UNIVERSIDADE DE LISBOA
CENTRO DE MATEMÁTICA E APLICAÇÕES FUNDAMENTAIS
Av. Prof. Gama Pinto 2, 1649-003 LISBOA, PORTUGAL Tel. (351) 217 904 700 FAX (351) 217 954 288

Mês de: JUNHO 2012

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 19 de Junho (terça-feira), às 14h15, na Sala B1-01

Global dynamics of the dihedral singular logarithmic potential

Alessandro Portaluri,
(Università del Salento, Lecce, Itália)

Abstract:
In this talk we describe the global dynamics of N points interacting through the singular logarithmic potential and subject to a symmetry constraint. After performing a sort of a McGehee change of coordinates useful in order to regularize the total collision, we study, in these new coordinates, the rest-points of the flow, the invariant (stable and unstable) manifolds and we derive some interesting information about the global motion.
We observe that besides application of this type of potential to astrodynamics our problem is equivalent to finding the stationary configurations of nearly-parallel vortex filaments in three dimensions in the LIA approximation

Local:
INSTITUTO PARA A INVESTIGAÇÃO INTERDISCIPLINAR
Av. Prof. Gama Pinto, 2
1649-003 Lisboa