

## **Post-graduate scholarship**

### **Numerical study of physical and mechanical aging in colloidal suspensions**

An 18 months post-doc position is available at Laboratoire Navier, to perform a numerical study of mechanical aging in colloidal silica suspensions. The study will take place within an otherwise experimental project that gathers both local and international actors.

On the experimental side, the silica particles and suspensions are prepared in the lab, thus granting us complete a control of their physico-chemistry. A prior rheometry study has examined in details how mechanical properties such as elastic moduli and yield stress evolve with resting time (mechanical aging). Ongoing experiments seek to characterize particle-particle interactions and the changes in microstructure associated with aging.

Numerical simulations will proceed in close collaboration with experiments and serve to make the link between physical assumptions about pairwise interactions and their consequences on microstructural and macroscopic properties.

Laboratoire Navier is located east of Paris, forty minutes from the city center. It is jointly supported by Université Paris-Est, École des ponts, CNRS, and IFSTTAR. The successful candidate will be hired by Université Paris-Est, at a monthly salary of about 2050€ after deductions.

We are looking for an ambitious and talented person with a PhD in Physics and a solid experience in running MD simulations. The successful applicant would have strong mathematical and numerical skills as well as an eagerness to learn about experimental Physics and interact with people from different disciplines.

Applications are welcome at any time until the position is filled. They should be sent to [anael.lemaitre@ifsttar.fr](mailto:anael.lemaitre@ifsttar.fr) and include at least a CV and two reference letters.