Temple University Mathematics Colloquium

Truyen Nguyen

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will speak on

Euler-Poisson systems as action minimizing paths in the Wasserstein space of probability measures

ABSTRACT:

We shall discuss a variational approach to the Euler-Poisson system arising in modeling the dynamics of a plasma. We will begin by considering a special Lagrangian on the tangent bundle of the Wasserstein space of probability measures. We study its associated action functional and the problem of minimizing the action when two endpoints are prescribed. The existence, uniqueness of minimizers and the Euler-Lagrange equation will be described. Conservation of the Hamiltonian along action minimizing paths shall also be discussed.

This is joint work with W. Gangbo and A. Tudorascu.

Monday, 28 January 2008
Lecture at 4:00 pm
Coffee, tea, and refreshments from 3-5 pm
Room 617, Wachman Building
Department of Mathematics