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Triviality and negative coupling phi4 on the lattice

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Triviality of phi4 theory in four dimensions can be avoided if the bare coupling constant is negative in the UV. Theories with negative coupling can be put on the lattice if the integration domain for phi(x) is contour-deformed from the real to the complex domain. In 0+1d (quantum mechanics), one can recover results from PT-symmetric quantum mechanics in this way. In this talk, I report on an attempt to put negative coupling phi4 theory in 4 dimensions on the lattice.

Topical area

Theoretical Developments

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