

Abstract Submitted
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Stability and Robustness against System Parameter Drift of Algorithms for the Control of Low Dimensional Chaos¹ THOMAS OLSEN, KJELL SCHRODER, Lewis & Clark College, Portland, OR, KATHERINE CARRIKER, BONITA SQUIRES, KARA YEDINAK, RICHARD WIENER, Pacific University, Forest Grove, OR — Previously, we have demonstrated that the chaotic formation of Taylor-Vortex pairs in Modified Taylor-Couette flow with hourglass geometry may be controlled by the application of the Recursive Proportional Feedback algorithm^{2,3}. We have developed analogous algorithms that may be more effective in changing environments, where system parameters may drift. We present numerical simulations and analysis to determine the stability and robustness of these new algorithms against such drift.

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²Rollins *et al*, Phys. Rev. E **47**, R780 (1993).

³Wiener *et al*, Phys. Rev. Lett. **83**, 2340 (1999).

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