

Anthony Coniglio – Resume/Curriculum Vitae

Email: coniglio@math.columbia.edu

Phone: +1 (954) 740-4468

Education

- **Columbia University**, September 2020-present (New York, NY, USA)
 - PhD Student in Mathematics
 - Recipient of National Science Foundation Graduate Research Fellowship (NSF GRFP)
- **University of Cambridge**, October 2019-July 2020 (Cambridge, United Kingdom)
 - Master of Advanced Study (MASt) in Mathematics, Part III of the Mathematical Tripos
 - Recipient of the 2019-2020 Churchill Scholarship
- **Indiana University Bloomington**, August 2015-May 2019 (Bloomington, IN, USA)
 - Degrees/Majors:
 - *Bachelor of Science in Mathematics*, with Departmental Honors and ‘Highest Distinction’
 - *Bachelor of Science in Physics*, with ‘Highest Distinction’
 - *Bachelor of Science in Astronomy & Astrophysics*, with ‘Highest Distinction’
 - *Bachelor of Music in Piano Performance*, with ‘Distinction’
 - Member of the Indiana University Hutton Honors College and recipient of the ‘Hutton Honors Notation’
 - Overseas study-abroad in Vienna, Austria, through the Institute for the International Education of Students (IES) and through the University of Vienna, Fall 2019

Publications

- “Noise-Induced Stabilization of Perturbed Hamiltonian Systems”, co-authored with Sarah Sparks, Daniel Weithers, and Professor Tiffany Kolba. Published in *The American Mathematical Monthly*, 126:6, 505-518. May 2019.
<https://www.tandfonline.com/doi/abs/10.1080/00029890.2019.1586502>
- “The Mathieu Differential Equation and Generalizations to Infinite Fractafolds”, co-authored with Shiping Cao, Xueyan Niu, Professor Richard Rand, and Professor Robert Strichartz. Published in *Communications on Pure and Applied Analysis*, 19:3, 1795-1845. April 2020.
<https://www.aims sciences.org/article/doi/10.3934/cpaa.2020073>

Research Experience

- Cornell University Department of Mathematics, *Summer Program for Undergraduate Research*, June-July 2018 (Ithaca, NY)
- Indiana University Department of Physics, *Research in Theoretical Physics*, November 2017-April 2018 (Bloomington, IN)

- Valparaiso University Department of Mathematics & Statistics, *Research Experience for Undergraduates (REU)*, June-July 2017 (Valparaiso, IN)

Summer Schools and Workshops Attended

- Northwestern University Department of Mathematics, *Summer Northwestern Analysis Program*, August 2019 (Evanston, IL)
- Institute for Advanced Study/Park City Mathematics Institute, *Undergraduate Summer School*, July 2019 (Park City, UT)
- Princeton University Department of Mathematics, *Summer School in Geometric Analysis*, June 2019 (Princeton, NJ)
- North Carolina State University, *Statistical and Applied Mathematical Sciences Institute Undergraduate Workshop*, May 2017 (Raleigh, NC)

Presentations

- Indiana University Hutton Honors Undergraduate Research Symposium, April 2019 (Bloomington, IN)
- Joint Mathematics Meetings, January 2019 (Baltimore, MD)
- Cornell University Department of Mathematics, SPUR/REU Undergraduate Research Forum, July 2018 (Ithaca, NY), co-presented with Shiping Cao and Xueyan Niu
- Indiana University Hutton Honors Undergraduate Research Symposium, April 2018 (Bloomington, IN)
- 35th Annual Rose-Hulman Undergraduate Mathematics Conference, Apr 2018 (Terre Haute, IN)
- Joint Mathematics Meetings, January 2018, poster session (San Diego, CA), co-presented with Sarah Sparks and Daniel Weithers
- Indiana University Math Club, September 2017 (Bloomington, IN)
- Purdue University, Indiana Undergraduate Mathematics Research Conference, July 2017 (West Lafayette, IN), co-presented with Sarah Sparks and Daniel Weithers
- Statistical and Applied Mathematical Sciences Institute Undergraduate Workshop, May 2017 (Raleigh, NC), co-presented with Luna Bozeman, Nicholas Christoffersen, Katie Lele, and Stephen Wu
- 34th Annual Rose-Hulman Undergraduate Mathematics Conference, April 2017 (Terre Haute, IN)
- Indiana University 'Directed Reading Program' presentations, December 2016 (Bloomington, IN)

Awards, Honors, and Grants

- *National Science Foundation (NSF) Graduate Research Fellowship*, to support PhD studies

- *The Churchill Scholarship*, awarded by the “Winston Churchill Foundation of the United States,” to fund study at the University of Cambridge, 2019-2020
- Second Place, *The Indiana College Mathematics Competition*, statewide team competition (with team members Nathaniel Lowry and Tiancheng Xu), 2019
- *Margaret Russell Edmondson Award*, awarded by the Indiana University Department of Astronomy & Astrophysics, 2019
- Finalist for the 2019 *Marshall Scholarship*
- IU Nominee for the 2019 *Rhodes Scholarship*, Indiana University
- *Marie S. Wilcox Scholarship*, awarded by the Indiana University Department of Mathematics, 2018
- *Marshal H. Wrubel Award*, awarded by the Indiana University Department of Astronomy & Astrophysics, 2018
- *Eugenia Sinor Memorial Scholarship*, awarded by the Indiana University Jacobs School of Music, 2018
- *Hutton International Experiences Program Grant*, awarded by the Indiana University Hutton Honors College, 2018
- First Place, *The Indiana College Mathematics Competition*, statewide team competition (with team members Baptiste Dejean and Nathaniel Lowry), 2018
- *Student Travel Grant*, awarded by the Mathematical Association of America, 2018
- *Cora B. Hennel Memorial Scholarship*, awarded by the Indiana University Department of Mathematics, 2017
- *T.F. and Emma A. Culver Scholarship* in piano, awarded by the Indiana Jacobs School of Music, 2016 and 2017
- *Indiana University Founders Scholar*, 2016, 2017, 2018, 2019
- *György Sebök Scholarship in Piano*, awarded by the Indiana University Jacobs School of Music, 2015, 2016, 2017
- *Premier Young Artist Award*, awarded by the Indiana University Jacobs School of Music, 2015 and 2016
- *William Gammon Henry, Jr. Trust Scholarship*, awarded by the Indiana University Jacobs School of Music, 2015-2016
- *YoungArts Foundation Merit Award Winner*, Classical Music (Piano) 2015, 2016
- *R&V Stoner Scholarship*, awarded by Indiana University, 2015-2018

Coursework in Mathematics, Physics, and Astrophysics

- Graduate-level courses:

NOTE: The symbol “†” denotes courses during the current academic year

- Analysis & Probability I †
- Complex Analysis and Riemann Surfaces I †
- Modern Geometry I †

- General Relativity (Fall 2019)
- Analysis of Partial Differential Equations (Fall 2019)
- Modular Forms and L-functions (Fall 2019)
- Analytic Number Theory (Spring 2020)
- Riemannian Geometry (Fall 2018)
- Functional Analysis Seminar (Fall 2018)
- Partial Differential Equations I (Spring 2018)
- Introduction to Differential Topology (Spring 2018)
- Theory of Gravitation I (Fall 2017)
- Theory of Gravitation II (Spring 2018)
- Complex Variables I (Fall 2017)
- Topology I (Fall 2017)
- Undergraduate-level courses:

NOTE: Asterisk "" denotes courses taken through independent-study/credit-by-examination*

 - Honors Course in Real Analysis I (Fall 2017)
 - Honors Course in Real Analysis II (Spring 2018)
 - Honors Course in Modern Algebra I (Fall 2016)
 - Number Theory (Spring 2017)
 - *Differential Equations I (Fall 2016)
 - *Differential Equations II (Spring 2017)
 - *Introduction to Elementary Complex Variables (Spring 2017)
 - Calculus III (Fall 2015)
 - *Calculus IV (Spring 2016)
 - Linear Algebra (Spring 2016)
 - *Electricity and Magnetism I (Fall 2017)
 - *Electricity and Magnetism II (Spring 2018)
 - Analytical Mechanics I (Fall 2017)
 - *Analytical Mechanics II (Spring 2018)
 - Topics in Astrophysics: Computational Astrophysics (Spring 2019)
 - Introduction to Quantum Mechanics I (Spring 2018)
 - Modern Physics (Fall 2016)
 - Thermodynamics and Statistical Mechanics (Spring 2017)
 - Experiments in Modern Physics (Spring 2019)
 - Modern Physics Laboratory (Spring 2019)
 - General Astronomy I (Fall 2016)
 - *General Astronomy II (Spring 2018)

Community Involvement and Extracurricular Activities

- Guest-lecturer for high-school AP Calculus class, Archbishop Edward A. McCarthy High School (January 2016 and September 2019)
- Vice President of Indiana University Math Club, Fall 2017-Spring 2018 and Spring 2019
- Volunteer for Preparation of Learning Material for Texas A&M Course on “The Science Before Science” by Dr. Anthony Rizzi, January-April 2018
- Knights of Columbus, Indiana University Bloomington Chapter, 2015-2017
- Volunteer Piano Teacher and Concerts for the Disabled at Schott Communities, 2013-2014
- Pianist/Organist for Sacred Liturgies, 2011-2015
- Piano Performances for the Elderly, 2012-2013
- Pianist for various Community Outreach & Events, 2011-Present

Employment

- National YoungArts Foundation, Resident Advisor, February 16-24, 2019, and January 2-12, 2020
- Grader for “Precalculus with Trigonometry” courses at Indiana University, Aug-Dec 2017
- Pianist for Musical Performances, March-April 2017
- Piano Teacher, 2010-2015 and Summer 2016

Languages and Skills

- Languages: English (native); Spanish (intermediate/beginner); French & German (beginner)
- Computer skills: LaTeX (proficient), MATLAB (beginner), and Python (beginner)