



THE UNIVERSITY OF CHICAGO

COMPUTATIONAL AND APPLIED MATHEMATICS STUDENT SEMINAR

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Assembly of Many-Species Ecosystems

THURSDAY, February 21, 2019, at 1:00 PM
Jones 226, 5747 South Ellis Avenue

ABSTRACT

Rich ecosystems harbour thousands of species interacting in tangled networks encompassing predation, mutualism and competition. Such widespread biodiversity is puzzling, because in ecological models it is exceedingly improbable for large communities to stably coexist. One aspect rarely considered in these models, however, is that coexisting species in natural communities are a selected portion of a much larger pool, which has been pruned by population dynamics. By incorporating this aspect we will show that many-species systems can arise without the need of explicitly fine-tuning the parameters of the models. Connections with bottom up assembly will also be discussed.