Mathematics
Seminar

Euler's Polyhedron Formula and The Euler Characteristic

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Abstract: A standard soccer ball is constructed using 12 regular pentagons and 20 regular hexagons. Is it possible to build one using only pentagons? How about only hexagons? It turns out that one of these is possible and one is not! The key to answering these questions is Euler's Polyhedron Formula, which expresses a certain relationship between the number of vertices, edges, and faces in any convex polyhedron. In this talk, we will discuss this formula, the more general Euler characteristic, and applications such as the classification of the Platonic solids and triangulations of surfaces.

Friday, February 4, 2022, 10:00 am
MSC W201 and Zoom

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