1041-33-261 **Diego Dominici*** (dominicd@newpaltz.edu), Technische Universität Berlin, Sekretariat MA 4-5, Straße des 17. Juni 136, D-10623 Berlin, Germany. *Asymptotic analysis of Hermite-type polynomials.*

Let $P_n(x)$ be defined by the three term recurrence relation

$$P_{n+1}(x) = 2xP_n(x) - c(n)P_{n-1}, \quad n = 0, 1, \ldots$$

with

$$P_{-1}(x) = 0, \quad P_0(x) = 1.$$

We analyze the polynomials $P_n(x)$ asymptotically as $n \to \infty$ using a discrete version of the WKB method. We present some examples from the classical hypergeometric polynomials and discuss possible extensions to $q-$orthogonal polynomials. (Received August 12, 2008)