Area Seminar

Title	Classical dynamics as an eigenvalue problem
Date and Time	20/12/2012 16:00:00
Speaker	Prof. R. K. Varma Physical Research Laboratory, Ahmedabad
Area	Theoretical Physics
Venue	Room No. 469
Abstract	A probability amplitude formalism is presented which casts classical dynamics as an eigenvalue problem in the spirit of the Schrodinger formalism. The governing equation of the formalism is a first order partial differential for a probability amplitude in contrast to the second order of the Schrodinger equation. A solution for the amplitude for a given dynamical problem yields, in a rather straightforward way, the solution for the Hamilton principal function, which is a solution of the Hamilton-Jacobi equation; whence the trajectory determination follows with the H-J prescription. The linearity of the eigenvalue equation offers a great operational advantage for the treatment of perturbations as against the usual procedure using the (nonlinear) Hamilton-Jacobi equation in the action-angle framework.