1086-39-584 **Erik S. Van Vleck**, 1460 Jayhawk Blvd, 405 Snow, Lawrence, KS 66045, and **Aijun Zhang*** (zhangai@ku.edu), 1460 Jayhawk Blvd, 405 Snow, Lawrence, KS 66045. *Competing Interactions and Traveling Wave Solutions in Lattice Differential Equations.*

The existence of traveling front solutions to bistable lattice differential equations in the absence of a comparison principle is studied. The results are in the spirit of those in Bates, Chen, and Chmaj for TRAVELING WAVES OF BISTABLE DYNAMICS ON A LATTICE, but are applicable to vector equations and to more general limiting systems. An abstract result on the persistence of traveling wave solutions is obtained and is then applied to lattice differential equations with repelling first and/or second neighbor interactions. (Received September 07, 2012)