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Yun Kang* (yun.kang@asu.edu), 7001 E. Williams Field Rd., Mesa, AZ, and **O. Aydogmus**, **M. E. Kavgaci** and **H Bereketoğlu**. *Dynamical effects of nonlocal interactions in discrete-time growth-dispersal models with logistic-type nonlinearities.*

This talk is devoted to the study of discrete time and continuous space models with nonlocal resource competition and periodic boundary conditions. We consider generalizations of logistic and Ricker's equations as intraspecific resource competition models with symmetric nonlocal dispersal and interaction terms. Both interaction and dispersal are modeled using convolution integrals, each of which has a parameter describing the range of nonlocality. It is shown that the spatially homogeneous equilibrium of these models becomes unstable for some kernel functions and parameter values by performing a linear stability analysis. To be able to further analyze the behavior of solutions to the models near the stability boundary, weakly nonlinear analysis, a well-known method for continuous time systems, is employed. We obtain Stuart–Landau type equations and give their parameters in terms of Fourier transforms of the kernels. This analysis allows us to study the change in amplitudes of the solutions with respect to ranges of nonlocalities of two symmetric kernel functions. Our calculations indicate that supercritical bifurcations occur near stability boundary for uniform kernel functions. We also verify these results numerically for both models. (Received September 25, 2017)