

CURRICULUM VITAE 2021

Amanda Tucker

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EDUCATION	<p>Massachusetts Institute of Technology B.S. in Mathematics with Computer Science</p> <p>University of California, San Diego M.A. in Pure Mathematics Ph.D. in Mathematics</p>	<p>2003</p> <p>2004</p> <p>2009</p>
RESEARCH	<p>Algebraic and Analytic Number Theory: Statistics of number fields, explicit class field theory, Stark Conjectures, L-functions, Hilbert's 12th problem. Dissertation <i>Groups of Special Units</i>, under Professor H. Stark</p>	<p>2009</p>
AWARDS AND GRANTS	<p>(with Eva Goedhart and Kevin McGown) Conferences and Workshops in the Mathematical Sciences NSF Grant, West Coast Number Theory Conference, DMS-1646760. AMS Epsilon Grant for GirlsGetMath@Rochester MAA Tensor Grant for GirlsGetMath@Rochester Course development grant to support a student to help develop workshops for Math 143 SUNY Geneseo Teaching Award Pearson's "One Teacher" Award Lehmer Prize for Best Talk at West Coast Number Theory Conference NSF/MAA PIC Math Undergraduate research grant Selected to develop and teach Big Data course in Edgar Fellows Honors Program SUNY Geneseo Research Travel Grant AWM Travel Grant UCSD Mathematics Department Outstanding TA Award GAANN Fellow NSF Graduate Fellowship honorable mention</p>	<p>2016-2019</p> <p>2017, 2018, 2019</p> <p>2017</p> <p>2016</p> <p>2015</p> <p>2015</p> <p>2014</p> <p>2014</p> <p>2014</p> <p>2013-2014</p> <p>2010</p> <p>2008</p> <p>2003-2009</p> <p>2003</p>
APPOINTMENTS	<p>Assistant Professor (non-tenure-track) and Assistant Director of Undergraduate Studies, University of Rochester Teach undergraduate courses, advise undergraduates, oversee graduate teaching, and various other administrative duties. Assistant Director of Undergraduate Studies, University of Rochester Teach undergraduate courses, advise undergraduates, oversee graduate teaching, and various other administrative duties. Visiting Assistant Professor, SUNY Geneseo Taught calculus, linear algebra, differential equations, intro to proofs, big data. Visiting Assistant Professor, University of Rochester Taught calculus, abstract algebra, number theory, cryptography, math for non-majors. Visiting Assistant Professor, Williams College Taught calculus, modular forms, discrete mathematics. Associate Instructor, University of California, San Diego Taught precalculus, linear algebra, differential equations. Teaching Assistant, University of California, San Diego Taught calculus, discrete math, linear algebra, abstract algebra, number theory. Teaching Assistant, Institute for Advanced Study, Princeton Taught zeta functions of graphs under Professor A. Terras at the Women and Mathematics Program.</p>	<p>2017-present</p> <p>2015-2017</p> <p>2013-2015</p> <p>2010-2013</p> <p>2009-2010</p> <p>2007-2009</p> <p>2004-2008</p> <p>2006</p>

PUBLICATIONS	Counting quintic fields with genus number one , with Kevin J. McGown and Frank Thorne. Submitted. Available at https://arxiv.org/abs/2006.12991	<i>2020</i>
	Statistics of genus numbers of cubic fields , with Kevin J. McGown. To appear in Annales de l'Institut Fourier Available at https://arxiv.org/abs/1611.07088	<i>2021</i>
	Consecutive Integers and the Collatz Conjecture with SUNY Geneseo student Marcus Elia, INTEGERS	<i>2015</i>
	Symmetries of rational functions arising in Ecalle's study of multiple zeta values with A. Salerno and D. Schindler, Women in Numbers Europe - Volume 2 of the Association for Women in Mathematics Series, pp 153 - 166	<i>2014</i>
	Roots of Modular Units , Ramanujan J., 32 , pp 465–470	<i>2013</i>
	Groups of Special Units , thesis	<i>2009</i>
SELECTED TALKS	Lessons learned while directing GirlsGetMath@Rochester , JMM Special Session: Mathematical Outreach: Engagement Opportunities and Best Practices	<i>2021</i>
	The statistics of the genus numbers of cubic fields , Boston University Number theory seminar	<i>2017</i>
	The statistics of the genus numbers of cubic fields , Invited talk in number theory session of the Mathematical Congress of the Americas	<i>2017</i>
	Multiple Zeta Values and the Real Numbers , CSU Chico REU talk	<i>2017</i>
	The statistics of the genus numbers of cubic fields , University of Warwick Arithmetic Statistics and the Cohen-Lenstra Heuristics Workshop	<i>2016</i>
	The arithmetic statistics of number fields , CU Boulder Number theory seminar	<i>2016</i>
	Roots of modular forms , University of Michigan, Ann Arbor Automorphic Forms Workshop	<i>2015</i>
	Multiple zeta values , Pacific Grove, CA West Coast Number Theory Conference	<i>2014</i>
	Hurwitz zeta functions , Hausdorff Center for Mathematics, Bonn, Germany Enfant/Elfant conference	<i>2014</i>
	Multiple zeta values , University of Binghamton Invited talk about my research on multiple zeta values	<i>2013</i>
	Explicit Class Field Theory , CNTA XI Contributed talk about my research	<i>2010</i>
	Explicit Class Field Theory , Brown University Invited algebra and number theory seminar about my research	<i>2010</i>
	Explicit Class Field Theory , University of California, Santa Barbara Invited colloquium about explicit class field theory	<i>2010</i>
	Almost Abelian Extensions , Five Colleges Number Theory Seminar Invited talk about the maximal almost abelian extension of an imaginary quadratic base field	<i>2009</i>
	Almost Abelian Extensions , AMS Sectional Meeting, Boca Raton Invited talk about the maximal almost abelian extension of an imaginary quadratic base field	<i>2009</i>
	Groups of Special Units , University of Georgia Invited number theory seminar about my thesis research	<i>2009</i>

CONFERENCE ORGANIZATION

West Coast Number Theory Conference

On organizational committee, funded by NSF grant DMS-1646760.

2015 - 2019

COMMUNITY AND OUTREACH

Founding Director, GirlsGetMath@Rochester

Director of summer day program for high school girls at University of Rochester.

2016 - present

Co-Organizer, GirlsGetMath@ICERM

Co-lead a one-week summer day program for high school girls at ICERM.

2014 - 2016

Head Counselor, Research Mentor, Board President, PROMYS Program

Involved with all aspects of summer program for talented high school students, from head counselor, to research mentor to webmaster to alumni liaison.

Involved with many aspects of PROMYS Foundation, including fundraising and development of fellowships for underprivileged/minority students; currently President.

2002-2004 and
2009 - present

Flower City Math Girls

Founded Flower City Math Girls, a club designed to attract talented math students in the Rochester area to meet each other and be exposed to the wide world of mathematics while still in high school.

2014 - 2016

SELECTED CONFERENCES AND SCHOLARLY ACTIVITIES

ESI Workshop "Local-Global Principles and Arithmetic Statistics"(NLB20)

2020, postponed

Visiting Scholar at Microsoft Research, New England

Worked on irrationality of certain multiple zeta values with H. Cohn

2014

Women in Numbers - Europe Workshop

Worked on the Salerno-Schneps project about multiple zeta values

2013

Arizona Winter School - Stark-Heegner Points

Worked on the Dasgupta-Greenberg project about Shintani zeta-functions

2011

UNDERGRADUATE RESEARCH

University of Rochester

Benjamin Kuehnert (honors thesis) *Algorithms for Galois Theory*

2020-2021

University of Rochester

Xin Lu (honors thesis) *On NP-intermediate, Isomorphism problems, and Polynomial Hierarchy*

2019-2020

University of Rochester

Shir Maimon (honors thesis) *Elliptic curves cryptography and quantum computing'*

2017-2018

SUNY Geneseo

Worked with Marcus Elia on the Collatz conjecture.

He won a Geneseo STEM summer research grant and several travel grants, as well as a speaking award at MathFest in Portland, Summer 2014. Resulted in published paper.

2013 - 2015

MAA/PIC Math

Worked with Amy Walters, Jacob Goldberg, Michael Ramsey, Gabrielle Angeloro, Lisa Rosenberg on a project joint with an industry partner, Resource Refocus, LLC.

2014

University of Rochester

Worked with Daniel Sieburth and Jake Goritski on rational distance sets.

2012-2013

SERVICE TO THE DEPARTMENT

University of Rochester

2015-present

GRE preparation and review sessions (2015 - present)
Undergraduate major advisor (2015 - present)
Undergraduate committee (2015 - present)
TA assignments committee (2015 - present)
Standing member of Undergraduate research committee (2020 - 2021)
Undergraduate research committee (2019 - 2020)
Faculty mentor to undergraduate math club (2015 - 2020)
Curriculum committee (2015 - 2020)
SUMS committee (2016 - 2020)
Publicity committee (2016 - 2018)

SUNY Geneseo

2013-2015

Graduate committee
Colloquium committee
GRE preparation and review sessions
Calculus II working group
Advising for transfer students
Involved in Supplemental Instruction, an academic support program that is a service of the Academic Opportunities Office.

SKILLS

Experienced with WeBWorK.
Python, Sage, HTML/markdown, MATLAB, Mathematica, Spanish, Dutch and German.

REFERENCES

Mark Herman

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Harold Stark

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University of California at San Diego
9500 Gilman Drive
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Doug Ravenel

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Glenn Stevens

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