Ethan R. Partida

Contact Information	School of Mathematics University of Minnesota Minneapolis, MN 55455	*Email:* parti023[at]umn[dot]edu *Web:* https://ethanpartida.github.io/

Interests	Algebraic Combinatorics, Computational Geometry and Topology
Core Skills	Python (SAGE, NumPy), Macauly2, C, Julia, Technical Writing
Education	University of Minnesota, Minneapolis, Minnesota USA Bachelor's degree in Mathematics, Expected May 2022 Bachelor's degree in Computer Science, Expected May 2022
Papers	*Simon's Conjecture and Decomposability.* Texas State REU 2021. In Preparation. *Real Powers of Monomial Ideals.* Polymath 2020. https://arxiv.org/abs/2101.10462.
Research Experience	Texas State REU, *Simon's Conjecture and Decomposablility*, Participant, 2021 Polymath REU, *Monomials, Convex Bodies and Optimization*, Participant, 2020 McNair Scholars Program, *Symmetry of a Pastry: A Mathematical Investigation into the Braid Group*, McNair Scholar, 2020 Undergraduate Research Scholarship, *Knoddy: A Reinforcement Learning Approach to Cribbage*, Scholarship Recipient, 2019-2021
Awards	Ronald E. McNair Scholar 3M Diversity Scholarship National Hispanic Scholarship Fund Recipient Prof. Hans H. Dalaker Mathematics Undergraduate Scholarship William H. Burgum College of Science and Engineering Scholarship MN Space Grant Recipient MAA 2021 Outstanding Student Paper Presentation JMM 2021 Honorable Mention Poster Texas State Rapid Fire Research Winner University Dean's List Taylor Student Project Fund Recipient
Presentations	*h-vectors! : A tour of simplicial complexes, shellability and Stanley–Reisner theory* UMN Student Combinatorics and Algebra Seminar, January 2022 *Simon's Conjecture and Decomposability* Joint Mathematics Meetings, PME Poster Session, April 2022 Texas State Graduate Expo, Five Minute Talks Session, November 2021 Young Mathematicians Conference, Student Talks, August 2021

Real Powers of Monomials Ideals

Joint Mathematics Meetings, Polymath Jr Special Session, January 2022
MAA Mathfest, Student Paper Session, August 2021
Undergraduate Math Research Seminar, April 2021
Brown University's SUMS, Student Presentation, March 2021
Joint Mathematics Meetings, MAA Poster Session, January 2021
Undergraduate Mathematics Symposium, Poster Session, November 2020
Texas State Graduate Expo, Five Minute Talks Session, November 2020

Staircases of Ideals

University of Minnesota, Student Combinatorics Seminar, November 2020

Symmetry of a Pastry: A Mathematical Investigation into the Braid Group

University of Minnesota, McNair Scholars Research Symposium, August 2020

Academic Experience

Mathematics Project at Minnesota, Participant, January 2020

Anderson Labs, Taylor Student Project Fund, Smart Mirror Creator (physical and software), Fall 2019

Tesla Works, Member, Fall 2019-Spring 2020

Community Involvement

University of Minnesota, Undergraduate Mathematics Research Seminar, Organizer, Fall 2021

University of Minnesota, Mathematics Project at Minnesota, Peer Mentor, Fall 2021

University of Minnesota, SMART Learning Commons, Peer Tutor, Summer 2020-Present

University of Minnesota, North Star STEM Alliance, Member, Fall 2019-Present

Farmington School District, Paraprofessional and Volunteer, Fall 2017-Present

Reading Groups

Emily Riehl, *Category Theory in Context*, Undergraduate Reading Group, Fall 2021

Edelsbrunner & Harer, *Computational Topology: An Introduction*, Graduate Reading Group, Spring and Summer 2021

Miller & Sturmfels, *Combinatorial Commutative Algebra*, Combinatorics Reading Group, Fall 2020

Bjorner & Brenti, *Combinatorics of Coxeter Groups*, Summer Combinatorics Reading Seminar, Summer 2020

Fong & Spivak, *An Invitation to Applied Category Theory*, Directed Reading Program, Spring 2020