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Evan Milliken* (evan.milliken@asu.edu) and **Hal L. Smith.** *Embedding a One-to-one Infection Network into a Nested Infection Network.*

Bacteria and bacteriophages have been observed in the wild in complex infection networks. It has been shown that a perfectly nested or one-to-one infection network is permanent, or uniformly persistent, as long as the bacteria and bacteriophages obey certain orderings with respect to their efficiencies. In this talk, a model is proposed for the case in which a one-to-one network is embedded into a nested infected network. Conditions are given for the existence of a positive coexistence equilibrium and for the permanence of the network. The stability of the coexistence equilibrium is analyzed and results are compared to stability results for networks with either one-to-one or nested structure, but not both. (Received September 25, 2017)