



# Yongfeng Zhao

## Curriculum Vitae

### Personal information

Date of birth 7th April 1990  
City of birth Yinchuan, China

### Research interests

- Systems biology, the design principle of biological systems.
- Nonequilibrium statistical physics, emergence behavior of active matter from microscopic mechanism.
- Deterministic and stochastic nonlinear dynamical systems.

### Working experience

- 2019–now **Postdoctoral researcher**, *Institute of Natural Sciences, Shanghai Jiao Tong University, Shanghai.*
- 2017–2018 **Postdoctoral researcher**, *Laboratoire Matière et Systèmes complexes, Université Paris Diderot, Paris.*
- 2012–2016 **Research assistant**, *Department of Biochemistry, University of Hong Kong, Hong Kong.*
- 2010–2012 **Research assistant**, *Center of Quantitative Biology, Peking University, Beijing.*

### Education

- 2012–2016 **Doctor of Philosophy (PhD) in Physics**, *Department of Physics, University of Hong Kong.*  
supervisors Prof. Huang, Jian-Dong, Dr. Julien Tailleur  
thesis *Run-and-tumble motion and differential dynamic microscopy*
- 2008–2012 **Bachelor of Science (BSc) in Physics**, *School of Physics, Peking University.*  
supervisors Dr. Li, Fang-Ting.  
thesis *A Mathematical Model For the Decision-making Process of CD4+ T cell System By Antigen Dose*

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## Publications

(\* Authors contributed equally.)

### Published

- [1] T. Bertrand, **Y. F. Zhao**, O. Bénichou, J. Tailleur, R. Voituriez, *Optimized diffusion of run-and-tumble particles in crowded environments*, Phys. Rev. Lett. 120, 198103 (2018).
- [2] E. Woillez, **Y. F. Zhao**, Y. Kafri, V. Lecomte, J. Tailleur, *Activated escape of a self-propelled particle from a metastable state*, Phys. Rev. Lett. 122, 258001 (2019).

### Accepted

- [3] A. I. Curatolo\*, N. Zhou\*, **Y. F. Zhao\***, C. L. Liu, A. Daerr, J. Tailleur, J. D. Huang, *Engineering cooperative patterns in multi-species bacterial colonies*, bioRxiv:10.1101/798827.
- [4] R. Zakine\*, **Y. F. Zhao\***, M. Knežević, A. Daerr, Y. Kafri, J. Tailleur, F. van Wijland, *Surface Tensions between Active Fluids and Solid Interfaces: bare vs dressed*, arXiv:1907.07738.

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## References

○ Prof. Jian-Dong Huang

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○ Dr. Julien Tailleur

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○ Dr. Adrian Daerr

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○ Prof. Frédéric van Wijland

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## Working language and skills

### Language

- Chinese, native speaker.
- English, professional working.

### Skills

- Programming in C/C++, Matlab, Python.
- Parallel computing using MPI, openmp, CUDA.
- Writing and presenting in L<sup>A</sup>T<sub>E</sub>X.
- Building optical experimental setup with Arduino.