Canonical hyperbolic laminations

John C. Mayer (University of Alabama at Birmingham)
`jcmayer@uab.edu`

Abstract: A *lamination* of the closed unit disc $\overline{\mathbb{D}}$ is a collection of chords of the disc that meet, if at all, only in the boundary $\mathbb{S}$ of the disc (which we parametrize by $[0, 1)$). We are interested in laminations which are forward and backward invariant under the angle-d-tupling map $\sigma_d : \mathbb{S} \to \mathbb{S}$ defined by $\sigma_d(t) = dt \pmod 1$. Laminations are a topological/combinatorial way to model the action of a complex polynomial on its connected Julia set in the plane $\mathbb{C}$. We will introduce the notion of a *canonical hyperbolic lamination*, determined by a collection of periodic chords or polygons (formed of chords). As a starting point, the empty lamination models a simple closed curve Julia set, which occurs if all critical points of a polynomial are attracted to a single fixed point.