

# Self-Switching Markov Chains

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In this talk, I will present a random walk model that modifies the dynamics depending on its trajectory, motivated by the following question: why did we observe just a few behavioral states in animals, although they typically have a large degree of freedom for producing movements? The standard approach for the predominance of a subset of behavior in an individual is to assume a learning mechanism. Here, I will show that it is also possible to observe only a few dominant behaviors, despite the lack of learning. This is based on joint works with S. Gallo, G. Iacobelli and D. Y. Takahashi.