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, machine learning.

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 **PhD research**, *Department of Biochemistry, University of Hong Kong*, HK.

2010–2012 **Undergraduate research**, *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. Jian-Dong Huang, 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. Fang-Ting Li.

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.)

[1] A. I. Curatolo*, N. Zhou*, **Y. Zhao***, C. Liu, A. Daerr, J. Tailleur, J. Huang, *Cooperative pattern formation in multi-component bacterial systems through reciprocal motility regulation*, Nat. Phys. (2020)

[2] R. Zakine*, **Y. Zhao***, M. Knežević, A. Daerr, Y. Kafri, J. Tailleur, F. van Wijland, *Surface Tensions between Active Fluids and Solid Interfaces: bare vs dressed*, Phys. Rev. Lett. 124, 248003 (2020).

[3] E. Woillez, **Y. Zhao**, Y. Kafri, V. Lecomte, J. Tailleur, *Activated escape of a self-propelled particle from a metastable state*, Phys. Rev. Lett. 122, 258001 (2019).

[4] T. Bertrand, **Y. Zhao**, O. Bénichou, J. Tailleur, R. Voituriez, *Optimized diffusion of run-and-tumble particles in crowded environments*, Phys. Rev. Lett. 120, 198103 (2018).

References

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- Prof. Masaki Sano

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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 LaTeX.
- Building optical experimental setup with Arduino.