Area Seminar

Title	Classical-Quantum relationship--a new point of view
Date and Time	27/01/2011 16:00:00
Speaker	Prof. R. K. Varma PRL, Ahmedabad
Area	Theoretical Physics
Venue	Room No. 469
Abstract	Following Dirac's conjectural comments that a solution of the Hamilton-Jacobi equation, the principal function, represents a 'family' of solutions of a classical dynamical problem, we develop an equation which describes what we term as the "Hamilton-Jacobi flow." This evolves along the characteristics of the Hamilton-Jacobi equation. A Hilbert representation of the flow is then constructed and it is shown that it yields a generalized set of Schrodinger equations describing this flow. Paradoxically,these together represent classical dynamics while only one of them is identified as the quantum mechanical Scrodinger equation. The nature of this relationship is then discussed.