

POSTDOCTORAL FELLOWSHIP



The Center for Theoretical Physics (CPT, Luminy, Marseille, France) invite applications for a one year postdoctoral position from candidates who received their PhD recently, to work in fundamental plasma physics.

The topics of this postdoc grant deals with the general Hamiltonian framework and its Hamiltonian perturbation theory (KAM), which is our area of strength. An important application of this problem is the Poisson Algebra of Maxwell-Vlasov. The goal is to explore the dynamics of a hot plasma of charged particles in a very strong (and nearly toroidal) magnetic field, and heated by a strong electric field, when all the retro-actions of the particles onto the magnetic and electric fields are taken into account. Some possible directions might use differential (or Poisson) geometry or Hamiltonian perturbation theory. Or we might precise the configurations staying confined in a toroidal chamber, named "Tokamak".

Some numerical implementations may also be considered, in the framework of our longtime collaboration with the "Institute for Magnetic Fusion Research" (IRFM), in CEA-Cadarache (near Marseille) where the "International Thermonuclear Experimental Reactor" (ITER) project is being build. For more informations: <http://irfm.cea.fr> or <http://iter.org>

This postdoctoral fellowship is granted by the Aix-Marseille University (AMU) through its "Excellence Initiative" A*MIDEX.

The duration of the grant is for one year, starting in Fall 2018. Our institute offers comprehensive support including travel fund.



The Center for Theoretical Physics (CPT, Marseille, France) offers a dynamic, multi-disciplinary environment with maximum research freedom and opportunity to collaborate within and across fields. It is situated in the Luminy campus (Aix-Marseille University & CNRS), in the south of Marseille, near the "Calanques" (cove) on the Mediterranean sea. The CPT is a Mixed Research Unit (UMR 7332) of CNRS (National Center for Scientific Research) associated with Aix-Marseille University & Toulon University. The CPT has 60 researchers & university faculty, 20 guest researchers, 15 postdoctoral researchers, 25 PhD students, divided into 3 themes (Fundamental Interactions, Statistical Physics & Condensed Matter, Classical & Quantum Dynamics) and 8 research teams. The research team concerned by this postdoctoral fellowship is named: "Dynamical Systems: Theory & Applications".

For more informations: <http://www.cpt.univ-mrs.fr>

We welcome all candidates to apply at:

postdoc-plasmas@cpt.univ-mrs.fr

before the end of April with a curriculum vitae, a statement of research interests, and a list of publications.