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**Harold G Diamond\*** ([diamond@math.uiuc.edu](mailto:diamond@math.uiuc.edu)), Prof. Harold G. Diamond, UIUC Department of Math, 1409 W. Green St., Urbana, IL 61801. *The Convolution Square Root of 1.*

The square root of the Riemann zeta function is the generating function of an arithmetic function  $\nu$  that we call the convolution square root of 1, by analogy with  $\zeta(s)^2$  and the divisor function  $1 * 1$ . It is not hard to see that  $\nu$  is multiplicative. We show how knowing its summatory function  $D_{1/2}(x)$  with a modest error term implies the prime number theorem, and we indicate how to approximate  $D_{1/2}(x)$ . (Received September 13, 2017)