1126-37-267 **Luen-Chau Li*** (`luenli@math.psu.edu`), Department of Mathematics, Pennsylvania State University, University Park, PA 16802. *An exact discretization of a Lax equation for shock clustering and Burgers turbulence.*

We consider a finite dimensional system which arises as an exact discretization of the Lax equation for shock clustering and Burgers turbulence, which describes the evolution of the generator of a Markov process with a finite number of states. In contrast with the extension of this equation to $N \times N$ generic matrices, the system is by its nature not a completely integrable system. Nevertheless, the system can be solved exactly and is conjugate to a straight line motion. In this talk, we will discuss a few results on this interesting system. (Received January 16, 2017)