LISE R. MONTEFIORE
D S Weaver Labs 157, North Carolina State University, Raleigh, NC 27695
Phone: 405-402-9425, Email: lrmontef@ncsu.edu

EDUCATION

Doctor of Philosophy, Biological and Agricultural Engineering – 2017 to 2021
North Carolina State University, Raleigh, NC
Minor: Earth Data Science; Advisor: Dr. Natalie Nelson; Dissertation Title: "Impacts of climate and land use change on runoff-driven nutrient loading to coastal systems"; GPA: 4.0

Master of Science, Water Science and Engineering – 2012 to 2014* and 2015 to 2016
Polytech Montpellier, France
**Gap year from 2014 to 2015 to gain research experience at Oklahoma State University*

Undergraduate Studies in Fundamental Science – 2009 to 2012
Lycée Jacques, Prévert, France
Preparatory classes in B.C.P.S.T. (biology, chemistry, physics, geology, and mathematics),
Three years of preparatory classes required for placement in professional engineering school.

RESEARCH AND PROFESSIONAL EXPERIENCES

2019 Global Change Fellow, Biological and Agricultural Engineering -August 2019 to Present

Graduate Research Assistant, Biological and Agricultural Engineering – August 2018 to July 2019
North Carolina State University, Raleigh, NC
- Prepare a proposal for the Graduate Student Research Funding Opportunity jointly sponsored by North Carolina Water Resources Research Institute and North Carolina Sea Grant.
- Prepare proposals and manuscripts for publication in peer-reviewed journals.
- Mentor an undergraduate research assistant.

Provost Graduate Research Fellow, Biological and Agricultural Engineering – August 2017 to July 2018

Graduate Research Assistant, Biosystems and Agricultural Engineering – August 2016 to June 2016
Oklahoma State University, Stillwater, OK
- Quantified additive efficiency for stormwater filters and modelling of phosphorous removal by fly-ash pellets.

Water Resources Engineering Intern, Suez Consulting – February 2016 to July 2016
Le Lamentin, Martinique, France
- Applied 2-D hydraulic models of the Mana River related to bridge reconstruction in French Guiana, South America.
- Perform environmental risk assessments.
- Evaluate alternative construction designs.

Water Research Intern, HydroSciences – November 2016 to January 2016
Montpellier, France
- Modeled solute transport in a complex 3D medium.

Visiting Research Scholar, Biosystems and Agricultural Engineering – September 2014 to March 2015
Oklahoma State University, Stillwater, OK
- Evaluated long-term clogging trends in pervious concrete through field and statistical analyses.

Flood Action and Prevention Plan Engineering Intern, EGIS – June 2014 to August 2014
Montpellier, France
- Contributed to the preparation of the Flood Plan, Prevention, and Actions Program for the watershed of Ouvèze River.
- Performed a cost-benefit analysis of [what exactly?].
- Collaborated with affected stakeholders, including utilities, municipalities, and regional and national environmental agencies.

TEACHING EXPERIENCES

Guest Lecturer, "Pigs, Poultry, the Planet, and Data-Driven Problem Solving", REEU program– July 2019

Lectured on "Introduction to GitHub"
Biological and Agricultural Engineering, North Carolina State University

Guest Lecturer, Environmental and Agricultural Data Analytics and Modeling (BAE 590, 3 cr.) – April 2019
Lectured on "Machine Learning Applications"
Biological and Agricultural Engineering, North Carolina State University

Teaching Assistant, Applied Statistics for Environmental and Agricultural Data Analysis (BAE 495, 3 cr.) – January 2017 to May 2017
Biological and Agricultural Engineering, North Carolina State University

SCHOLARSHIPS AND AWARDS

Southeast Climate Adaptation Science Center Global Change Fellow – August 2019 to August 2020
Southeast Climate Adaptation Science Center, U.S. Department of the Interior

CERF travel award- November 2019
Coastal and Estuarine Research Federation

1st Place for ASABE Ethics Video Challenge- July 2019
American Society of Agricultural and Biological Engineers

NC Sea Grant/Water Resources Research Institute Graduate Student Research Award – March 2019 to February 2020
North Carolina Sea Grant and Water Resources Research Institute

William H. and Glenda N. Johnson Graduate Engineering Fellowship Stipend Endowment – 2018
Biological and Agricultural Engineering, North Carolina State University

2nd place, Annual NC State University Graduate Student Research Symposium, Agricultural Sciences and Natural Resources category – 2018
North Carolina State University

Provost's Doctoral Fellowship – 2017 to 2018
North Carolina State University

SKILLS

Software experience:
Microsoft Office Suite (Word, Excel, Power Point), R, GIS (MapInfo, ArcGis, Qgis), Erdas Imagine, Google Earth Engine, Telemac-2D, Minitab, Chem Transport.

Languages:
French (native), English (professional working proficiency), Spanish (limited proficiency)

PUBLICATIONS

- Nelson, N.G., **Montefiore, L.R.**, Antony, C., Merriman, L., Kuster, E., and Fox, G.A. 2019. Undergraduate exposure to climate education: national trends and opportunities for curricular improvements. *Transactions of the ASABE*.
- Vogel, J.R., A.J. McLemore, and **L.R. Montefiore**. Pervious Concrete Long-term Clogging Trends and Evaluation of Cleaning Methods. *Under co-author review.*
- **Montefiore, L.R.** and G.O. Brown. 2018. Review of the potential additives to improve pollutant treatment in bioretention. *Under co-author review*.

CONFERENCE ORAL PRESENTATIONS

- **Montefiore, L.R.**, and N.G. Nelson. July 2019. Identifying estuaries at-risk of eutrophication under future climate and land use change scenarios in the Southeast United States. ASABE Annual International Meeting, Boston MA
- **Montefiore, L.R. (invited speaker)**, and N.G. Nelson. September 2018. Reducing the computational cost of large gridded datasets: an HPC case study. HPC User Research Symposium at NC State, Raleigh, NC
- **Montefiore, L.R.**, and N.G. Nelson. July 2018. Coupling climate, land use, and sea level rise projections to identify threatened estuaries in North Carolina. ASABE Annual International Meeting, Detroit, MI

CONFERENCE POSTER PRESENTATIONS

- **Montefiore, L.R.**, and N.G. Nelson. March 2019. Coupling climate, land use, and land cover projections to identify estuaries threatened by freshwater-driven change across the South Atlantic and Gulf Coasts. RISING Multi-Media Exhibit Grand Opening, Raleigh, NC
- **Montefiore, L.R.**, and N.G. Nelson. March 2019. Coupling climate, land use, and sea level. Rise projections to identify threatened estuaries in North Carolina. NC Water Resources Research Institute, Raleigh, NC
- **Montefiore, L.R.,** and N.G. Nelson. December 2018. Coupling Climate, Land Use, and Land Cover Projections to Identify Estuaries Threatened by Freshwater-driven Change across the South Atlantic and Gulf Coasts. AGU Fall Meeting, Washington D.C.
- **Montefiore, L.R.**, N.G. Nelson, and J.J. Classen. September 2018. Spatiotemporal reconstruction of historical swine CAFO spread in North Carolina. North Carolina ASABE State Section Meeting, Raleigh, NC
- **Montefiore, L.R.**, and N.G. Nelson. June 2018. Leveraging global change projections to identify threatened estuaries across the South Atlantic and Gulf Coasts. 2nd Annual NC State University CALS Graduate Student Poster Symposium, Raleigh, NC
- **Montefiore, L.R.,** and N.G. Nelson. March 2018. Coupling climate, land use, and sea level rise projections to identify threatened estuaries in North Carolina. 14th Annual NC State University Graduate Student Research Symposium, Raleigh, NC
- **Montefiore, L.R.**, and N.G. Nelson. March 2018. Coupling climate, land use, and sea level. Rise projections to identify threatened estuaries in North Carolina. NC Water Resources Research Institute, Raleigh, NC
- **Montefiore, L.R.**, and N.G. Nelson. September 2017. Spatial Variability in Estuarine Vulnerability to Natural and Human Pressures Across the Southeast USA. North Carolina ASABE State Section Meeting, Raleigh, NC
- **Montefiore, L.R.,** G.O. Brown, and J.R. Vogel. April 2017. Fly-Ash Pellets Design for Phosphorus Removal in Stormwater Filters Oklahoma Clean Lakes and Watersheds Association, Stillwater, OK
- **Montefiore, L.R.**, and S. Majdalani. October 2016. Solute Transport in a Complex Geometry Medium. Water Conference & Research Symposium, Norman, OK

PROFESSIONAL DEVELOPMENT

- **EOPD-412 Engineering Ethics Videos, Essays and panel discussion (ASABE)- July 2019**
  Completed 2 hours
  ASABE Annual International Meeting, Boston MA
- **Communication Strategies for Teaching and Beyond – January 2019 to April 2019**
  Completed 44 hours
  North Carolina State University
- **How to Write a Statement of Teaching Philosophy – April 2019**
  Completed 3 hours
  North Carolina State University

PROFESSIONAL AFFILIATIONS

American Geophysical Union (2018-Present)
American Society of Agricultural and Biological Engineers (2018-Present)

PROFESSIONAL SERVICE

French Interpreter – November 2017 to Present
International Programs, College of Agricultural and Life Sciences, North Carolina State University
Conference Organizer – February 2016
Polytech Montpellier, Montpellier, France
Conference entitled: *Urban Design for Stormwater Runoff Management*

Tutor in fundamental science – 2015 to 2016
- 10 students

- Mathematics, physics, chemistry, and biology

Volunteer – September 2012, September 2013, September 2015

Lez River, Montpellier, France

Removal of the Jussie, an invasive plant species,