

Rigidity of topological entropy of boundary maps associated to Fuchsian groups

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Given a closed, orientable surface of constant negative curvature, we study a family of generalized Bowen–Series boundary maps, with each map defined for a particular fundamental polygon for the surface and a particular multi-parameter. We prove the following rigidity result: the topological entropy is constant and depends only on the genus of the surface. This is in contrast to a previous result that measure-theoretic entropy varies greatly within Teichmüller space. We give explicit formulas for both of these entropies. The proofs of rigidity use conjugation to maps of constant slope.

This work is joint with Svetlana Katok and Ilie Ugarcovici.