OLIVIA FRANCES EDWARDS

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EDUCATION

Texas A&M University *Expected 2026*
3rd Year Ph.D. Student in Economics
Research Interests: Industrial Organization, Applied Microeconomics

Millsaps College *2017-2021*
BS in Economics, Minors in Mathematics & Data Analytics
Phi Beta Kappa

PUBLICATIONS

Lattice Configurations Determining Few Distances *2020*
Integers Volume 20 (with Balaji et al)
We begin by revisiting a paper of Erdos and Fishburn, which posed the following question: given $k \in N$, what is the maximum number of points in a plane that determine at most k distinct distances, and can such optimal configurations be classified? We rigorously verify claims made in remarks in that paper, including the fact that the vertices of a regular polygon, with or without an additional point at the center, cannot form an optimal configuration for any $k \geq 7$. Further, we investigate configurations in both triangular and rectangular lattices studied by Erdos and Fishburn. We collect a large amount of data related to these and other configurations, some of which correct errors in the original paper, and we use that data and additional analysis to provide explanations and make conjectures.

Sets in R^d Determining K Taxicab Distances *2019*
Involve Volume 13, No. 2 (with Balaji et al)
We address an analog of a problem introduced by Erdos and Fishburn, itself an inverse formulation of the famous Erdos distance problem, in which the usual Euclidean distance is replaced with the metric induced by the ℓ^1-norm, commonly referred to as the taxicab metric. Specifically, we investigate the following question: given $d, k \in N$, what is the maximum size of a subset of R^d that determines at most k distinct taxicab distances, and can all such optimal arrangements be classified? We completely resolve the question in dimension $d = 2$, as well as the $k = 1$ case in dimension $d = 3$, and we also provide a full resolution in the general case under an additional hypothesis.

WORKS IN PROGRESS

Competition, Incentives, and Welfare Effects of School Accountability Closures and Takeovers *2023*

Evaluating the Effects of and Parental Preferences for Special Education *2023*
(with Melissa Gentry)

Labor Workforce Participation and Tax Evasion: Evidence from Child Support *2023*

Pricing, Perception, and Discounts in Liberal Arts College Tuition *2021*
(with Blakely Fender)

TEACHING EXPERIENCE

ECON 285: First-Year Experience *Fall 2023*
Instructor at Texas A&M

ECON 202: Principles of Microeconomics *Spring 2022 - present*
Teaching Assistant for Dr. Jonathan Meer at Texas A&M

ECON 328: Economics of Education *Spring 2022, Fall 2023*
Teaching Assistant for Dr. Jonathan Meer at Texas A&M

ECON 100: Principles of Economics *2020 - 2021*
Teaching Assistant for Dr. Patrick Taylor at Millsaps College

OTHER EXPERIENCE

Research Assistant
Dr. Jonathan Meer, Texas A&M *Summer 2022, 2023*
Dr. Steve Puller, Texas A&M *Fall 2021*
Dr. Blakely Fender, Millsaps College *2019 - 2021*
Dr. Alex Rice, Millsaps College (Dept. of Mathematics) *2019 - 2020*

Pre-K3 Teacher *2017 - 2019, Summer 2021*
St. Martin's School; New Orleans, LA

Congressional Intern *Summer 2020*
House of Representatives; Washington D.C.

PROFESSIONAL ACTIVITIES

1st-Year Ph.D. Student Mentor, Texas A&M *2022 - present*
Undergraduate Research Advisor, Texas A&M *2022 - present*

AWARDS AND HONORS

Lechner Liberal Arts Scholarship, Texas A&M *2021-2022*
Most Outstanding Economics Graduate, Millsaps College *2021*
Most Outstanding Else Business School Graduate, Millsaps College *2021*
Woman of the Year, Millsaps College *2021*
Women in Democracy Fellow, Mississippi Legislature *2020*
Pi Mu Epsilon, Millsaps College *2020*
Omicron Delta Kappa, Millsaps College *2020*
Omicron Delta Epsilon, Millsaps College *2019*

SKILLS & INTERESTS

Programming Languages	R (advanced), Python (beginner), Matlab (beginner), Stata (introductory)
Software & Tools	Git, LaTeX, AI Prompt Engineering, Tableau
Interests	Painting, Running, Ballet

Last Updated: June 2023