

962-B1-18

Pat Touhey* (ptouhey@miseri.edu), Pat Touhey, Mathematics and Computer Science, College Misericordia, Dallas, PA 18612. *Persistent Properties of Chaos*.

Given a continuous, chaotic map f on the metric space X we investigate the persistence of the properties defining chaos. That is to say, does $F = f^m$ necessarily retain any or all of the properties of chaos; transitivity, density of periodic points and sensitive dependence on initial conditions, for all m ? The answer for the latter two properties is affirmative while negative for the first. (Received June 02, 2000)