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# Affine Surfaces (2)

*mardi 11 février 2025 10:30 (1 heure)*

The goal of this series of talks is to present some elements of the dynamics and topology of affine surfaces, with a focus on two subclasses: translation surfaces and dilation surfaces in the compact case.

We will begin with translation surfaces, introducing their deformation space and explaining a fundamental connection between their dynamics and the dynamics within this space, known as Masur's criterion. This criterion is a key ingredient in proving that unique ergodicity is generic for translation surfaces.

After becoming familiar with this subclass of affine surfaces, we will turn to a more general class: dilation surfaces. While these surfaces share many structural similarities with translation surfaces, their dynamics and topology generally exhibit significantly different behaviors. We will discuss their expected generic dynamics (which represent the simplest behavior from a dynamical perspective) and present a beautiful result by Veech on their triangulations.

If time permits, we will conclude by exploring some non-generic intermediate dynamical behaviors, such as the emergence of strange attractors, which can appear even in simple examples of dilation surfaces.

**Orateur:** FOUGERON, Charles