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Theoretical Physics Seminar Series

Recent results on oscillons
Andrzej Wereszczyński

Jagiellonian University, (Poland)

Abstract: Oscillons are quasi-periodic localized solutions in nonlinear field theories whose unexpectedly long lifetime is still a mystery. I will present two recent surprising results. Firstly, I will show that, contrary to common belief, oscillons exist in gapless (massless) models. Secondly, I will show that modulation of amplitude of oscillons leads to a fractal pattern in oscillon decay. I will argue that such modulations can be explained as an effect of motion of two unexcited oscillons. Hence, an excited oscillon is a bound state of unexcited oscillons.

Prof. A. Chamorro Seminar Room, Theoretical Physics Seminar Room
Wednesday, March 13th, 2024
Time: 11:40 pm