

# Milo James Bechtloff Weising

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## Education

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<b>University of California, Davis</b> Ph.D. Mathematics Thesis Title: <i>Stable-Limit Cherednik Theory</i>	Davis, CA June 2024
<b>University of California, Santa Barbara</b> B.S. Mathematics	Santa Barbara, CA June 2019

## Professional Appointments

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<b>Virginia Tech</b> Postdoctoral Associate for Mathematics	Blacksburg, VA August 2024 - Current
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## Research Experience

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<b>Postdoctoral Associate, Virginia Tech</b> Faculty advisor: Prof. Daniel Orr	August 2024 - Current
<b>PhD Candidate, UC Davis</b> Thesis advisor: Prof. Monica Vazirani	January 2022 - June 2024
<b>UCSB SURF</b> Research advisor: Prof. Karel Casteels	Summer 2018

## Research Visits

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<b>Virginia Tech</b> Visited Prof. Daniel Orr	October 2023
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## Teaching

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<b>Virginia Tech Department of Mathematics</b> · <i>Postdoctoral Faculty</i>	Started August 2024
<b>UC Davis Department of Mathematics</b> · <i>Teaching Assistant</i>	2019 - 2024
<b>UC Davis Department of Mathematics</b> · <i>Instructor</i>	Summer 2020

## Awards

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<b>UC Davis Dean's Summer Research Fellowship</b>	Summer 2023
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## Publications

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- **Milo Bechtloff Weising**. "Stable-Limit Non-symmetric Macdonald Functions". accepted to: Algebraic Combinatorics (2024)
- **Milo Bechtloff Weising**. "Murnaghan-Type Representations of the Elliptic Hall Algebra". In: Sém. Lothar. Combin. 91B.47 (2024)
- **Milo Bechtloff Weising**. "Stable-Limit Non-symmetric Macdonald Functions in Type A". In: Sém. Lothar. Combin. 89B.56 (2023)

## Preprints

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- **Daniel Orr, Milo Bechtloff Weising**. "Stable-limit partially symmetric Macdonald functions and parabolic flag Hilbert Schemes". (In preparation)

- **Milo Bechtloff Weising.** "Artin Symmetric Functions". In: (2024). arXiv:2409.09643 [math.NT] url: <https://arxiv.org/abs/2409.09643>
- **Milo Bechtloff Weising.** "Delta Operators on Almost Symmetric Functions". In: (2024). arXiv:2405.09846 [math.RT] url: <https://arxiv.org/abs/2405.09846>
- **Milo Bechtloff Weising.** "Almost Symmetric Schur Functions". In: (2024). arXiv: 2405.01049 [math.CO] url: <https://arxiv.org/abs/2405.01049>
- **Milo Bechtloff Weising.** "Double Dyck Path Algebra Representations From DAHA". In: (2024). arXiv: 2402.02843 [math.RT] url: <https://arxiv.org/abs/2402.02843>
- **Milo Bechtloff Weising.** "Murnaghan-Type Representations of the Positive Elliptic Hall Algebra". In: (2024). arXiv: 2405.00756 [math.CO] url: <https://arxiv.org/abs/2405.00756>
- **Milo Bechtloff Weising.** "Stable-Limit Non-symmetric Macdonald Functions". In: (2023). arXiv: 2307.05864 [math.RT]. url: <https://arxiv.org/abs/2307.05864>.

## Presentations

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- Quantum Groups and Representation Theory, North Carolina State University, NC. *Double Dyck Path Algebra Representations From DAHA*. October 14, 2024. Contributed Talk.
- Virginia Tech Algebra Seminar, Blacksburg, VA. *Arithmetic Symmetric Functions*. September 27, 2024. Talk.
- FPSAC 2024, Bochum, Germany. *Murnaghan-Type Representations of the Elliptic Hall Algebra*. July 2024. Poster.
- UC Davis Algebra and Discrete Math Seminar, Davis, CA. *New Directions in Macdonald Theory*. June 2024. Talk.
- AMS Spring Western Sectional Meeting 2024, San Francisco CA *Double Dyck Path Algebra Representations From DAHA*. May 2024. Talk.
- AMS Spring Western Sectional Meeting 2024, San Francisco CA *Murnaghan-Type Representations of the Elliptic Hall Algebra*. May 2024. Talk.
- UC Berkeley Combinatorics Seminar, Berkeley, CA. *Stable-Limit Non-symmetric Macdonald Functions* September 26, 2023. Talk.
- Virginia Tech Algebra Seminar, Blacksburg, VA. *Stable-Limit Non-symmetric Macdonald Functions* October 4, 2023. Talk.
- AMS Spring Western Sectional Meeting 2023, Fresno CA *Stable-Limit Non-symmetric Macdonald Functions*. May 2023. Talk.
- FPSAC 2023, Davis, CA. *Stable-Limit Non-symmetric Macdonald Functions in Type A*. July 2023. Poster.

## Student-Run Seminar Talks

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- Student-Run Algebra and Discrete Math Seminar, Davis CA. *Hopf Algebras*. March 2022.
- Student-Run Algebra and Discrete Math Seminar, Davis CA. *Introduction to Schubert Calculus*. April 2022.
- Student-Run Algebra and Discrete Math Seminar, Davis CA. *Flag Varieties*. April 2022.
- Student-Run Algebra and Discrete Math Seminar, Davis CA. *Introduction to Haar Measure and the Representation Theory of Compact Groups*. May 2023.
- UC Davis Mathematics Student-Run Research Seminar, Davis CA *Stable-Limit Non-symmetric Macdonald Functions*. June 2023.

## Service

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- Ran an undergraduate research group at Virginia Tech in Fall 2024 (ongoing)

- Co-founder of the Student-Run Algebra and Discrete Math Seminar at UC Davis

## **Additional Skills**

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- Fluent in Latex
- Proficient in SageMath
- Semi-professional saxophonist, 17 years

## **References**

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- Monica Vazirani: [mjvazirani@ucdavis.edu](mailto:mjvazirani@ucdavis.edu)
- Daniel Orr: [dorr@math.vt.edu](mailto:dorr@math.vt.edu)
- Eugene Gorsky: [egorskiy@math.ucdavis.edu](mailto:egorskiy@math.ucdavis.edu)
- Erik Carlsson: [ecarlsson@math.ucdavis.edu](mailto:ecarlsson@math.ucdavis.edu)