1155-05-145 **John Rhodes** and **Anne Schilling***, Department of Mathematics, University of California, One Shields Avenue, Davis, CA 95616. *Mixing times for finite Markov chains.*

We show that the stationary distribution of a finite Markov chain can be expressed as the sum of certain normal distributions. These normal distributions are associated to planar graphs consisting of a straight line with attached loops. The loops touch only at one vertex either of the straight line or of another attached loop. Our analysis is based on our previous work, which derives the stationary distribution of a finite Markov chain using semaphore codes on the Karnofsky–Rhodes and McCammond expansion of the right Cayley graph of the finite semigroup underlying the Markov chain. This method also provides a way to analyze the mixing time of the Markov chain.

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