

# NICHOLAS A MATTEO

## CURRICULUM VITAE

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### EDUCATION

Ph.D. in Mathematics. Northeastern University, May 2015.  
Advisor: Egon Schulte. Thesis: “Convex polytopes and tilings with few flag orbits.”  
M.A. in Mathematics. Miami University, August 2010.  
B.A. in Mathematics, with minor in Computer Science. Miami University, August 2008.

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### PUBLICATIONS

N. Matteo. “Combinatorially two-orbit convex polytopes.” *Discrete & Computational Geometry* 55 (3), April 2016, pp. 662–680.  
N. Matteo. “Two-orbit convex polytopes and tilings.” *Discrete & Computational Geometry* 55 (2), March 2016, pp. 296–313.  
P. Larson, N. Matteo, S. Shelah. “Majority decisions when abstention is possible.” *Discrete Mathematics* 312, April 2012, pp. 1336–1352.  
N. Matteo, Y. Morton. “Ionosphere Geomagnetic Field: Comparison of IGRF Model Prediction and Satellite Measurements 1991–2010.” *Radio Science* 46 (4), August 2011, RS4003.  
N. Matteo, Y. Morton. “Higher-order ionospheric error at Arecibo, Millstone, and Jicamarca.” *Radio Science* 45 (6), December 2010, RS6006.  
N. Matteo, Y. Morton, P. Chandrasekaran, F. van Graas. “Higher Order Ionosphere Errors at Arecibo, Millstone, and Jicamarca.” Proceedings of the 22nd International Technical Meeting of the Satellite Division of the Institute of Navigation (ION GNSS 2009), pp. 2739–2750.

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### TALKS

“Orthoschemes,” Discrete Mathematics Seminar. York University, January 21, 2016.  
“ $k$ -Orbit convex polytopes,” AMS Fall Eastern Sectional Meeting, Special Session on Geometry and Combinatorics of Polytopes. Rutgers University, November 14–15, 2015.  
“Convex polytopes, tilings, and flag orbits,” Geometry/Algebra seminar. University of New Brunswick, August 25, 2015.  
“Four-orbit convex polytopes,” Combinatorial and Convex Geometry Fest. Banff International Research Station, February 14–15, 2015.  
“Three-orbit convex polytopes,” Discrete Geometry and Symmetry Workshop. Banff International Research Station, February 9–13, 2015.  
“Flag orbits of convex polytopes and tilings,” Geometry, Algebra, Singularities, Combinatorics (GASC) seminar. Northeastern University, December 1, 2014.

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“Two-orbit convex polytopes and tilings,” Retrospective Workshop on Discrete Geometry, Optimization, and Symmetry. Fields Institute, Toronto, November 25–29, 2013.

“Higher Order Ionosphere Errors at Arecibo, Millstone, and Jicamarca,” Institute of Navigation GNSS, Session E4, Paper #3. Savannah, GA, September 22–25, 2009.

“Ionosphere Geomagnetic Field”, COUNT Workshop. Dayton, OH, April 9–10, 2009.

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TEACHING & RESEARCH EXPERIENCE

**Lecturer** at CU Boulder. Taught

MATH 1012: Quantitative Reasoning (11 sections, 8–36 students)  
Summer 2018, Summer 2019, Fall 2019, Spring 2020, Spring 2021, Summer 2021.

MATH 1112: Math Analysis in Business (12 sections, 19–31 students)  
Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021.

MATH 1150: Precalculus (10 sections, 25–39 students)  
Fall 2017, Spring 2018, Spring 2019, Fall 2021, Spring 2022.

MATH 1151: Precalculus Supplemental Lab (2 sections, 34–37 students) Fall 2017.

MATH 1212: Data & Models (2 sections, 19–31 students) Spring 2018.

MATH 2510: Introduction to Statistics (10 sections, 13–39 students)  
Fall 2018, Summer 2020, Fall 2021, Spring 2022.

**Research Associate** at Colorado Center for Astrodynamics Research, CU Boulder.

Developed Python software to analyze GPS signals for volcanic ash detection. 2016–2017.

**Postdoctoral Fellow** at York University. Taught

MATH 1505: Mathematics for the Life and Social Sciences (150 students) 2015–2016.

**Teaching Assistant** at Northeastern. 8 semesters as instructor of record:

MATH 1215: Mathematical Thinking (35–47 students) Spring 2013, Fall 2013, Fall 2014.

MATH 1231: Calculus for Business (22–34 students) Fall 2011, Fall 2012.

MATH 1251: Calculus for Biology (20–40 students) Fall 2010, Spring 2011, Spring 2014.

**Research Assistant** to Dr. Yu Morton, Department of Electrical and Computer Engineering, Miami University.

Analyzed large satellite data sets with MATLAB, Python, and C on a supercomputing cluster to investigate ionosphere-caused error in GPS location.

Funded by AFOSR grant #FA9550-07-0354. 2008–2010.

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GRANTS & FELLOWSHIPS

Northeastern University Dissertation Completion Fellowship. Spring 2015.

Northeastern University Excellence Fellowship. 2010–2014.

National Science Foundation grant supplied travel and lodging for the Jicamarca Radio Observatory International Research Experience Program in Peru. Summer 2009.

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HONORS & AWARDS

Miami University Department of Mathematics Faculty Prize, April 2010, “In Recognition of Outstanding Scholarship.”

Nicholas A Matteo

2009 Institute of Navigation Graduate Scholarship.

National Merit Scholar.

Erdős number 2.

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ORGANIZATIONS

Member of American Mathematical Society	2008–present.
Free Software Foundation	2003–present.
Served on Miami Computer Science Department Advisory Council	2006–2007.
Treasurer of Miami Student Association for Computing Machinery	2005–2007.
Founder of Miami SigLinux (free software interest group); president	2004–2007.

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LANGUAGES

English, Italian, French, basic Spanish.

C++, Python, MATLAB, C, Java, PHP, Perl, Bash, Go, R; SQL; L<sup>A</sup>T<sub>E</sub>X; GNU/Linux.