



Teichmüller Theory Seminar

Arcs and orthogeodesics on hyperbolic surfaces

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Abstract

Let X be a compact hyperbolic surface with either geodesic or horocyclic boundary. The homotopy class (rel the boundary) of a non-trivial arc from the boundary to itself can be realized by an *orthogeodesic*- a geodesic segment perpendicular to the boundary at its initial and terminal points. This talk is about a special subclass of orthogeodesics called *prime* orthogeodesics. In work with Hugo Parlier and Ser Peow Tan we show that the prime orthogeodesics arise naturally in the study of maximal immersed pairs of pants in X and are intimately connected to regions of X in the complement of the natural collars. These considerations lead to continuous families of equations (so called *identities*) that remain constant on the deformation space of hyperbolic structures.

Monday, 11 April 2016, 4pm

Smith Hall 204