El Naschie, M. S.
Complex vacuum fluctuation as a chaotic "limit" set of any Kleinian group transformation and the mass spectrum of high energy particle physics via spontaneous self-organization.

Summary: First we give an introduction to the $\mathcal{E}^{(\infty)}$ quantum space-time theory from the point of view of nonlinear dynamics, complexity, string and KAM theory. Subsequently we give without proof several theorems that we consider to be fundamental to the foundation of any general theory for high energy particles interaction. The final picture seems to be a synthesis between compactified Kleinian groups acting on the essentially nonlinear dynamics of a KAM system, which enables us to give a very accurate estimation of the mass spectrum of the standard model, and further still we are granted a glimpse into the physics of grand unification as well as quantum gravity.

MSC:

81R60	Noncommutative geometry in quantum theory
81V22	Unified quantum theories
37N20	Dynamical systems in other branches of physics (quantum mechanics, general relativity, laser physics)
83C45	Quantization of the gravitational field
83E30	String and superstring theories in gravitational theory
81T30	String and superstring theories; other extended objects (e.g., branes) in quantum field theory

Cited in **22** Documents

Keywords:

quantum space-time theory; nonlinear dynamics; complexity; string and KAM theory; grand unification; quantum gravity

Full Text: DOI

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