



Mathematics Colloquium

Degenerations of Riemann surfaces together with a meromorphic differential

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Abstract

The Deligne-Mumford compactification of the moduli space of Riemann surfaces is obtained by allowing (singular) nodal Riemann surfaces. In various questions in Teichmüller dynamics and algebraic geometry, it is natural to consider degenerations of a family of Riemann surfaces together with a differential. The main difficulty then is that in the limit the differential may become identically zero on some components of the nodal curve. We will describe recent joint works with M. Bainbridge, D. Chen, Q. Gendron, M. Möller, and with I. Krichever and C. Norton, which aim at constructing compactifications preserving more information about degenerations of differentials, and at describing the limits geometrically.

Wednesday, 1 November 2017, 4pm

Smith Hall 204

Tea and refreshments will be served at 3:45pm.