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Sheldon H Lee* (shlee@viterbo.edu). *A stochastic process model for fish migration.*

In this talk, I will discuss a continuous-time Markov model to describe the migration of fish along a river system. We assume that a river is divided into several regions, and that they are separated by barriers such as dams. We assume that fish may cross such barriers at various rates which may depend on a factors such as the type of dam, the season, and the water temperature. In this talk I will discuss the probability of fish reaching the end of a river system, and how harvesting at a particular pool affects this probability. As an example I will discuss the migration of an invasive species of Asian carp in the Illinois River. (Received September 22, 2015)