

Meeting: 998, Houston, Texas, SS 15A, Special Session on Geometric Variational Problems

998-49-259 **Panayotis Panayotaros*** (panos@mym.iimas.unam.mx), IIMAS-UNAM, Circuito Escolar, Ciudad Universitaria, 04510 Mexico City, Mexico. *Averaging and solitons in a periodically forced nonlinear Schrödinger equation.*

We present analytical and numerical results on a parametrically forced nonlinear Schrodinger equation arising in nonlinear optics. The emphasis will be on recent numerical results where we examine localized periodic solutions (solitons) of the averaged system. These orbits are also constrained critical points of the averaged Hamiltonian of the system, and we examine numerically their variational type. We also discuss the relation between solutions of the averaged and original systems. (Received February 29, 2004)