

## **EDUCATION**

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### **Doctor of Philosophy- *August 2017 to Present***

Biological and Agricultural Engineering, North Carolina State University, Raleigh, NC  
Biosystems Analytics Lab  
Dissertation topic: Geospatial analyses of estuarine vulnerability  
Advisor: Dr. Natalie Nelson  
Expected Graduation Date: 2020  
Current GPA: 4.0

### **Master of Science- *2012 to 2014\* and 2015 to 2016***

Water Science Engineering, Polytech Montpellier, France  
3<sup>rd</sup> through 5<sup>th</sup> years of a 5-year engineering qualification in Water Science and Technology  
Graduation: September 2016  
*\*Gap year from 2014 to 2015 to gain research experience at Oklahoma State University*

### **Undergraduate Studies-*2009 to 2012***

Lycée Jacques, Prévert, France  
Preparatory classes in B.C.P.S.T. (biology, chemistry, physic and geology with mathematics),  
Three years of preparatory classes required for placement in professional engineering school.

## **RESEARCH AND PROFESSIONNAL EXPERIENCES**

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### **Provost Graduate Research Fellow-*August 2017 to Present***

Biological and Agricultural Engineering, North Carolina State University

### **Graduate Research Assistant- *August 2016 to June 2016***

Biosystems and Agricultural Engineering, Oklahoma State University

- Wrote a literature review of different additives for stormwater filters
- Evaluated the impact of fly ash pellets design on phosphorous removal utilizing columns experiments
- Designed pipes filled with fly-ash pellets using a transport model

### **Water Research Intern- *November 2016 to January 2016***

HydroSciences, Montpellier, Montpellier, France

- Participated in a study examining solute transport in a complex geometric medium
- Conducted a comprehensive literature review
- Constructed the experimental set-up, data collection, and analyzed the results
- Produced a final report of the findings

### **Visiting Research Scholar- *September 2014 to March 2015***

Biosystems and Agricultural Engineering, Oklahoma State University

- Conducted a comprehensive literature review on cleaning methods

- Performed infiltration tests on pervious concrete
- Completed particle size distribution analyses of clogging particles
- Produced a report and presented the results to department faculty and students

### ***Water Resources Engineering Intern- February 2016 to July 2016***

Suez Consulting (previously SAFEGE), Le Lamentin, Martinique, France

- 2-D Hydraulic modelling of the Mana River closed to an existing bridge
- Environmental risk assessments (e.g. flood, earthquakes, tsunami, pollutants) for former gas station location
- Conducted an impact study for the expansion of a municipal water treatment plant
- Evaluated construction alternatives for a water reservoir and distribution systems
- LIDAR analysis using ArcGIS and MapInfo
- Hydraulic monitoring of a fish passage

### ***Flood Action and Prevention Plan Engineering Intern- June 2014 to August 2014***

Internship at EGIS (previously BCEOM), Montpellier, France

- Wrote report sections necessary for the labelling of the Flood Plan, Prevention, and Actions Program for the watershed of Ouveze River
- Conducted data collection of field and created maps of affected regions with MapInfo
- Prepared presentations for the affected stakeholders, including collectivities, departments, regions, and national environmental agencies
- Participated in a cost-benefit analysis study

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## **SKILLS**

### **Software experience**

- Microsoft Office Suite (Word, Excel, Power Point)
- Visual Basic
- R
- GIS (MapInfo, ArcGIS with 3D Analyst, Qgis)
- ERDAS Imagine
- TELEMAC-2D with Bluekenue and Fudaa.prepro extensions
- Minitab
- Chem Transport

### **Languages**

- Fluent in French (mother tongue), English
- Proficient in Spanish (reading and written)

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## **PUBLICATIONS:**

Montefiore, L., N.G. Nelson, and J. Ekstrom. 2018. Vulnerability of estuarine-dependent fisheries to projected water quality change in the Southeast U.S. (in preparation).

## **CONFERENCE ORAL PRESENTATIONS**

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- Montefiore, L.R, N.G. Nelson, and J. Ekstrom. July 2018. Vulnerability of estuarine-dependent fisheries to projected water quality change in the Southeast U.S. America Society of Agricultural and Biological Engineers Annual International Meeting, Detroit, MI

## **CONFERENCE POSTER PRESENTATIONS**

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- Montefiore, L.R, and N.G. Nelson. March 2018. Vulnerability of estuarine-dependent fisheries to projected water quality change in the Southeast U.S. NC Water Resources Research Institute, Raleigh, NC
- Montefiore, L.R, and N.G. Nelson. March 2018. Coupling climate, land use, and sea level rise projections to identify threatened estuaries across the South Atlantic and Gulf Coast. Graduate Student Research Symposium, 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

## **OTHER EXPERIENCES**

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### **French Interpreter - November 2017**

CALS in International Programs, North Carolina State University, Raleigh, NC

### **Tutor- 2015 to 2016**

Academia, Complétude, Paris/Montpellier, France

- 10 high school students
- Mathematics, physics, chemistry, and biology

### **Citizen Volunteer- September 2012, September 2013, September 2015**

Lez River, Montpellier, France

Removal of the Jussie, an invasive plant species,

### **Conference Organizer - February 2016**

Polytech Montpellier, Montpellier, France

Conference entitled: *Urban Design for Stormwater Runoff Management*

## **PROFESSIONAL AFFILIATION**

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