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**Alex Eskin\*** ([eskin@math.uchicago.edu](mailto:eskin@math.uchicago.edu)). *The  $SL(2, \mathbb{R})$  action on moduli space.*

I will discuss ergodic theory over the moduli space of compact Riemann surfaces and its applications to the study of polygonal billiard tables. There is an analogy between this subject and the theory of flows on homogeneous spaces; I will talk about some successes and limitations of this viewpoint. This is joint work with Maryam Mirzakhani and Amir Mohammadi. (Received May 10, 2015)