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Dan Margalit* (margalit@math.gatech.edu), 686 Cherry St., School of Mathematics, Atlanta, GA 30332. *Algebraic, geometric, and dynamical aspects of surfaces.*

To each homeomorphism of a surface we can associate a real number, called the entropy, which encodes the amount of mixing being effected. This number can be studied from topological, geometrical, dynamical, analytical, and algebraic viewpoints. We will start by explaining Thurston's beautiful insight for computing the optimal entropy within a homotopy class and explain a new, fast algorithm based on his ideas. Then we will discuss some classical results and recent progress on the problem of understanding phenomena related to small entropy. One theme is that algebraic complexity and geometric complexity both imply dynamical complexity. This work is joint with Ian Agol, Benson Farb, Chris Leininger, and Oyku Yurttas. (Received January 31, 2015)