



# Welcome to the 2019 Vermont EPSCoR Undergraduate Research Symposium



Thank you for a successful year of BREE  
Your passion and dedication make this event  
possible!

August 1<sup>st</sup>, 2019

2:00 - 7:30 pm

Main Street Landing  
Burlington, Vermont





# 2019 VT EPSCoR Undergraduate Student Research Symposium

## Agenda

2:00 **Registration**

2:30 **Welcome and Introduction to BREE**

Dr. Arne Bomblies, State Director, VT EPSCoR

Dr. Veronica Sosa Gonzalez, Coordinator, VT EPSCoR Center for Workforce Development and Diversity

3:00 **Scholarship Ceremony**

Dr. Arne Bomblies, State Director, VT EPSCoR

Ted Brady, Deputy Secretary, VT Agency of Commerce and Community Development

4:30 **Oral Presentations**

5:15 **Poster Session**

6:30 **Dinner**



## Scholarship Recipients

### First Generation Scholarship

William Li, University of Vermont

**Major: Civil Engineering**

Lexus Pattershall, University of Vermont

**Major: Environmental Engineering**

Ryland C. Richardson, Norwich University

**Major: Mechanical Engineering**

Tracee Turnbaugh, Castleton University

**Major: Computer Information Systems**

### Native American Scholarship

KC Herne, Norwich University

**Major: Biology**

Stiles Loper, Community College of Vermont - Rutland

**Major: Health Sciences**

Katie Lucier, Northern Vermont University - Johnson

**Major: Biology**



## Oral Presentations

4:30-5:15pm

- 4:30 Ann Marie Matheny, Maike Holthuijzen, Indiana University  
**Assessing the effectiveness of empirical quantile mapping for bias correcting historical extreme temperature projections from a climate model**
- 4:40 Julyanice Cruz, Stephanie Drago, Rebecca Diehl, Don Ross, Beverley Wemple, St. Michael's College  
**A spatial investigation of floodplain deposition in the Lake Champlain basin of Vermont**
- 4:50 Mariana C. Delpin Sosa, Wilton Burns, Luis Esbrí Ruiz, Andrew Schroth, Universidad Ana G. Mendez  
**Understanding the community dynamics, timing, and intensity of the 2017 and 2018 cyanobacteria blooms in two shallow eutrophic bays in Lake Champlain**
- 5:00 Jack Goldman, Brittany Lancellotti, University of Vermont  
**An analysis of greenhouse gas fluxes across landscape positions in forested riparian buffers**

## Poster Presentations

5:15-6:30pm

1. Anna Singer, Patrick Bitterman, Chris Koliba, University of Delaware  
**The central role of state agencies in Lake Champlain water quality governance**
2. Alex Howe, Kevin Andrew, University of Vermont  
**Modeling deforestation and land cover transitions in the Lake Champlain Basin**
3. Pamela Garcia, Brittany Lancellotti, Universidad de Puerto Rico  
**Impacts of land use and landscape position in denitrification rates during snowmelt period**
4. Sarimar W. Cuevas Hernandez, Elizabeth Doran, Universidad de Puerto Rico  
**Evaluating BRAT: A tool to predict castor canadensis habitat to determine nature-based wetland restoration potential in Vermont**
5. Giorgio Sarro, Caitlin Crossett, Lesley-Ann Dupigny-Giroux, University of Wisconsin  
**Meteorological predictors of droughts in Vermont, New Hampshire and Eastern New York**
6. Raquel Lugo-Bendezu, Scott Hamshaw, Donna Rizzo, Mandar Dewoolkar, Universidad de Puerto Rico  
**Analysis of suspended sediment and discharge hysteresis patterns using classification tests**



3



4

7. Luis A. Esbrí Ruiz, Wilton Burns, Mariana C. Delpin Sosa, Andrew Schroth, Universidad de Puerto Rico  
**A comparative analysis of nutrient dynamics and their drivers in Missisquoi and Saint Albans Bays of Lake Champlain.**
8. Connor Zwonik, Maike Holthuijzen, University of Vermont  
**Assessing the effectiveness of empirical quantile mapping for bias correcting historical extreme precipitation projections from a climate model**
9. Kerien Lopez-Aquino, Diego Rodriguez-Steinhardt, Clare Ginger, Richard Kujawa, Universidad de Puerto Rico  
**Resilience to extreme events: An analysis of local hazard mitigation based on state of Vermont priorities**
10. Mathew Koretsky, Jesse Gourevitch, University of Vermont  
**Effects of water quality changes on property values along the Lake Champlain shoreline**
11. Grady Jakobsberg, Jesse Gourevitch, University of Vermont  
**Effects of water quality changes in Lake Champlain on Vermont state park visitation**
12. Ellie Sovcik, Dustin Kincaid, Erin Seybold, Carol Adair, Andrew Schroth, University of Vermont  
**Influence of the Missisquoi river wetland complex on riverine nitrogen and phosphorus cycling under different flow regimes**
13. Mariah Cronin, Julia Petty, Erin Seybold, Dustin Kincaid, Carol Adair, Andrew Schroth, University of Vermont  
**Groundwater phosphorous dynamics along a riparian buffer**

**Thank you for a great summer of research!**



**2019 BREE Undergraduate Interns**

**Home institutions:**

**University of Vermont, St. Michael's College, Universidad de Puerto Rico, Universidad Ana G. Mendez, Indiana University, University of Wisconsin, University of Delaware**

