KOÇ UNIVERSITY

Science – Math Seminar

Speaker: Teoman Turgut
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Date: Thursday, May 5, 2005
Time: 16:45 (Tea and cookies will be served at 16:30)
Place: Science Building, Room Z42

Title: Attractive delta potential in two dimensions

Abstract:

Delta function potential in one dimension is a simple exercise in quantum mechanics, but the same problem in two dimensions requires a renormalization. This is again an interesting testing ground for problems which require renormalization. we will show that many things we know for ordinary quantum systems still hold for this case. We extend the same ideas for a particle moving on a manifold under the influence of delta potentials. Next we d'scuss the many body version of this problem on the plane following a method due to Rajeev. One can prove that the ground state energy is bounded from below and find a mean field solution for the ground state.

Please visit http://sci-math.ku.edu.tr/ for a schedule of upcoming Science - Math seminars.