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**Stephen Krughoff\*** ([krughofs@math.oregonstate.edu](mailto:krughofs@math.oregonstate.edu)), Department of Mathematics, Kidder Hall 368, Oregon State University, Corvallis, OR 97331. *The topology of moduli spaces of planar pentagons with singularities*. Preliminary report.

We consider the topology of the space of polygons with fixed edge-lengths in the Euclidean plane, modulo orientation preserving isometries. The topology of such spaces does depend on the combinatorics of the fixed edge-lengths, but these spaces are generically manifolds. Kapovich and Millson studied these manifold topologies in 1995, and much of the subsequent research has focused on the manifold case. For certain edge-lengths, however, singularities can arise. In this talk I'll adapt Kapovich and Millson's techniques to study the possible singular topologies of moduli spaces of planar pentagons. (Received February 01, 2018)