

1154-60-1583

**Manuel E. Lladser\*** ([manuel.lladser@colorado.edu](mailto:manuel.lladser@colorado.edu)), Department of Applied Mathematics, Campus Box 526 UCB, University of Colorado, Boulder, CO 80309, and **Stephen R. Chestnut** and **Javiera Barrera**. *Approximating linear functionals of transient Markov chains*. Preliminary report.

Linear functionals of Markov chains occur in wide-ranging domains. Despite their ubiquitous use, approximating their distribution is a challenging problem in transient regimes because of the infeasibility of exact computations and lack of stationarity to justify Gaussian, Poisson, and compound Poisson approximations. In this talk, I will review recent work with Stephen Chestnut and ongoing work with Javiera Barrera to approximate the distribution of these functionals in the presence of a so-called “regeneration” set; in particular, our setting encompasses Harris-recurrent Markov chains. (Received September 16, 2019)