

Colloquium speaker: Dr. Michael Bishop (Fresno State)

Title: Quantum Mechanics and the Riemann Hypothesis

Abstract: The Riemann Hypothesis states that all the non-trivial zeros of the Riemann Zeta function lie on the line $1/2 + it$ in the complex plane. This has great implications for the distribution of prime numbers and all of mathematics. The Hilbert-Pólya approach to the Riemann Hypothesis suggests that zeros of the Riemann Zeta function correspond to energies and trajectories of a physical system. In a quantum mechanical context, this means the eigenvalues of an operator. I will present a recent fascinating attempt by Bender, Brody, and Muller at the Riemann Hypothesis using PT symmetry.