

James Harbour

Resume

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Mathematics Experience

- 2023 **UChicago REU**, Full participant, Researching noncommutative ergodic theory.
- 2022 **UVA Research**, I took an intensive one-on-one reading and research course in operator algebras with Dr. Benjamin Hayes. Living expenses were covered by a grant (see below).
- Completed the undergraduate requirements for mathematics major during high school.
- Completed the UVA mathematics PhD curriculum as a first year student.
- **Graduate level courses taken**: Functional Analysis, Measure Theory, Complex Analysis, Differential Topology, Algebraic Topology, Algebraic Geometry, Representation Theory, Algebra II, Algebra I.

Selected Talks

- 4/23 **Maximal rigidity for L^2 -cohomology of Groups and Beyond**, *UVA Operator Theory seminar*
- 11/22 **Index Rigidity for type- II_1 Subfactors**, *UVA Operator Theory seminar*
- 11/22 **Construction and examples of the von Neumann dimension of Hilbert modules**, *UVA Operator Theory seminar*

Conferences

- 05/23 **Great Plains Operator Theory Symposium (GPOTS)**, *Ohio State University*
- 05/23 **Noncommutative Geometry and Operator Algebras (NCGOA) Spring Institute**, *Vanderbilt University*
- 01/23 **Joint Math Meetings**, *Boston*
- 10/22 **East Coast Operator Algebras Symposium**, *Michigan State University*
- 06/22 **Thematic Program in p-adic L-functions and Eigenvarieties**, *University of Notre Dame*

Financial Experience

- **Member of UVA's Alternative Investment Fund** An investment club managing a portfolio of \$60,000 AUM with both systematic and discretionary trading strategies. Rigorous selection process with multiple interviews and a 3% acceptance rate.

Programming Experience

Proficient In Java, C, C++, Assembly, Python, Javascript, \LaTeX , SageMath, Mathematica. I have taken courses in algorithmic economics, computer architectures, and machine learning.

Honors and Awards

- Various Grants/Funding/Travel (see my website for more info)
 - \$2000 Supporting summer research in operator algebras alongside Dr. Benjamin Hayes.
 - \$500 For travel to the Notre Dame workshop in Elliptic Curves and Modular Forms
 - \$1000 Supporting travel fees to attend the East Coast Operator Algebras Seminar.
 - \$1500 Supporting travel fees to attend the Joint Mathematics Meetings
- Mathematics PhD Qualifying Exams - Passed Real & Complex Analysis Exams (as a freshman)