1020-37-130 **Sarah Bailey Frick*** (sebailey@email.unc.edu), Columbus, OH 43210, and **Karl Petersen**.
Adic transformations and random walks, I. Preliminary report.

A random walk on a finite graph leads to a shift of finite type (SFT) on an alphabet A of symbols and also to several associated adic (Bratteli-Vershik) systems: a stationary adic (S-adic), whose transitions are the same as those of the SFT; a nonstationary non-simple adic (C-adic), whose vertices correspond to counts of symbols from A and possible successors; and ramified adics (R-adics), which duplicate edges of the C-adic according to a fixed reinforcement scheme for the original random walk. We show how, beginning with the finite graph consisting of two loops at a common vertex, this process produces the dyadic odometer as the S-adic, the Pascal system as the C-adic, the Euler system as the R-adic if the edge not traversed is reinforced, and the reverse Euler system as the R-adic if we use the normal positive reinforcement. Identification of the ergodic invariant measures is possible in these cases and has implications for the asymptotics of the reinforced random walks. (Received August 23, 2006)