

# The Riemann Zeta Function and Quantum Theory of Prime Numbers

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## **Abstract**

In this talk I will discuss in pedagogical way a relation between the number theory and quantum physics. Starting from elementary ideas of string quantization and partition function for natural numbers, to quantum theory of the Riemann zeta function and partition of prime numbers. The quantized gas of prime numbers, the set of nontrivial zeros of zeta function and the spectrum of quantum Hilbert-Polya type Hamiltonians would be discussed.