

# William J. Wesley

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Department of Mathematics, University of California, Davis  
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## EDUCATION

### University of California, Davis

Ph.D. Mathematics, September 2018-present

### Amherst College

B.A. Mathematics and Computer Science, *summa cum laude*, May 2018

## PUBLICATIONS

5. W.J. Wesley, *Improved bounds for Ramsey-type theorems involving the Fibonacci numbers and other sequences*, preprint (available on arXiv).
4. J.A. De Loera and W.J. Wesley, *Ramsey numbers through the lenses of polynomial ideals and Nullstellensätze*, preprint (available on arXiv).
3. Y. Chang, J.A. De Loera, and W.J. Wesley, *Rado numbers and SAT computations*, Proceedings of the 2022 International Symposium on Symbolic and Algebraic Computation (2022).
2. M. Barnett, A. Folsom, and W.J. Wesley, *Rank generating functions for odd-balanced unimodal sequences*, Journal of the Australian Mathematical Society 109(2) (2020).
1. M. Barnett, A. Folsom, O. Ukogu, W.J. Wesley, and H. Xu, *Quantum Jacobi forms and balanced unimodal sequences*, Journal of Number Theory 186 (2018).

## TALKS

- *Computation and Certification of Ramsey-Type Numbers*, San Diego State University, Fall 2022
- *Rado numbers and SAT computations*, ISSAC '22, Lille, France, Summer 2022
- *Computation and Certification of Ramsey-Type Numbers*, Seminario de Matemáticas Discretas, UNAM Campus Juriquilla, Virtual, Spring 2022
- *Ramsey Theory and the Fibonacci Numbers*, Student-run research seminar, University of California, Davis, Spring 2022
- *Lean and Formalizing Mathematics*, CACAO seminar, University of California, Davis, Spring 2022
- *Rado Numbers*, CACAO seminar, University of California, Davis, Summer 2021
- *Nullstellensatz Certificates and Ramsey Numbers*, Student-run research seminar, University of California, Davis, Spring 2021
- *Nullstellensatz Certificates and Ramsey Numbers*, CACAO seminar, University of California, Davis, Virtual, Summer 2020
- *The Unique Games Conjecture*, CACAO seminar, University of California, Davis, Fall 2019
- *Ramanujan's Congruences*, Thesis mini-talk session, Amherst College, Fall 2017
- *Quantum Jacobi Forms*, WIMIN Conference, Smith College, Fall 2017

**CONFERENCES  
AND  
WORKSHOPS**

- *Quantum Jacobi Forms*, MAA MathFest, Chicago, IL, Summer 2017
- *Sums of Squares Method in Geometry, Combinatorics and Optimization*, Kelowna, BC, Summer 2022
- *ISSAC '22*, Lille, France, Summer 2022
- *CCAAGS-22*, Seattle, WA, Summer 2022
- *Satisfiability: Theory, Practice, and Beyond*, Virtual, Winter 2022
- *WIMIN Conference*, Northampton, MA, Fall 2017
- *MAA MathFest*, Chicago, IL, Summer 2017

**TEACHING  
EXPERIENCE**

**University of California, Davis**

Instructor of Record:

- MAT 21B (Integral Calculus) Fall 2022
- MAT 16B (Integral Calculus) Summer 2019

Teaching Assistant:

- MAT 108 (Discrete Mathematics) Winter 2021
- MAT 127B (Real Analysis) Spring 2020
- MAT 21A (Differential Calculus) Fall 2021, Fall 2019, Winter 2019
- MAT 21B (Integral Calculus) Winter 2022, Winter 2020, Fall 2018
- MAT 21C (Sequences and Series) Spring 2022, Spring 2021
- MAT 21D (Multivariable Calculus) Fall 2020, Spring 2019

**Amherst College**

Teaching Assistant:

- COSC 111 (Introduction to Computer Science) Spring 2016, Fall 2015, Spring 2015

Grader:

- MATH 281 (Combinatorics) Fall 2017
- MATH 350 (Real Analysis) Spring 2017, Fall 2016, Spring 2016

**AWARDS**

**University of California, Davis**

- College of Letters and Science Dean's Summer Fellowship, 2022, 2020

**Amherst College**

- Woods-Travis Prize, 2018
- Breusch Prize in Mathematics, 2018
- Phi Beta Kappa, 2018
- USTFCCCA All-Academic, Fall 2017

- Undergraduate Student Paper Session Award, MAA MathFest 2017
- NESCAC All-Academic Team (Spring 2018, Fall 2017, Spring 2017, Winter 2017, Fall 2016, Spring 2016, Winter 2016, Fall 2015)