ABBAS MOAMENI, University of British Columbia

Self-dual variational principles for periodic solutions of Hamiltonian and other dynamical systems

Self-dual variational principles are introduced in order to construct solutions for Hamiltonian and other dynamical systems which satisfy a variety of linear and non-linear boundary conditions including many of the standard ones. These principles lead to new variational proofs of the existence of parabolic flows with prescribed initial conditions, as well as periodic, anti-periodic and skew-periodic orbits of Hamiltonian systems.

This is a joint work with N. Ghoussoub.