Postdoc opening in computational active fluids at NJU Suzhou

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PI: Zhouyang Ge (https://gezhouyang.github.io/)
Start: 1 Jan 2026, or on a mutually agreed on date thereafter
Appointment: 2 years, with a possibility to extend for 2-3 years
Salary: 240,000 CNY per annum (including social insurance)

Motivation

Active matter refers to systems in which energy is continuously supplied and dissipated at the constituent particle level. Because of this microscopic energy flux, active matter can display a multitude of interesting phenomena ranging from enhanced diffusion to active turbulence and even "superfluidic" rheologies. Despite the tremendous progress in the field over the last few decades, to date, there have been relatively few studies that have carefully incorporated the *hydrodynamic interactions* among the active particles, thus limiting our physical understanding of active matter as well as its potential applications in materials design and medical technology. This is where we want to make a contribution. Using the recently developed *Active Fast Stokeisan Dynamics* framework [1-2], we aim to perform rigorous and large-scale hydrodynamic simulations of active suspensions to elucidate their dynamical and rheological behaviours in realistic and flowing conditions [3-4].

Job description

We seek a highly motivated postdoc with a background in *computational fluid dynamics* to join us at NJU Suzhou, from 1 January 2026. The candidate must have a PhD degree in a related area (mechanics, engineering physics, applied mathematics, mechanical engineering, chemical engineering, etc) by the time the position starts. Programming skills are necessary, preferably in C++/CUDA. Prior research experience in active matter is advantageous but not required.

The duty of the job includes mainly research (literature review, code development, numerical simulation, data analysis, participance in national/international conferences, publication) and some minor management (coadvising students in the group).

The initial appointment is for 2 years, which may be extended for 2-3 years if there are mutual interest and available funding. The annual base pay is 240,000 CNY, including social insurance. See the HR document (in Chinese) for the official policy.

We strive to create a free and inclusive group environment so that everyone can be themselves and find their own balance. We understand the stress and uncertainty of the job, and will do our best to help each of our members build their academic network and advance their career.

How to apply

Please send your CV and one representative paper to Zhouyang Ge (zhoge@nju.edu.cn) and briefly explain why you want to join us. Informal inquiries are welcome.

References

1. Fiore & Swan. *J. Fluid Mech.*, 878, 544-597 (2019). [link]
2. Elfring & Brady. *J. Fluid Mech.*, 952, A19 (2022). [link]
3. Ge & Elfring. *J. Fluid Mech.*, 1003, A17 (2025). [link]
4. Ge, Brady & Elfring. *arXiv:2505.09457*. [link]