B Vieux, F Ogden, J Niedzialek, C Downer, J Addiego, **J Daraio** (2003). "A Test of Two Distributed Hydrologic Models With WSR-88D Radar Precipitation Data Input in Arizona." In: 31st Intl. Conf. on Radar Meteorology, 6-12 Aug. 2003, Seattle, Washington.

TECHNICAL  
REPORTS

11. Finnis, J. and **J. Daraio**. 2018. Projected Impacts of Climate Change for the Province of Newfoundland and Labrador: 2018 Update. Prepared for the Government of Newfoundland and Labrador <http://www.exec.gov.nl.ca/exec/occ/publications/index.html>
10. **Daraio, JA.** 2014. Development of river hydraulics models for use with multi-model ensembles of hydrologic response to climate change in two New Jersey watersheds. Final report submitted to the Office of Sponsored Programs, Rowan University, Glassboro, NJ for project sponsored by Rowan University Seed Grant Program.
9. Bednarz, A., F. Blotta, M. Brattoli, S. Kamper, K. Varghese, and **J. Daraio** (Faculty Advisor) 2014. Assessment of Flooding and Stormwater Drainage at PSEG's Salem and Hope Creek Generating Station, prepared for PSEG Nuclear LLC, Salem, NJ.
8. Hashash, Y.M.A., S. Nikolaou, B. Sukumaran, A Sacks, M. Burlingame, C. Baxter, A. Bradshaw, L. Wooten, H. Lacy, C. Moss, **J. Daraio**, T.D. O'Rourke 2013. Field Reconnaissance of Geotechnical Aspects of October 2012 Hurricane Sandy along the US East Coast. GEER Association Report No. GEER-032. [http://www.geerassociation.org/GEER\\_Post%20EQ%20Reports/Sandy\\_2012/2012-GEER-Sandy-report-V1-released.pdf](http://www.geerassociation.org/GEER_Post%20EQ%20Reports/Sandy_2012/2012-GEER-Sandy-report-V1-released.pdf)

7. Kwak, T.J. W.G. Cope, J.D. Bales, T.J. Newton, **JA. Daraio**, T.J. Pandolfo, J.M. Archambault, A M. Ganser, R.J. Heise, and B.N. Karns. 2013. "Modeling the response of imperiled freshwater mussels to anthropogenically induced changes in water temperature, habitat, and flow in streams of the southeastern and central United States." Final Report to U.S. Geological Survey, National Climate Change and Wildlife Science Center, Reston, Virginia.
6. **Daraio, JA.** and T.J. Randle 2004. Lower Williamson River Delta Restoration: Hydraulic Modeling," prepared for The Nature Conservancy, Portland, OR, by Sedimentation and River Hydraulics Group, Bureau of Reclamation, Denver, CO.
5. **Daraio, JA.**, JA. Bountry, and T.J. Randle 2003. "Dungeness River In-Stream Flow Side Channel Study," prepared for Washington State Department of Ecology by Sedimentation and River Hydraulics Group, Technical Service Center, Bureau of Reclamation, Denver, CO in cooperation with the Jamestown S'Klallam Tribe.
4. **Daraio, JA.**, and T.J. Randle 2003. "Salmon Lake Tailwater Study," prepared for Waterways and Concrete Dams Group, Bureau of Reclamation by Sedimentation and River Hydraulics Group, Bureau of Reclamation, Denver, CO.
3. Murphy, P. J, T.J. Randle, L. M. Fotherby, and **JA. Daraio** 2004. "Platte River Channel: History and Restoration." U.S. Department of the Interior, Bureau of Reclamation, Sedimentation and River Hydraulics Group, Technical Service Center, Denver, Colorado.
2. Randle, T.J. and **JA. Daraio** 2003. "Sediment and Geomorphic Assessment for the Potential Removal of Chiloquin Dam," prepared for Bureau of Reclamation Klamath Basin Area Office by Sedimentation and River Hydraulics Group, Technical Service Center, Bureau of Reclamation, Denver, CO.
1. Yang C.T., Y.G. Lai, T.J. Randle, and **JA. Daraio**. 2003. Development of a numerical model to predict sediment delivery to river systems in a watershed. Project progress report No.1. U. S. Department of the Interior, Sedimentation and River Hydraulics Group, Technical Service Center, Bureau of Reclamation, Denver, CO.

CONFERENCE  
PRESENTATIONS

51. **Daraio JA.** 2022. "Changing the Conversation: Bridging the Uncertainty Gap Between Knowledge and Decision Making for Sustainable Development." 6th International EcoSummit Congress, Building a sustainable and desirable future: Adapting to a changing land and sea-scape, Gold Coast, Queensland, Australia, June 14–18, 2021 (Postponed due to Covid-19.)
50. Amponsah\*, A, **Daraio JA**, and Khan, AA. 2021. "Incorporating Climate Change into Design Storms for Flood Risk Mapping and Infrastructure in Newfoundland and Labrador, Canada" Eighth International Conference on Flood Management (ICFM8): Lowering Risk by Increasing Resilience, Iowa City, IA, USA, August 9–11, 2021 (Postponed due to Covid-19.)
49. Mosayebi\*, S and **JA Daraio**. (2020) "Evaluation of WRF regional climate model for simulating near-surface atmospheric characteristics." American Geophysical Union Annual Conference, December 1-17, 2020 (online).
48. **Daraio, JA**, N Agh\*, K Miller\*, and M Schumacher\*. (2020) "A Multi-Model Approach for Design and Planning of Resilient Storm Water Infrastructure: Using Science- and Community-Based Knowledge to Integrate Natural and Built Infrastructure in Small Communities in Newfoundland and Labrador, Canada." American Geophysical Union Annual Conference, December 1-17, 2020 (online).
47. Miller\*, KM and **Daraio JA.**. 2020. "Eco-asset management to control flooding and erosion in Bay Bulls, Newfoundland and Labrador." Canadian Network of Asset Managers 2020 Conference (Virtual). May 12–14, 2020 (St. John's, NL, moved to virtual due to Covid 19.)
46. **Daraio JA.** and KM Miller\*. 2020. "A Watershed Approach to Planning for Resilience Infrastructure Assets." Canadian Network of Asset Managers 2020 Conference (Virtual). May 12–14, 2020 (St. John's, NL, moved to virtual due to Covid 19.)
45. Irvine, M and **Daraio JA.**. 2020. "Migrating coastlines: Drivers of change and hazards

- in Newfoundland and Labrador.” Canadian Network of Asset Managers 2020 Conference (Virtual). May 12–14, 2020 (St. John’s, NL, moved to virtual due to Covid 19.)
44. **Daraio JA.** and Kolijn, K. 2020. “Incorporating climate change in water resources infrastructure design under uncertainty.” Adaptation Canada 2020, Vancouver, BC, February 19–22, 2020.
  43. **Daraio JA.** 2019. “Simulations and Uncertainty of Historical and Projected Flow Duration Curves using Dynamically Downscaled GCMs.” EWRI World Environmental & Water Resources Congress, Pittsburgh, PA, May 19–23.
  42. **Daraio, JA.** 2019. “Hydrologic, Hydraulic, and Urban Storm Water Modelling for Climate Change Adaptation and Resilience Planning and Design in Newfoundland and Labrador, Canada” EWRI World Environmental & Water Resources Congress, Pittsburgh, PA, May 19–23.
  41. **Daraio JA.**, A A. Khan, and J. Finnis. 2019. “Incorporating Climate Change Considerations Into Flood Mapping and Infrastructure Design in Newfoundland and Labrador.” CSCE Annual General Conference, Laval, QC, June 12–15.
  40. Sankar\*, D.L. and **Daraio JA.** 2019. “Simulation of Hydro-Ecological Indices in a Long-Term Hydrologic Model Using Downscaled Climate Data.” CSCE Annual General Conference, Laval, QC, June 12–15.
  39. **Daraio, JA.** 2019. “Hydrologic, Hydraulic, and Urban Storm Water Modelling for Climate Change Adaptation and Resilience Planning and Design in Newfoundland and Labrador, Canada” EWRI World Environmental & Water Resources Congress, Pittsburgh, PA, May 19–23.
  38. Amponsah\*, A O, **Daraio, JA.**, and Khan, A A. 2018. “Downscaling sub-daily precipitation using a nonparametric disaggregation model with multi-taper method” AGU Annual Conference, Washington, DC, Dec. 10–14.
  37. **Daraio, JA.**, Amponsah\*, A O, and Khan, A A. 2018. “Implications of Climate Variation of Temporal Precipitation Patterns for the Development of Design Storms for Urban Drainage Systems” AGU Annual Conference, Washington, DC, Dec. 10–14.
  36. Sankar\*, D., and **Daraio, JA.** 2018. “Preservation of Ecological Indices in Downscaled Climate Data” AGU Annual Conference, Washington, DC, Dec. 10–14.
  35. **Daraio, JA.** 2018. “Preservation of Ecological Indices in Downscaled Climate Data” AGU Annual Conference, Washington, DC, Dec. 10–14.
  34. Chowdhury\*, HA and **Daraio JA** 2017. “Watershed Delineation of the Humber River Basin in Newfoundland.” CWRA National Conference, Lethbridge, AB, June 5–7, 2017
  33. Amponsah\*, A and **Daraio JA** 2017. “Response of stream temperature to precipitation: a case study of the Chestnut Branch, New Jersey, United States.” CSCE Annual General Conference, Vancouver, BC, May 31–June 3, 2017
  32. Miller\* K., Nazari R, and **Daraio JA.** 2017 “Community Based Resiliency Planning Through Green Infrastructure.” ASCE EWRI World Environmental & Water Resources Congress, Sacramento, CA May 21–25, 2017.
  31. Dusseau R.A., Morgan J.K., **Daraio JA.** 2016 “New Introduction to Infrastructure Course at Rowan University”. Eighth Annual (FYEE) First Year Engineering Experience Conference Enhancing the First Year of Engineering Education The Ohio State University, Columbus, OH July 31–August 2.
  30. **Daraio, JA.** 2015 (Invited) “Assessing the Effects of Land-Use, Climate Change, and Extreme Events on Physical Habitat in Rivers.” 4th Biennial Symposium of the International Society for River Science (ISRS) 2015, La Crosse, WI, August 23–28.
  29. **Daraio JA** and Dusseau, R. 2015. “Infrastructure Education using the Impacts of Extreme Storms as Case Studies.” 122nd Annual Conference and Exposition of the ASEE, Seattle, WA, June 14–17.
  28. Bechtold\* AL, McCarthy\* ME, Spurgin\* CM, Tucci\* JM, and **Daraio JA** 2015. “Climate Change Impacts on Stream Flow in Two New Jersey Watersheds.” 18<sup>th</sup> Annual Rowan University Science, Technology, Engineering, & Mathematics (STEM) Student Research Symposium, Glassboro, NJ, April 24, 2015



27. **Daraio, JA.** 2014. "Understanding Resilience: Implications for Water Resources Design." 2014 AWRA Annual Water Resources Conference, Tysons Corner, VA, November 3-6.
26. Sukumaran, B, Youssef, M.A. Hashash, S. Nikolaou, M.Burlingame, C. Baxter, A. Bradshaw, L. Wooten, A. Sacks, H. Lacy, **J. Daraio** T. D. O'Rourke. 2013. Field Reconnaissance of Geotechnical Aspects of Super-Storm Sandy along the NJ Coastline. 15th Annual NJDOT Research Showcase, West Windsor, NJ October 23, 2013
25. **Daraio, JA.** 2014. "A Comparative Analysis of Hydrologic Response to Climate Change in Developed and Undeveloped Watersheds on the New Jersey Coastal Plain." AGU Fall Meeting, San Francisco, CA, December 15–19, 2014.
24. Seigel\*, C and **JA. Daraio** 2014. "Event-Based Hydrologic Model Calibration using NEXRAD Data in a Southern New Jersey Watershed." AGU Fall Meeting, San Francisco, CA, December 15–19, 2014.
23. Sears\*, K.W. and **JA. Daraio** 2014. Stream Temperature Response to Rainfall in a Small Watershed. Presented at EWRI ASCE World Environmental and Water Resources Congress, Portland, OR, June 1-5, 2014.
22. Smith\*, BM, Shaub\*, J and **JA Daraio** 2014. Calibration of a River Hydraulics Model in the New Jersey Pinelands. Presented at EWRI ASCE World Environmental and Water Resources Congress, Portland, OR, June 1-5, 2014.
21. Seigel\*, C.M. and **JA. Daraio.** 2014. Spatial Variability and Scaling in Hydrologic Modeling using NEXRAD Radar Data. 17<sup>th</sup> Annual Rowan University Science, Technology, Engineering, & Mathematics (STEM) Student Research Symposium, Glassboro, NJ, April 25, 2014
20. Benigno\*, J., A C. Maclane\*, C.M. Seigel\*, and **JA. Daraio.** 2013. Hydraulic Modeling to Assess the Relationship between Flow Parameters and Freshwater Mussel Habitat in the Upper Tar River Basin, North Carolina. 16<sup>th</sup> Annual Rowan University Science, Technology, Engineering, & Mathematics (STEM) Student Research Symposium, Glassboro, NJ, April 26, 2013
19. Giannelli\*, N.R., S. Kamper\*, M. Rossett\*, D. Yoder, B Sukumaran, and **JA. Daraio.** 2013. Evaluation of Geotechnical Aspects of SuperStorm Sandy Along the New Jersey Coastline. 16<sup>th</sup> Annual Rowan University Science, Technology, Engineering, & Mathematics (STEM) Student Research Symposium, Glassboro, NJ, April 26, 2013
18. **Daraio, JA.** and J.D. Bales. 2012. Forecasting the effects of land-use and climate change through mid-century on stream temperature in the upper Tar River, North Carolina. AGU Fall Meeting, San Francisco, CA, December 3–7 2012.
17. Kwak,T.J., W.G. Cope, T.J. Newton, J.D. Bales, **JA. Daraio**, C.A. Drew, T.J. Pandolfo\*, J.M. Archambault\*, A M. Ganser\*, R.J. Heise, R.B. Nichols, T. Augspurger, and B.N. Karns. 2012. Breaking traditional barriers to model climate change and land use impacts on freshwater mussels. Invited speaker to the Freshwater Mollusk Conservation Society Biennial Workshop entitled "Incorporating Environmental Flows, Climate Change, and Ecosystem Services into Freshwater Mussel Conservation and Management." Athens, Georgia, April 19-20, 2012.
16. **Daraio, JA.**, J.D. Bales, and T.J. Pandolfo\*. 2012. A stochastic hourly stream temperature model to forecast land-use and climate change effects on temperature threshold exceedance duration for freshwater mussels. AGU Fall Meeting, San Francisco, CA, December 3–7 2012.
15. **Daraio, JA.**, J.D. Bales, and T.J. Pandolfo\*. 2012. Multi-scale Modeling to Forecast the Effects of Climate and Land-Use Change on Mean Daily and Hourly Stream Temperature in a North Carolina watershed. Passaic River Symposium V: Today's Status, Tomorrow's Perspective, Montclair, NJ, October 19, 2012.
14. **Daraio, JA.** and Bales, J.D., 2011. Modeling the effects of climate change on instream temperature in the Upper Tar River, North Carolina. AGU Fall Meeting, San Francisco, CA, December 5–9 2011.
13. **Daraio, JA.** and Bales, J.D., 2011. Multiscale modeling to assess the effects of climate and land-use changes on common and imperiled freshwater mussel occurrence in the Tar

River, NC and the St. Croix and Mississippi rivers in the Upper Midwest, USA, presented at the 7th Biennial Symposium of the Freshwater Mollusk Conservation Society, Louisville, KY, April 11–15, 2011.

12. Blomquist, S.M., Lannom, K.O. , and **Daraio, JA.**, 2010. Predicting the effects of long-term sedimentation on native aquatic salamanders and fishes: application of RUSLE to forests on the Cumberland Plateau of Tennessee under three management systems. Joint Meeting of the American Society of Ichthyologists and Herpetologists, American Elasmobranch Society, the Herpetologists' League, and the Society for the Study of Amphibians and Reptiles, Providence, Rhode Island. 10 July 2010.
  11. **Daraio, JA.**, Weber, L.J., Zigler, S.J., and Newton, T.J., 2009. Importance of the host fish location at the time of drop off on dispersal of juvenile mussels in the Upper Mississippi River, presented at the 6th Biennial Symposium of the Freshwater Mollusk Conservation Society, Baltimore, MD, April 19-23, 2009.
  10. **Daraio, JA.**, Weber, L.J., and Newton, T.J., 2009. Effects of shear stress on dispersal of juvenile mussels (*Amblema plicata*) in the Upper Mississippi River, presented at the 6th Biennial Symposium of the Freshwater Mollusk Conservation Society, Baltimore, MD, April 19-23, 2009.
  9. **Daraio, JA.** and L.J. Weber, 2009. "Coupling Computational Fluid Dynamics and Ecological Models: Juvenile Mussel Dispersion and Settling in the Upper Mississippi River," 7th International Symposium on Ecohydraulics, Concepcion, Chile, January 11-17, 2009.
  8. **Daraio, JA.**, Weber, L.J. 2007. Freshwater Mussel Habitat Dynamics Modeling in the Upper Mississippi River, presented at the Second National Conference on Ecosystem Restoration (NCER), Kansas City, MO, April 23-27, 2007.
  7. **Daraio, JA.**, L. J. Weber, and T. J. Newton, 2007. "Modeling Freshwater Mussels in the Upper Mississippi River," presented at the 5th Biennial Symposium of the Freshwater Mollusk Conservation Society, Little Rock, AR, March 12-15, 2007.
  6. **Daraio, JA.** and L. J. Weber, 2007. "Habitat Suitability Index Modeling for Freshwater Mussels in the Mississippi River, USA," presented at the 6th International Symposium on Ecohydraulics, Christchurch, New Zealand, February 18-23, 2007.
  5. Hunter, S., B. Vieux, F. Ogden, J. Niedzialek, C. Downer, J. Addiego, and **J. Daraio** 2003. "A Test of Two Distributed Hydrologic Models with WSR-88D Radar Precipitation Data Input in Arizona," 31st International Conference on Radar Meteorology, Seattle, Washington, 6-12 August, 2003.
  4. **Daraio, JA.** and F. L. Ogden 2002. "Physically-Based Distributed Modeling of Event-Scale Erosion: The Relationship Between Rainfall Erosivity and Suspended Sediment Discharges," presented at the 2nd Federal Interagency Hydrologic Modeling Conference, Las Vegas, NV, July 29-Aug. 1, 2002.
  3. Heilig, A., F.L. Ogden, and **JA. Daraio** 2001. "Watershed-Scale Calibration and Verification of the Erosion Component of CASC2D," American Geophysical Union Spring Meeting, Proc., 29 May-2 June, Boston, MA.
  2. **Daraio, JA.**, and F.L. Ogden, 2001. "A Conceptual Investigation of Baseflow Separation Using a Distributed Hydrologic Model," American Geophysical Union Spring Meeting, Proc., 29 May - 2 June, Boston, MA
  1. Bringsjord, S., E. Bringsjord, R. Noel, **JA. Daraio** and C. Viaggi 1997. "Explaining Phi Without Dennett's Exotica: Good Ol' Computation Does Just Fine," presented at the 1997 Annual Meeting of the Society for Philosophy and Psychology, New York, NY, June 5-8.
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12. "Scenario Planning for Climate Resilient Storm Water Infrastructure in Small Communities in Newfoundland and Labrador." CSCE National Tech Talk Webinar, February 10, 2021
  11. "Building and Sustaining Infrastructure Resilience Through Targeted Climate Adaptation Training for Professionals in Newfoundland and Labrador." FCM Climate and Asset Management Workshop Series – Atlantic, online August 11, 2020

INVITED  
SPEAKER/  
LECTURE/  
WEBINAR

10. “Building Capacity for Infrastructure Resilience Through Targeted Climate Adaptation Training for Professionals in Newfoundland and Labrador.” Infrastructure and Buildings Working Group (IBWG) online, June 17, 2020.
9. “Uncertainty.” Building Climate Resilience: Infrastructure Design and Planning With Uncertainty. St. John’s, NL, November 19, 2019.
8. (Keynote) Nguyen, VTV, A Nazemi, P Langan, **J Daraio**. (2019). “What is Climate Change Adaptation?.” 2019 CSCE Hydrotechnical Conference, Laval, Canada
7. “From Climate Projections to Infrastructure Design: Uncertainty and Applications.” Building Climate Resilience: Incorporating Climate Change into Public Infrastructure Planning and Design, Workshop in St. John’s, NL, March 8-9, 2018.
6. “Climate Projections and Impacts: Implications for Infrastructure in Newfoundland and Labrador.” Building Climate Resilience: Incorporating Climate Change into Public Infrastructure Planning and Design, Workshop in St. John’s, NL, March 8-9, 2018.
5. “How resilient infrastructure can address climate change impacts on Newfoundland and Labrador’s communities.” Memorial University of Newfoundland, Faculty of Engineering and Applied Science Speaking of Engineering Public Lectures, April 11, 2018
4. “Water Resources Engineering and Sustainability.” Memorial University of Newfoundland, Department of Earth Science, November 3, 2017
3. “Multi-scale modeling for water resources and environmental sustainability.” Stroud Water Research Center, Avondale, PA, October 30, 2013
2. “Multi-scale modeling for water resources and environmental sustainability.” Graduate Student Seminar in Civil and Environmental Engineering, Rutgers, The State University of New Jersey, New Brunswick, NJ, April 10, 2013
1. Kwak, T.J., W.G. Cope, T.J. Newton, J.D. Bales, **JA. Daraio**, C.A. Drew, T.J. Pandolfo, J.M. Archambault, A M. Ganser, R.J. Heise, R.B. Nichols, T. Augspurger, and B.N. Karns. 2013. Breaking traditional barriers to model climate change and land use impacts on freshwater mussels. Invited speaker to the Climate Change Science and Management Webinar Series. U.S. Geological Survey, National Climate Change and Wildlife Science Center and U.S. Fish and Wildlife Service, National Conservation Training Center. March 26, 2013, online webinar.

COURSES  
TAUGHT

ENGI 9797 *Climate Change and Water Resources Sustainability*, Memorial University of Newfoundland, Winter 2017–2021  
 ENGI 7713 *Hydrology and Water Resources*, Memorial University of Newfoundland, Spring 2016, 2017–2020.  
 ENGI 7716 *Hydrotechnical Engineering*, Memorial University of Newfoundland, Spring 2016, 2017, 2018.  
 ENGI 5713 *Fluid Mechanics*, Memorial University of Newfoundland, Winter 2016, 2017, 2018, 2020.  
 CEE 08101 *Introduction to Infrastructure*, Rowan University, Spring 2015  
 CEE 08493/503 *Water Resources Sustainability and Climate Change*, Rowan University, Spring 2014.  
 CEE 08342 *Water Resources Engineering*, Rowan University, Spring 2013, 2014, 2015  
 ENGR 01341 *Fluid Mechanics*, Rowan University, Fall 2012, 2013, 2014  
 ENGR 01272 *Statics*, Rowan University, Fall 2013  
 GEOL 4820 *Watershed Modeling*, Tennessee Technological University, Summer 2010  
 CE 053:195 *Ecology and Ecohydraulics*, The University of Iowa, Spring 2008

GRADUATE  
STUDENT  
SUPERVISION

**Doctoral Students:**

4. Matthew Schumacher, Thesis topic: “Watershed modelling for design and planning of sustainable storm water infrastructure.” 2020–2024. Co-supervised with Lakshman Galagedara at MUN Grenfell.
3. Makcim De Sisto. Climate model development of biogeochemistry, coupling the ice-sheet

- model to the ocean, and improving the permafrost scheme to account for thermokarst. 2020–2024. Co-supervised with Andrew MacDougall at St. Francis Xavier University, NS.
2. Sanaz Mosayebi. Climate change impact on winds and coastal pollutant transport. 2019–2023. Co-supervised with Helen Zhang.
  1. Abena Amponsah. Climate change impact on design storms . 2016–2021. (Parental leave from February 2020 to June 2020.)

#### **Masters Students:**

8. TBD, Thesis topic:: Climate change adaptation planning for storm water infrastructure in Pouch Cove, NL. 2020-2022
7. Arjit Arghya, Thesis topic: Climate change on landslides. 2020–2022. Co-supervisor with Bipul Hawlader
6. Kelly Miller. Thesis topic: “Incorporating climate change into water infrastructure.” 2019–2021

#### *Completed:*

5. Keerthika Ashokkumar. Thesis topic “Sustainable Water Resources Development for O’Brien Farm.” 2018–2019
4. Diana Sankar. Thesis topic “Changes in Nutrient Parameters and Concentrations under Ice Affected Conditions,” 2017–2019. Co-supervised with Bing Chen
3. Hasab-ul Chowdury. Theses topic ”Hydrologic Modelling of the Humber River Basin.” 2016–2018
2. Katie Miller (Co-advisor with Dr. Rouzbeh Nazari at Rowan University), Thesis topic: Assesment of the impacts of climate change (sea level rise) on coastal flooding in the Mid-Atlantic. 2014–2016
1. Chris Seigel, Thesis: Using RADAR Rainfall Data to Calibrate a Hydrologic Model in Southern New Jersey. 2012–2014

UNDERGRADUATE  
STUDENT  
SUPERVISION

\*Number in parenthesis indicates number of students supervised, or co-supervised.)

#### **Work-term Student**

1. (43) Liam Martin, Assisted my Ph.D. student, A. Amponsah with research on IDF curves, September–December 2017.

#### **Engineering Clinics at Rowan University**

##### *Junior/Senior Clinic, PI/Project Leader*

18. Kokeb Abera, Nicole Reilly, Nicholas Pytlowany, Anthony DaSilva, (42) Samantha Mann, *Storm Water Modeling for Salem, NJ using EPA SWMM*, Spring 2015
17. Ashley Bechtold, (41) John Tucci, Michael McCarthy, Collin Spurgin, *Climate Change Impacts of Stream Flow in Two New Jersey Watersheds*, Spring 2015
16. (38) Michael McCarthy, (39) Nicholas Pytlowany, (40) Collin Spurgin, Kevin Varghese, *Climate Change Impacts of Stream Flow in Two New Jersey Watersheds*, Fall 2014
15. (29) Kokeb Abera, (30) Ashley Bechtold, (31) Anthony DaSilva, (32) Joseph Diorio, (33) Christopher Alaimo, (34) Daniel McDevitt, (35) Nicole Reilly, (36) Emily Keck, (37) Erin Signor *EPA Campus Rainworks Challenge*, Fall 2014
14. (26) Ashley Davis, (27) Parker Oris, (28) Jacob Wyshinski, *Watershed Erosion*, Spring 2014
13. Chris Wagner, Pat Lynch, Jason Shaub, (25) Rob Morrone *Chestnut Branch Stream Gaging*, Spring 2014
12. Anthony Bednarz (ME), Samantha Kamper, Felipe Blotta, Kevin Varghese, (24) Alex Van Nest (ME), *Stormwater Drainage at PSEG Salem and Hope Creek Generating Station*, Spring 2014
11. Steve Corcoran, Katie Miller, (22) CJ Patras, (23) Andrew Furlong (ECE), *Hydrologic*

*Modeling of the Maurice River Basin*, Spring 2014

10. (19) Stephen Pindale, (20) Steve Corcoran, (21) Katie Miller, *Hydrologic Modeling of the Maurice River Basin*, Fall 2013
9. (14) Michael Brattoli (ME), (15) Anthony Bednarz (ME), (16) Samantha Kamper, (17) Felipe Blotta, (18) Kevin Varghese *Stormwater Drainage at PSEG Salem and Hope Creek Generating Station*, Fall 2013 ( Report submitted to PSEG, January 16, 2014: *Assessment of Flooding and Stormwater Drainage at PSEG's Salem and Hope Creek Generating Station*)
8. (10) Dan Collins, (11) Chris Wagner, (12) Pat Lynch, John Benigno, (13) Jason Shaub, *Chestnut Branch Stream Gaging*, Fall 2013
7. (7) Jen Matczak, (8) Makayla Holt, (9) Jacob Taylor, *EPA Campus Rainworks Challenge*, Fall 2012, co-PI: Dr. Jess Everett
6. (4) Vlad Koldomasov, (5) Will Sheaffer, (6) Brittany Smith, *Campus Irrigation*, Spring 2013, co-PI: Dr. Jess Everett
5. (1) Andrew MacLane, (2) John Benigno, (3) Christopher Seigel; *River Hydraulics Modeling*, Fall 2012/Spring 2013

*Junior/Senior Clinic, co-PI:*

4. (8) Nicholas Pytlowany, (9) Matthew Bresan, (10) Parker Oris, (11) Jacob Wyshinski, (12) Matthew D'Eustachio, *Ceres Park Multi-Purpose Trails*, Fall 2013, PI: Dr. Doug Cleary
3. (7) Stephen Duda, Shawn Williams, *Bioinfiltration*, Fall 2012, PI: Dr. Jess Everett
2. (5) Katie Miller, (6) Shawn Williams, *Bioinfiltration*, Spring 2013, PI: Dr. Jess Everett
1. (1) Nicole Giannelli, (2) Sam Kamper, (3) Matt Rossett, (4) Derek Yoder, *Impact of Hurricane Sandy on the NJ Coastal Communities*, Spring 2013, PI: Dr. Beena Sukumaran

#### **Honors Independent Study**

1. (1) Ken Sears, stream temperature research in Chestnut Branch, Fall 2013, Spring 2014

#### ACADEMIC SERVICE

*Memorial University of Newfoundland*

- Reviewer for The Harris Centre MMSB Waste Management Applied Research Fund (2020-2021)
- Decarbonize MUNFA Working Group (2019–)
- Library Academic Council Committee (FEAS Representative; 2019–)
- NSERC Banting Postdoctoral Fellowship Committee (2019)

*Faculty of Engineering and Applied Science*

- Dean's Computing Advisory Committee (ad hoc, Covid-19, 2020)
- CUGS-Subcommittee on Academic Continuity (ad hoc, Covid-19, 2020)
- Committee on Undergraduate Studies Executive Committee member (2019–)
- Continuous Improvement Committee (2018– )
- Gender & Diversity Committee (2018– )
- Faculty Awards Committee member (September 2016– )
- Committee on Undergraduate Studies member (September 2015–2017; 2018–)
- Graduate Student Awards Committee (October 2016–2017 )
- Outstanding Engineering TA Awards Committee member (2016, 2017)
- Chair, PhD proposal defence (2)
- Chair, PhD Comprehensive Exam (6)
- Core Curriculum Subcommittee (attended several meetings as a substitute)

*Department of Civil Engineering*

- Deputy Head of the Department of Civil Engineering (2019–)
- Chair, Sustainable Infrastructure Working Group (2020–)
- Curriculum Committee Chair (2019–)

- Curriculum Committee member (March 2016–2019)
- Search Committee member, 3-year term teaching position in Environmental Engineering (2016)
- Search Committee member, CRC in Environmental Engineering (2016)

PROFESSIONAL AND  
COMMUNITY  
SERVICE

- Land Stewardship Committee for O’Brien’s Farm in St. John’s, Newfoundland and Labrador Heritage Society (2018–)
- Steering committee for workshop on “Building and Sustaining Infrastructure Resilience in NL through Climate Adaptation Training for Professionals.” (November 2017–)
- Reviewer for *Journal of Hydrologic Engineering*, *Water Research*, *Journal of the North American Benthological Society*, *Applied Mathematical Modelling*, *Freshwater Science*, *Water Resources Research*, *Freshwater Biology*, *Open Water Journal*, *Ecological Modelling*, *Canadian Journal of Civil Engineering*, *Science of the Total Environment*
- Storm Water Committee for O’Brien’s Farm in St. John’s, Newfoundland and Labrador Heritage Society (2016)
- AWRA, Future Risks Committee (2014–2015)
- New Jersey section of AWRA, Stormwater Committee (2013–2015)
- President, Students of IIHR (2004 -2005); liaison between IAHR and students at IIHR; organized IIHR student seminar series, the IIHR annual holiday party, and numerous social events.

PROFESSIONAL  
SOCIETY  
MEMBERSHIPS

- Professional Engineers and Geoscientists Newfoundland and Labrador (PEGNL), License number 08566
- Canadian Society for Civil Engineering, CSCE, Member
  - Member of the Executive Committee for the Newfoundland & Labrador Branch (2017–)
  - Faculty/Student Advisor to the MUN Student Section of CSCE (2018–)
  - Treasurer, Newfoundland & Labrador Branch (2017–2018)
- Canadian Water Resources Association, CWRA
- American Society of Civil Engineers, ASCE, Member
- American Meteorological Society, AMS
- American Geophysical Union, AGU
- American Water Resources Association, AWRA
- International Association for Hydro-Environment Engineering and Research, IAHR