

CENTRAL MICHIGAN UNIVERSITY
Department of Mathematics
GRADUATE STUDENT
SEMINAR

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MAP ENUMERATION

Tuesday, April 25, 4:00 pm - 5:00 pm
Pearce Hall, Room 227

A combinatorial map is an embedding of a graph onto a surface. Maps are fundamental objects in combinatorics and there has been extensive study on the enumeration of specific families of these objects. Map enumeration has become an important topic under active research. The counting of different families of maps has shown to be connected to other fields outside of combinatorics including algebra, topology, random matrix theory, and theoretical physics.

In this talk several independent definitions of combinatorial maps will be given. Some basic examples of map counting will be presented and then solved by both bijective and recursive approaches. These examples will highlight some general enumerative proof techniques which can be extended to more difficult problems. Finally, a brief discussion will be given about current research on map enumeration, and the importance of the topic to fields outside of combinatorics.