1125-33-571   **Marc Chamberland*** (`chamberl@grinnell.edu`), 1116 8th Ave., Department of Mathematics, Grinnell, IA 50112. *Combinatorial Identities via Matrix Factorization.*

The LU factorization is an effective tool in numerical linear algebra. By performing matrix factorizations symbolically, however, beautiful identities can be constructed. This talk will showcase this approach and the formulas produced connected to the Fibonacci numbers, binomial coefficients, q-series, Legendre polynomials, and more. (Received September 06, 2016)