

ZACHARY LANGLEY

- education** RUTGERS UNIVERSITY. *New Brunswick, NJ.*
Ph.D., Computer Science, 2019–*expected* 2024.
• Advised by Prof. Aaron Bernstein.
- ROCHESTER INSTITUTE OF TECHNOLOGY. *Rochester, NY.*
B.S., Computer Science, 2014.
- research interests** I am broadly interested in the design and analysis of algorithms, especially algorithms catered towards massive graphs. More broadly, I am interested in building new theoretical tools in service to practical algorithms.
- publications** *A framework for dynamic matchings in weighted graphs*, with Aaron Bernstein and Aditi Dudeja. Annual ACM Symposium on Theory of Computing (STOC 2021).
Improved bounds for distributed load balancing, with Sepehr Assadi and Aaron Bernstein. International Symposium on Distributed Computing (DISC 2020). **Best Paper Award.**
Minimum planar multi-sink cuts with connectivity priors, with Ivona Bezáková. International Symposium on Mathematical Foundations of Computer Science (MFCS 2014).
Contiguous minimum single-source-multi-sink cuts in weighted planar graphs, with Ivona Bezáková. International Computing and Combinatorics Conference (COCOON 2012).
- research experience** RUTGERS UNIVERSITY, *New Brunswick, NJ.* 2019–present
Graduate Research Assistant.
- UNIVERSITY OF ROCHESTER, *Rochester, NY.* Summer 2012
Research Experience for Undergraduates (REU) student.
• Supervised by Prof. Daniel Štefankovič.
• Studied Markov chains to develop fast algorithms for sampling and counting various combinatorial objects, including self-organizing lists and graph colorings.
- ROCHESTER INSTITUTE OF TECHNOLOGY, *Rochester, NY.* Summer 2011
Center for Student Innovation Undergraduate Summer Research and Innovation Fellow.
• Supervised by Prof. Ivona Bezáková.
• Designed and analyzed novel optimization and counting algorithms for problems in planar graphs.
- teaching experience** RUTGERS UNIVERSITY, *New Brunswick, NJ.*
Teaching Assistant for CS 344: Dsgn. and Analysis of Algorithms. Spring 2021
Teaching Assistant for CS 440: Intro. to Artificial Intelligence. Spring 2020
Teaching Assistant for CS 344: Dsgn. and Analysis of Algorithms. Fall 2019

employment Graduate research assistant, Rutgers University. *New Brunswick, NJ.* 2019–present
Graduate teaching assistant, Rutgers University. *New Brunswick, NJ.* 2019–present
Software engineer, Color Genomics, *Burlingame, CA.* 2017–2019
Software engineer, Operator, *San Francisco, CA.* 2015–2017
Software engineer, Twitter, *San Francisco, CA.* 2013–2015
Software engineer intern, Google, *Cambridge, MA.* Summer 2013
Computer science theory tutor, Rochester Institute of Technology, *Rochester, NY.*
2011–2013

**honors
& awards** Best Paper Award at the International Symposium on Distributed Computing (DISC)
2020.
B. Thomas Golisano College of Computer and Information Sciences Research Seed
Funding Recipient, 2012.
Center for Student Innovation Undergraduate Summer Research and Innovation
Fellowship Recipient, Summer 2011.
Placed 3rd, 6th, 3rd in the ACM-ICPC Northeast North America Regional Finals in
2010, 2011, 2012.