

**ON THE NON-INTEGRABILITY OF SOME N -BODY
PROBLEMS**

SERGI SIMON

(Dept. Matemàtica Aplicada i Anàlisi)

A series of non-integrability results for the N -Body Problem in Celestial Mechanics have been obtained. Namely, we give a new, simpler non-integrability proof for the Three Body Problem with arbitrary masses and a further result for $N > 3$ equal masses. The main tools used for such results come from Morales-Ramis theory.

Joint work with J.J. Morales