

## Temporary teaching assistant (ATER) in Soft Matter Physics

**Position:** Temporary teaching assistant (ATER), 1 year, opportunity to continue on a postdoc.

**Localization:** L'École Supérieure de Physique et de Chimie Industrielles de la Ville de Paris (ESPCI-Paris)

**Teaching:** 135 hours of tutorial classes and practical works in statistical physics and soft matter physics (phase transitions, soft interfaces) for the 1<sup>st</sup> and 2<sup>nd</sup> year ESPCI students; the teaching starts in January 2022.

**Teaching profile:** PhD in soft matter physics or related area; good theoretical basis in physics and practical skills of working with polymers, colloids and interfaces. The teaching is in French.

**Research project:** The candidate will integrate the Soft Matter Science and Engineering lab (SIMM-UMR7615, [www.simm.espci.fr](http://www.simm.espci.fr)) at ESPCI. He/she will have an opportunity to work on several projects of the lab, including the following:

- *Cavitation in soft pores during drying:* the aim is to apply controlled mechanical solicitations to induce “on-demand” cavitation of gas bubbles in polymer foams upon drying; this method may be used to design the porosity distribution inside a material.
- *Numerical modelling of soft pores at large deformations:* we wish to understand the effect of hydrostatic pressure and adhesion on the behavior of soft deformable pores.
- *Magnetic foams for stimuli-responsive surfaces:* we develop soft porous coatings to tune the wetting and adhesion of materials.

Depending on the motivation of the candidate, the research part may be followed by a post-doc on the similar topic.

**Research profile:** Enthusiastic physicist able to work in a multidisciplinary team. Good reporting and communication skills are required. An experience in solid or fluid mechanics or microfluidics will be a benefit but is not mandatory.

**Applications:** Please contact Artem Kovalenko ([artem.kovalenko@espci.fr](mailto:artem.kovalenko@espci.fr)) by sending an application email which should include a CV, a motivation letter and contact information of the references.

**Starting date:** As soon as possible.

### References:

1. Jin et al.. Nature Communications 2019, 10 (1), 143. <https://doi.org/10.1038/s41467-018-07990-5>.
2. Nguyen et al. Soft Matter 2020. <https://doi.org/10.1039/D0SM00932F>.