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PT-symmetric quantum field theory

Monday 9 July 2018 11:00 (50 minutes)

PT-symmetric quantum mechanics began with a study of the Hamiltonian $H = p^2 + x^2(ix)^\epsilon$. The surprising feature of this non-Hermitian Hamiltonian is that its eigenvalues are discrete, real, and positive when $\epsilon > 0$. In this talk we study the corresponding quantum-field-theoretic Hamiltonian $H = (\partial\phi)^2 + \phi^2(i\phi)^\epsilon$ in D-dimensional space-time, where ϕ is a pseudoscalar field.

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