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Margaret Bayer* (bayer@ku.edu), **Marija Jeli'c Milutinovi'c** and **Julianne Vega**. *Matching Complexes of Planar Tilings*. Preliminary report.

The matching complex of a graph is the simplicial complex whose vertex set is the set of edges of the graph with a face for each independent set of edges. Much research has been done on the topology of matching complexes of specific classes of graphs, especially complete graphs and complete bipartite graphs. This project looks at the topology of matching complexes of polygonal tilings. We use tools from the study of independence complexes of graphs and discrete Morse theory. (Received September 18, 2021)