Mathematical Biology Seminar

Monday, February 24, 2020
3 pm – 457 CAB

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The effect of random dispersal and spatial heterogeneity on population dynamics

We will talk about some recent results in reaction-diffusion models related to random dispersal and spatially heterogeneous environment. Starting from the famous results of Dockery et al. concerning the evolution of slow dispersal in heterogeneous environment, we will discuss a Hamilton-Jacobi approach to connect it with the adaptive dynamics framework. A second topic is the consumer-resource model introduced by Zhang et al. We will discuss the experimental and analytical efforts to prove/disprove the validity of two underlying biological hypotheses concerning the total population abundance in the presence of an exploitable renewed limiting resource.