

1096-VL-1634 **Mark J Panaggio***, markpanaggio2014@u.northwestern.edu, and **Daniel M Abrams**. *Chimera states on periodic spaces*.

Diverse phenomena ranging from the blinking lights of fireflies to the footfalls of pedestrians on a bridge to the firing of nerve cells in the brain can be modeled as arrays of coupled oscillators. Although incoherence and synchronization are the norm in these arrays, complex spatiotemporal patterns such as “chimera states”—where incoherence and coherence coexist—have been observed both computationally and experimentally in a variety of systems. I will use an analytical approach to characterize various types of chimera states (including stripes, spots and spirals) that have been observed in two-dimensional periodic spaces, and discuss the relationship between the coupling scheme and the stability of these exotic dynamic patterns. (Received September 16, 2013)