

# The Tessellation Project

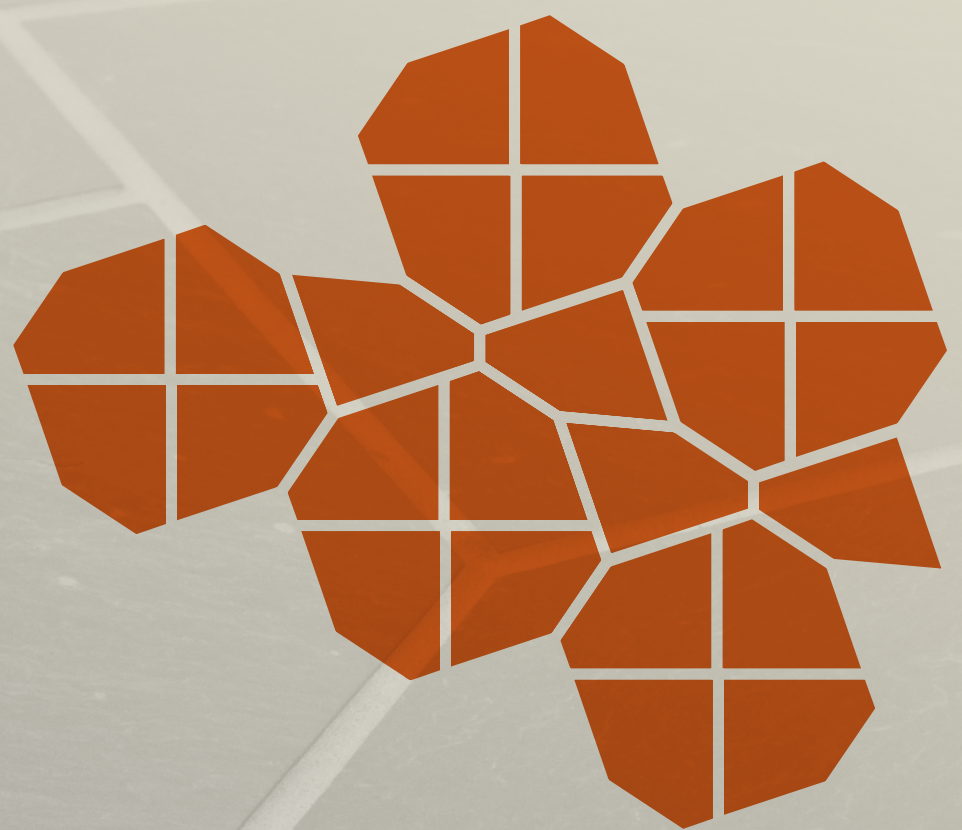
In the early 1990s two Ohio State mathematics professors, Henry Glover and J. Philip Huneke, created designs for the slate floors in each of the seven elevator lobbies of The Ohio State University Mathematics Tower. The patterns depict tessellations of the plane, increasing in complexity as the floor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

## RICHARD JAMES III'S CONVEX PENTAGON TILE

### Sixth Floor

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In 1918, K. Reinhardt discovered five different families of convex pentagons that could tile the plane (1-5). This was the complete list until 1968, when Richard Kershner wrote about three more families of tiling pentagons (6-8). Martin Gardner wrote about the complete list of eight tiling pentagons in 1975, and then received a message from Richard James III about another type (9). This pattern was reported in Gardner's column in the December 1975 issue of *Scientific American* and is the pattern on the sixth floor.



## 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.