Abstract. In this introductory talk, we explore the concept of chaos from a statistical point of view, which is a basic idea for the ergodic theory of chaotic dynamical systems. A class of positive operators called Frobenius-Perron operators will be introduced in an elementary way for the investigation of invariant measures that give statistical properties of chaotic maps. We also present structure-preserving numerical methods for approximating Frobenius-Perron operators, particularly the famous Ulam method.

There will be a reception for Dr. Ding in Allen 467 at 3:00 pm.

Contact Chuanxi Qian, qian@math.msstate.edu or (662) 325-7148, for additional information.