

1147-05-147

John Rhodes (anne@math.ucdavis.edu) and **Anne Schilling*** (anne@math.ucdavis.edu), One Shields Avenue, University of California, Davis, CA 95616. *Stationary and normal distributions of 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 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. (Received January 02, 2019)