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*Coexistence of competing species for intermediate dispersal rates in a reaction-diffusion chemostat model*

In this talk, I will revisit a diffusive chemostat model with two competing species and one nutrient. We show that for large diffusion rate, both species will be washed out, while for small diffusion rate, competition exclusion will occur. This implies that a stable coexistence can only occur at intermediate diffusion rate. We present an explicit way of determining parameter range which supports a stable coexistence steady state. This is a joint work with Drs Junping Shi and Yixiang Wu.