1067-52-1772   **Casey Mann*** (`cmann@uttyler.edu`), The University of Texas at Tyler, Department of Mathematics, 3900 University Blvd, Tyler, TX 75799. *Heesch Numbers of Polyforms with Edge Matching Rules.* Preliminary report.

The author presents the more interesting results of an extensive computerized search for the Heesch numbers of edge-marked polyforms. The Heesch number of a tile is the maximum number of layers formed from copies of the tile in a patch which may surround a centrally placed copy of the tile. A polyform of order n is a tile formed from n equilateral triangles, squares, or regular hexagons. In this study, the edges of polyforms were marked in various ways (matching colors, matching bumps and nicks, directed edges, and combinations thereof). (Received September 21, 2010)