

# David Owen Horace Cutler

Department of Mathematics, Tufts University

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## Research interests

Complex geometry, metric geometry, geometric group theory

## Education

### B.S. in Mathematics

Tufts University

expected May 2026

GPA: 4.0

#### Coursework:

**Undergraduate:** Real Analysis I–II, Harmonic Analysis, Abstract Algebra I–II, Topics in Algebra

**Graduate:** Analysis, Functional Analysis, Complex Analysis, Algebra II, Differential Forms in Algebraic Topology, Algebraic Geometry, Differential Geometry, Metric Geometry and Curvature

#### Research experiences:

UMD REU, convex and complex geometry with Prof. [Tamás Darvas](#)

Jun – Jul 2024

Rutgers DIMACS REU, complex geometry with Prof. [Chi Li](#)

May – Jul 2025

UCSD research minicourse, complex geometry

Jul 2025

## Papers

### Research publications

*The Hausdorff distance and metrics on toric singularity types* (with A. Aitokhuehi, B. Braiman, T. Darvas, M. Deaton, P. Gupta, J. Horsley, V. Pidaparthi, J. Tang), to appear in *Bull. Sci. Math.*, [arXiv:2411.11246](#)

### Manuscripts, other papers, etc.

*Cutting a pancake using an exotic knife* (with N. J. A. Sloane), in preparation

## Talks

*Counterexamples in measure*, Tufts Math Monday Meeting

Mar 2024

*Manifolds, mixed volumes, and a quasi-metric*, Tufts Math Monday Meeting

Oct 2024

*Hölder estimates for the Hausdorff distance and a quasi-metric*, Special Session on

Jan 2025

Research in Mathematics by Undergraduates, Joint Mathematics Meetings

## Teaching experience

### Teaching assistant

MATH 135: Real Analysis I

Fall 2024

MATH 136: Real Analysis II

Fall 2025

### Grader

MATH 135: Real Analysis I

Fall 2023, Spring 2024

MATH 51: Differential Equations

Spring 2025

## Reading groups

Geometric group theory with Prof. [Nima Hoda](#)

Feb 2025 – present

Metric geometry with Tufts graduate students

Sep 2025 – present

## Awards and honors

Martin Guterma Award

Apr 2024

Goldwater Scholarship

Mar 2025

Sigma Xi

Jun 2025