LABORATOIRE PHYSIQUE ET MÉCANIQUE DES MILIEUX HÉTÉROGÈNES
CNRS & ESPCI – PARIS – FRANCE

LABORATOIRE DE PHYSIQUE THÉORIQUE ET MODÈLES STATISTIQUES
CNRS & UNIVERSITÉ PARIS-SUD – ORSAY – FRANCE

Postdoctoral position available

We welcome applications for a postdoctoral position on the **self-assembly of irregular objects**. The project will be a first experimental foray into the recent idea that geometrical frustration can strongly influence the aggregation of particles with complex shapes unable to fit into a crystalline structure (Lenz & Witten, *Nat. Phys.* 2017). According to these theoretical results, self-assembling irregular particles with short-range interactions should have strong tendency to form fibers or sheets planes, which could shed some light on the formation of protein fibers during protein aggregation diseases, as well as serve as a new design principle for artificial self-assembly.

To test these ideas, the postdoc will **develop an experimental protocol to design and produce colloids of arbitrary shapes** using a sub-micrometer-resolution 3D printer (NanoScribe) currently used in the lab. She or he will then tailor the interactions between the colloids using physico-chemical techniques as needed, then monitor their self-assembly and the resulting aggregate shapes under the microscope.

The work will take place at PMMH, a laboratory of ESPCI located in the center of Paris, and will be conducted under the supervision of Julien Heuvingh, Martin Lenz and Olivia du Roure. More details about our research activities can be found at

www.lptms.u-psud.fr/membres/mlenz/research

https://www.pmmh.espci.fr/?Cell-Biophysics

The postdoc will be employed by CNRS, France's largest and most recognized research institution. Funding is available for at least **two years of employment**. The net salary for the position ranges between 2000 €/month and 2900 €/month depending on experience. Benefits include free full healthcare coverage for the postdoc and her or his dependents, generous vacations, 16-weeks fully-paid maternity leaves, free schooling from age 3 and subsidized child care for younger children. CNRS additionally subsidizes vacations, sports and cultural activities for its employees.

The position will begin **preferably in the early Fall of 2019**, although appointments later in 2019 are also possible. Review of applications will continue until the position is filled. For primary consideration, applicants are encouraged to apply before June 20st 2019. The successful candidate will hold a Ph.D. by the start date and be strongly motivated to develop a new experimental system, with the associated challenges and rewards. A strong record in experimental soft matter research is required for the position. Applications will comprise the names of three references, an application letter, a CV and a publications list including preprints. Informal inquiries welcome.

Contact:

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