1041-65-79   **Christopher W. Curtis*** (`curtchr@u.washington.edu`), University of Washington, Applied Mathematics, Box 352420, Seattle, WA 98195-2420, and **Bernard Deconinck**. *On the Convergence of Hill's Method.*

Hill's method is a numerical scheme to approximate the spectra of linear differential operators with periodic coefficients. In this talk, we show the method does not produce any spurious approximations. Further, for certain self-adjoint operators, we prove that the rate of convergence of Hill's method for the ground-state eigenvalue is spectrally fast. (Received August 04, 2008)