

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, MAY 31, 2006

PADEL FORD C-36

3:50-5PM

Global attractor for the Klein-Gordon equation with a
nonlinearity supported at a point

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We consider the long-time asymptotics of all finite energy solutions to the Klein-Gordon equation in one dimension, with the nonlinearity concentrated at a point. Our main result is that the attracting set of any finite energy solution consists of “nonlinear eigenfunctions”, also known as solitary or standing waves. The problem is inspired by Bohr’s postulate on quantum transitions and Schroedinger’s identification of the quantum stationary states to the eigenfunctions of the coupled Maxwell-Schroedinger or Maxwell-Dirac equations.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, www.math.washington.edu, follow the link **Seminars, Colloquia, and Conferences**).

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