Deformations and Self-Maps of the Universal Hyperbolic Solenoid

The universal solenoid H_{∞} is a genus independent generalization of the notion of a compact surface of genus greater than 1 ("the universal compact surface"). It is defined as the inverse limit of the set of all finite sheeted coverings of a compact surface of genus greater than 1. This is a compact space locally homeomorphic to a disk times a Cantor set. We investigate the quasiconformal deformations of the complex structures on the solenoid H_{∞} , namely the Teichmüller space $\mathcal{T}(H_{\infty})$ of the solenoid. We are particularly interested in the Teichmüller metric and the complex structure on $\mathcal{T}(H_{\infty})$. In a joint work with V. Markovic, we investigate quasiconformal self-maps and corresponding Mapping class group of the solenoid.