

**MATH 499: UNDERGRADUATE RESEARCH SEMINAR  
FALL 2014**

**Instructor.** Dr. Allison H. Moore      Office: HBH 456  
allison.h.moore@rice.edu      Office hours: W 10 - 12 or by appointment

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**Course Information.** Meetings F 12-12:50 HBH 453

**Course Description.** This class is an undergraduate research seminar. Instead of lectures, meetings will be based on open-ended discussions. Together, we will explore the topic of topological data analysis, and in particular, will learn about persistent homology. Students are expected to have taken a linear algebra course as a prerequisite.

**Textbooks.** There are no required textbooks for this class. However, you may find the following references helpful: *Linear Algebra* by Friedberg, Insel and Spence, *Algebra* by Artin and *Algebraic Topology* by Allen Hatcher (free online). Additionally, research papers and references will be distributed throughout the semester.

**Assignments.** Homework problems, reading assignments, or learning tasks may be assigned occasionally, and students will be expected to work on these assignments at their own pace. However, assignments will not be graded and there will not be any exams.

**Grades.** Your grade will be determined by active participation and attendance. “Active participation” can include reading research level math papers, explaining math to other students, attempting to work hard problems, and using Matlab or other software. Most importantly, it means talking about math during our weekly meetings.

**Academic Integrity.** Students are expected to abide by the Rice Honor Code at all times.

**OWL-Space.** Announcements, suggested readings and assignments will usually be posted to OWL-Space. Add yourself to OWL-Space with a NetID and check regularly.

**Students with disabilities.** Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first week of class. All discussions will remain confidential. Students with disabilities need to also contact Disability Support Services in the Ley Student Center.

Visit <http://students.rice.edu/students/Disability.asp> for more information.

**Disclaimer.** The instructor reserves the right to update the expectations outlined in this syllabus. Any modifications will be announced in class before changes are made to the syllabus.