

The Laboratory of Geometry at Michigan

The pictures on the front of this card were made by undergraduate students when they participated in the Laboratory of Geometry at Michigan, or LoG(M). In this program, undergraduates work with graduate students and faculty on mathematical projects and problems that arise as part of a faculty member's research. This program is part of a larger network of Geometry Labs including those at the University of Maryland, the University of Illinois at Urbana-Champaign, and the University of Washington. Please see the website <https://sites.lsa.umich.edu/logm/> for more information.

Below are short descriptions of the images.

1. The foliation by annuli generated by the osculating circles of a logarithmic spiral. Patrick Haggerty, Noah Luntzlar, Didac Martinez-Granado, Piriya Korn Piriya Tamwong, Maxime Scott, Dylan Thurston, Mengxi Wang, Sharon Ye
2. The first 600 closed geodesics up to word length in a fundamental domain for a once-punctured torus. Connor Davis, Ben Gould, Mark Greenfield, Luke Kiernan, Nicholas Vlamis
3. A billiards orbit on an ellipse. Amanda Burcroff, Sandrine Daurat, Diana Hubbard, Max Kontorovich, Jasmine Powell, Wenyu Ji
4. Saddle connections of length 50 in a genus two surface. Vignesh Jagathese, Jason Liu, Carsten Peterson, Jacob Shulkin, Matt Stevenson, Alex Wright
5. A visualization of the pairs external rays of the Mandelbrot set that meet at a root point. Mitch Boyce, Sarah Koch, Yi Lu, Jasmine Powell, Jonathan Thomas
6. One view of a 3D model of a tiling of a complex projective domain. Harrison Bray, Samantha Pinella, Rudreshwaran Ranganathan, Steven Schaefer, and Hanissa Shamsuddin, Robert Walker
7. The union of a number of geodesics from the origin to the corners of the box. Adam Azlan, Pat Boland, Francesca Gandini, Melissa George, Mark Greenfield, Yinlan Shao, Haidan Tang
8. A family of 3-intervals with piercing number 2. Yiwang Chen, Connor Puritz, Bennet Sakelaris, Billy Warner, Shira Zerbib
9. Length-minimizing paths in the Taxicab metric. Adam Azlan, Pat Boland, Francesca Gandini, Melissa George, Mark Greenfield, Yinlan Shao, Haidan Tang
10. An ideal quadrilateral obtained by cutting a 3-times punctured sphere along a geodesic. Connor Davis, Ben Gould, Mark Greenfield, Luke Kiernan, Nicholas Vlamis
11. An unfolding billiards orbit on an irregular polygon. Amanda Burcroff, Sandrine Daurat, Diana Hubbard, Max Kontorovich, Jasmine Powell, Wenyu Ji
12. A coloring of the flip graph associated to a convex hexagon in the plane. Francesca Gandini, John Paul Koenig, Sanjana Kolisetty, Zihui Qi, Nicholas Vlamis
13. A second view of a 3D model of a tiling of a complex projective domain. Harrison Bray, Samantha Pinella, Rudreshwaran Ranganathan, Steven Schaefer, and Hanissa Shamsuddin, Robert Walker

