Mackey, M. C.; **Glass, L.**

Oscillation and chaos in physiological control systems. (English) Zbl 1383.92036

Science 197, No. 4300, 287-289 (1977).

Summary: First-order nonlinear differential-delay equations describing physiological control systems are studied. The equations display a broad diversity of dynamical behavior including limit cycle oscillations, with a variety of wave forms, and apparently aperiodic or "chaotic" solutions. These results are discussed in relation to dynamical respiratory and hematopoietic diseases.

MSC:

92C50	Medical applications (general)
34C15	Nonlinear oscillations and coupled oscillators for ordinary differential equations
37D45	Strange attractors, chaotic dynamics of systems with hyperbolic behavior
37N25	Dynamical systems in biology

Keywords:

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