

1119-37-26

Brandon Edwards* (edwardbr@math.oregonstate.edu). *A new characterization for elements of a Veech Group*. Preliminary report.

Translation surfaces are topological surfaces that when punctured are equipped with an atlas of local charts to the complex plane for which the transition functions are translations. This atlas gives us a well defined notion of whether or not a map from one translation surface to another has a constant Jacobian or is 'affine'. The Veech group of a translation surface is the group of Jacobians of orientation preserving affine homeomorphisms of the surface. The size of this group can inform us on the dynamics (periodic/ergodic) of the geodesic flow in a given direction [Veech 1989]. I will discuss an equivalent condition for Veech group membership that I use in an algorithm for computing generators of lattice Veech groups. (Received January 15, 2016)