1056-78-582 **Anjan Biswas*** (`biswas.anjan@gmail.com`), Department of Mathematical Sciences, Delaware State University, 1200 N DuPont Hwy, Dover, DE 19901-2277. *OPTICAL SOLITON PERTURBATION BY HE'S VARIATIONAL PRINCIPLE.*

In this talk, an exact 1-soliton solution will be given for the nonlinear Schrodinger's equation with Kerr and power law nonlinearity, in presence of perturbation terms. The nonlinear Schrodinger's equation governs the propagation of solitons through an optical fiber. The perturbation terms that will be considered are self-steepening term, nonlinear dispersion and Raman scattering. He's variational principle will be used to carry out this integration. (Received September 13, 2009)