Hypergeometric Zeta Functions.

Preliminary report.

In this talk I will give a preliminary report on my investigation of a family of higher-order hypergeometric zeta functions. These functions are obtained by replacing the difference $e^x - 1$ that appears in Riemann’s integral formula for the classical zeta function with a higher-order Maclaurin difference. Besides discussing their hypergeometric nature, I will also present some analytical and combinatorial properties of these functions and make comparisons with the classical zeta function. (Received September 19, 2004)