



Department of Mathematics and Statistics

Colloquium

Tuesday November 5

AMB 164 4:00 - 5:00 pm

## Hued coloring on graphs without certain minors

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### Abstract

A graph  $H$  is a minor of a graph  $G$  if  $H$  is isomorphic to the contraction of a subgraph of  $G$ . The famous Four Color Theorem is about the vertex coloring of planar graphs, and Kuratowski's Theorem told us that a graph is planar if and only if it contains no  $K_5$  (complete graph on 5 vertices) minor and  $K_{3,3}$  (complete bipartite graph on 3+3 vertices) minor. This theorem gives us a motivation in studying graph coloring on graphs without certain minors.

I will first give a detailed introduction with examples on the hues coloring and graph minor, then summarize some recent results on hues coloring of graphs without certain minors. Lastly, I will talk about the charge discharge method that may be useful for the hues coloring study on outerplanar graphs. Simple examples that can be solved by charge discharge method will be given.

Refreshments at 3:45