



Department of Mathematics and Computer Science

**Dr. Sarah Frick**

Ohio State University

*Symbolic Dynamics, Ergodic Theory, and  
Bratteli-Vershik Systems*

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Symbolic dynamics arose as a method for studying evolving systems by discretizing both time and space. Ergodic theory is the study of the long term average behavior of evolving systems. In this talk we will give a brief overview of both of these subjects. Bratteli diagrams are infinite downward directed graphs where vertices are partitioned into levels with edges connecting vertices in consecutive levels. We consider the space of infinite paths, together with an adic transformation to form a Bratteli-Vershik system. We will discuss some of the ergodic properties of these systems, particularly ergodic invariant measures as well as some connections with reinforced random walks.

**Monday, January 26, 2009 at 5:00pm**

**in Ohlendorf 225**

**Refreshments at 4:30 in the Math Library**