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Rachel Neville* (neville@math.colostate.edu). *Persistent Homology of Dynamical Systems on Networks*.

In this talk, we will look at patterns in networks of dynamical systems revealed through an extension of the ideas in persistent homology. Persistent homology is a technique in computational topology that captures multi-scale information regarding the longevity or size of topological features of data. In this case data is generated by networks of dynamical systems. To compare persistence diagrams, a technique called persistence images is used, which allows for machine learning techniques to be applied to persistence diagrams. (Received September 22, 2015)