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**Wenjie Ni** and **Junping Shi\*** (jxshix@wm.edu), Department of Mathematics, College of William and Mary, Williamsburg, VA 23187-8795, and **Mingxin Wang**. *Global stability and pattern formation in a nonlocal diffusive Lotka-Volterra competition model.*

A diffusive Lotka-Volterra competition model with nonlocal intraspecific and interspecific competition between species is formulated and analyzed. The nonlocal competition strength is assumed to be determined by a diffusion kernel function to model the movement pattern of the biological species. It is shown that when there is no nonlocal intraspecific competition, the dynamics properties of nonlocal diffusive competition problem are similar to those of classical diffusive Lotka-Volterra competition model regardless of the strength of nonlocal interspecific competition. Global stability of non-negative constant equilibria are proved using Lyapunov or upper-lower solution methods. On the other hand, strong nonlocal intraspecific competition increases the system spatiotemporal dynamic complexity. For the weak competition case, the nonlocal diffusive competition model may possess nonconstant positive equilibria for some suitably large nonlocal intraspecific competition coefficients. (Received September 19, 2017)