

The Teichmüller distance between subgroups of $\mathrm{PSL}(2, \mathbb{Z})$

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Abstract

In this talk I will explain what is the Teichmüller space of the solenoid. Several results will be discussed. One of those states the following. For a given $\epsilon > 0$, there exist two finite index subgroups of $\mathrm{PSL}(2, \mathbb{Z})$ which are $(1 + \epsilon)$ -quasisymmetrically conjugated and the conjugation homeomorphism is not conformal (moreover one can arrange that these two groups are not conformally conjugated). This implies that for any $\epsilon > 0$ there are two finite regular covers of the Modular once punctured torus T_0 (or just the Modular torus) and a $(1 + \epsilon)$ -quasiconformal map between them that is not homotopic to a conformal map. As an application of this results, one can show that the orbit of the basepoint in the Teichmüller space $T(S)$ of the punctured solenoid S under the action of the corresponding Modular group has the closure in $T(S)$ strictly larger than the orbit and that the closure is necessarily uncountable.

This is a joint work with D. Saric.