Postdoctoral position :

Computation of the probabilities of rare events in solar system dynamics

We are looking for top quality young researchers to join our research team. This position will be part of the ERC project TRANSITION. The postdoctoral research will be supervised by Jacques Laskar at IMCCE/Paris Observatory, Paris, and Freddy Bouchet at laboratoire de physique of ENS de Lyon, France. The research project TRANSITION aims at developing statistical mechanics tools, mainly based on large deviation theory, in order to compute rare events.

The computation of the probability of rare events in the dynamics of objects in the Solar System will be addressed both numerically and theoretically, using advanced techniques of rare event probability computation developed in statistical physics and applied mathematics.

The candidate will be required expertise in High Performance Computation. The project will put a special emphasis on precise numerical integration algorithms for ordinary differential equations, eventually in presence of singularities. It is not expected that the candidate will master all the fields that could be needed in this multidisciplinary approach. Expertise in some of the following domains will be appreciated: Statistical physics, Dynamical Systems, Celestial Mechanics, Precise numerical algorithms.

The working conditions will be very good, in the scientific environment of either ENS-Lyon or IMCCE/Paris Observatory, with a very strong expertise and some of the leading researchers in Solar System dynamics and statistical physics.

The position duration could extend from one to two years, and could start at any time in 2016.

If you are interested please send a simple application e-mail, including a motivation letter, a CV, and the name of 2 or 3 persons that could provide reference letters to Jacques Laskar (laskar@imcce.fr) and Freddy Bouchet (Freddy.Bouchet@ens-lyon.fr).