

## Aren Lampman

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### **Education:**

- Oregon State University (4.0 GPA) Corvallis, Oregon PhD Mathematics (2023 – Present)
- Oregon State University (4.0 GPA) Corvallis, Oregon M.S. Mathematics (2023 - Present)
- Johns Hopkins University (4.0 GPA) Baltimore, Maryland Non-Degree Mathematics (2022 - 2023)
- University of Arizona (3.9 GPA) Tucson, AZ B.S. Mathematics (Probability & Statistics) (2020 – 2022)
- University of Arizona (3.9 GPA) Tucson, AZ Minor in Computer Science (2020 - 2022)
- Rio Salado College (4.0 GPA) Phoenix, AZ A.S. Mathematics (May 2019 - Dec. 2019)
- Central Arizona College (4.0 GPA) San Tan Valley, AZ A.S. Mathematics (Aug. 2018 – May 2020)

## **Research:**

- Oregon State University – PhD Research (2024 - Present)
  - ◆ Conducting probability research in interacting particle systems under the supervision of Oregon State University Professor Yevgeniy Kovchegov. Research consists of improving the rigorous development of specific types of interacting particle systems, namely those of coalescent and annihilation processes.
  - ◆ Using improved interacting particle system models to aid in the analysis of randomness within scientific systems, especially those related to particle physics (including models for anti-matter interactions).
  - ◆ Using the aid of computer programming/software to help create simulations of interacting particle systems and branching processes.
  - ◆ Collaborating with other university colleagues to study models of interacting particle systems.
- University of Arizona – Undergraduate Research (2021 – 2022)
  - ◆ Conducted research with University of Arizona Professor Doug Pickrell on combinatorial issues associated with infinite products of matrices of a special form using Maple software.
  - ◆ Documented and updated research documents for use in possible future publications.
  - ◆ Discovered patterns of partitions, polynomial degrees, and singularity terms for input values of the Zeta Function.
  - ◆ Attempted to develop topic conjecture for use in ongoing paper.

### **Presentations and Talks:**

- “Cross-Multiplicative Coalescent Processes and Applications” - Oregon State University Graduate Seminar - July 2<sup>nd</sup>, 2024.
- “Introduction to Multi-Dimensional Markov Chains” - Oregon State University Graduate Talk - May 2024.

### **Awards and Honors:**

- ARCS (Achievement Rewards for College Scientists) Scholarship – (2023 - Present) - Oregon State University
- Walter Winterhoff Scholarship - 2021, 2022 - University of Arizona
- James R. Bunch Scholarship - 2021, 2022 - University of Arizona
- Highest Academic Distinction Award – 2021, 2022 – University of Arizona
- Senior Student Grade Point Average Award - 2022 - University of Arizona
- Award of Excellence in Mathematics - 2019 - Central Arizona College
- Award of Excellence in the Physical Sciences - 2018 - Central Arizona College
- Honors Society – 2018, 2019 - Central Arizona College
- Advanced Writing Competition Scholarship – 2018 - Central Arizona College
- Dean’s List – (2018 – 2022) – Central Arizona College, University of Arizona

### **Technical Skills:**

- Computer Programming Languages – Python (most proficient), Java
- Mathematical Computer Software – LaTeX, Maple, Matlab, Computer Graphing Systems
- Languages – English (Proficient), German
- Computer Construction – Hardware Assembly

## **Teaching and Mentoring:**

- Oregon State University MTH 252 (Integral Calculus) (Sep. 2024 – Present)
  - ◆ Taught student recitation sections and facilitated group work to solve practice problems. Graded student recitation worksheets and homework assignments.
  - ◆ Proctored student exams and held additional student help sessions for extra support.
- Oregon State University MTH 241 (Calculus for Management and Social Sciences E-Course) (June 2024 – Aug. 2024)
  - ◆ Graded student homework assignments and helped grade exams.
  - ◆ Provided additional student help sessions for extra support.
- Oregon State University MTH 227 (Calculus and Probability for the Life Sciences) (April 2024 – June 2024)
  - ◆ Taught student recitation sections and lectured on course content. Created, distributed, and graded student homework assignments.
  - ◆ Proctored and graded student exams.
- Oregon State University MTH 245 (Mathematics for Management, Life, and Social Sciences) (Jan. 2024 – March 2024)
  - ◆ Taught student recitation sections and facilitated group work to solve practice problems. Graded student homework assignments.
  - ◆ Proctored student quizzes and held additional student help sessions for extra support.
- Oregon State University MTH 251 (Differential Calculus) (Sep. 2023 – Dec. 2023)
  - ◆ Taught student recitation sections and facilitated group work to solve practice problems. Graded student homework assignments.
  - ◆ Proctored student exams and held additional student help sessions for extra support.

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- University of Arizona MATH 100 (College Mathematics) (Aug. 2020 – Dec. 2020, Aug. 2021 – Jan. 2022)
  - ◆ Proctored class exams and led student presentation sessions on mathematical group projects and oversaw solution findings presentations.
  - ◆ Led student discussions with upwards of 15 groups of 4 students regarding mathematical application problems by focusing and guiding student work.
  - ◆ Diversified mathematical explanations to accommodate all student learning methods.
  - ◆ Assisted at the Mathematics Educator Appreciation Day (MEAD) as a technical advisor – 2021
- University of Arizona MATH 122B (Calculus I) (Jan. 2021 – Aug. 2021)
  - ◆ Designed, published, and graded student homework and quiz assignments.
  - ◆ Researched and wrote a student-friendly worksheet on quantum calculus.
  - ◆ Helped facilitate in-class student activities and proctored class exams.
- University of Arizona CSC 144 (Discrete Mathematics) (Jan. 2022 – May 2022)
  - ◆ Designed, published, and graded student homework.
  - ◆ Led TA Supplemental Instruction Sessions and Exam Reviews.
  - ◆ Facilitated in-class student activities. Proctored and graded student exams.

### **Professional Memberships:**

- American Mathematical Society (AMS)
- ARCS (Achievement Rewards for College Scientists) Scholar

### **Certifications:**

- ELITE PD (Engaged Learning, Inclusive Teaching, and Equity Professional Development) Teaching Certificate – (2023 – Present)

Aren Lampman CV

**References:**

- Ibrahim Fatkullin – Associate Professor of Applied Mathematics – University of Arizona – [ibrahimf@arizona.edu](mailto:ibrahimf@arizona.edu) – (520) 621-2246
- Yevgeniy Kovchegov – Professor of Mathematics – Oregon State University - [kovchegy@math.oregonstate.edu](mailto:kovchegy@math.oregonstate.edu) – (541) 737-1379