

Erik Wendt

Curriculum vitae

University of Connecticut, Storrs
Department of Mathematics

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Education

- 2019–2025 **Ph.D. in Applied Mathematics**, University of Connecticut, Storrs, CT
Advisors: Vasilis Chousionis and Dmitriy Leykekhman
- 2015–2019 **B.A. Mathematics (Honors)**, Gettysburg College, Gettysburg, PA
- 2017–2018 **Budapest Semesters in Mathematics**, Budapest, Hungary

Publications and Preprints

- 2026 **Rational Approximation for Hausdorff Dimension Estimation**, E. Wendt, In preparation
- 2025 **Attractors for Higher Dimensional Möbius Iterated Function Systems**, E. Wendt, In preparation
- 2025 **The Dimension Spectrum of the Infinitely Generated Apollonian Gasket**, V. Chousionis, D. Leykekhman, M. Urbański, E. Wendt, submitted
<https://arxiv.org/abs/2504.17835>
- 2024 **Rigorous Numerical Hausdorff Dimension Estimates for Conformal Fractals**, V. Chousionis, D. Leykekhman, M. Urbański, E. Wendt, submitted
<https://arxiv.org/abs/2408.06330>
- 2019 **A state-dependent delay equation with chaotic solutions**, B. Kennedy, Y. Mao, E. Wendt, Electronic Journal of Qualitative Theory of Differential Equations, No. 22, 1–20; <https://doi.org/10.14232/ejqtde.2019.1.22>

Teaching Experience

- 2021–2025 **Instructor**, University of Connecticut, Storrs, CT
- Spring 2024 – Spring 2025: Math 2410 (Elementary Differential Equations)
 - Spring 2023: Math 1060Q (Precalculus)
 - Fall 2021–Fall 2023: Math 2705W (Technical Writing in Mathematics)
 - Spring 2021: Math 1020 (Problem Solving)
- 2019–2020 **Teacher Assistant**, University of Connecticut, Storrs, CT
- Spring 2020: Math 1132 (Calculus II)
 - Fall 2019: Math 1131 (Calculus I)
- 2021 **Measure Theory Grader / Tutor**, University of Connecticut, Storrs, CT

Invited Talks

- Winter 2025 **Rigorous Numerical Dimension Estimates for Higher Dimensional Continued Fractions**, Joint Mathematics Meetings, Seattle, WA

- Fall 2024 **Rigorous Dimension Estimates for Fractals and How to Find Them**, *Geometry Seminar*, George Mason University, Fairfax, VA
- Winter 2023 **Rigorous Numerical Bounds on Hausdorff Dimension via Finite Elements**, *Joint Mathematics Meetings*, Boston, MA
- Spring 2022 **Computational Dimension Estimates in Conformal Dynamics and Applications**, *AMS New England Graduate Student Conference*, Brown University, Providence, RI
- Fall 2021 **An Introduction to Rootfinding and Approximation Theory**, *Mathematics Continued Conference*, University of Connecticut, Storrs, CT

Talks

- Summer 2025 **Thesis Defense**, University of Connecticut, Storrs, CT
- Spring 2023 **Some Numerical Methods for Estimating Hausdorff Dimension**, *AMS New England Graduate Student Conference*, Brown University, Providence, RI
- Spring 2023 **On rigorous numerical bounds of Hausdorff dimension**, *Finite Element Circus*, Bridgewater State University, Bridgewater, MA
- Spring 2022 **An Introduction to the Quantum Fourier Transform**, *UConn SIAM Quantum Computing Workshop*, University of Connecticut, Storrs, CT
- Spring 2021 **An Introduction to Ergodic Theory and Thermodynamic Formalism I/II**, *Mathematical Physics Learning Seminar*, University of Connecticut, Storrs, CT

Activities

- Winter 2025 **Conference Participant**, *Dynamics Days 2025*, Denver, CO
- Summer 2024 **Conference Participant**, *Dynamical Systems and Fractal Geometry*, UNT, Denton, TX
- Spring 2023 **Special Semester Participant**, *Modern holomorphic dynamics and related fields*, IMPAN, Warsaw, Poland
- Spring 2023 **Conference Participant**, *Thermodynamic Formalism: Non-additive Aspects and Related Topics*, Banach Center, Bedlewo, Poland

Service

- 2025-present **Reviewer for TISMIR**
- 2021-2024 **President of the UConn Graduate Chapter of the Society of Industrial and Applied Mathematics**, *University of Connecticut*, Storrs, CT
- 2022-2024 **Applied Math Learning Seminar Organizer**, *University of Connecticut*, Storrs, CT
- 2022-2024 **Women in Mathematics and Applications Seminar Organizer**, *University of Connecticut*, Storrs, CT
- 2021-2024 **SIAM Graduate Student Reading Group Organizer**, *University of Connecticut*, Storrs, CT

2020-2025 **DRP Mentor**, *University of Connecticut*, Storrs, CT

Mentored undergraduate students as a part of UConn's directed reading program in the following areas:

- Fractals in analysis
- Quantum computing
- Multipole methods

Spring 2024 **Organizer of the Finite Element Workshop**, *University of Connecticut*, Storrs, CT

This workshop provided UConn graduate students an introduction to Finite Element Methods, followed by research talks by Dr. Andrew Miller and Dr. Robert Dolan, two experts in this area.

Spring 2023 **Organizer of the Quantum Walks on Graphs Workshop**, *University of Connecticut*, Storrs, CT

This workshop provided UConn graduate students an introduction to Quantum Walks on Graphs, followed by a keynote talk with Dr. Anastasiia Minenkova, an expert in this area.

Spring 2022 **Organizer of the SIAM Graduate Quantum Computing Workshop**, *University of Connecticut*, Storrs, CT

This workshop gave UConn graduate students an introduction to quantum computing, followed by a keynote lecture on current quantum computing research.

Programming Experience

Languages: Matlab, Java, Python, R, C++

Proficiencies: Scientific computing, Cluster computing

Libraries: NumPy, SciPy, Scikit-Learn, IFEM

References

Dr. Vasilis Chousionis (co-advisor)

University of Connecticut

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Dr. Dmitriy Leykekhman (co-advisor)

University of Connecticut

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Dr. Maria Gordina (committee member)

University of Connecticut

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Dr. Mariusz Urbański (collaborator)

University of North Texas

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