

EDUCATION

- **University 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

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

PUBLICATIONS

- **Closed microbial communities self-organize to persistently cycle carbon**
Luis Miguel de Jesús Astacio*, Kaumudi H. Prabhakara*, Zeqian Li, Harry Mickalide, Seppe Kuehn
bioRxiv 2020.05.28.121848; doi: <https://doi.org/10.1101/2020.05.28.121848>

RESEARCH EXPERIENCE

- **University of Illinois at Urbana-Champaign** 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.
 - **Center for Physics of Living Cells (CPLC) lab rotations** Aug 2018 - Jul 2019
Lab rotations with Jun Song (computational biology), Karin Dahmen (neural avalanches), and Seppe Kuehn (closed ecosystem).
- **Hong Kong Baptist University** Hong Kong
Supervisor: Changsong Zhou Jul 2016 - Jul 2018
 - **Computational capacities of spiking neural networks with critical avalanches**
 - **Cell adjacency relationships in *C. elegans* cell migration**
 - **Feedback connections on *C. elegans* neural signal flow**

TEACHING EXPERIENCE

- **Hong Kong Baptist University**
Teaching assistant for introductory physics courses.

OTHER ACTIVITIES

- **ICTP Spring College on the Physics of Complex Systems (2018)** ICTP, Trieste, Italy
Took five graduate courses with grade E (excellent).

PROGRAMMING

- Python, Java, C/C++, Matlab
- Bioinformatics tools
- LaTeX, beamer, tikz