ALUMNI COMMENTS

"The program helped me develop mathematical writing and speaking skills that I have found useful, especially now that I am in graduate school."
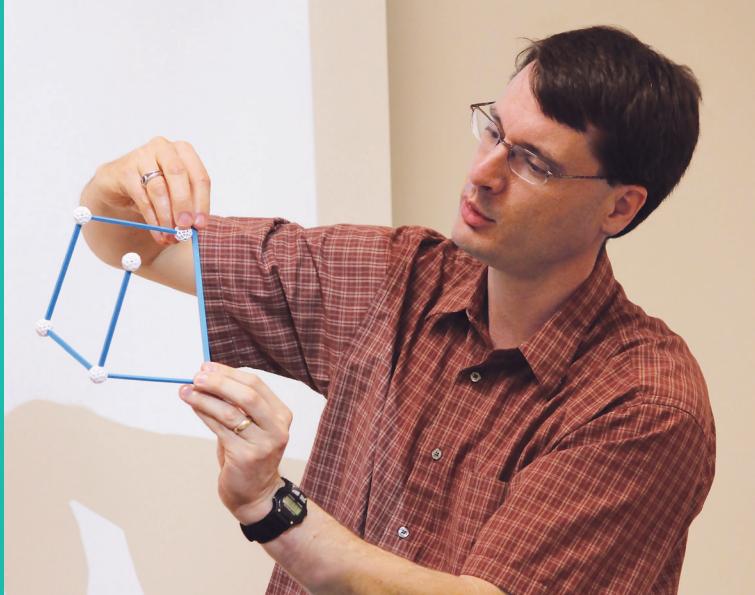
REU ALUMNUS, '05, PH.D.
CORNELL UNIVERSITY, '11
FACULTY MEMBER AT
LEBANON VALLEY COLLEGE IN PA

"This summer definitely helped me make some decisions about my future. I am now more motivated and have determined that I would like to go to graduate school and possibly on to a doctorate. I would then be the first in my family, and I feel like this goal is more achievable than I had viewed it in the past."

REU ALUMNUS, '11

"I loved that the mentors treated us as equals, and were genuinely concerned with our well-being. They wanted to help and support us in every way they could, while still treating us like serious mathematical researchers, rather than just research assistants."

REU ALUMNUS '14

GRAND VALLEY STATE UNIVERSITY

2017 RESEARCH EXPERIENCE FOR UNDERGRADUATES IN MATHEMATICS

FOR MORE INFORMATION

Learn more about these projects and the 2017 Research Experience for Undergraduates in Mathematics program at Grand Valley State University by visiting our website: *gvsu.edu/mathreu/*.

The Grand Valley State University Summer Mathematics REU is funded in part by a pending grant from the National Science Foundation. All projects for the 2017 program are contingent upon funding.

GRAND VALLEY STATE UNIVERSITY
DEPARTMENT OF MATHEMATICS

UNDERGRADUATE RESEARCH FELLOWSHIP OPPORTUNITY

Research Experience for Undergraduates (REU)

Fellowship recipients actively collaborate with faculty members at Grand Valley State University, conducting original research in mathematics, while developing their mathematical communication skills. Past student projects have resulted in publications in professional journals and award-winning presentations at state and national conferences.

gvsu.edu/mathreu

PROGRAM INFORMATION

Dates
Sunday, June 4 to Sunday, July 30, 2017

Eligibility
Participants must be citizens or permanent residents of the U.S. or its possessions, current full-time or part-time undergraduates, and have completed one full year of calculus and one course in linear algebra.

Setting
Beautiful summertime in West Michigan!

Support
$4,000 research stipend, on-campus in air-conditioned housing with your own bedroom, and a generous food allowance.

Application Deadline
Applications received by Friday, February 17, 2017 will receive full consideration. Review of applications will continue until all positions are filled. Applicants will be notified of their acceptance by the end of March.

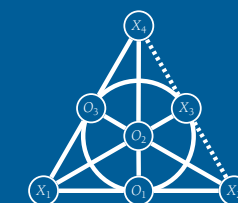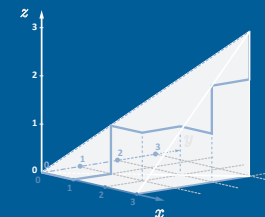## Apply
Online at *gvsu.edu/mathreu*

Questions?
Email Jonathan Hodge, Ph.D., at hodgejo@gvsu.edu

We particularly welcome applications from students belonging to groups traditionally underrepresented in mathematics.

SUMMER RESEARCH TOPICS

GENERALIZED CATALAN NUMBERS
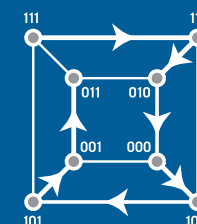Develop and prove combinatorial bijections between sets counted by the generalized Catalan numbers.

ANTI-GAMES ON STEINER TRIPLE SYSTEMS
Explore games played on combinatorial designs where the winner is the last to lose.

GRAPHS AND ELECTION SIMULATION
Use graphs to simulate diverse electorates in referendum elections.

EQUAL CIRCLE PACKING
Find and prove the optimality of dense arrangements of circles on tori or Klein bottles.