

Xiaoyu He
Curriculum Vitae

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EDUCATION	Stanford University, PhD in Mathematics expected	2016 -
	Advisor: Jacob Fox.	
	Harvard University, A.B. in Mathematics	2012 - 2016
	Magna Cum Laude with Highest Honors in Field.	
	Secondary in Computer Science.	
PAPERS	Upper bounds on the restricted online Ramsey number	
	<i>with David Gonzalez and Hanzhi Zheng</i> , preprint, arXiv:1812.04131 (2018).	
	Online Ramsey Numbers and the Subgraph Query Problem	
	<i>with David Conlon, Jacob Fox, and Andrey Grinshpun</i> , preprint, arXiv:1806.09726 (2018).	
	A proof of Tomescu's graph-coloring conjecture	
	<i>with Jacob Fox and Freddie Manners</i> , preprint, arXiv:1712.06067 (2018).	
	Linear dependence between hereditary quasirandomness conditions	
	Electron. J. Combin. 25 (2018), P4.12.	
	Primes of the form $p^2 + Ny^2$	
	Harvard University senior thesis, preprint.	
	Geometric-progression free sequences with small gaps II	
	INTEGERS 16 (2016), Paper No. A31, 9 pp.	
SELECTED TALKS	Zero-sum subsequences of length kp in finite abelian p-groups	
	Discrete Math 339 (2016), 399-40.	
	Geometric-progression free sequences with small gaps	
	J. Number Theory 151 (2015), 197-210.	
	Cross number invariants of finite abelian groups	
	J. Number Theory 136 (2014), 100-117.	
	On the classification of universal rotor-routers	
	preprint, arXiv:1111.1459 (2011).	
	Tomescu's Graph-Coloring Conjecture	2018
	<i>Stanford Combinatorics Seminar</i>	
	The Parity Problem in Sieve Theory	2016
	<i>MIT Student Colloquium for Undergraduates in Mathematics</i>	
	The Parity Problem in Sieve Theory	2016
	<i>Meeting of the Friends of Harvard Mathematics</i>	
	GP-Free Sequences with Small Gaps	2015
	<i>Dartmouth Number Theory Seminar</i>	
	Counting Squarefree Numbers with the Sieve	2015
	<i>Harvard-MIT Undergraduate Math Symposium</i>	
	GP-Free Sequences with Small Gaps	2015
	<i>AMS Session on Number Theory, III, Joint Math Meetings</i>	
	Cross Number Invariants of Finite Abelian Groups	2014
	<i>AMS Session on Combinatorics and Number Theory, Joint Math Meetings</i>	

SELECTED AWARDS	NSF Graduate Research Fellowship	2018-2021
	Friends of Harvard Mathematics award (runner-up)	2016
	Robert Fletcher Rogers Prize	2015
	<i>Best Math Table Talk 2014-2015</i>	
	Google Code Jam Round 3	2014
	William Lowell Putnam Competition	
	• N1	2013
	• N2	2015
	• Honorable Mention	2012, 2014
	International Math Olympiad	
	• Gold Medal	2010, 2011
	• Silver Medal	2012
	USA Math Olympiad	
	• Second Place	2010, 2011
	• Perfect Score	2012
	Intel Science Talent Search Finalist	2012
	Davidson Fellow	2012
EXPERIENCE	Stanford University Research in Mathematics Program Mentor	2017 - 2018
	Stanford University Directed Reading Program Mentor	2017 - 2018
	Stanford University Course Assistant	2016 - 2018
	MIT PRIMES Research Mentor	2016
	Google Inc. Software Engineering Intern	2015
	Harvard University Course Assistant	2014 - 2015
	Jane Street Capital Trading Intern	2013
	MIT-PRIMES Circle Mentor	2013 - 2014
	IdeaMath Year-round Program Instructor	2012 - 2013