

Outer billiards and polygon exchange maps

Richard Schwartz

Brown University

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Abstract

Outer billiards is a dynamical system based on a convex shape in the plane. Unlike ordinary billiards, the game is played on the outside of the shape. The system produces beautiful and mysterious tilings of the plane, about which little is known. I'll explain how outer billiards works, show some colorful computer demos, and also explain some of the work I've done in the subject.