Zeqian Li

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Education

- **Unversity of Chicago** — United States
  Research assistant, Center for Physics of Evolving Systems — *Aug 2020 – current*
- **Unversity of Illinois at Urbana-Champaign** — United States
  Ph.D in Physics candidate — *Aug 2018 – current*
- **Hong Kong Baptist University** — Hong Kong
  B.S in Physics (minor in Applied Mathematics) — *Sep 2014 – July 2018*

Publications

- **Closed microbial communities self-organize to persistently cycle carbon**
  Luis Miguel de Jesús Astacio*, Kaumudi H. Prabhakara*, **Zeqian Li**, Harry Mickalide, Seppe Kuehn
  Accepted, PNAS, 2021.

Research Experience

- **University of Chicago** — United States
  Supervisor: Seppe Kuehn — *Aug 2019 - current*
  - **Yellowstone hot spring microbial communities** I am building a fluorescence microscope to image spatial patterns of the hot spring microbial mats, using shotgun metagenomic data to analyze metabolic features of the hot spring community, and, in collaboration with a postdoc, studying the environmental determinants of cyanobacterial growth.
  - **Pathway splitting** I am building a fluorescence microscope to image spatial patterns of the hot spring microbial mats, using shotgun metagenomic data to analyze metabolic features of the hot spring community, and, in collaboration with a postdoc, studying the environmental determinants of cyanobacterial growth.
  - **Carbon** (in collaboration with I am building a fluorescence microscope to image spatial patterns of the hot spring microbial mats, using shotgun metagenomic data to analyze metabolic features of the hot spring community, and, in collaboration with a postdoc, studying the environmental determinants of cyanobacterial growth.
  - **Closed eco-systems** I am building a fluorescence microscope to image spatial patterns of the hot spring microbial mats, using shotgun metagenomic data to analyze metabolic features of the hot spring community, and, in collaboration with a postdoc, studying the environmental determinants of cyanobacterial growth.
- **Hong Kong Baptist University** — Hong Kong
  Supervisor: Changsong Zhou — *Jul 2016 - Jul 2018*
  I studied various biological systems (C. elegans development, C. elegans neural systems, artificial neural networks) using theoretical and computational tools stem from statistical physics.

Honors and Rewards

- **Center for Physics of Living Cells (CPLC) Fellow** — UIUC, 2018-2020
- **HKSAR Government Scholarship** — Hong Kong, 2015-2018
- **Scholastic Award** — Hong Kong Baptist University, 2018

Others

- **ICTP Spring College on the Physics of Complex Systems (2018)** — ICTP, Triest, Italy
  Took five graduate courses with grade E (excellent).
- **Teaching experience**
  Teaching assistant for introductory physics courses in both the college and the graduate school.

Programming

- **Bioinformatics:** basic omics tools, 16s data analysis, metagenome data analysis
- Python, Java, Javascript, C/C++, Matlab
- LaTeX