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Paul Apisa*, 5442 S Ellis Ave, Chicago, IL 60615, and **Hamid al-Saqban, Alena Erchenko, Osama Khalil, Shahriar Mirzadeh, Caglar Uyanik** and **Howard Masur**. *Hausdorff Dimension, Divergence, and Teichmuller Geodesic Flow!*

The moduli space of Riemann surfaces is an intrinsically inhomogeneous space (in a sense made precise by Farb and Weinberger), yet the dynamics of Teichmuller geodesic flow exhibit many hallmarks of homogeneous dynamics. What mechanism accounts for the homogeneity?

For example, given a quadratic differential there is a circle of directions in which to apply Teichmuller geodesic flow. By results of Eskin and Chaika, the set of directions that diverge on average (i.e. spend asymptotically no time in any compact set) is measure zero. In this talk I will describe new results that say that no matter which quadratic differential you choose, the set of directions that diverge on average always has Hausdorff dimension one-half.

The talk will begin with motivation from continued fractions and will assume no background on Teichmuller geodesic flow. The lower bound is joint work with Masur and the upper bound is joint work with al-Saqban, Erchenko, Khalil, Mirzadeh, and Uyanik. (Received February 11, 2018)