

Younhun Kim

MIT Department of Mathematics, 2-341C
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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA 2016-2022
Expected Ph.D. – Applied Mathematics

Brown University, Providence, RI 2008-2009, 2013-2016
Sc.B. – Math & Computer Science
Magna Cum Laude, Honors in Department

SUMMARY

Final-year Ph.D. candidate in Applied Math. Interested in models of evolution, random networks, statistical learning theory and computational biology.

PUBLICATIONS

T.E. Gibson, **Y. Kim**, ..., G.K. Gerber. “Intrinsic Instability of the Dysbiotic Microbiome Revealed Through Dynamical Systems Inference at Scale,” *In submission*.

Y. Kim, E. Mossel, G. Ramnarayan, P. Turner. “Efficient Reconstruction of Stochastic Pedigrees,” *arXiv:2005.03810*

Y. Kim, F. Koehler, A. Moitra, E. Mossel, G. Ramnarayan. “How Many Subpopulations is Too Many? Exponential Lower Bounds for Inferring Population Histories,” *RECOMB 2019 & Journal of Computational Biology*.

M.D.M. Leiserson, F. Vandin, H. Wu, J.R. Dobson, J.V. Eldridge, J.L. Thomas, A. Papoutsaki, **Y. Kim**, ..., B.J. Raphael. “Pan-cancer network analysis identifies combinations of rare somatic mutations across pathways and protein complexes,” *Nature Genetics*, vol. 47, no. 2, pp. 116-114, Dec 2014.

Seminars

Co-organizer, MIT Simple Person’s Applied Math Seminar (SPAMS) 2018-2019
Assistant Organizer, MIT Bioinformatics Seminar Spring 2018

Talks and Posters

“Strain Tracking from Time-series Data.”, Poster Session, ICML Compbio 2020
“Post-Quantum Cryptography”, MIT SPAMS 2018
“Cancer Biology: A Computational Lens”, MIT SPAMS 2018
“Statistics of Sequence Alignment”, MIT SPAMS 2017

OTHER PROJECTS

Applications of Spectral Graph Theory & Perron Ranking. Jul 2015 – May 2016
Advisor: Sorin Istrail, Brown University.
Parameter Selection in HotNet2 Summer 2014
Advisor: Benjamin J. Raphael, Brown University.

ACADEMIC SERVICE

Recitation Instructor, MIT, 18.650: Statistics Spring 2020
Recitation Instructor, MIT, 18.600: Probability Sep 2019
TA, edX Micromasters in Stat. and Data Sci. (6.431x & 18.6501x) 2018-2019
Mentor & Counselor, MIT MathROOTS June 2018 & 2019
Problem Reviewer, NYCIML 2016 – 2018
TA, MIT, 18.418: Topics in Computational Bio Spring 2018
Grader, MIT, 18.404: Theory of Computation Fall 2017
Mentor, RSI July 2017
Mentor, MIT PRIMES 2017
TA, Brown U., APMA 1740: Recent Appl. Prob. & Stat. Spring 2016
Head TA, Brown U., CSCI 1810: Computational Biology Fall 2014, 2015
TA, Brown U., CSCI 0080: First Byte of CS Spring 2014
Math Tutor 2007-2008

AWARDS

MIT PRIMES Bershadsky Mentorship 2022
MIT Akamai Presidential Fellowship 2016
Brown U. Undergraduate Teaching & Research Award 2014

INDUSTRY

Quantitative Research Intern Summer 2020 & Summer 2021
Jump Trading, Chicago, IL, USA
Programmer & Web developer Jun 2009 – Aug 2013
Orbis Systems, Jersey City, NJ, USA

TECHNICAL SKILLS

Languages & Software: Java, Python, MATLAB, L^AT_EX, Git, SQL