

Parabolic flows and slow chaos

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Parabolic or 'slowly chaotic' dynamical systems are systems which display a 'slow' form of 'butterfly effect'. Examples include many important models coming from physics (such as the Ehrenfest and Novikov models of metals) and many fundamental flows in mathematics (such as horocycle flows or smooth flows on surfaces), but are much less understood than 'fast chaotic' (hyperbolic) dynamical systems. We will survey some of the recent advances in our understanding of typical chaotic features as well as key mechanisms which explains them, achieved exploiting a mixture of dynamical, analytic and geometric techniques.