1154-60-998 **Barbara H Margolius*** (b.margolius@csuohio.edu), Dept Mathematics, Cleveland State University, 2121 Euclid Ave, Cleveland, OH 44120, and **Yiqiang Zhao** (yiqiangzhao@cunet.carleton.ca), School of Mathematics and Statistics, Carleton University.
Quasi-Stationary Distributions in the context of continuous time Markov Processes with time-varying periodic transition rates. Preliminary report.

We consider Markov processes with time-varying periodic transition rates evolving in a domain where there is a set of absorbing states that form a trap. The process is said to be killed when it hits the absorbing set and it is assumed that this happens almost surely. We investigate the behavior of the process conditioning on its not having been absorbed. We consider processes with transition matrices having a block structure.

Time-varying periodic transition rates arise in processes with a diurnal, weekly or seasonal variability such as call center traffic, rush hour traffic, weather or emergency service systems. (Received September 12, 2019)