# Olivia Borghi

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## Education

**University of Washington**
*PhD - Pure Mathematics* **Fall 2017- Now**

**Boise State University**
*M.S. - Pure Mathematics* **Fall 2016 - Spring 2017**
*Attended for one year prior to transferring to University of Washington*

**Lewis & Clark College**
*B.A. – Mathematics and Computer Science* **Fall 2009 - Spring 2014**
*Minor in Classical Studies*

## Relevant Work Experience

**Teaching Assistant**
*University of Washington - Seattle, WA* **Fall 2017 - Now**

Primary Teaching assistant for courses ranging from algebra to calculus 3.

**Teaching Assistant**
*Boise State University - Boise, ID* **Fall 2016 - Spring 2017**

Primary teacher of four sections of high school level algebra at Boise State University. Taught two courses per semester. Sections met twice a week for 90 minutes. Responsible for all lecturing and grading.

**High School Mathematics Tutor** **Summer 2014 - Summer 2016**
*Tutor Doctor - Portland, OR*

Tutored high school students in mathematics. Helped improve student's skills and confidence. Taught students in all subjects ranging from geometry and algebra to calculus and differential equations. Instrumental in improving non-passing grades to A's and B's.

**Private Mathematics Tutor** **Fall 2011 - Summer 2016**
*Portland, OR*

Worked privately as a high school mathematics tutor during my undergraduate education.

*References Available Upon Request*

Act 2019,

Hello, my name is Olivia Borghi. I am a PhD student in pure mathematics at the University of Washington in Seattle, WA. My expected graduation date is likely spring of 2023. My primary research interest is in higher category theory and how it relates to certain branches of algebraic topology. My current project is in relation to the Verrity-Riehl infinity cosmoi structure. At this time I am most interested in:

(1) Bartosz Milewski - Profunctors and Optics
(2) Mehrnoosh Sadrzadeh - Formal and experimental methods to reason about dialogue and discourse using categorical models of vector spaces
(3) David Spivak - Toward a mathematical foundation for autopoiesis

My commitment to this program is dependent on funding. Though I can ask The University of Washington for help with this, and am guaranteed at least $300 I can put toward this. At this time I believe I would need help from this program as well in order to attend.

As I am a young researcher, so this is a great opportunity for me to expand my knowledge base. I am very much in the point of my career where gathering new knowledge is at the foremost importance. Some of my current colleagues whom I go to for collaboration and help have attended this conference in the past and very much recommend it. I look for any opportunity to meet other young researchers that I may form a working relationship with. This is also true for meeting any experienced math researchers who may be good resources in the future. Since category theory is not the strongest research field at University of Washington I also look for opportunities to find others I can reach out to outside of the school I attend. As a queer woman in math finding people of like mind is what has allowed me to flourish as much as I have, and I imagine this will continue to be the case. The primary reason I wish to attend ACT 2019 is pure interest. I love this material and am very excited to learn everything I can about it. Thank you so much for considering me.

Best,
Oliva Borghi
(she / her)
University of Washington
Department of Mathematics