1145-AF-2347   **William A Massey*** (`wmassey@princeton.edu`), ORFE Department, Sherrerd Hall, Princeton University, Princeton, NJ 08544. *A Uniform Acceleration Trilogy for Dynamic Rate, Single Server Queueing Transience.*

The dynamic rate $M/M/1$ queueing system is a time-inhomogeneous, Markovian birth-death process. Both the birth and death rates here vary over time but stay constant over changes in the state. An asymptotic scaling of these rates called *uniform acceleration* was developed in the PhD thesis of the author. This approach was shown for the $M/M/1$ queue to be the natural generalization to the steady state equilibrium analysis of time-homogeneous Markov processes.

Over a period spanning three decades, this analysis also engaged the author into developing a trilogy of publications on the transience or stochastic evolution of this single server queueing system. This talk tells that larger story. We show how each successive paper yields new interpretations for the asymptotics of uniform acceleration. (Received September 25, 2018)