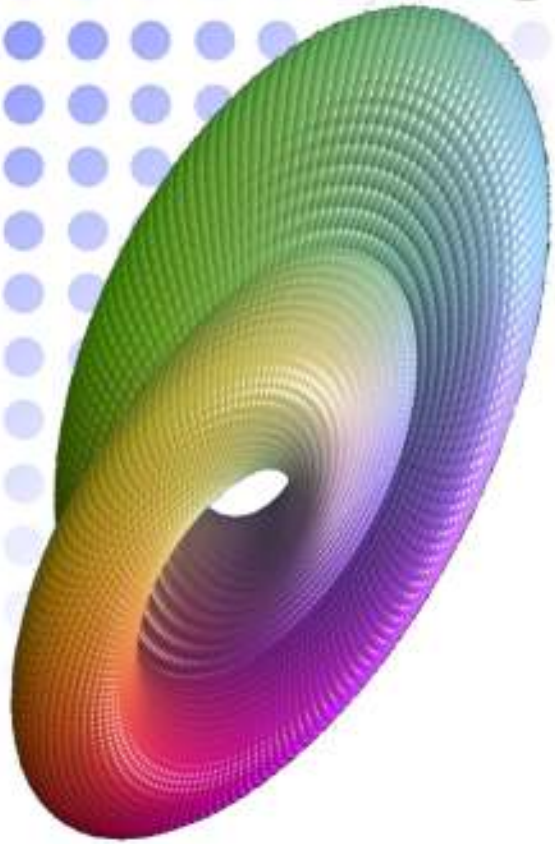
Michigan Math Club

Thursday at 4pm in the Commons

Free Pizza and Pop



The Graph Minor Theorem

Alexander Leaf

Abstract for 12 February 2015

Given a graph G and a surface M, when can G be drawn on M so that its edges don't cross each other? If M is the plane, then Wagner's Theorem tells us that G can be drawn on M if and only if G does not contain the graphs K_5 or $K_{3,3}$ as minors. Robertson and Seymour's celebrated Graph Minor Theorem, proven in 2004, implies that every surface has such a "forbidden minor" characterization. We will give a more general statement of this theorem, and discuss some of its remarkable consequences. No prior knowledge of graph theory will be assumed.