

Evolution of dispersal with starvation measure and coexistence

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Many biological species increase their dispersal rate if starvation starts. To model such a behavior, we need to understand how organisms measure starvation and response to it. In this talk, we compare three different ways of measuring starvation by applying them to starvation-driven diffusion. The evolutionary selection and coexistence of such starvation measures are studied within the context of Lotka-Volterra-type competition model of two species. We will see that, if species have different starvation measures and different motility functions, both the coexistence and selection are possible. This is the joint work with Y.-J. Kim.