

Abstract Submitted
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On Control of Chaos in the Rössler system JULIAN ANTOLIN CAMARENA, University of Texas at El Paso, ROMAN GRIGORIEV, Georgia Institute of Technology, REU PROGRAM AT THE CNS AT THE GEORGIA INSTITUTE OF TECHNOLOGY TEAM — In order to control chaos, a deep understanding is required on top of good amounts of mathematical and computational work: First, the system must be numerically integrated to acquire data in order to construct a Poincare map, this is necessary in order to construct the iterate maps from which the periodic orbits and fixed points (period-1 orbits). Second, the Jacobian is computed at each fixed point. From the Jacobian the eigenvalues and eigenvectors are obtained in order to identify the stable and unstable manifolds. From this point on, one can apply the necessary control algorithms to achieve the desired, predetermined, and controlled system dynamics.

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