

Dylan KING

PERSONAL INFORMATION

ADDRESS: 1285 Gatewood Road, Walnut Cove, NC, 27052, USA
PHONE (USA): +1 336-406-6327
INSTITUTIONAL EMAIL: dking@caltech.edu
PERSONAL EMAIL: dylank1029@gmail.com

EDUCATION

- **2022-present California Institute of Technology**, Pasadena, California, USA
 - PhD in mathematics, advised by Dr. David Conlon
- **2021-2022 University of Bristol**, Bristol, United Kingdom
 - Master’s in Science by Research under the supervision of Dr. David Ellis (focus on extremal combinatorics)
- **2020-2021 University of Cambridge**, Cambridge, United Kingdom
 - Master’s in Advanced Studies by Part III of the Mathematical Tripos
 - Pass with Distinction
- **2016-2020 Wake Forest University**, Winston-Salem, North Carolina, USA
 - Bachelors of Science in Mathematics, Bachelors of Arts in Computer Science, Minor in Chemistry
 - GPA: 4.0, Graduated May 2020
 - Highest Honors at the Budapest Semesters in Mathematics Program, 2018-19

PUBLICATIONS

- Fish, S., King, D., & Miller, S. J. (2020). Extensions of Autocorrelation Inequalities with Applications to Additive Combinatorics. *Bulletin of the Australian Mathematical Society*, 102(3), 451–461. [arXiv:2001.02326](#)
- Coen, F., Gillman, N., Keleti, T., King, D.A., & Zhu, J. (2021). Large Sets with Small Injective Projections. *Annales Fennici Mathematici*, 46(2), 683–702. [arXiv:1906.06288](#)
- King, D.A., Martinez, T., Miller, S.J., & Sun, C., (2022). Generalizing the Distribution of Missing Sums in Sumsets. *Journal of Number Theory*, 239, 402-444. [arXiv:2005.07981](#)
- Fish, S., King, D.A., Miller, S.J., & Wahlenmayer, C.G. (2019). Crescent Configurations in Normed Spaces. *Integers*, 20, A96. [arXiv:1909.08769](#)
- Fang, S., King, D., Lee, E. B., & Strichartz, R. (2019). Spectral decimation for families of self-similar symmetric Laplacians on the Sierpiński gasket. *Journal of Fractal Geometry*, 7(1), 1–62. [arXiv:1709.02031](#)
- A review of B. Bajnok, *Additive Combinatorics: A Menu of Research Problems*, CRC Press, Boca Raton, FL, 2018, 390 pages; joint with Thomas C. Martinez, Steven J. Miller, and Chenyang Sun. Printed in the December American Mathematical Monthly.

SELECTED PRESENTATIONS

- **2023** Workshop on Ramsey Theory at UC San Diego, Daisy-free hypergraphs and arithmetic Hilbert cubes

- **2022** Random Structures and Algorithms (RS&A) in Gniezno, Distribution of Missing Sums in Correlated Sumsets
- **2022** Large Sets with Small Injective Projections at Special Session on Geometric Measure Theory at the Joint Math Meetings (Online)
- **2020** Erdős' Elementary proof of Chebyshev's Theorem, Part III Michaelmas 2020 Seminar Series
- **2020** Combinatorial and Additive Number Theory (CANT), Distribution of Missing Sums in Correlated Sumsets, (Zoom) <https://www.youtube.com/watch?v=EYS2g0ktFbQ&feature=youtu.be>
- **2020** Outstanding poster at the Joint Mathematics Meetings student poster session
- **2019** Maine-Québec Number Theory Conference: Presentation of joint work on discrete geometry and number theory with S. Fish, C. Wahlenmayer, and S. Miller

TEACHING

- **2022** Teaching Assistant for Ma1 a (Head TA) and c: Single Variable Calculus at **Caltech**
- **2022** Teaching Assistant for Ma1 a,b, and c: Single Variable Calculus at **Caltech**
- **2020** Teaching Assistant for MST 214 Multivariable Analysis at **Wake Forest University**
- **2019** Teaching Assistant for MST 317 Complex Analysis at **Wake Forest University**

HONORS AND AWARDS

- **2020** Marshall Scholar
- **2019** G.W. Greene Scholar at **Wake Forest University**
 - Junior Phi Beta Kappa member with the highest GPA
- **2018** Barry Goldwater Scholar
- **2018** Raynor Scholar at **Wake Forest University**
 - Scholarship awarded by the Math Department to an outstanding undergraduate
- **2016** Reynolds Scholar
 - Awarded full tuition academic merit scholarship to attend **Wake Forest University**, including funding to pursue independent research projects during the summer