

UNIVERSITY OF DELAWARE
DEPARTMENT OF MATHEMATICAL SCIENCES
DISCRETE MATHEMATICS SEMINAR

Friday Nov. 21, 2003, 4:00pm, Room 436 Ewing Hall

Regular maps are the most beautiful maps

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An (orientable) *map* is a 2-cell embedding of a graph in an orientable surface. A map is called *regular* if its orientation preserving automorphism group acts transitively on its arcs. Regular maps possess the largest possible level of *symmetry*, with the best known examples being the *Platonic solids*. Regular maps have played a substantial role in several famous problems in topological graph theory and group theory.

A *Cayley map* is an embedding of a Cayley graph that has a group of automorphisms acting regularly on the vertices of the map. In our talk, we will present some of the most recent results concerning an ongoing classification of all regular Cayley maps of finite groups.