1100-37-256 **Filiz Tumel*** (`ftumel@na.edu`), 5959 FM 1960 Rd. W, Apt. 1336, Houston, TX 77069. *Random Walks on a Lattice with Deterministic Local Dynamics.*

In this talk we prove statistical properties of dynamical systems on a lattice with randomly occurring jumps. The original model of this type, called a hybrid system, was introduced by E. Kobre and L. S. Young in 2007. We use different methods to derive the drift rate and the averaged Central Limit Theorem. We generalize their results to piecewise uniformly expanding maps with countable partitions. We obtain an upper bound for the speed of convergence in the Central Limit Theorem and prove that the convergence is with tight maxima. We prove Large Deviation results. We also prove a quenched Central Limit Theorem, subject to a condition that can be verified following existing techniques for maps that are sufficiently expanding. Finally, we expand the drift rate results and averaged Central Limit Theorem to certain non-uniformly expanding systems. (Received February 09, 2014)