

Michigan Math Club

Thursday at 4pm in the Commons
Free Pizza and Pop



Circle Packings and the Combinatorial Riemann Mapping Theorem

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Abstract for 22 January



The Riemann mapping theorem asserts that every simply connected, meaning without holes, domain in the plane is equivalent to the unit disk via a map that preserves angles. I will explain the statement of the theorem and sketch a proof due to Thurston. The idea is to construct combinatorial approximations of the desired map using circle packings. In particular, the proof yields a computer implementable algorithm to approximate the Riemann map numerically.