

The Proof of the Riemann Hypothesis

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For Uta

Abstract

The proof of the Riemann Hypothesis requires a decoding of the fine-structure constant α in which is shown, why the Riemann zeta function $\zeta(s)$ cannot show a zero point with $\text{Re}(s) = 1$, off the critical line $\text{Re}(s) = 1/2$

The Proof

That the proof of the Riemann Hypothesis requires a decoding of the fine-structure constant α was already suggested by Michael Atiyah (1). However, if we take a closer look at this suggestion, then we must not stop at the electron. Rather α requires that we concentrate on the proton (2). For if we place the proton in the center of our evidence and accept a limited space of positive energy within an unlimited space of negative energy, then a volume constant of electromagnetic processes appears and within this constant not only a mass point of $m = 1$, which marks the limited within the unlimited, but also an additional mass shift of $m = 2$ which is inversely proportional to the effect. Which not only the spin quantum number $s = 1/2$ makes stand out, and thus the connection of location and momentum, but also the Riemann zeta function $\zeta(s)$, which strives towards ∞ and has no zero with $\text{Re}(s) = 1$.

In this respect, the Riemann zeta function $\zeta(s)$ strives towards ∞ , while a spatial limitation of the unlimited as spin quantum number s appears, or as $\text{Re}(s) = 1/2$, which is then one and the same.

(1) Atiyah M 2018 The Riemann Hypothesis, Heidelberg Laureate Forum

(2) Volkenborn U and Volkenborn H 2017 The Quantization of Space, vixra 1710.0173