

Curriculum Vitae for Connor Ahlbach

CONTACT INFORMATION	University of Washington, Seattle Seattle, WA, 98195-4350	<i>Mobile:</i> +1-650-636-3013 <i>E-mail:</i> ahlbach@uw.edu
WEBSITE	https://sites.math.washington.edu/~ahlbach/website/	
CITIZENSHIP	United States of America	
EDUCATION	Harvey Mudd College , Claremont, California USA <ul style="list-style-type: none">• B.S., Mathematics, May 2013• Advisor: Professor Francis Su• Thesis Title: <i>A Discrete Approach to the Poincare Miranda Theorem</i> University of Washington , Seattle, Washington USA <ul style="list-style-type: none">• PhD program in Mathematics: September 2013 - May 2019 (Expected)• Advisor: Professor Sara Billey• Thesis Title: <i>Cyclic Sieving: Refinements, Applications, and Tableaux</i>	
RESEARCH INTERESTS	Algebraic Combinatorics, Symmetric Functions, Young Tableaux, Representation Theory, Cyclic Sieving Phenomenon, Permutation Statistics, Coxeter Groups	
JOURNAL PUBLICATIONS	<ol style="list-style-type: none">1. Ahlbach, Connor; Swanson, Joshua. <i>Refined cyclic sieving on words for the major index statistic</i>, European Journal of Combinatorics, Volume 73, October 2018, Pages 37-60.2. Ahlbach, Connor; Usatine, Jeremy; Pippenger, Nicholas. <i>Barred preferential arrangements</i>, Electronic Journal of Combinatorics, Volume 20, Issue 2, 2013.3. Ahlbach, Connor; Usatine, Jeremy; Frougny, Christiane; Pippenger, Nicholas. <i>Efficient algorithms for Zeckendorf arithmetic</i>, Fibonacci Quarterly, Volume 51, Number 3, August 2013, pg. 249 - 255.	
OTHER PAPERS	<ol style="list-style-type: none">1. Ahlbach, Connor. <i>Tableaux stabilization and rectangular tableaux fixed by promotion powers</i>. In Preparation.2. Ahlbach, Connor; Swanson, Joshua; Rhoades, Brendon. <i>Euler-Mahonian refined cyclic sieving</i>. In Preparation.3. Ahlbach, Connor; Swanson, Joshua. <i>Cyclic sieving, necklaces, and branching rules related to Thall's problem</i>. arXiv:1808.06043. Submitted August 2018.4. Ahlbach, Connor; Usatine, Jeremy; Pippenger, Nicholas. <i>A combinatorial interpretation of the joint cumulant</i>. arXiv:1211.0652.5. Ahlbach, Connor; Usatine, Jeremy; Pippenger, Nicholas. <i>Gap theorems for the delay of circuits simulating finite automata</i>. arXiv:1308.2970.	

TEACHING
EXPERIENCE

- Upward Bound Tutoring and other tutoring of high school students weekly during my undergraduate education (Sept. 2009 - May 2013)
- Teaching Assistant for Precalculus (6 quarters), Calculus (1 quarter)
- Instructor for Linear Algebra (9 quarters), Precalculus (1 quarter)
- Apprentice Instructor at *MathILy*, Summer 2018
- Teaching Math Prep I at Washington Correction Center for Women through the Freedom Education Project Puget Sound, Autumn 2018
- Math Circle Volunteer weekly for Spring 2018 and Autumn 2018

PROGRAMMING
SKILLS

- Familiar with: L^AT_EX, Python, Sage/CoCalc, Matlab
- Some Experience with: Java, Racket, Prolog
- Wrote program for Type B RSK correspondence, submitted to Sage/CoCalc.

OTHER
PROFESSIONAL
ACTIVITIES

- I am writing an introductory linear algebra textbook. You can view my current progress here: <https://sites.math.washington.edu/~ahlbach/linalextextbook/>
- Referee for FPSAC 2017
- Reviewed a submission to Discrete Mathematics
- Worked with Washington Experimental Mathematics Lab on research into *Rook placement games* with undergraduates, Spring 2018
- Working with Washington Experimental Mathematics Lab on research into *sandpile models* with another graduate student and an undergraduate, Autumn 2018

AWARDS

- Microsoft Scholar Award 2013 - 2017.

INVITED TALKS

- Ahlbach, Connor; Swanson, Joshua. *Refined Cyclic Sieving on Words for the Major Index Statistic*. Poster Presentation at Formal Power Series and Algebraic Combinatorics (FPSAC) Conference 2017.
- AMS Fall Sectional Meeting at University of California, Riverside: Combinatorial Representation Theory. *Refined Cyclic Sieving on Words for the Major Index Statistic*. November 4-5, 2017.
- *Sum and Intersection of Subspaces in Introductory Linear Algebra* in Innovative and Effective Ways to Teach Linear Algebra section at Joint Math Meetings 2019.

OTHER ACTIVITIES

- Mixed Martial Arts: 2000-2013,
- Aikido: 2013-Present.