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#dynamical systems #chaos theory #nonlinear dynamics #mathematical sciences textbook #introduction to chaos

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Example: Planetary Dynamics
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Dynamics
Modern Challenges
Nonlinear Challenges
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The three great theorems of 20th Century mathematics
The concept of State Space
Lorenz State Space
Cantor's Set and the prototype fractal
Hilbert's Decision Problem
The link between 20th Century mathematics and fractal geometry
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Random matrices
The Manhattan Project
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The Orbit Is a Periodic
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Part G
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Conclusion
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Stretching Process
Rustler Equations
Model of the Wrestler Attractor
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Types of Dynamical Systems Iterated Functions and Differential Equations
Differential Equations
Newton's Law of Cooling
Solving Differential Equations
Analytic Methods
Euler's Method
Uniqueness and Existence
The Butterfly Effect
Algorithmic Randomness
Iterated Functions
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Dynamical Systems
Differential Equation
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Bifurcation Diagrams
Bifurcation Diagram
Cubic Equation
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Intro
5.1- WHAT IS DYNAMICAL SYSTEM

A DYNAMICAL SYSTEM HAS TWO PARTS
Classification of Dynamical Systems
When a Dynamical System is Deterministic?
Discrete Vs Continuous Models
Discrete System
Continuous System
Differential equations
Linear vs. Nonlinear System
Autonomous Vs. Nonautonomous system
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