

Yabin Zhang

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Education

Rice University Aug. 2015 - present
Houston, TX, USA

Ph.D. in Computational and Applied Mathematics (exp. May 2020)
Master of Arts in Computational and Applied Mathematics Aug. 2017
Qualification exams passed in May 2016
Advisor: Dr. Adrianna Gillman

UCLA Sep. 2011- Jun. 2015
Los Angeles, CA, USA

Bachelor of Science in Applied Mathematics, with *cum laude* honor

Harvard University Sep. 2014 - Dec. 2014
Cambridge, MA, USA
Visiting Undergraduate

Research Interest

My research focuses on fast direct solvers for boundary integral equations and efficient linear algebra. I am interested in the development of robust and optimal scaling algorithms for solving PDEs.

Undergraduate Research experience

Undergraduate Research Seminar Jan. 2015 - Mar. 2015
UCLA, mentored by Dr. Mihai Cucuringu
Graph theory; Local-to-global approaches in analyzing vertex similarities.

Summer REU Jun. 2014 - Aug. 2014
California Research Training Program in Computational and Applied Mathematics
Emotional contagion among dense crowds in 2D and 3D; Fast marching methods.

Faculty Directed Research Mar. 2014 - Jun. 2014
UCLA, mentored by Dr. Li Wang
Swarming and emotional contagion modeling in 2D; Linked-cell algorithm.

Awards

**K2I Computational Science & Engineering
Enhancement Fellowship** Aug. 2015 - Aug. 2019
The Ken Kennedy Institute for Information Technology, Rice University

Ken Kennedy - Cray Inc. Graduate Fellowship Aug. 2016 - Aug. 2017
The Ken Kennedy Institute for Information Technology, Rice University

Publications

Y. Zhang and A. Gillman, *A fast direct solver for boundary value problems on locally perturbed geometries*,
In review.

Posters and Presentations

“A fast direct solver for PDEs on locally-perturbed domains”

- 2017 Modern Advances in Computational and Applied Mathematics Workshop, Jun. 9 - Jun. 10
Poster
- 2017 Rice Oil & Gas HPC Conference, Mar. 15 - Mar. 16
Poster
- SIAM Conference on Computational Science and Engineering 2017, Feb. 27 - Mar. 3
Contributed Talk