962-60-628 **Jie Xiong*** (jxiong@math.utk.edu), Department of Mathematics, University of Tennessee, Knoxville, TN 37996-1300. *A cyclically catalytic super-Brownian motion.*

In generalization of the mutually catalytic super-Brownian motion in R of Dawson/Perkins (1998) and Mytnik (1998), a function-valued cyclically catalytic model X is constructed as a strong Markov solution to a martingale problem. Starting with a finite population X_0, each pair of neighboring types will globally segregate in the long-term limit (non-coexistence of neighboring types). Also finer extinction/survival properties depending on X_0 are studied in the spirit of Mueller and Perkins (1999). In fact, X_0 can be chosen in such a way that all types survive for all finite times. On the other hand, sufficient conditions on X_0 are stated for the following situation: Given a type k and a positive time t, the k^{th} subpopulation X^k dies by time t with a large probability, provided that its initial value X_0^k was sufficiently small. This talk is based on a joint paper with K. Fleischmann. (Received September 18, 2000)