

Hecke continued fractions and connection points on Veech surfaces

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Abstract.

The purpose of the talk is to introduce so called Hecke continued fractions and explain a correspondence between real numbers having finite (resp. eventually periodic) Hecke continued fraction expansion and slopes of vertex-to-vertex trajectories on double regular polygon translation surfaces (following Veech, and Schmidt-Sheingorn). We will use this correspondence to obtain results on so-called "connection points" on translation surfaces, and finally give an application to billards trajectories in regular polygons as well as a few conjectures (if we have time).