

1153-57-381

D Chambers, E Flapan, E Lawrence* (edlawrence@usfca.edu), **D Heath, C Thatcher** and **R Vanderpool**. *Topological symmetry groups of the Petersen graph*.

The study of graphs embedded in S^3 was motivated by chemists' need to predict molecular behavior. The symmetries of a molecule can explain many of its chemical properties. Moreover, flexible molecules may have symmetries that are not merely a combination of rotations and reflections. Such symmetries prompted topologists to introduce the concept of the *topological symmetry group* of a graph in S^3 . We will discuss recent work on the classification of all groups which arise as the topological symmetry group for some embedding of the Petersen graph. (Received September 02, 2019)