

August Guang

<http://augustguang.com>
august_guang@brown.edu

SKILLS

PROGRAMMING

Python • R • C++

MISCELLANEOUS

git • conda • SQLite • HPC Linux clusters

COMMUNICATION

Keynote • \LaTeX • Markdown

EDUCATION

BROWN UNIVERSITY

PHD IN APPLIED MATHEMATICS

Specialization: Probability &
Computational Biology
Dec 2017 | Providence, RI

MS IN APPLIED MATHEMATICS

May 2014 | Providence, RI

HARVEY MUDD COLLEGE

BS IN MATHEMATICS

May 2012 | Claremont, CA
Graduated with High Distinction
Honors in Mathematics
Honors in Humanities, Social Sciences &
Arts

LINKS

Github: <https://github.com/aguang>

Bitbucket: <https://bitbucket.com/aguang>

EXPERIENCE

BROWN UNIVERSITY | GENOMICS DATA SCIENTIST

February 2018–Current | Providence, RI

GENENTECH | COMPUTATIONAL BIOLOGY & BIOINFORMATICS

GRADUATE INTERN

June 2016–August 2016 | South San Francisco, CA

CURRENT RESEARCH

PRESERVING INTRA-PATIENT VARIANCE IMPROVES PHYLOGENETIC INFERENCE OF HIV TRANSMISSION

- Obtained highly competitive Blue Waters Graduate Fellowship award, given to 10 graduate students per year.
- Developed HMM approach to summarize intra-patient HIV genome variation to improve inference of transmission events.
- Presented at 3 competitive national and international venues with audiences from 30-100+.

REVISING TRANSCRIPTOME ASSEMBLIES WITH PHYLOGENETIC INFORMATION IN AGALMA1.0.

- Developed module in lab's phylogenomics pipeline Agalma1.0 that utilizes gene tree information to correct for transcript assignment errors.
- bioRxiv doi: <https://doi.org/10.1101/202416>

PUBLICATIONS

A. Guang, F. Zapata, M. Howison, C.E. Lawrence, C.W. Dunn. "Better integrating the components of phylogenetic analyses." Trends in Ecology and Evolution, February 2016.

F. Hinkelmann, M. Brandon, B. Guang, R. McNeill, G. Blekherman, A. Veliz-Cuba, and R. Laubenbacher. "ADAM: Analysis of Discrete Models of Biological Systems Using Computer Algebra." BMC Bioinformatics, 12(1): 295, July 2011.

AWARDS

BLUE WATERS GRADUATE FELLOWSHIP | NATIONAL CENTER FOR SUPERCOMPUTING APPLICATIONS

September 2016–August 2017 | Characterizing HIV Transmission Networks Through Sensitivity Analyses and Simulations

INTEGRATIVE GRADUATE EDUCATION RESEARCH TRAINEESHIP | NATIONAL SCIENCES FOUNDATION

September 2012–August 2014, June 2016 | Untangling Morphotype and Latitudinal Variation in *Spartina Alterniflora*

OUTSTANDING PRESENTATION HONORS | JOINT MATHEMATICS MEETINGS

January 2012 | Boston, MA | Application of a Hill Climbing Algorithm to Parallelize Graph-based Genome Assembly