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Infinitesimal Geometry of Thurston's Lipschitz metric on the Teichmüller space.

Teichmüller space can be equipped with a metric using the hyperbolic structure of a Riemann surface, as opposed to the conformal structure that is used to define the Teichmüller metric. This metric, which is asymmetric, was introduced by Thurston and has not been studied extensively. However, it equips Teichmüller space with a distinctive and rich structure. We examine the infinitesimal geometry of this metric. In the case of the punctured torus, we prove a version of Royden's theorem for Teichmüller metric, namely, we show that the metric is totally non-homogenous.