1046-65-57 **Natasha A Cayco Gajic*** (naelxcg@caltech.edu), Applied and Computational Mathematics, Caltech, 1200 E. California Blvd. MC 217-50, Pasadena, CA 91125, **Nathan Kallus** (kallus@berkeley.edu), Dept. Mathematics, UC Berkeley, 970 Evans Hall #3840, Berkeley, CA 94720-3840, and **Jessica L Stigile** (jls2@cec.wustl.edu), Department of Computer Science, One Brookings Drive, St. Louis, MO 63130. *A numerical method for integration of rational functions.* Preliminary report.

Landen transformations are maps on an integrand that preserve the value of the integral. These originally appeared in the context of elliptic integrals. We present an implementation and numerical improvement of an integration technique based on Landen transformations of rational integrands developed by Boros, Manna, and Moll. The method presented deals with the problem of coefficient growth while preserving the fast order of convergence of the original procedure. We discuss the merits of the method as compared to standard integration techniques. (Received July 21, 2008)