

1127-60-10

**Richard C Bradley\*** ([bradleyr@indiana.edu](mailto:bradleyr@indiana.edu)), Department of Mathematics, Indiana University, Bloomington, IN 47405. *On mixing properties of reversible Markov chains.*

This talk will discuss an example, from R.C. Bradley [*New Zealand J. Math.* 45 (2015) 71-87], of a strictly stationary, countable-state, reversible Markov chain that satisfies the  $\rho$ -mixing condition (and hence also geometric ergodicity) but fails to satisfy  $\rho^*$ -mixing (the “interlaced” variant of  $\rho$ -mixing in which the two index sets can be “interlaced” instead of being restricted to “past” and “future”). In this example, the “mixing rate” for  $\rho$ -mixing (and absolute regularity and even information regularity) can be made “arbitrarily fast exponential”, and the entropy of the marginal distribution can be made arbitrarily small. (Received September 18, 2016)