
Alexander G. Losev, Elena A. Mazepa, and Victoriya Y. Chebanenko

Unbounded Solutions of the Stationary Schrödinger Equation on Riemannian Manifolds

CMFT 3 No.2 (2003), 443–451. [ISSN 1617-9447]

Abstract. We study questions of existence and membership to a given functional class of unbounded solutions of the stationary Schrödinger equation $\Delta u - cu = 0$, where c is a smooth non-negative function on a non-compact Riemannian manifold M without boundary. We establish some interrelation between problems of existence of solutions of this equation on M and off some compact $B \subset M$ with the same growth “at infinity”.

Keywords. Riemannian manifold, Schrödinger equation.

2000 MSC. Primary 30F15; Secondary 31A05.

Received. December 18, 2003.