HAOWEN ZHANG

Georgia Institute of Technology ⋄ Atlanta, GA 30332, United States

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EDUCATION

Georgia Institute of Technology   *08/2017 - Present*
Ph.D. student in Computational Science and Engineering

Shandong University   *09/2013 - 06/2017*
B.E., Hons, in Computer Science and Technology

RESEARCH EXPERIENCE

Georgia Institute of Technology   Atlanta, GA
Graduate Research Assistant; Advisor: Dr. Srinivas Aluru   *08/2017 - Present*

- Working on long/short read algorithm design and implementation.

- Using high-performance architectures to accelerate sequencing data analysis.

Tsinghua University & National Institutes for Food and Drug Control   Beijing, China
Visiting Student; Advisor: Dr. Tao Jiang and Dr. Tai Guo   *01/2017 - 07/2017*

- Worked on viral deep sequencing data analysis.

- Set up a pipeline to detect low-frequency variants using deep sequencing data of viruses.

Shandong University   Jinan, China
Research Assistant; Advisor: Dr. Weiguo Liu   *08/2015 - 01/2017*

- Proposed a new index data structure and two novel seeding algorithms for short read mapping.

- Accelerated edit distance computing on Intel Many Integrated Core Architecture (MIC).

The University of Hong Kong   Hong Kong
Research Intern; Advisor: Dr. Siu-Ming Yiu   *08/2016*

- 1/19 students accepted by HKU CS Research Internship Programme.

- Conducted a comprehensive evaluation of structural variation (SV) detection tools using simulated reads.

- Gave suggestions on developing a new SV calling algorithm.

PUBLICATIONS

1. Chirag Jain[†], **Haowen Zhang**[†], Yu Gao, and Srinivas Aluru. On the complexity of sequence to graph alignment. In *International Conference on Research in Computational Molecular Biology (RECOMB)*. Springer, 2019. ([†]contributed equally; accepted)

2. Chirag Jain, Sanchit Misra, **Haowen Zhang**, Alexander Dilthey, and Srinivas Aluru. Parallel sequence to graph alignment. In *Parallel and Distributed Processing Symposium (IPDPS), 2019 IEEE International*. IEEE, 2019. (accepted)

3. Yueyue Liu, Tai Guo, Qingchuan Yu, **Haowen Zhang**, Jialiang Du, Yunqi Zhang, Shengli Xia, Huan Yang, and Qihan Li. Association of human leukocyte antigen alleles and supertypes with immunogenicity of oral rotavirus vaccine given to infants in china. *Medicine*, 97(40):e12706, 2018

4. **Haowen Zhang**[†], Yuandong Chan[†], Kaichao Fan, Bertil Schmidt, and Weiguo Liu. Fast and efficient short read mapping based on a succinct hash index. *BMC bioinformatics*, 19(1):92, 2018. ([†]contributed equally)

SELECTED HONORS AND AWARDS

- Workshop on String Algorithms in Bioinformatics (StringBio) Travel Award *2018*
- Workshop on the Future of Algorithms in Biology (FAB) Travel Fellowship *2018*