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THE FIELDS INSTITUTE FOR RESEARCH IN MATHEMATICAL SCIENCES

POSTDOCTORAL/GRADUATE STUDENT EXPOSITORY SEMINAR SERIES ON DYNAMICAL SYSTEMS

SPEAKER:

HEINZ HANßMANN
University of Groningen

On the Topic:

"The Lagrange Top as a Perturbation of the Euler Top"

The general motion of a Euler Top takes place on a 2-torus: it is described by a rotation and precession, where energy and angular momentum are fixed. Using a normal form theorem we can make a given perturbation of this free Hamiltonian (i.e. some potential energy) independent of these two angles up to any prescribed order. When we truncate, the conjugated actions become constant (in the perturbed problem!) and we can treat them as parameters, ending up with a (parameter dependant) one degree of freedom problem. I will apply this general scheme to the special potential of the Lagrange Top and compare the information one can obtain following this scheme with the (known) behavior of the Lagrange Top.

Friday, November 6, 1992 at 11:30 am, room 3018

at

The Fields Institute

Note: This is an ongoing series each week through to December 3. For information contact Ali Lari-Lavassani (lavassan@fields.uwaterloo.ca)

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