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CHAPTER 6. LYAPUNOV EXPONENTS 121 Figure 6.3: A Numerical Computation Of The Loga- Rithm Of The Stretch ^n >(Jt Jt)^n In Formula (6.10) For The Rössler flow (2.28), Plotted As A Function Of The Rössler Time Units. The Slope Is The Leading Lyapunov Exponent Jan 13th, 2024

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AppendixA Computing Lyapunov Exponents For Time-Delay Systems

Largest Nonzero Lyapunov Exponent λm Among The N Lyapunov Exponents Of The N-dimensional Dynamical System. A.2.1 Computation Of Lyapunov Exponents To Compute The N-Lyapunov Exponents Of The N-dimensional Dynamical System (A.1), A Reference Trajectory Is Created By Integrating The Nonlinear Equations Of Motion (A.1). Jan 4th, 2024

Project 2: Largest Lyapunov Exponents

This Simulation Investigates The Chaotic Behaviour Of This System Over This Range By Calculating The Largest Lyapunov Exponent (LLE) For Both V (t) And X(t). As The System Formulas Are Available, Wolf's Algorithm [3] Can Be Used To Determine The LLEs. As A Cross-check, A Time-series Is Generated And Analyzed For LLEs Using Rosenstein's [1 ... Jan 16th, 2024

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2.2. Largest Lyapunov Exponent . Lyapunov Exponents (EL) Measure The Rate Of Divergence Or Convergence Of Initially Nearby Trajectories In A Phase Space And Estimate The Amount Of Chaos In A System. LE Is Often Represented By The Greek Letterλ. A System Is Allowed To Develop From Two Slightly Different Initial States: X And X + ε. Feb 4th, 2024

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