THE OHIO STATE UNIVERSITY

DEPARTMENT OF MATHEMATICS

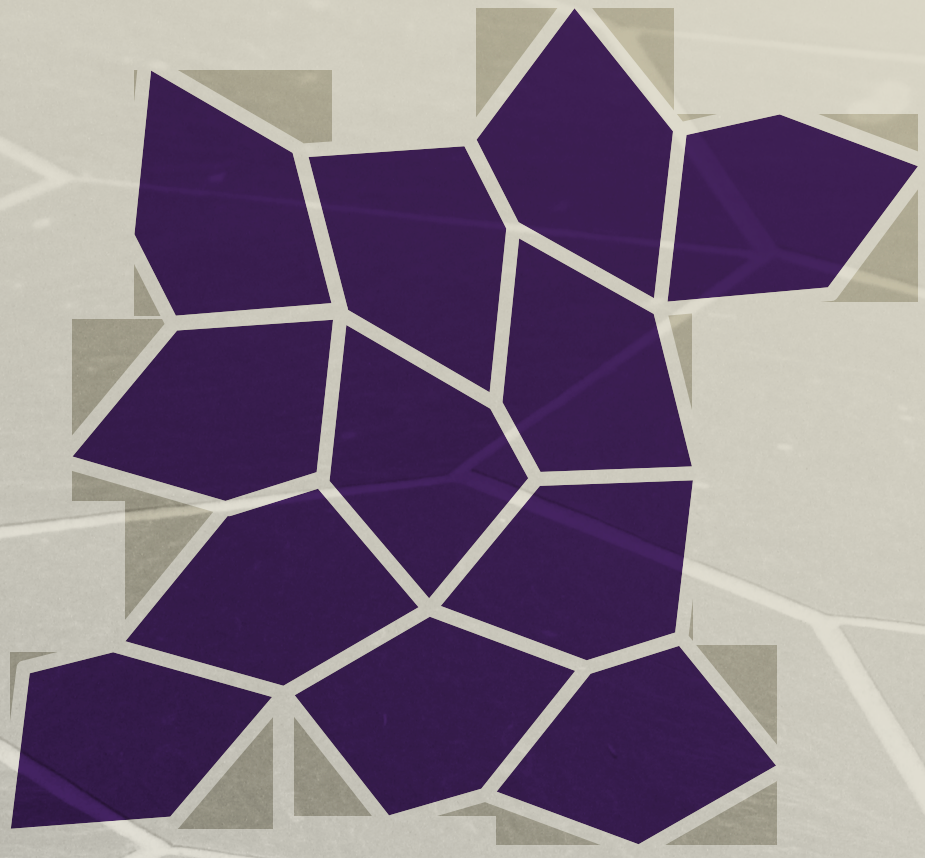
The Tessellation Project

In the early 1990s two Ohio State mathematics professors, Henry Glover and J. Philip Huneke, created designs for the slate floors in each of the seven elevator lobbies of The Ohio State University Mathematics Tower. The patterns depict tessellations of the plane, increasing in complexity as the floor numbers go up.

MARJORIE RICE'S FIRST TILE PATTERN

Seventh Floor

After reading about the discovery of James' pentagon (as shown on the sixth floor), Marjorie Rice, a San Diego housewife and mother of five with no mathematical training, was curious to see if she could find more. Because she came up with her own notation to describe the angles in a pentagon, Rice was able to see things that professional mathematicians had overlooked. In 1976, Rice sent her first discovery of a new tiling pentagon (10), and it was this pentagon that is used for the tessellation design on the seventh floor. In less than a year, Rice discovered three more tessellating pentagons (11-13) and over sixty distinct tessellations using pentagons.



About the Designers

Henry H. Glover joined the Ohio State mathematics faculty in 1968. With a diverse group of collaborators, he tackled problems in fixed-point theory, geometric group theory, and graph theory. In the early 1970s he used the newly developed tool of localization in topology to obtain interesting results about vector fields on manifolds. Glover died on May 31, 2011.

J. Philip Huneke was a member of the mathematics department for 35 years. Huneke solved concrete mathematical problems that required both insight and careful attention to detail. His best-known work (in collaboration with Glover) is the determination of the complete list of 103 graphs that are obstructions to embedding a graph in the projective plane. Huneke died on October 1, 2004.

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