

ELODIE PASSEPORT**CURRICULUM VITAE**

35 St George Street, Rm# GB319F, Department of Civil & Mineral Engineering
 University of Toronto
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Citizenship French; Permanent Resident of Canada; US Green Card Application in process
Languages French, English, Spanish
Date of birth June 26, 1983

EDUCATION

2010 **Ph.D. Water Sciences** Dept. Geosciences and Natural Resources
 Univ. AgroParisTech–Irstea (France)
Thesis: *Efficiency of an artificial wetland and a forest buffer for pesticide pollution mitigation in a tile-drained agricultural watershed*
Advisors: Dr. J. Tournebize, Prof. Y. Coquet

2007 **Master of Science** Dept. Continental Environments and Hydrosociences
 Univ. ParisTech–Pierre & Marie Curie (France)

2006 **Bachelor/Master of Science** Dept. Chemical Engineering
 National Institute of Applied Sciences (France)
 6 months at Univ. Polytechnica de Catalunya (Spain)

EMPLOYMENT

1/2024 **Associate Professor** Dept. Environmental Sciences
 Rutgers, The State University of New Jersey

7/2020-12/2023 **Associate Professor** Cross appointment: Civil & Mineral Engineering (51%)
 and Chemical Engineering & Applied Chemistry (49%)
 Univ. of Toronto (Canada)

7/2020-6/2021 **Visiting Researcher** Research Leave at the University of Montpellier
 HydroSciences research unit

8/2014-6/2020 **Assistant Professor** Cross appointment: Civil & Mineral Engineering and
 Chemical Engineering & Applied Chemistry
 Univ. of Toronto (Canada)

2019-present **Adjunct Faculty** School of the Environment
 Univ. of Toronto (Canada)

2017-present **Adjunct Faculty** Dept. Earth and Environmental Sciences

Univ. of Waterloo (Canada)

2012-2014	Postdoctoral Fellow	Dept. Earth Sciences Univ. of Toronto (Canada) Partnership: DuPont Advisor: University Prof. B. Sherwood Lollar
2011-2012	Postdoctoral Fellow	Dept. Plant and Microbial Biology Univ. of California at Berkeley (USA) Partnership: California Dept. Water Resources Advisor: Prof. N. Terry
2007	Research Assistant	Dept. Biological and Agricultural Engineering Univ. North Carolina State University (USA) Advisors: Prof. W.F. Hunt III, Dr. F. Birgand
2006	Research Assistant	Dept. Hydrosystems & Bioprocesses Univ. Irstea (France) Advisors: Dr. C. Kao, Dr. J. Tournebize
2005	Research Assistant	Dept. Chemical Engineering Univ. Indian Institute of Technology, Chennai (India) Advisor: Prof. D.V.S. Murthy

AWARDS

2021	Ontario Early Researcher Award
2020	Early Career Teaching Award from the Faculty of Applied Science and Engineering at the University of Toronto
2018	Bill Burgess Teacher of the Year Award for Large Classes in the Department of Chemical Engineering and Applied Chemistry at the University of Toronto
2015, 2021	Tier II Canada Research Chair Environmental Engineering & Stable Isotopes
2015	University of Toronto Connaught New Researcher Award
2012	PHYTOPHARMA industry-sponsored (BAYER) Award for best Ph.D. Thesis from “French Group on Pesticide

MEMBERSHIPS

- American Chemical Society
- Geochemical Society
- Association of Environmental Engineering and Science Professors

INVITED ADDRESSES

- [IT31] **Seminar at Rutgers University**, Department of Environmental Sciences, New Brunswick (online), October 5, 2023, “Fate of trace organic contaminants in green infrastructure”
- [IT30] **Seminar at Imperial College**, Environmental Research Group, School of Public Health, London, United Kingdom, June 12, 2023, “Fate of trace organic contaminants in green infrastructure”
- [IT29] **Seminar at Technical University of Denmark**, Department of Environmental and Resources Engineering, Lyngby, Denmark, June 9, 2023, “Fate of trace organic contaminants in green infrastructure”

- [IT28] **Seminar at Polytechnique Montréal**, Montréal, Canada, November 23, 2022, “Fate of trace organic contaminants in green infrastructure”
- [IT27] **Geotop Seminar Series, Université du Québec à Montréal**, Montréal, Canada, November 22, 2022, “Compound Specific Isotope Analysis to track contaminant fate in green infrastructure”
- [IT26] **EOHSI Seminar Series, Rutgers University**, online, October 7, 2022, “Fate of trace organic contaminants in green infrastructure”
- [IT25] **Invited keynote presentation at 2nd Annual International Congress on Euglenoids 2022**, Toronto, Canada, November 7-10, 2022, “Potential of *Euglena gracilis* for elimination of trace organic contaminants from water”
- [IT24] **FABE Seminar Series, Ohio State University**, online, September 13, 2022, “Fate of trace organic contaminants in green infrastructure”
- [IT23] **Invited seminar at University of Strasbourg, Isotopic and Environmental Biogeochemistry Team**, Strasbourg, France, November 17, 2021, “Tracking contaminant degradation using ¹⁴C-labelled chemicals: current state and perspectives”
- [IT22] **Invited seminar at University of Strasbourg, Institut Terre & Environnement de Strasbourg (ITES)**, Strasbourg, France, November 18, 2021, “Fate of trace organic contaminants in green infrastructure”
- [IT21] **Invited seminar at University of Maryland Center for Environmental Science Horn Point Laboratory**, online (for Horn Point, MD, USA), May 22, 2021, “Fate of trace organic contaminants in urban stormwater green infrastructure” part of “The Universe to Unicellular Organisms and Everything In-between”, a virtual Seminar Series.
- [IT20] **Invited seminar at Laboratory Biotechnology and Environment**, online (for Narbonne, France), November 6, 2020, “Contaminants in aquatic environments: fate & removal in passive water treatment systems”
- [IT19] **Invited seminar at University of Toronto Annual Mass Spectrometry User Meeting**, Toronto, Canada, February 20, 2020, “Applications of Compound Specific Isotope Analysis to sediment and surface water environments”
- [IT18] **Invited seminar at CNRS UMR-Hydrogeosciences**, Montpellier, France, December 13, 2019, “Applications of Compound Specific Isotope Analysis to sediment and surface water environments”
- [IT17] **Invited seminar at the National Institute for Agronomic Research (INRA), LISAH lab**, Montpellier, France, July 8, 2019, “Passive water treatment systems for contaminant removal”
- [IT16] **Invited seminar at Queen’s University**, part of the Beaty Water Research Center, Department of Civil Engineering, Kingston, ON, Canada, April 25, 2019, “Processes governing the fate of pharmaceuticals and personal care products in constructed wetland systems”
- [IT15] **Invited seminar at the University of Toronto**, School of the Environment, Toronto, ON, Canada, February 14, 2019, “Mitigation of radioactive strontium pollution in wetlands”
- [IT14] **Invited seminar at the University of Maryland**, Department of Civil and Environmental Engineering, College Park, MD, USA, February 21, 2018, “Passive water treatment solutions for surface water contamination”
- [IT13] **Invited seminar at ECOLAB**, UMR 5245 CNRS-UPS-INPT, Toulouse, France, February 6, 2018, “Passive water treatment solutions for surface water contamination”
- [IT12] **Invited seminar at University of Windsor, Great Lakes Institute for Environmental Research**, Windsor, Canada, November 3, 2017, “Applications of Compound Specific Isotope Analysis to sediment and surface water environments”

- [IT11] **Invited presentation at University of Waterloo workshop** on Stormwater management and nutrients control in extreme events; knowledge mobilization on the reduction of nutrient loading from urban non-point sources under climate change, Waterloo, ON, Canada, October 11, 2017, “Bioretention cells under cold climate conditions: the effect of freezing and thawing on water infiltration, soil structure and nutrient removal”
- [IT10] **Invited seminar at Royal Military College of Canada, Department of Chemistry and Chemical Engineering**, Kingston, ON, Canada, July 25, 2017, “Passive water treatment solutions for surface water contamination”
- [IT9] **Invited platform presentation, RemTEC Summit**, Denver, CO, USA, March 8, 2017, “Coupling of High Resolution Pore Water Sampling and Compound Specific Isotope Analysis to Monitor Sediment Natural Attenuation”
- [IT8] **Invited seminar at University of Toronto, Skule**, Toronto, ON, Canada, February 8, 2017, “Passive water treatment solutions for surface water contamination”
- [IT7] **Invited seminar at University of Toronto, Environmental Seminar Series, School of the Environment**, Toronto, Canada, November 18, 2015, “Monitoring the Natural Attenuation of Chlorinated Benzenes in Contaminated Groundwater and Sediments”
- [IT6] **Invited seminar at University of California at Berkeley, Department of Environmental Science, Policy, and Management**, Berkeley, CA, USA, September 25, 2015, “Compound Specific Isotope Analysis to monitor the natural attenuation of chlorinated benzenes”
- [IT5] **Invited seminar at University of Waterloo, Department of Earth & Environmental Sciences, Ecohydrology Seminar Series**, Waterloo, Canada, May 12, 2015, “Fate of Organic Contaminants in Aquatic Environments: Contribution from Radio and Stable Isotope Chemistry”
- [IT4] **Invited seminar at University of Toronto, Department of Civil Engineering, Environmental Engineering Graduate Seminar Series**, Toronto, Canada, February 3, 2015, “Fate of Organic Contaminants in Aquatic Environments: Contribution from Radio and Stable Isotope Chemistry”
- [IT3] **Panelist for Water Environment Association of Ontario (WEAO) University of Toronto Chapter**, Panel Discussion November 13, 2014.
- [IT2] **Invited seminar at University of Toronto, Department of Chemistry, Environmental Chemistry Seminar Series**, Toronto, Canada, October 16, 2014, “Fate of Organic Contaminants in Aquatic Environments: Contribution from Radio and Stable Isotope Chemistry”
- [IT1] **Invited seminar at 10th RECETOX Summer School**, Brno, Czech Republic, June 26, 2014, “Applications of Compound Specific Isotope Analysis to chlorinated benzenes”

PUBLIC CONSULTATION AND TECHNOLOGY TRANSFER

- **Workshop to TRCA STEP webinar series**: on June 10, 2021: “The fate of non-conventional stormwater pollutants in bioretention systems: microplastics, benzotriazole and more” co-presented by Dr. Elodie Passeport and Dr. Jennifer Drake from University of Toronto
- **Invited presentation at RemTEC 2021** (online), titled “The use of advanced tools as lines of evidence for remediation planning” co-presented by Dr. Elodie Passeport and Dr. Silvia Mancini from Geosyntec Consultants, on March 10 2021 in session “Lines of evidence approaches in remediation: technical and legal perspectives”.
- **Panelist** at the industry-oriented TRIECA conference on March 21, 2018, on “Bioretention cells”, with presentation titled “Bioretention cells under cold climate conditions”.

- **Presentation to industrial collaborators:** “Latest isotope results in AOC1”, B. Sherwood Lollar, A. Horst, G. Lacrampe-Couloume, T. Gilevska, E. Passeport, E. Lutz, E.E. Mack, K. West, S. Norcross, S. Morgan, Science Advisory Board for **Chemours Remediation Group**, Feb. 1, 2016
- Reviewer and participant in panel for the development of new stormwater guide from the **Toronto Region Conservation Authority and Sustainable Technologies Evaluation Program** entitled “Low Impact Development Stormwater Inspection and Maintenance Guide”, Sept. 21, 2015
- **Presentation to industrial collaborators:** “Novel determining of rates of bioremediation for chlorinated aromatic hydrocarbons and CFCs”, B. Sherwood Lollar and E. Passeport, **Dupont Remediation Research Center**, Wilmington DE. Nov. 2014

DIVERSITY, EQUITY, INCLUSION & OUTREACH

- Initiated and led the writing of a **review paper to highlight the work of female scientist** Prof. Barbara Sherwood Lollar *for a Special Issue on Women in Hydrology for the Journal of Hydrology*.
- Co-organizer and participant in panel on “Career transitions in academia”, **University of Strasbourg, Institut Terre & Environnement de Strasbourg (ITES)**, Strasbourg, France, November 17, 2021
- Co-organizer and participant in panel on “Women in (geo)sciences: Facts, representation and evolution”, **University of Strasbourg, Institut Terre & Environnement de Strasbourg (ITES)**, Strasbourg, France, November 17, 2021
- Participant to Science Rendezvous 2021, *The energy hidden in wastes* (virtual). May 8, 2021. <https://www.sciencerendezvousuoft.ca/>
- Judge for Environmental Remediation track in Women in Science & Engineering (WISE) conference. January 24, 2021 <https://wiseuoft.org/>
- Invited seminar at STEM Lunch & Learn, July 24, 2018, <https://outreach.engineering.utoronto.ca/pre-university-programs/deep-summer-academy/>

LIST OF PUBLICATIONS

Peer-reviewed journals

- [Scholar.Google Profile](#) **h-index = 25** and **total citations: 2086**

ORCID: <https://orcid.org/0000-0002-6324-7233>

*Below, IF = Impact Factor. Name of students/PDF (co-)supervised in bold. *The asterisk indicates the corresponding author.*

Submitted

[S2] Zhou B., Parsons C., Shafii M., Rezanezhad F., Passeport E., van Cappellen P. Do bioretention cells reduce urban stormwater phosphorus and nitrogen loads? Insights from the International Stormwater Best Management Practice Database. Submitted on October 20, 2023. *Water Research*.

[S1] **Smyth K., Tan S.**, van Seters T., Gasperi J., Dris R., Drake J., Passeport E.* Small-size microplastics in urban stormwater runoff are efficiently trapped in a bioretention cell. Submitted on October 11, 2023. *Water Research*.

Published

[J52] **Suchana S.**, Edwards E., Mack E.E., Lomheim L., Melo N., Gavazza S., Passeport E.* Polar organic chemical integrative sampler (POCIS) allows compound specific isotope analysis (CSIA) of substituted chlorobenzenes at trace levels. (2024). *Science of the Total Environment*. 906:167628

[J51] **Suchana S., Wu L.**, Passeport E.* Compound specific carbon, hydrogen, and nitrogen isotope analysis of nitro- and amino-substituted chlorobenzenes in complex aqueous matrices. (2023). *ACS Analytical Chemistry*. 95(17) 6801-6809

[J50] Zhou B., Shafii M., Parsons C., Passeport E., Rezanezhad F., **Lisogorsky A.**, Singh A., Wilson S., Van Cappellen P.* Modeling multi-year phosphorus dynamics in a bioretention cell: phosphorus partitioning, accumulation, and export. (2023) *Science of the Total Environment*. 876:162749

[J49] Phillips E., Bergquist B., Chartrand M., Chen W., Edwards E., Elsner M., Gilevska T., Hirschorn S., Horst A., Lacrampe-Couloume G., Mancini S., McKelvie J., Morrill P., Sullivan Ojeda A., Slater G., Sleep B., De Vera J., Warr O., Passeport E.* Compound Specific Isotope Analysis in Hydrogeology. (2022). *Journal of Hydrology*. 615 Part A, 128588, 13 pages

[J48] **Yuan J.**, Fox F., Crowe G., Mortazavian S., Passeport E., Hofmann R.* Is in-service granular activated carbon biologically active? An evaluation of alternative experimental methods to distinguish adsorption and biodegradation in GAC. (2022). *Environmental Science & Technology*. 56(22) 16125-16133

[J47] **Tan S.**, Krichen E., Rapaport A., Passeport E., Josh A. Taylor* Fitting second-order cone constraints to microbial growth data. (2022). *Journal of Process Control*. 118, 165-169.

- [J46] **Shamsunnahar S.**, Passeport E.* Implications of polar organic chemical integrative sampler for high membrane sorption and suitability of polyethersulfone as a single-phase sampler. 2022. *Science of the Total Environment*. 850:157898, 9 pages
- [J45] O'Brien A,* **Yu Z.H.**, Pencer C., Frederickson M., LeFevre G.H., Passeport E. Harnessing plant-microbiome interactions for bioremediation across a freshwater urbanization gradient. (Accepted on August 1, 2022). *Water Research*. 118926, 9 pages
- [J44] Yuan J., Morazavian S., Passeport E., Hofmann R.* Evaluating perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) removal across granular activated carbon (GAC) filter-adsorbers in drinking water treatment plants. (2022). *Science of the Total Environment*. 838(Part 3):156406, 9 pages
- [J43] Rodgers T., **Wu L., Gu X.**, Spraakman S., Passeport E., Diamond M.* Stormwater Bioretention Cells are not an Effective Treatment for Persistent and Mobile Organic Compounds (PMOCs). (2022). *Environmental Science & Technology*. 56(10) 6349-6359
- [J42] **Lam K.Y.**, Yu Z.H., Flick R., Passeport E.* Triclosan uptake and transformation by the green algae *Euglena gracilis* strain Z. (2022). *Science of the Total Environment*. 833:155232, 10 pages
- [J41] Yuan J., Morazavian S., Crowe G., Flick R., Passeport E., Hofmann R.* Evaluating the relative adsorption and biodegradation of 2-methylisoborneol and geosmin across granular activated carbon filter-adsorbers. (2022). *Water Research*. 215:118239, 10 pages
- [J40] Shi B.* , Patel M., Yu D., Yan J., Li Z., Petriw D., Pruyn T., Smyth K., Passeport E., Miller D.R.J., Howe J.Y. Automatic quantification and classification of microplastics in scanning electron microscopes via deep learning. (2022). *Science of the Total Environment*. 825:153903, 11 pages
- [J39] **Tan S.**, Taylor J.A., Passeport E.* Efficient prediction of microplastic counts from mass measurements. (2022). *ACS ES&T Water*. 2(2)299-308
- [J38] Yuan J., Passeport E., Hofmann R.* Understanding adsorption and biodegradation in granular activated carbon: A critical review. (2022). *Water Research*. 210:118026, 17 pages
- [J37] **Gu X.**, Rodgers, T.F.M., Spraakman, S., Van Seter, T., Flick, R., Diamond, M.L., Drake, J., and Passeport E.* Trace organic contaminant transfer and transformation in bioretention cells: a field tracer test with benzotriazole. (2021). *Environmental Science & Technology*. 55(18) 12281-12290
- [J36] **Wu L., Suchana S.**, Flick R., Kümmel S., Richnow H., Passeport E.* Carbon, hydrogen and nitrogen stable isotope fractionation allow characterizing the reaction mechanisms of 1H-benzotriazole aqueous phototransformation. (2021). *Water Research*. 203:117519, 9 pages
- [J35] **Akdeniz, C.**, Yu, Z.-H., Passeport E.* Adsorption and desorption of naphthalene in bioretention cells under cold climate conditions. (2021). *Ecological Engineering*. 169:106308, 8 pages
- [J34] **Smyth K.**, Drake J., Li Y., Rochman C., Van Seters T., Passeport E.* Bioretention cells remove microplastics from urban stormwater. (2021). *Water Research*. 191:116785, 9 pages

- [J33] **Spraakman S.**, Rodgers T.F.M., Monri-Fung H., Nowicki A., Diamond M.L., Passeport E., Thuna M., Drake J.* A need for standardized reporting: a scoping review of bioretention research 2000-2019. (2020) *Water*. 12(11): 3122, 35 pages
- [J32] **Spraakman S.**, Van Seters T., Drake J.A, Passeport E.* How has it changed? A comparative field evaluation of bioretention infiltration and treatment performance post-construction and at maturity. (2020). *Ecological Engineering*. 158:106036, 11 pages
- [J31] **Suchana S.**, Passeport E.* Optimization of a solid-phase microextraction technique for chloro- and nitro-substituted aromatic compounds using Design of Experiments. (2020). *Journal of Chromatography A*. 1621:461083, 10 pages
- [J30] Nuñez Garcia A., Boparai H.K., Chowdhury A.I.A., de Boer C., Kocur C.M.D., Passeport E., Sherwood Lollar B., Austrins L., Sidebottom A., Herrera J.E., O'Carroll D.M.* Sulfidated Nano Zerovalent Iron (S-nZVI) for *In Situ* Treatment of Chlorinated Solvents: A Field Study. (2020). *Water Research*. 174:115594. 5-year, 12 pages
- [J29] **Lam K.-Y.**, Nélieu S., Benoit P., Passeport E.* Optimizing constructed wetlands for safe removal of triclosan. (2020). *Environmental Science & Technology*. 54(1):225-234
- [J28] O'Brien A, **Yu Z.H.**, Luo D.-Y, Laurich J., Passeport E., Frederickson M.* Resilience to multiple stressors in an aquatic plant and its microbiome. (2019). *American Journal of Botany*. 107(2):1-13
- [J27] **Larsen C.**, **Yu Z.-H.**, Flick R., Passeport E.* Mechanisms of pharmaceutical and personal care product removal in algae-based wastewater treatment. (2019). *Science of the Total Environment*. 695:133772, 9 pages
- [J26] Marvin J., Passeport E., Drake J.A.* State-of-the-art review of phosphorus sorption amendments in bioretention media: A systematic literature review. (2020). *Journal of Sustainable Water in the Built Environment*. 6(1): 03119001, 16 pages
- [J25] Gilevska T., Passeport E., Mahsa, S., Seger, E., Lutz, E., West, K., Morgan, S., Mack, E.-E., Sherwood Lollar, B.* Determination of in situ biodegradation rates via a novel high-resolution isotopic approach in contaminated sediments. (2019). *Water Research*. 149:632-639
- [J24] **Rhodes-Dicker, L.**, Passeport E.* Effects of cold-climate environmental factors temperature and salinity on benzotriazole adsorption and desorption in bioretention cells. (2019). *Ecological Engineering*. 127:58-65
- [J23] **Ding B.**, Rezanezhad F., Gharedaghloo B., Van Cappellen P., Passeport E.* Bioretention cells under cold climate conditions: Effects of freezing and thawing on water infiltration, soil structure, and nutrient removal. (2019). *Science of the Total Environment*. 649:749-759
- [J22] **Boyer A.**, Hatat-Fraile M., Passeport E.* Biogeochemical controls on strontium fate at the sediment – water interface of two groundwater-fed wetlands with contrasting hydrologic regimes. (2018). *Environmental Science & Technology*. 52(15):8365-8372

- [J21] Passeport E.*, Zhang N., Wu L., Herrmann H., Sherwood Lollar B., Richnow H. (2018). Aqueous photodegradation of substituted chlorobenzenes: Kinetics, carbon isotope fractionation, and reaction mechanisms. *Water Research*. 135:95-103
- [J20] **Boyer A.**, Ning P., Killey D., Klukas M., Rowan D., Simpson A., Passeport E.* (2018). Strontium adsorption and desorption in wetlands: Role of organic matter functional groups and environmental implications. *Water Research*. 133:27-36
- [J19] Xu, B.S., Sherwood Lollar, B., Passeport E., Sleep, B.E.* (2016). Diffusion related isotopic fractionation effects with one-dimensional advective-dispersive transport. *Science of the Total Environment*, 550:200–208
- [J18] Passeport E.*, Landis R., Lacrampe-Couloume G., Lutz E.J., Mack E.E., West K., Morgan S., Sherwood Lollar B. (2016). Sediment Monitored Natural Recovery evidenced by Compound Specific Isotope Analysis and high-resolution pore water sampling. *Environmental Science & Technology*. 50(22):12197-12204
- [J17] Chartrand, M., Passeport E.*, Rose, C., Lacrampe-Couloume, G., Bidleman, T.F., Jantunen, L.M., Sherwood Lollar, B. (2015). Compound specific isotope analysis of hexachlorocyclohexane isomers: a method for source fingerprinting and field investigation of in situ biodegradation. *Rapid Communications in Mass Spectrometry*, 29(6):505–514
- [J16] Passeport E.*, Landis R., Mundle S.O.C., Chu K., Mack E.E., Lutz E.J., Sherwood Lollar B., (2014). Diffusion sampler for compound specific carbon isotope analysis of dissolved hydrocarbon contaminants. *Environmental Science & Technology*. 48(16):9582–9590
- [J15] Liang X., Mundle, S.O.C.*, Nelson, J.L., Passeport, E., Chan, C.H.C., Lacrampe-Couloume G., Zinder, S.H., Sherwood Lollar B. (2014). Distinct Carbon Isotope Fractionation during Anaerobic Degradation of Dichlorobenzene Isomers. *Environmental Science & Technology*. 48(9): 4844-4851
- [J14] Passeport, E.*, Richard, B., Chaumont C., Tournebize, J., Margoum, C., Liger, L., Gril, J.-J. (2014). Dynamics and mitigation of six pesticides in a “Wet” forest buffer zone. *Environmental Science and Pollution Research*. 21(7):4883-4894
- [J13] Passeport, E.*, Tournebize, J., Chaumont, C., Guenne, A., Coquet, Y. (2013). Pesticide contamination interception strategy and removal efficiency in forest buffer and artificial wetland in a tile-drained agricultural watershed. *Chemosphere*. 91:1289-1296
- [J12] Passeport, E., Vidon, P., Forshay, K.J., Hyman, J., Kaushal, S.S., Kellogg, D.Q., Mayer, P.M.* and Stander, E.K. (2013). Ecological engineering practices for the reduction of non-point source N in human influenced landscapes: a guide for watershed managers. *Environmental Management*. 51(2):392–413
- [J11] Tournebize, J.*, Passeport, E., Chaumont, C., Fesneau, C., Guenne, A., Vincent, B. (2013). Pesticide de-contamination of surface waters as a wetland ecosystem service in agricultural landscapes. *Ecological Engineering*. 56:51-59

- [J10] Huang, J.-C., Passeport, E., Terry, N.* (2012). Development of a constructed wetland water treatment system for selenium removal: use of mesocosms to evaluate design parameters. *Environmental Science & Technology*. 46:12021-12029
- [J9] Passeport, E.*, Benoit, P., Bergheaud, V., Coquet, Y., Tournebize, J. Epoxiconazole degradation from artificial wetland and forest buffer substrates under flooded conditions. (2011). *Chemical Engineering Journal*. 173(3):760-765
- [J8] Stehle, S.*, Elsaesser, D., Gregoire, C., Imfeld, G., Niehaus, E., Passeport, E., Payraudeau, S., Schäfer, R.B., Tournebize, J. and Schulz R. (2011). Pesticide Risk Mitigation by Vegetated Treatment Systems: A Meta-analysis. *Journal of Environmental Quality*. 40(July-August):1-13
- [J7] Passeport, E.*, Benoit, P., Bergheaud, V., Coquet, Y., Tournebize, J. (2011). Selected pesticides adsorption and desorption in substrates from artificial wetland and forest buffer. *Environmental Toxicology and Chemistry*. 30(7):1669-1676
- [J6] Lange J.*, Schütz T., Gregoire C., Elsässer D., Schulz R., Passeport E., Tournebize J. (2011). Multi-tracer experiments to characterise contaminant mitigation capacities for different types of artificial wetlands. *International Journal of Environmental and Analytical Chemistry*. 91(7-8):768-785
- [J5] Passeport, E.*, Guenne, A., Culhaoglu, T., Moreau, S., Bouyé, J.-M., Tournebize, J. (2010). Design of experiments and detailed uncertainty analysis to develop and validate a solid-phase microextraction/gas chromatography–mass spectrometry method for the simultaneous analysis of 16 pesticides in water. *Journal of Chromatography A*. 1217(33):5317-5327
- [J4] Passeport E.*, Tournebize J., Jankowsky S., Prömse B., Chaumont C., Coquet Y., Lange J. (2010). Artificial Wetland and Forest Buffer Zone: Hydraulic and Tracer Characterization. *Vadose Zone Journal*, 9(1):73-84
- [J3] Gregoire C.*, Elsaesser D., Huguenot D., Lange J., Lebeau T., Merli A., Mose R., Passeport E., Payraudeau S., Schütz T., Schulz R., Tapia-Padilla G., Tournebize J., Trevisan M., Wanko A. (2009). Review: Mitigation of agricultural nonpoint-source pesticide pollution in artificial wetland ecosystems. *Environmental Chemistry Letters*, 7(3):205-231
- [J2] Passeport E., Hunt W.F. (2009). Asphalt Parking Lot Runoff Nutrient Characterization for Eight Sites in North Carolina, USA. *Journal of Hydrologic Engineering*, 14(4):352-361
- [J1] Passeport E., Hunt W.F., Line D.E., Smith R.A., Brown R.A. (2009). Field study of the ability of two grassed bioretention cells to reduce stormwater runoff pollution. *Journal of Irrigation and Drainage Engineering*, 135(4):505-510

Conference proceedings

- [CP10] **Smyth K.**, Drake K., **Tan S.**, van Seters T., Passeport E. Pavement wear: A source of microplastics in stormwater runoff? Novatech 11th International conference, Lyon, France, July 3-7, 2023

- [CP9] **Lisogorsky A.**, Rezanezhad F., Van Cappellen P., Parsons C., Shafii M., Zhou B., Passeport E. Field-derived phosphorus accumulation rates and fractionation in bioretention cells, Novatech 11th International conference, Lyon, France, July 3-7, 2023
- [CP8] Passeport, E., **Ding, X.R.**, Gharedaghloo, B., Rezanezhad, F., **Rhodes-Dicker, L.**, Van Cappellen, P. Bioretention cell performance in cold climate conditions. Novatech 2019, Lyon, France, July 1-5, 2019.
- [CP7] **Stammitti Scarpone, A.**, Passeport, E., Evans, G., Mahadevan, K. Experience on implementing a project for educating students on runaway reaction dynamics. Canadian Engineering Education Association's Annual Conference 2017, Toronto, Canada, June 4-7.
- [CP6] Passeport, E., Tournebize, J., Chaumont, C., Guenne, A., Coquet, Y. Efficacités d'une zone humide artificielle et d'une zone tampon forestière pour dissiper la pollution par les pesticides d'un bassin versant agricole drainé. XXXXI^{ème} Congrès du Groupe Français des Pesticides, Orléans, France, 25 – 27 May 2011 (*In French*).
- [CP5] Tournebize, J., Vincent, B., Chaumont, C., Passeport, E., Gramaglia, C., Molle, P., Gril, J.-J., Margoum, C., Carluier, N. Pesticides dissipation by use of constructed wetlands in agricultural area: technical and sociological feedback. IWA 12th International conference on wetland systems for water pollution control, Venice, Italy, 4 – 8 October, 2010.
- [CP4] Tournebize, J., Vincent, B., Chaumont, C., Passeport, E., Gramaglia, C., Molle, P., Carluier, N., Gril, J.-J., Grison, D., Euzen, A. Lessons gained from French R&D programs for pesticides dissipation by use of constructed wetlands. ASABE 9th International Drainage Symposium, XVIIth World Congress of the International Commission of Agricultural Engineering (CIGR), Québec City, Canada, 13 – 17 June 2010.
- [CP3] Passeport E., Tournebize J., Lange J., Chaumont C. Non-point source pesticide pollution mitigation in buffer zones: a tracer experiment for hydrological characterization. 5th European Conference on Pesticides and Related Organic Micropollutants in the Environment, Marseille, France, 22 – 25 October 2008.
- [CP2] Hunt W.F., Passeport E., Brown R.A. Water quality and hydrologic benefits of five bioretention cells in North Carolina, USA. 11th International Conference on Urban Drainage, Edinburgh, Scotland, UK, 31 August – 5 September 2008.
- [CP1] Hunt W.F., Passeport E., Brown R.A. Water quality and hydrologic benefits of five bioretention cells in North Carolina. World Environmental and Water Resources Congress, Honolulu, HI, USA, 12 – 16 May 2008.

Others (Articles in Journal with Reviewing Committee)

Tournebize, J., Passeport, E., Chaumont, C., Mander, U. (2014). Efficacité des zones tampons humides artificielles pour la dissipation des nitrates et des pesticides dans un contexte de drainage agricole, Techniques Sciences et Méthodes, Association Scientifique et Technique pour l'Eau et l'Environnement, Volume: December, Issue 12, pp. 40-58 (In French)

CONFERENCE PRESENTATIONS

*Below, the name of the speaker is underlined. My students' names are in **bold**.*

Accepted (and upcoming)

Smyth K., Drake K., **Tan S.**, van Seters T., Passeport E. Is pavement wear a source of microplastics in stormwater runoff and green infrastructure? 2023 EWRI ASCE International Low Impact Development Conference, Oklahoma City, Oklahoma, United States, August 6-9, 2023

Smyth K., Drake J., Van Seters T., Gasperi J., Tassin B., Dris R., Rochman C., **Tan S.**, Passeport E. Bioretention cells remove microplastics in the 25 – 106 micron size fraction. EWRI ASCE International Low Impact Development 2023, Oklahoma City, Oklahoma, USA, August 6-9, 2023

Oral presentations

1. **Lisogorsky A.**, Rezanezhad F., Van Cappellen P., Parsons C., Shafii M., Zhou B., Passeport E. Field-derived phosphorus accumulation rates and fractionation in bioretention cells, Novatech 11th International conference, Lyon, France, July 3-7, 2023
2. **Suchana S.**, Passeport E. Compound specific isotope analysis confirms biotransformation of 2,3-dichloroaniline in constructed wetlands, Goldschmidt conference, Lyon, France, July 9-14, 2023
3. Zhou B., Shafii M., Parsons C., Passeport E., Rezanezhad F., Van Cappellen P., Do bioretention cells reduce urban stormwater phosphorus and nitrogen loads? Insights from the International Stormwater Best Management Practice Database, Goldschmidt conference, Lyon, France, July 9-14, 2023
4. Zhou B., Radosavljevic J., Parsons C., Rezanezhad F., Passeport E., Van Capellen, P. Modelling phosphorus reduction performances of typical types of urban best management practices at watershed scale. Global Water Futures, Saskatoon, Canada, May 15-17, 2023
5. Zhou B., Shafii M., Parsons C., Passeport E., Rezanezhad F., **Lisogorsky A.**, Van Cappellen P. Analysis of phosphorus accumulation in an urban bioretention cell using reactive-transport modelling. IAGLR's 66th Annual Conference on Great Lakes Research, Toronto, ON, May 8-12, 2023
6. Miriam L Diamond, Scott Mundle, Razegheh (Raz) Akhbarizadeh, Julian Aherne, Patricia Lynn Corcoran, Maria B. Dittrich, James Gauld, Paul Helm, Liisa M Jantunen, Bulent Mutus, Elodie Passeport and Simon Rondeau-Gagne, Source-specific identification, characterization, and control of MPs across a remote, rural and urban gradient. IAGLR's 66th Annual Conference on Great Lakes Research, Toronto, ON, May 8-12, 2023
7. **Suchana S.**, Edwards E., Lomheim L., Pimentel Araujo S., Gavazza S., Mack E.E., Passeport E., Compound Specific Isotope Analysis of 2,3-Dichloroaniline Reveals Aerobic Biotransformation in Constructed Wetlands. 2023 Bioremediation Symposium, Austin, Texas, United States, May 8-11, 2023
8. **Suchana S.**, Edwards E., Lomheim L., Melo N., Gavazza S., Mack E.E., Passeport E.. Polar Organic Chemical Integrative Sampler (POCIS) Allows Compound Specific Isotope Analysis of Substituted Chlorobenzenes at Trace Levels. 2023 Bioremediation Symposium, Austin, Texas, United States, May 8-11, 2023
9. **Smyth K.**, Drake K., **Tan S.**, van Seters T., Passeport E. Pavement wear: A source of microplastics in stormwater runoff? Novatech 11th International conference, Lyon, France, July 3-7, 2023

10. **Smyth K.**, Drake J., Van Seters T., Gasperi J., Tassin B., Dris R., Rochman C., Tan S., Passeport E. Bioretention cells remove microplastics in the 25 – 106 micron size fraction, New Zealand Stormwater Conference, Cordis, Tamaki Makaurau Auckland, New Zealand, May 23-25, 2023
11. **Lisogorsky A.**, Rezanezhad F., Van Cappellen P., Parsons C., Shafii M., Zhou B., Passeport E. Field-derived phosphorus accumulation rates and fractionation in bioretention cells, Novatech 11th International conference, Lyon, France, July 3-7, 2023
12. **Smyth K.**, Drake J., Passeport E. Modelling stormwater-derived microplastics in bioretention cells. 58th Annual Central Canada Water Quality Research Symposium, March 20-21, 2023, York University, Toronto, Canada
13. **Smyth K.**, Drake J., Passeport E. Modelling stormwater-derived microplastics in bioretention cells. Source-to-Stream conference, March 22-23, 2023, Toronto, Canada
14. **Zhou B.**, Shafii M., Parsons C., Passeport E., Rezanezhad F., Van Cappellen P. Assessing the efficacy of bioretention cells for phosphorus and nitrogen load reduction in stormwater runoff: Interrogating the International Stormwater Best Management Practices Database. American Geophysical Union Fall Meeting, Chicago, IL & Online Everywhere, December 12-16, 2022.
15. **Zhou B.**, Shafii M., Parsons C., Passeport E., Rezanezhad F., **Lisogorsky A.**, Van Cappellen P. Phosphorus retention in a bioretention cell: Insights from process-based reaction-transport modelling. American Geophysical Union Fall Meeting, Chicago, IL & Online Everywhere, December 12-16, 2022.
16. **Passeport, E.** Fate of stormwater emerging contaminants in bioretention cells. Remediation Technology (RemTEC) & Emerging Contaminants Summit. Westminster, CO, USA, Oct 4-6, 2022
17. **Suchana S.**, Pimentel Araujo S., Lomheim L., Edwards E., Mack E.E., & Passeport E. Natural attenuation of dichloronitrobenzenes and dichloroanilines in constructed wetlands revealed by Compound Specific Isotope Analysis, 10th International Symposium on Ecosystem Behaviour (Biogeomon), Tartu, Estonia, June 26 – 30, 2022.
18. **Gu X.**, Rodgers T.F.M., Spraakman S., Van Seters T., Flick R., Diamond M.L. Drake J., Passeport E., Fate of trace organic stormwater contaminants in a bioretention cell assessed via a field tracer test with benzotriazole, 10th International Symposium on Ecosystem Behaviour (Biogeomon), Tartu, Estonia, June 26 – 30, 2022.
19. **Suchana S.**, Gavazza S., Melo N., Edwards E., Lomheim L., Mack E.E., & Passeport E. Compound specific isotope analysis of substituted chlorobenzenes at sub- $\mu\text{g/L}$ concentrations using polar organic chemical integrative sampler. Advances in Stable Isotope Techniques and Applications (ASITA) conference, Montreal, Canada, June 12-15, 2022. **Won Moire Anne Wadleigh student prize for best presentation**
20. **Suchana S.** & Passeport E. Multi-element compound specific isotope analysis reveals aerobic biodegradation of 2,3-dichloroaniline at a complex site. 57th CENTRAL Canadian symposium on water quality research. Canadian Association on Water Quality (CAQW) York University, Canada, April 4, 2022.
21. Zhou B., **Lisogorsky A.**, Shafii M., Arvisais A., Parsons C., Passeport E., Rezanezhad F., Van Cappellen P. Characterization and modeling of phosphorus cycling in an urban bioretention cell. American Geophysical Union Fall Meeting 2021, New Orleans, USA, December 13-17, 2021.
22. **Wu L.**, **Shamsunnahar S.**, Passeport E. Multi-element compound-specific isotope analysis reveal pathways of benzotriazole aqueous phototransformation. American Chemical Society Spring 2022 Meeting, participated online, March 20-24, 2022.
23. **Shamsunnahar S.**, Passeport E. Compound-specific isotope analysis of substituted chlorobenzenes at sub $\mu\text{g/L}$ concentrations using polar organic chemical integrative samplers. American Chemical Society Spring 2022 Meeting, participated online, March 20-24, 2022.

24. **Suchana S.** Passeport E., Implications of polar organic chemical integrative sampler for high membrane sorption and suitability of polyethersulfone as a single-phase sampler. SETAC North America 42nd Annual Meeting, Portland, OR, USA (Virtual). November 14-18, 2021.
25. **Suchana S.** Gavazza S., Natanna M., Edwards E., Lonheim L., Mack E.E., Passeport E. Compound specific isotope analysis of substituted chlorobenzenes at sub- $\mu\text{g/L}$ using in situ polar organic chemical integrative sampler. SETAC North America 42nd Annual Meeting, Portland, OR, USA (Virtual). November 14-18, 2021.
26. Rodgers T.F.M., **Wu L., Gu X.,** Spraakman S., Passeport E., Diamond M.L. Persistent and mobile organic compound fate in a bioretention cell predicted using the novel BioretentionBlues model and a spike and recovery test. SETAC North America 42nd Annual Meeting, Portland, OR, USA (Virtual). November 14-18, 2021.
27. **Suchana S.** & Passeport E. Polar organic chemical integrative sampler (POCIS) for compound specific isotope analysis of substituted chlorobenzenes. 56th CENTRAL Canadian symposium on water quality research. Canadian Association on Water Quality (CAQW) virtual conference, March 24-25, 2021.
28. **Passeport E.**, Mancini S., The use of advanced tools as lines of evidence for remediation planning. Remediation Technology (RemTEC) Summit, March 9-11, 2021.
29. **Smyth, K.,** Drake, J., Rochman, C., Passeport E. Microplastics, stormwater and green infrastructure. Canadian Society for Civil Engineering 2020 National Conference, Saskatoon, Canada, May 27-30, 2020.
30. **Drake, J.,** Spraakman, S., Passeport E. Performance of mature bioretention systems. Canadian Society for Civil Engineering 2020 National Conference, Saskatoon, Canada, May 27-30, 2020.
31. **Smyth, K.,** Drake, J., Rochman, C., Passeport E. Microplastics removal from stormwater using a bioretention system. International Conference on Urban Drainage 2020, Melbourne, Australia, September 6-11, 2020.
32. **Smyth, K.,** Drake, J., Rochman, C., Passeport E. Efficiency of a bioretention cell for microplastics removal in stormwater. IAGLR's 63rd Annual Conference on Great Lakes Research, Winnipeg, Canada, June 8-12, 2020.
33. **Smyth, K.,** Drake, J., Rochman, C., Passeport E. Microplastic removal in a bioretention cell. American Society of Civil Engineers Low Impact Development conference 2020, Bethesda, MD, USA, July 19-22, 2020.
34. **Larsen, C., Yu, Z-H,** Flick, R., Passeport, E. Transfer and transformation mechanisms of pharmaceutical and personal care products in algae-based passive water treatment, 2019 Goldschmidt Conference, Barcelona, Spain, August 18–23, 2019.
35. Passeport, E., Droz, B., **Rhodes-Dicker, L.,** Imfeld, G. Dissipation of atrazine at the sediment-water interface of a wetland and a bioretention cell, 8th International Symposium on Wetland Pollutant Dynamics and Control (WETPOL), Aarhus, Denmark, June 17-21, 2019.
36. **Lam, K.Y.,** Nélieu, S., Benoit, P., Passeport, E. Enhancing triclosan photodegradation in wetlands: effects of pH, dissolved organic carbon, and nitrate concentration, 8th International Symposium on Wetland Pollutant Dynamics and Control (WETPOL), Aarhus, Denmark, June 17-21, 2019.
37. **Larsen, C., Yu, Z-H,** Flick, R., Passeport, E. Transfer and transformation mechanisms of pharmaceutical and personal care products in algae-based passive water treatment, 2019 Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference, Tempe, AZ, USA, May 14–16, 2019.
38. **Lam, K.Y.,** Nélieu, S., Benoit, P., Passeport, E. Direct and indirect phototransformation of triclosan in wetland water. American Chemical Society National Meeting and Exposition, Orlando, FL, USA, March 31 – April 4, 2019.

39. Passeport, E., **Larsen, C., Z.H. Yu.** Transfer and transformation mechanisms of pharmaceuticals and personal care products in algae-based passive water treatment. American Chemical Society National Meeting and Exposition, Orlando, FL, USA, March 31 – April 4, 2019.
40. **Boyer, A., Hatat-Fraile, M., Passeport, E.** Biogeochemical controls on radioactive Strontium-90 transport at the sediment – water interface of two distinct wetlands. Goldschmidt Annual Meeting 2018, Boston, MA, USA, August 12-17, 2018.
41. **Ding, B.** Rezanezhad, F., Gharedaghloo, B., Van Cappellen, P., Passeport, E. Bioretention cells under cold climate conditions. International Low Impact Development Conference, Nashville, TN, USA, August 12-14, 2018.
42. **Rhodes, L.**, Passeport, E. Bioretention cells for removal of benzotriazole from urban stormwater runoff. International Low Impact Development Conference, Nashville, TN, USA, August 12-14, 2018.
43. Passeport, E. Bioretention cells under cold climate conditions: the effect of freezing and thawing on water infiltration, soil structure, and nutrient removal, Panel Presentation at TRIECA conference, Toronto, ON, Canada, March 21-22, 2018.
44. **Ding, B.**, Rezanezhad, F., Gharedaghloo, B., Van Cappellen, P., Passeport, E. Bioretention cells under cold climate conditions. IAGLR's 61st annual Conference on Great Lakes Research, Toronto, ON, Canada, June 18-20, 2018.
45. **Rhodes, L.**, Passeport, E. Bioretention cells for removal of benzotriazole from urban stormwater runoff. 53rd Central Canadian Symposium on Water Quality Research, Toronto, ON, Canada, February 22, 2018.
46. **Lam, K.Y.**, Nélieu, S., Passeport, E. Direct and indirect photodegradation of triclosan in wetland. 53rd Central Canadian Symposium on Water Quality Research, Toronto, ON, Canada, February 22, 2018.
47. **Boyer, A.**, Ning, P., Killey D., Klukas, M., Gallagher, C., Rowan, D., Simpson A., Passeport E. Strontium-90 and wetland organic matter interactions. 7th International Symposium for Wetland Pollutant Dynamics and Control (WETPOL), Big Sky, Montana, USA, August 21-25, 2017.
48. Gilevska, T., Passeport, E., Shayan, M., Seger, E., Lutz, E.J., West, K.A., S.A. Morgan, Mack, E.E, Lacrampe-Couloume, G., and Sherwood Lollar, B. *In situ* biodegradation in contaminated sediments assessed by Compound Specific Isotope Analysis with high-resolution sampling. Goldschmidt Annual Meeting 2017, Paris, France, August 13-18, 2017.
49. **Stammitti Scarpone, A.**, Passeport, E., Evans, G., Mahadevan, K. Experience on implementing a project for educating students on runaway reaction dynamics. Canadian Engineering Education Association's Annual Conference 2017, Toronto, Canada, June 4-7.
50. Passeport, E., Zhang, N., Wu L., Herrmann H., Sherwood Lollar, B., Richnow, H. Compound Specific Isotope Analysis of the aqueous photodegradation of substituted chlorobenzenes. 253rd American Chemical Society National Meeting and Exposition, Advanced Materials, Technologies, Systems & Processes, San Francisco, USA, April 2-6, 2017.
51. Passeport E., Landis R., Lacrampe-Couloume G., Lutz E.J., Mack E.E., West K., Morgan S., Sherwood Lollar B. Coupling of high resolution pore water sampling and Compound Specific Isotope Analysis to monitor sediment natural attenuation. Remediation Technology Summit (REMTEC), Denver, USA, March 7-9 2017. **Invited.**
52. **Boyer, A.**, Ning, P., Killey D., Klukas, M., Gallagher, C., Rowan, D., Simpson A., Passeport E. Strontium-90 and wetland organic matter interactions. 52nd Central Canadian Symposium on Water Quality Research, Toronto, Canada, February 23, 2017. **Awarded Student Presentation Philip H. Jones Award.**
53. Gilevska T., Sherwood Lollar B., Horst A., Passeport E., Lacrampe-Couloume G. Insights from high resolution CSIA for chlorinated aromatics. Scientific Advisory Board DuPont Corporate Remediation Centre, Wilmington, Delaware, USA, January 2017.

54. Gilevska, T., Passeport, E., Lacrampe-Couloume, G., West, K., Seger, E., Lutz, E., Mack, E.E., and Sherwood Lollar. The use of compound specific isotope analysis (CSIA) to evaluate *in situ* bioremediation of chlorinated aromatic hydrocarbons at a contaminated field site. INTEGRATE 5th Annual Meeting, University of Toronto Trinity College, Toronto, Canada September 30, 2016.
55. Xu, B.S., Sherwood Lollar, B., Passeport, E., Sleep, B.E. Factors impacting stable isotope fractionation related to aqueous phase diffusion in the subsurface. 2016 Computational Methods in Water Resources Conference, Toronto, Canada, June 20 – 24, 2016.
56. Passeport, E., Zhang, N., Wu L., Herrmann H., Sherwood Lollar, B., Richnow, H. Compound Specific Isotope Analysis of the aqueous photodegradation of substituted chlorobenzenes. American Geophysical Union's 48th annual Fall Meeting, San Francisco, USA, December 14 – 18, 2015
57. Passeport, E., Landis, R., Chu, K., Lacrampe-Couloume, G., Lutz, E.J., Mack, E.E., West, K., Sherwood Lollar, B. Compound Specific Isotope Analysis at the sediment – water interface. International Network of Environmental Forensics Conference, Toronto, ON, Canada, August 4 – 6, 2015
58. Passeport, E., Landis, R., Chu, K., Lacrampe-Couloume, G., Lutz, E.J., Mack, E.E., West, K., Sherwood Lollar, B. Compound Specific Isotope Analysis of aromatics and chlorinated aromatics at a fine vertical resolution across the sediment water interface. 249th American Chemical Society Annual Meeting and Exposition, Division of Environmental Chemistry, Denver, CO, USA, March 22 – 26, 2015
59. Passeport, E., Chu, K., Lacrampe Couloume, G., Landis, R., Lutz, E.J., Mack, E. Erin, West, K., Sherwood Lollar, B. A sediment pore water diffusion sampler (“peeper”) for compound specific isotope analysis of chlorinated aromatic hydrocarbons. Ninth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, USA, May 19 – 22, 2014.
60. Passeport, E., Chu, K., Lacrampe Couloume, G., Landis, R., Lutz, E.J., Mack, E. Erin, West, K., Sherwood Lollar, B. Sorption- and diffusion-associated isotope effects for chlorinated and non-chlorinated aromatic hydrocarbons in a sediment pore water diffusion sampler. American Geophysical Union's 46th annual Fall Meeting, San Francisco, USA, December 9-13, 2013.
61. Passeport, E., Chu, K., Lacrampe Couloume, G., Landis, R., Lutz, E.J., Mack, E. Erin, West, K., Sherwood Lollar, B. Novel method for Compound Specific Stable Isotope Analysis of contaminated groundwater across the sediment-water interface. 23rd Annual V. M. Goldschmidt Conference, Florence, Italy, August 25-30, 2013.
62. Passeport, E., Tournebize, J., Chaumont, C., Guenne, A., Paineau, F., Coquet, Y. On-site efficiency assessment of an artificial wetland and a forest buffer for pesticide pollution mitigation in a tile-drained agricultural watershed. Joint meeting of SWS/WETPOL and Biogeochemistry symposium, Prague, Czech Republic, 3 – 8 July 2011.
63. Passeport, E., Tournebize, J., Chaumont, C., Guenne, A., Coquet, Y. Efficacité d'une zone humide artificielle et d'une zone tampon forestière pour dissiper la pollution par les pesticides d'un bassin versant agricole drainé. XXXXI^{ème} Congrès du Groupe Français des Pesticides, Orléans, France, 25 – 27 May 2011 (*In French*).
64. Tournebize, J., Vincent, B., Chaumont, C., Passeport, E., Gramaglia, C., Molle, P., Gril, J.-J., Margoum, C., Carluer, N. Pesticides dissipation by use of constructed wetlands in agricultural area: technical and sociological feedback. IWA 12th International conference on wetland systems for water pollution control, Venice, Italy, 4 – 8 October, 2010.
65. Passeport E., Tournebize J., Chaumont C., Bernard V., Margoum C., Gril J.-J., Paineau F., Culhaoglu T., Guenne A., Coquet Y. Efficiency of an artificial wetland and a forest buffer for

- pesticide mitigation in a subsurface drained watershed. SWS annual meeting, Salt Lake City, UT, USA, 28 June – 2 July 2010.
66. Tournebize, J., Vincent, B., Chaumont, C., Passeport, E., Gramaglia, C., Molle, P., Carluer, N., Gril, J.-J., Grison, D., Euzen, A. Lessons gained from French R&D programs for pesticides dissipation by use of constructed wetlands. ASABE 9th International Drainage Symposium, XVIIth World Congress of the International Commission of Agricultural Engineering (CIGR), Québec City, Canada, 13 – 17 June 2010.
 67. Passeport E., Tournebize J., Chaumont C., Bernard V., Margoum C., Gril J.-J., Paineau F., Culhaoglu T., Guenne A., Coquet Y. Artificial wetland and forest buffer for pesticide pollution control. 3rd Wetland Pollutant Dynamics and Control Symposium WETPOL, Barcelona, Spain, 20 – 24 September, 2009.
 68. Passeport E., Tournebize J., Jankowsky S., Prömse B., Chaumont C., Coquet Y., Lange J. Artificial Wetland and Forest Buffer Zone: Hydraulic and Tracer Characterization. SWS-WWA-WBS joint meeting, Madison, WI, USA, 21 – 26 June 2009.
 69. Passeport E., Tournebize J., Lange J., Chaumont C. Non-point source pesticide pollution mitigation in buffer zones: a tracer experiment for hydrological characterization. 5th European Conference on Pesticides and Related Organic Micropollutants in the Environment, Marseille, France, 22 – 25 October 2008.
 70. Hunt W.F., Passeport E., Brown R.A. Water quality and hydrologic benefits of five bioretention cells in North Carolina, USA. 11th International Conference on Urban Drainage, Edinburgh, Scotland, UK, 31 August – 5 September 2008.
 71. Hunt W.F., Passeport E., Brown R.A. Water quality and hydrologic benefits of five bioretention cells in North Carolina. World Environmental and Water Resources Congress, Honolulu, HI, USA, 12 – 16 May 2008.

Posters

1. **Lisogorsky A.**, Rezanezhad F., Van Cappellen P., Parsons C., Shafii M., Zhou B., Passeport E. Field-derived phosphorus accumulation rates and fractionation in bioretention cells, Goldschmidt conference, Lyon, France, July 9-14, 2023
2. **Suchana S.**, Lomheim L., Edwards E., Quintero P.B., Mack E.E., & Passeport E. Quantifying *in situ* degradation of substituted chlorobenzenes in pilot constructed wetlands using compound specific isotope analysis. Remediation Technology (RemTEC) & Emerging Contaminants Summit. Westminster, CO, USA, Oct 4-6, 2022 (scheduled).
3. **Suchana S.** and Passeport E. Polar organic chemical integrative sampler (POCIS) for compound specific isotope analysis of substituted chlorobenzenes. Remediation Technology Summit (RemTEC). Virtual conference, Mar 9-11, 2021.
4. **Lam, K.Y.**, Néliou, S., Benoit, P., Passeport, E. Enhancing triclosan photodegradation in wetlands: effects of pH, dissolved organic carbon, and nitrate concentration. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
5. **Lam, K.Y.**, Passeport, E. Removal of triclosan by the green alga *Euglena gracilis*. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
6. **Shamsunnahar, S.**, Passeport, E. Compound specific stable carbon isotope analysis of semi-volatile substituted chlorobenzenes coupled with solid phase microextraction. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
7. **Wu, L.**, Passeport, E. Investigation of the phototransformation processes of benzotriazole in surface waters using Compound-Specific Isotope Analysis approach. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.

8. **Gu, X.**, Spraakman, S., Rodgers, T.F.M., Diamond, M.L., Drake, J. Passeport, E. Multi-tracer experiment in a bioretention cell to study the transport of trace organic stormwater contaminants. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
9. **Z. Yu,** A.M. O'Brien, D. Luo, J. Laurich, M. Frederickson, E. Passeport. Role of duckweed – microbe interactions in the elimination of benzotriazole from salt-contaminated water. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
10. **Smyth, K.** Drake, J., Rochman, C., Passeport, E. Microplastics removal in bioretention cell and distribution in stormwater from different pavements. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
11. **Tan, S.**, Taylor, J.A., Passeport E. Identification and Classification of Microplastic Particles Using Machine Learning Algorithms. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
12. **Larsen, C., Yu, Z-H,** Flick, R., Passeport, E. Mechanisms of pharmaceutical and personal care product removal in algae-based wastewater treatment. SETAC North America 40th Annual Meeting, Toronto, ON, Canada, November 3–7, 2019.
13. **Akdeniz, C.,** Passeport, E. Bioretention cells: Adsorption and desorption of naphthalene from urban stormwater. International Low Impact Development Conference, Nashville, TN, USA, August 12-14, 2018.
14. **Rhodes, L.,** Passeport, E. Bioretention cells for removal of benzotriazole from urban stormwater runoff. TRIECA Conference, Toronto, ON, Canada, March 21-22, 2018.
15. **Akdeniz, C.,** Passeport, E. Adsorption and desorption of polycyclic aromatic hydrocarbon naphthalene in bioretention cells. TRIECA Conference, Brampton, ON, Canada, March 21-22, 2018.
16. **Larsen, C.,** Passeport, E. Mechanisms of pharmaceutical and personal care product removal in algae-based water treatment. 53rd Central Canadian Symposium on Water Quality Research, Toronto, ON, Canada, February 22, 2018.
17. **Akdeniz, C.,** Passeport, E. Bioretention cells: Adsorption and desorption of naphthalene from urban stormwater. 53rd Central Canadian Symposium on Water Quality Research, Toronto, ON, Canada, February 22, 2018.
18. **Akdeniz, C.,** Yu, E., Da Silva, B., **Rhodes, L.,** Drake, J., Passeport, E. Adsorption and desorption of naphthalene and phosphorus from urban stormwater on bioretention cell soils: pre- and post-construction comparison. TRIECA conference, Toronto, Canada, March 22-23, 2017.
19. Gnanaraj A.R.J., Drake J., Passeport E. Hydrology of a bioretention system during winter conditions. TRIECA conference, Toronto, Canada, March 22-23, 2017.
20. **Ding, X.R.,** Rezanezhad, F., Van Cappellen, P., Passeport, E. Effect of freeze-thaw cycles on nutrient removal in stormwater bioretention cells. TRIECA conference, Toronto, Canada, March 22-23, 2017. **Awarded Best Poster Presentation.**
21. **Ding, X.R.,** Rezanezhad, F., Van Cappellen, P., Passeport, E. Effect of freeze-thaw cycles on nutrient removal in stormwater bioretention cells. International Erosion Control Association Annual Conference Environmental Connection, Atlanta, Georgia, USA, February 21-24, 2017. **Awarded Best Poster Presentation.**
22. **Ding, X.R.,** Rezanezhad, F., Van Cappellen, P., Passeport, E. Effect of freeze thaw cycles on nutrient removal in stormwater bioretention cells. 5th International EcoSummit Congress, Montpellier, France, August 29 – September 1, 2016.
23. **Ding, X.R.,** Rezanezhad, F., Van Cappellen, P., Passeport, E. Effect of freeze thaw cycles on nutrient removal in stormwater bioretention cells. TRIECA conference, Toronto, Canada, March 23-24, 2016.
24. **Ding, X.R.,** Rezanezhad, F., Van Cappellen, P., Passeport, E. Effect of freeze thaw cycles on nutrient removal in stormwater bioretention cells. 51st Central Canadian Symposium on Water

Quality Research conference, Toronto, Canada, February 23-24, 2016. **Awarded Best Poster Presentation.**

25. Passeport, E., Landis, R., Lacrampe Couloume, G., Lutz, E.J., Mack, E. Erin, West, K., Sherwood Lollar, B. Evidence of chlorobenzene natural attenuation in contaminated sediments using Compound Specific Isotope Analysis and high resolution pore water sampling. American Geophysical Union's 47th annual Fall Meeting, San Francisco, USA, December 15-19, 2014.
26. Chu K., Passeport E, Landis R, Lutz E, Mack EE, West K, Sherwood Lollar B. Development of a novel approach for sampling aromatic hydrocarbons across the sediment-water interface, Advances in Stable Isotope Techniques and Applications Davis, CA, USA, 15-18 June 2014
27. Hoyos, C., Tournebize, J., Passeport, E., Bize, A., Guenne, A., Bouchez, T., Mazeas, L. Degradation potential of S-metolachlor in artificial wetland ecosystem: microcosm assessment. Joint meeting of SWS/WETPOL and Biogeochemistry symposium, Prague, Czech Republic, 3-8 July 2011.
28. Lange, J., Passeport, E., Tournebize, J. Fluorescence tracers as a reference for pesticide transport in wetland systems. European Geosciences Union General Assembly 2010, Vienna, Austria, 02-07 May 2010.
29. Passeport E., Tournebize J., Chaumont C., Bernard V., Margoum C., Gril J-J., Paineau F., Culhaoglu T., Guenne A., Coquet Y. Efficiency of an artificial wetland and a forest buffer for pesticide mitigation. Ecological Engineering from Concepts to Applications (EECA) International Congress, Paris, France, 2-4 December 2009.
30. Gregoire C., Elssaeser, D., Imfeld, G., Jezequel, K., Lange, J., Lebeau, T., Merli, A., Mose, R., Paineau, F., Passeport, E., Schulz, R., Tournebize, J., Trevisan, M., Payraudeau, S., Wanko, A. Mitigation of agricultural nonpoint-source pesticide pollution and phytoremediation in artificial wetland ecosystems. 3rd Wetland Pollutant Dynamics and Control Symposium WETPOL, Barcelona, Spain, 20-24 September, 2009.
31. Passeport E., Chaumont C., Vincent B., Guenne A., Tournebize J. Agricultural non-point source nitrate and pesticide pollution mitigation through artificial wetlands. Denitrification RCN workshop, Denitrification in Managed Ecosystems, Coastal Institute, University of Rhode Island Narragansett, RI, USA, 12-14 May 2009.
32. Passeport E., Lange, J., Tournebize, J., Chaumont C., Jankowsky, S., Proemse B., Schütz T., Blattmann E. Agricultural drained watershed effluents: a tracer experiment for hydraulic characterization of an artificial wetland as pesticide mitigation system. European Geosciences Union General Assembly, Vienna, Austria, 13-18 April 2008.

RESEARCH AWARDS

#	Source, Program Title PI	Period of Award	Total Funds \$ with Share (%)
G32	NSERC, Discovery Grant <i>Stable isotopes as tracers for emerging organic contaminants in natural and engineered systems</i> PI: E. Passeport	Apr. 2022– Mar. 2027	\$275,000 i.e., \$55,000/y ear (100%)
G31	NSERC, Alliance Mission on Anthropogenic GHG research <i>Adaptive management of green stormwater infrastructure to reduce greenhouse gas emissions from urban watersheds</i> PI: P. van Cappellen, co-PIs: E. Passeport, F. Rezaeezhad, B. Gharabaghi, S. Smith, A. Brookfield	2023-2025	1,348,540 (15%)
G30	NSERC, Research Tools and Instruments <i>Identify and Quantify Trace Contaminants in Drinking Water and its Sources</i> PI: S. Andrews, co-PIs: E. Passeport, R. Andrews, R. Hofmann, B. Sleep	2023-2024	150,000 (20%)
G29	NSERC Alliance + cash contribution (Corteva, Geosyntec) + MITACS Accelerate <i>Integration of microbial, stable isotope, and modeling tools to identify natural and enhanced pollutant bioattenuation processes at complex contaminated sites</i> PI: E. Passeport, co-PIs: Brent Sleep and Elizabeth Edwards	2022-2025	728,000 (30%)
G28	Institute for Water Innovation, Civil and Mineral Engineering, Mechanical and Industrial Engineering, WaterSeed <i>Low-friction fabric coatings for reduced microfibre formation in water</i> PIs: E. Passeport and K. Golovin	2022-2024	60,000 (50%)
G27	The University of Melbourne - University of Toronto Call for Joint Research Proposals 2021 Round <i>Generation of microplastics from waste tyre permeable pavement</i> PIs: E. Passeport and A. Mehdizadeh	2021-2023	30,000 (50%)
G26	University of Toronto Mississauga, Faculty of Applied Science and Engineering, Civil and Mineral Engineering, Chemical Engineering and Applied Chemistry, Department of Geography, Geomatics and Environment, XSeed <i>Hydrogen isotopes to track hydroclimatic processes</i> PIs: E. Passeport and T. Porter	2021-2023	120,000 (50%)
G25	Canada Research Chair Tier II, Renewal <i>Water quality protection: Environmental Engineering & Stable Isotopes</i> PI: E. Passeport	2021-2026	150,000 (100%)
G24	NSERC – ECCO Alliance Plastics Science for a Cleaner Future <i>Source-specific characterization and control of microplastics across a remote, rural and urban gradient</i> PIs: J. Crossman, J. Aherne, P. Corcoran, M. Diamond, M. Dittrich, E. Passeport, S. Mundle, J.W. Gauld, S.R.G. Rondeau-Gagné	2021-2025	999,992 (8.5%)
G23	Ontario Ministry of Economic Development, Early Researcher Award <i>Benzotriazole transformation in green infrastructure</i> PI: E. Passeport	2021-2026	100,000 (100%)
G22	NSERC, Research Tools and Instruments <i>Characterizing microplastics and microfibers using micro-FTIR</i> PI: M. Diamond, co-PI: E. Passeport, S. Finkelstein, M. Dittrich, J. Drake	2020-2021	\$148,938 (20%)
G21	Institute for Water Innovation, Civil and Mineral Engineering, Material Science and Engineering, WaterSeed <i>Fast Quantification of Microplastics using Scanning Electron Microscopy: from Nanometer to Micrometer scale</i> PIs: E. Passeport and J. Howe	2020-2022	60,000 (50%)

G20	Faculty of Applied Science and Engineering, Civil and Mineral Engineering, Chemical Engineering and Applied Chemistry, Electrical and Computer Engineering, CECSeed <i>Developing opto-chemical and electro-chemical sensors for monitoring environmental methane and ammonia gas emissions</i> PIs: E. Passeport, M. Mojahedi and N. Yan	2020-2022	108,000 (20%)
G19	French Embassy, Programme de mobilité Mourou/Strickland 2019 <i>Scientific exchanges with CNRS UMR team Hydrosience in Montpellier, France</i> PI: E. Passeport	2019	~3,000 (100%)
G18	Faculty of Applied Science and Engineering, Dean's Strategic Fund <i>Early-career faculty retreat in engineering</i> PI: E. Passeport	2019-2022	30,000 (100%)
G17	Faculty of Applied Science and Engineering, Civil and Mineral Engineering, Chemical Engineering and Applied Chemistry, Electrical and Computer Engineering, CECSeed <i>Estimating chemical partition coefficients with low-rank matrix completion</i> PIs: E. Passeport and J.A. Taylor	2018-2020	60,000 (50%)
G16	NSERC, Collaborative Research Development <i>Integrating microbial characterization tools into conceptual site models (CSMs) at complex contaminated sites</i> PI: E. Edwards, co-PI: E. Passeport, S Gavazza	2018-2020	275,635 (18%)
G15	NSERC, Strategic Project Grant <i>Assessing risks of eutrophication by urban stormwater runoff under climate change</i> PIs: P. Van Cappellen, co-PI: E. Passeport, N Basu, B Gharabaghi, B MacVicar, C Parsons, F Rezanezhad	2018-2021	676,569 (5%)
G14	Faculty of Arts and Science, Faculty of Applied Science and Engineering, Civil and Mineral Engineering, Department of Chemical Engineering and Applied Chemistry, Department of Ecology and Evolutionary Biology, XSeed <i>Constructing duckweed microbiomes for water treatment</i> PIs: E. Passeport and M. Frederickson	2018-2020	\$120,000 (50%)
G13	CNRS (France) – University of Toronto, Joint call for proposal <i>ISOpol - Isotope approaches to evaluate the persistence of the herbicide atrazine in water – sediment/soil systems</i> PIs: E. Passeport and G. Imfeld	2018	\$15,000 (50%)
G12	NSERC, Engage <i>An algae-based wastewater treatment solution for trace organic contaminant removal</i> PI: E. Passeport	2017	\$25,000 (100%)
G11	Southern Ontario Water Consortium – Advancing Water Technologies <i>A Novel Raman-based Sensor for cost-effective monitoring of nitrate and phosphate in water</i> PI: E. Passeport	2016-2018	\$100,000 (100%)
G10	NSERC, Research Tools and Instruments <i>Radio-isotope facility to track chemical & biochemical processes</i> PI: E. Passeport, co-PI: B. Sleep, E. Edwards, K. Mahadevan, A. McGuigan, R. Bazinet, A. Chan	2015-2016	\$150,000 (100%)
G9	Canada Research Chair Tier II <i>Water quality protection: Environmental Engineering & Stable Isotopes</i> PI: E. Passeport	2015-2020	\$150,000 (100%)
G8	NSERC, Strategic Project Grant <i>Beyond the Black Box: Developing a novel bioretention infiltration – treatment system for sustainable urban stormwater management</i> PI: E. Passeport, co-PI: J. Drake, M. Diamond	2015-2018	\$419,175 (35%)

G7	NSERC, Connect <i>Engineered constructed wetlands for pollutant removal</i> PI: E. Passeport	2015	\$696 (100%)
G6	NSERC, Engage <i>Effect of freeze - thaw cycles on bioretention performance for water quality improvement</i> PI: E. Passeport	2015-2016	\$25,000 (100%)
G5	Canada Foundation for Innovation, John R. Evans Leaders Fund <i>Stable isotope facility for improved understanding of the fate and removal of emerging contaminants in water</i> PI: E. Passeport	2015-2016	\$200,000 (100%)
G4	Canada Foundation for Innovation, Operating Fund <i>Stable isotope facility for improved understanding of the fate and removal of emerging contaminants in water</i> PI: E. Passeport	2015-2020	\$60,000 (100%)
G3	Ontario Research Fund, Small Infrastructure Fund <i>Stable isotope facility for improved understanding of the fate and removal of emerging contaminants in water</i> PI: E. Passeport	2015-2016	\$200,000 (100%)
G2	NSERC, Discovery Grant <i>Stable isotopes as tracers for emerging organic contaminants in natural and engineered systems</i> PI: E. Passeport	Apr. 2015- Mar. 2020	\$115,000 (100%)
G1	University of Toronto, Connaught New Researcher Award <i>Nature-inspired water treatment systems: from the Black box to the Grey box</i> PI: E. Passeport	2015-2017	\$10,000 (100%)

TEACHING EXPERIENCE

In-class teaching

At the University of Toronto

<i>Course</i>	<i>Level</i>	<i>School, Year, # students</i>
○ Remediation of complex wastewater	MASc/PhD	- University of Toronto, Summer 2023, 2 students (reading course)
○ Isotope geochemistry	PhD	- University of Toronto, Winter 2022, 1 student (reading course)
○ Concepts in Chemical Engineering CHE113 (coordinator)	BSc 1 st year	- University of Toronto, Winter 2022, Winter 2023, 140-160 students
○ Introduction to Physical Chemistry CHE112 (co-instructor, not coordinator)	BSc 1 st year	- University of Toronto, Fall 2018 and Fall 2019, 150 students
○ Environmental Remediation with Passive Water Treatment Systems /Treatment Wetlands CIV1399 (new course I designed, coordinator)	MASc, PhD	- University of Toronto, Winter 2017 and Winter 2020, Fall 2021, Fall 2022, 10-20 students
○ Environmental Bioengineering CIV541 (coordinator)	BSc 4 th yr, MEng, & MASc	- University of Toronto, Civil & Mineral Engineering, open to other departments, Offered in Winter 2015, Fall 2018, Fall 2019, Fall 2021, Fall 2022, Fall 2023, 10-25 students
○ Heat & Mass Transfer CHE210 (coordinator)	BSc	- University of Toronto, Chemical Engineering & Applied Chemistry, Offered in Winter, from 2015 to 2017, 160 students

Prior to University of Toronto

○ Wetland ecology, hydrology & biogeochemistry (Course I designed, coordinator)	MSc	- University of Freiburg (Germany), 20 h, 2010 - AgroParisTech (France), 3 h, 2010 & 2009
○ Subsurface drainage	BSc	AgroParisTech (France), 3 h, 2009
○ Watershed management to control non-point source agricultural pollution (co-instructor, not coordinator)	MSc	ENGEES (France), 16 h, 2009 & 2008
○ Nitrogen transformation in soil	MSc	AgroParisTech (France), 3 h, 2008

Supervision

Research Associate supervision

1. **Gabriela Barreto Bossoni**, October 2022 – September 2023
2. **Andrei Starostine** 2017-2020

Postdoctoral fellow supervision

1. **Shamsunnahar Suchana**, **August 2022 – present**, “*Compound Specific Isotope Analysis of substituted chlorobenzenes*”, Co-supervised with Prof. Elizabeth Edwards at UofT
2. **Langping Wu**, **January 2019 – June 2021**, “*Compound Specific Isotope Analysis of benzotriazole: method development and characterization of phototransformation reaction mechanisms*”, Principal Supervisor
3. **Mélisa Hatat-Fraile**, **October 2016 – August 2018**, “*Raman spectroscopy for water pollutant concentration measurement*”, Principal Supervisor

PhD student supervision

1. **Shuping Wang (Civil and Mineral Engineering)**, **PhD, since September 2021**, “*Stable C, N and H isotope fractionation during transformation of chloroanilines and chloronitrobenzenes*”.
2. **Shuyao Tan (Chemical Engineering and Applied Chemistry)**, **PhD, since May 2019**, “*Machine learning for faster microplastic quantification*”, Co-supervised with Prof. Josh Taylor (Electrical & Computer Engineering, UofT)
 - i. Received the 2023 Faculty of Applied Science and Engineering Graduate Student Endowment Fund
3. **Kelsey Smyth (Civil and Mineral Engineering)**, **PhD, since January 2018**, “*Microplastics in urban stormwater and removal in bioretention cell*”, Co-supervised with Prof. Jennifer Drake (Civil & Mineral Engineering, UofT)
 - i. Received NSERC MSc scholarship.
 - ii. Received NSERC PhD scholarship.
 - iii. Received NSERC PDF fellowship (for future PDF)
4. **Suchana Shamsunnahar (Civil and Mineral Engineering)**, **PhD, September 2017-August 2022**, “*Compound Specific Isotope Analysis of trace organic chemicals*”.
 - i. Best presentation for the Emerging Contaminant session, The Water and Environment Student Talks Conference, 06/2023
 - ii. Moire Anne Wadleigh student prize for best presentation, Advances in Stable Isotope Techniques and Applications (ASITA) conference, Montreal, Canada 2022.
 - iii. Frances Bradfield Graduate Fellowship in Environmental Engineering, Faculty of Applied Science and Engineering, University of Toronto, 2022.
 - iv. Doctoral completion award, School of Graduate Studies, University of Toronto, 2021-2022 academic year.
 - v. 2nd place paper in the Geosyntec Student Paper Competition, 05/2021.
 - vi. NSERC CREATE travel grant for attending virtual conference, BioZone, University of Toronto, 04/2021.
 - vii. 1st place in student poster presentation, Biozone Research Symposium, University of Toronto, 03/2021.
 - viii. Connaught International Scholarship at the University of Toronto for the academic cohort 2017-2018. Duration 2017-2021.

5. **Ka Yee Lam (Chemical Engineering and Applied Chemistry), PhD, September 2014 – December 2020**, *“Optimized triclosan removal processes in constructed wetland systems”*.
 - i. Recipient of International Society of Automation’s Water & Wastewater Industry Division scholarship (2015).

MASc student supervision

1. **Gabriel Negrelli Garcia (Civil and Mineral Engineering), MASc, since January 2023**, *“Wetland treatment train for the removal of complex industrial chemicals”*
2. **Ariel Lisogorsky (Earth and Environmental Sciences, Univ. of Waterloo), MASc, May 2020 – September 2022**, *“Phosphorus cycle in bioretention cells”*, Co-Supervised with Prof. Fereidoun Rezaeezhad (Earth & Environmental Sciences, University of Waterloo).
3. **Zhu Hao Yu (Chemical Engineering and Applied Chemistry), MASc, September 2018 – August 2020**, *“Algae and duckweed for pharmaceutical removal from water”*.
 - a. Received Queen Elizabeth II/William, Dorothy Palm Graduate Scholarship in Science and Technology,
 - b. Received Ontario Graduate Scholarship.
 - c. Won Second Place in the 2021 Canadian Society of Chemical Engineering, Chemical Institute of Canada - Best MA Thesis Award: invited to give a keynote presentation about his work at the Canadian Chemical Engineering Conference 2021
4. **Xinyao Gu (Chemical Engineering and Applied Chemistry), MASc, May 2018 – April 2020**, *“Fate of organophosphate ethers in bioretention cells”*.
5. **Leandra Rhodes (Chemical Engineering and Applied Chemistry), MASc, September 2016 – August 2018**, *“Biogeochemical processes governing the fate of contaminants in bioretention cells”*.
 - a. Received Queen Elizabeth II Graduate Scholarship in Science & Technology.
6. **Christian Larsen (Civil and Mineral Engineering), MASc, September 2016 – August 2018**, *“Algae for contaminant removal from water”*.
 - a. Received Queen Elizabeth II Graduate Scholarship in Science & Technology.
7. **Ceren Akdeniz (Civil and Mineral Engineering), MASc, September 2016 – August 2018**, *“Adsorption and desorption of phosphorus and naphthalene on bioretention soils”*.
8. **Antoine Boyer (Chemical Engineering and Applied Chemistry), MASc, September 2015 – August 2017**, *“Constructed wetlands for strontium removal”*.
 - a. Received Edward Jarvis Tyrrell Fellowship
 - b. Received NSERC Industrial Postgraduate Fellowship with Canadian Nuclear Labs.
9. **Brenden Ding (Civil and Mineral Engineering), MASc, September 2015 – May 2017**, *“Effect of freezing and thawing on bioretention performance for nutrient removal”*.

Master of Engineering (MEng) candidate supervision

1. Hariharan Savinandam (Chemical Engineering and Applied Chemistry, MEng), 2022-2023, “Creating standards for plastic microfibers and use in spike and recovery tests”
2. Weiwu Chen (Civil and Mineral Engineering), 2021-2022, “Characterization of microplastic contamination in urban stormwater”
3. Yourong Li (Chemical Engineering and Applied Chemistry), 2019-2020, “Characterization of microplastic and microfiber materials in urban stormwater runoff.”
4. Ziyu Shan (Chemical Engineering and Applied Chemistry), 2017-2018, “Effect of temperature, salinity, and initial concentration on nitrogen and phosphorus removal and fate in bioretention cells.”
5. Neeti Sondi (Civil and Mineral Engineering), 2016-2017 “Ammonia removal in constructed wetlands.”
6. Ceren Akdeniz (Civil and Mineral Engineering), 2015 – 2016 (then transferred to MASc), “Adsorption and desorption of phosphorus and naphthalene on bioretention soils.”

Bachelor candidate supervision

I have supervised 28 undergraduate students since I started as an assistant professor, mostly as summer research assistants and occasionally as 4th year thesis students from CHEM. In total, the undergraduate students I supervised received 16 awards, including NSERC USRA, NSERC UTEA, and First-Year Research Fellowship. Most undergraduate students are assigned a specific sub-project as part of a graduate student or PDF research project. By having their own sub-project, they feel ownership and responsibility toward their work. They receive laboratory safety training and I meet with them and the graduate student in charge every week or two. The students are encouraged to participate in the summer iLead undergraduate program and the UnERD conference. At the end of their research project, I ask them to provide feedback via a questionnaire, which helps me adjust the supervisory structure as needed and helps them self-reflect about what they learned and accomplished during their research project.

1. Loïc Bouilly (Chemical Engineering and Applied Chemistry, UofT), May – August 2023
Won NSERC Undergraduate Student Research Award (USRA)
2. Jaden Irving (Civil and Mineral Engineering, UofT), May – August 2023
Won NSERC Undergraduate Student Research Award (USRA)
3. Christina Pizzonia (Chemistry transferring to Chem Eng, UofT), May – August 2022
4. Michael Chan (Chemical Engineering and Applied Chemistry, UofT), May – August 2022
Won University of Toronto Excellence Award (UTEA)
5. Savannah Byrne (Chemical Engineering and Applied Chemistry, UofT), May – August 2022
Won First Year Summer Research Fellowship
6. William Wen (Engineering Science, UofT), May – August 2022
7. Ravindu Samarasekera (Chemical Engineering and Applied Chemistry, UofT), May – August 2021

8. Cassidy Tan (Chemical Engineering and Applied Chemistry, UofT), May – August 2021
9. Yao Sheng Chai (Chemical Engineering and Applied Chemistry, UofT), May – August 2021
Won University of Toronto Excellence Award (UTEA)
10. Naman Mamtani (Chemical Engineering and Applied Chemistry, UofT), May – August 2021
11. Harsh Ganatra (Chemical Engineering and Applied Chemistry, UofT), May – August 2021
12. Ami Zeng (Chemical Engineering and Applied Chemistry, UofT), May to August 2020
Won NSERC Undergraduate Student Research Award (USRA)
13. Adam Tam (Chemical Engineering and Applied Chemistry, UofT), May to August 2019
Won William J. Dowkes Undergraduate Summer Research Grant
14. Chaitanya Ahuja (Chemical Engineering and Applied Chemistry, UofT), May to August 2019
Won First Year Summer Research Fellowship
15. Yourong Li (Environmental Chemistry and Economy, UofT Scarborough), May to August 2019
16. Yucong Shi (Chemical Engineering and Applied Chemistry, UofT), May to August 2019
17. Amandine Rault (Chemical Engineering and Applied Chemistry, Polytech Nantes, France), May to August 2019
18. Ziting Xia (Chemical Engineering and Applied Chemistry, UofT), May to August 2019
Won Best poster presentation award in Food/Civil Engineering category at University of Toronto UnERd conference;
Won University of Toronto Excellence Award (UTEA);
Won Chemical Engineering Undergraduate Scholarship;
Won 2nd place CSChE Summer Research Symposium;
Won 2nd place National Robert G. Auld Student Paper Competition;
Won James W. Smith Leaders Of Tomorrow Award from Faculty of Applied Science and Engineering
19. Syed Naqvi (Chemical Engineering and Applied Chemistry, UofT), September 2018 – May 2019
20. Wei Cheng Hooi (Chemical Engineering and Applied Chemistry, UofT), May to August 2018
Won University of Toronto Excellence Award (UTEA)
21. Gordon Wong (Civil Engineering, UofT), May to August 2017
Won NSERC Undergraduate Student Research Award (USRA)
22. Mehdi Bouras (IUT Toulouse, France), April to June 2016
23. Suzanne Malec (Chemical Engineering and Applied Chemistry, UofT), January to August 2016
Won NSERC Undergraduate Student Research Award (USRA)

24. William Wong (Chemical Engineering and Applied Chemistry, UofT), January to March 2016
25. Bruno José da Silva (Chemistry, Science without borders program, UofT), May to August 2015
26. Garnet Lollar (Biology, UofT), May to August 2015
Won NSERC Undergraduate Student Research Award (USRA)
27. Eric Yu (Chemical Engineering and Applied Chemistry, UofT), May to August 2015
Won NSERC Undergraduate Student Research Award (USRA)
28. Amos Siu Chan (Civil Engineering, UofT), January to April 2015

Master candidate supervision (prior to independent research position: 9 M.Sc.)

- Carolina Hoyos-Hernandez, 2010, 7 mths, *“Laboratory study of S-metolachlor dissipation in wetland substrates”*, Co-supervisor, Univ. Paris-Est Créteil (France)
- Benjamin Richard, 2009, 6 mths, *“Tracer experiment in a forest buffer”*, Principal advisor, AgroParisTech – Univ. Pierre & Marie Curie (France)
- Cécile Meigné, 2009, 4 mths, *“Role of macrophytes in treatment wetland ecosystems”*, Co-supervisor, Univ. de Rouen (France)
- Céline Blin, 2009, 4 mths, *“Cartography of several treatment wetland fauna and flora”*, Co-supervisor, Univ. François-Rabelais de Tours (France)
- Larry Maret-Mercier, 2009, 4 mths, *“Factors influencing electrical resistivity in waste storage areas”*, Co-supervisor, Univ. Paris Sud XI (France)
- Anne-Charlotte Deglin, 2009, 4 mths, *“Modifications and tests of a program for linear modeling using least squares and Williamson-York methods”*, Co-supervisor, Ecole Centrale de Nantes (France)
- Tanya Culhaoglu, 2008, 6 mths, *“Development and validation of an analytical method”*, Principal advisor, Univ. Paris Sud XI (France)
- Sonja Jankowsky, 2008, 6 mths, *“Tracer experiment in an artificial wetland”*, Co-supervisor, Univ. of Freiburg (Germany)
- Bernadette Prömse, 2008, 6 mths, *“Tracer experiment in a forest buffer”*, Co-supervisor, Univ. of Freiburg (Germany)

Bachelor candidate supervision (prior to independent research position: 5 B.Sc.)

- Adam Virani, 2013, 5 mths, *“Diffusion of methane through a Teflon membrane and effects on isotopic composition”*, Co-supervisor, Univ. of Toronto (Canada)
- Grady Pierroz, 2011, 8 mths, *“Constructed wetland and algal pond for selenium removal”*, Principal Supervisor, University of California at Berkeley (USA)
- Caroline Scofield, 2012, 6 mths, *“Selenium and Boron remediation from water and soil”*, Principal Supervisor, University of California at Berkeley (USA)
- Brice Siroux, 2010, 3 mths, *“Comparison of three normalization methods to validate a SPME-GC-MS analytical method & chemical analyses”*, Principal advisor, IUT Créteil Vitry (France)
- Jessica Brest, 2009, 3 mths, *“Analytical method validation and chemical analyses”*, Principal advisor, Univ. Paris Sud XI (France)

Teaching Workshops Attended

- **CTSI Course Design Institute workshop**, University of Toronto, May 23-24, 2018 (2 full days)
- **TEAL fellow program workshops** (since 2016)

- **EdTech Workshop 2017**, University of Toronto, May 12, 2017 (all day)
- **University of Toronto’s Teaching and Learning Symposium**: “2017 Intersections: Where instructional design meets learning science”, May 1, 2017 (afternoon)
- **CTSI Deepening Your Teaching Practice: Integrating Teaching and Research workshop**, October 5, 2015 (2.5 h)
- **Methods and Tools to Help Students Learn Core ChE Concepts**, a workshop by Milo Koretsky, Chemical Engineering and Applied Chemistry LLE speaker, October 7, 2015 (2 h)
- **Exploring Educational Technology, a workshop from the Teaching & Learning Workshop series**, September 22, 2015 (1 h)
- **CTSI Setting the tone for success: the first day and beyond**, August 26, 2014 (2.5 h)
- **CTSI Discussion techniques to support active learning**, August 26, 2014 (3 h)
- **CTSI Teaching with academic & collaborative technologies at UofT**, August 27, 2014 (2 h)
- **Developing learning outcomes**, August 28, 2014 (2 h), via the Faculty of Engineering Teaching Methods and Resources Committee (TMRC)
- **Prof. Margot Vigeant’s workshop on: “Ideas for active learning”**, Chemical Engineering and Applied Chemistry LLE speaker, January 6th, 2015 (2 h)

SERVICE

At the University of Toronto

University level

- Panelist on Panel I Career Leaders at 5th Ursula Franklin Forum on Career transitions and next steps on the journey: Insights and lessons learned on the path forward from graduate studies. Science at Massey.
- Advisory committee to the Provost on the search for the new Dean of the Faculty of Applied Science and Engineering (2018-2019)
- Representative for the Faculty of Applied Science and Engineering at the University of Toronto Radiation Protection Authority (since 2019)
- Invited participation to CTSI Review of Course Design Institute, January 30th, 2019, to provide feedback on the 2-day workshop.
- Invited participation from the Division of the Vice-President, Research & Innovation to a round table to review the on-line research administration tool My Research On-Line (MROL).

Faculty of Applied Science and Engineering level

- Member (since 2021) and elected chair (since 2022) of the Teaching Methods and Resources Standing Committee in the Faculty of Applied Science and Engineering
- Leader and Founder of Early-Career Engineering Faculty group; led organization of whole-day retreats (2019, 2022).

Department level

- Member (since 2018) and chair (since 2019) of the Teaching Effectiveness Committee in the Department of Chemical Engineering and Applied Chemistry
- Faculty search committee member for the Department of Chemical Engineering and Applied Chemistry and the Department of Civil and Mineral Engineering
- Member of Graduate scholarship committee in Civil and Mineral Engineering
- Host 2-3 invited speakers every year and apply and host each year’s distinguished lecturer for the Association of Environmental Engineering and Science Professors (AEESP)
- Reviewer of Capstone design project for selection for national competition in Civil & Mineral Engineering
- Chair of SGS PhD defenses, departmental exams

- Member of graduate student reading or examination committees in the Faculty of Applied Science and Engineering and the Faculty of Arts and Science

Outside of the University of Toronto

- Stakeholder Review Committee meeting - LID SWM Planning and Design Guide Wiki
- Conference session chair for multiple conferences: American Geophysical Union 2015 and 2016, Canadian Chemical Engineering Conference 2018, International Low Impact Development Conference 2018, SETAC conference 2019; Biogeomon 2022; Goldschmidt 2023.
- Reviewer for multiple journals: Water Research, Environmental Science & Technology, Journal of Hydrology, Science of the Total Environment, Ecological Engineering, Chemosphere, Journal of Chromatography A, and many others.
- Reviewer for grant proposals: NSERC, FRQNT (Québec), Estonian government, Nebraska government, Adema (France), SERDP (USA), and several others.
- External reviewer for PhD defenses outside of University of Toronto: Université de Strasbourg (France), Sorbonne Université (France), Luleå University (Sweden)

OTHER

- Maternity leaves:
 - o March 11, 2016 to December 15, 2016
 - o August 20, 2017 to March 18, 2018