Workshop dedicated to the memory of Professor Gabriela Kohr
Geometric Function Theory in Several Complex Variables and Complex Banach Spaces

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Nonlinear perturbations of the time-dependent Schrodinger equation

Radu Precup

Babeş-Bolyai University, Cluj-Napoca, Romania

Abstract

The time-dependent Schrödinger equation is a cornerstone of quantum physics. It is representative for the role of complex analysis in studying differential systems modelling wave processes with phase differences. The talk will focus on some classes of nonlinear state-dependent forces capable of maintaining wave movements with an initial generation. Our analysis is based on the theory of nonlinear operators.