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Normalized spacings between zeros of Riemann zeta function follow normalized Maxwell-Boltzmann distribution SIAVASH SOHRAB, Northwestern University — Through *Planck* relation $\varepsilon = h\nu$ normalized spacings between energy levels of oscillators are related to those between frequencies expressed as *Gauss* clock calculator or *Hensel* p_j-adic numbers. Energy-level spacings are related to spacings between "stationary states" and through *Euler* golden key to zeros of *Riemann* zeta function. The latter are shown to follow normalized *Maxwell-Boltzmann* (NMB) distribution function,

$$\rho_\beta = (8/\pi_\beta)[(2/\sqrt{\pi_\beta})x_\beta]^2 e^{-[(2/\sqrt{\pi_\beta})x_\beta]^2} \quad (1)$$

, hence providing physical explanations of *Montgomery-Odlyzko* law and *Hilbert-Polya* conjecture. Position of the critical line is found to coincide with that of stationary states. Normalized spacing between eigenvalues of GUE of an *Adele* space constructed by superposition of infinite NMB distribution functions will coincide with spacing of zeros of *Riemann* zeta function according to the theory of noncommutative geometry of *Connes*.

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