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Eric Forgoston* (eric.forgoston@montclair.edu), **Lora Billings**, **M. Ani Hsieh**, **Ira B. Schwartz** and **Philip Yecko**. *Collaborative tracking and control in stochastic dynamical systems*.

We consider the problem of stochastic prediction and control in a time-dependent stochastic environment, such as the ocean, where escape from an almost invariant region occurs due to random fluctuations. Lagrangian Coherent Structures (LCS) are found using collaborative tracking, and a control policy is formulated that utilizes knowledge of the LCS. The control strategy is evaluated with experimental and ocean data. (Received January 27, 2014)