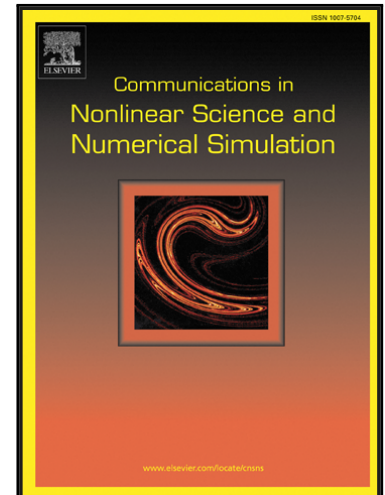


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Stabilizing constrained chaotic system using a symplectic  
psuedospectral method

Haijun Peng , Xinwei Wang , Boyang Shi , Sheng Zhang ,  
Biaosong Chen

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### Highlights

- Stabilization of constrained chaotic system is solved under the frame of nonlinear optimal control.
- The constrained nonlinear optimal control problem with arbitrary Lagrange-type cost function is solved.
- The proposed method satisfies the necessary conditions of nonlinear constrained optimal control problem.
- The proposed method is applied to stabilizing constrained chaotic systems around an unstable periodic orbit.

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