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Weil-Petersson analogs for metric graphs

Thurston observed that given a sequence of closed geodesics on a surface which are in some sense uniformly distributed, by taking a certain kind of limit, their length functions can be used to define a Riemannian metric over Teichmüller space. Wolpert later proved that this metric is essentially the Weil-Petersson metric. Using this dynamical characterization, Pollicott-Sharp and Kao have defined Weil-Petersson analogs on moduli spaces of metric graphs, and have investigated their properties in some low-rank cases. We will summarize and motivate some of these constructions, and describe some ongoing and preliminary results regarding the large scale properties of these metrics in arbitrary rank. This represents joint work with Matt Clay and Yo’av Rieck.