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**Jerome Goddard II\*** (jgoddard@aum.edu), **J. T. Cronin** (jcronin@lsu.edu) and **R. Shivaji** (shivaji@uncg.edu). *Effects of interaction-mediated dispersal on the persistence of a population.*

Dispersal of an organism plays an important role in its individual fitness, population dynamics, and species distribution. In the literature, dispersal is loosely applied to movement over different spatial scales, e.g. movement between habitat patches separated in space from other areas. Recently, ecologists have found that interacting organisms can affect one another's dispersal, a phenomenon known as interaction-mediated dispersal. Little is known regarding the patch-level consequences of habitat fragmentation of interacting species in the presence of interaction-mediated dispersal. In this talk, we will explore effects of habitat fragmentation and interaction-mediated dispersal on patch-level population dynamics through development and study of a model built on the reaction diffusion framework. The focal point of our results will be concerned with a one-dimensional patch and relies upon adaptation of methods from nonlinear analysis such as time map analysis (quadrature method). In particular, we will elaborate on the biological importance of these results. (Received January 24, 2019)