962-11-927 **Ronald E. Rietz*** (`rietz@gac.edu`), Ron Rietz, Math/CS Dept., Gustavus Adolphus College, 800 W. College Ave., St. Peter, MN 56082. *Solving Generalized Fermat-Pell Equations by Matrix Methods.* Preliminary report.

Let a and d be positive integers such that ad is not a perfect square, and let N be a nonzero integer. This talk will present an elementary matrix-based method for finding all integer solutions of the equation $ax^2 - dy^2 = N$. Related results, such as this: if $a \neq 29$ and $a \neq 261$, then $ax^2 - (a+2)y^2 = 261$ has no integer solutions; and, generalizations of the basic method, will be outlined. (Received September 29, 2000)