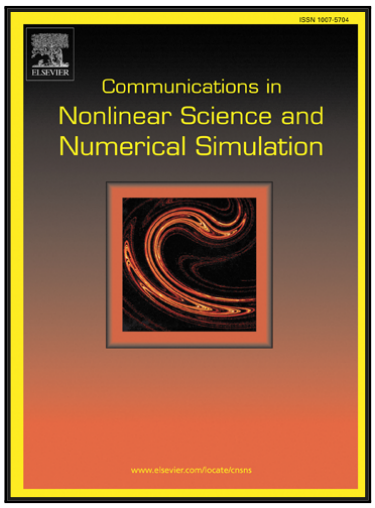

Chimera states in nonlocally coupled phase oscillators with biharmonic interaction

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PII: S1007-5704(17)30266-6
DOI: 10.1016/j.cnsns.2017.07.015
Reference: CNSNS 4271

To appear in: *Communications in Nonlinear Science and Numerical Simulation*

Received date: 16 July 2016
Revised date: 13 July 2017
Accepted date: 18 July 2017

Please cite this article as: Hongyan Cheng, Qionglin Dai, Nianping Wu, Yuee Feng, Haihong Li, Junzhong Yang, Chimera states in nonlocally coupled phase oscillators with biharmonic interaction, *Communications in Nonlinear Science and Numerical Simulation* (2017), doi: 10.1016/j.cnsns.2017.07.015

Highlights

- Chimera dynamics in nonlocally coupled phase oscillators with biharmonic interaction are investigated.
- In chimera states unique to biharmonic interaction, adjacent coherent clusters may have a phase difference pi/2 and oscillators in a same coherent cluster may split into two groups with phase difference pi/2.
- Multi-cluster chimera states with more than 2 coherent clusters matter for phase oscillators without delay in interaction.