Kevin J. McGown **Curriculum Vitae**

CONTACT INFORMATION

Department of Mathematics
California State University, Chico
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EDUCATION

University of California, San Diego
Ph.D. Mathematics, June 2010
Advisor: Harold Stark
Thesis Topic: Norm-Euclidean Galois Fields

Oregon State University
M.S. Mathematics, June 2005
B.S. Computer Science, Magna Cum Laude, March 2004
B.S. Mathematics, Magna Cum Laude, March 2004

PROFESSIONAL EXPERIENCE

Professor (with tenure) and Department Chair, Department of Mathematics and Statistics, California State University, Chico, Fall 2022 – Present

Rector Funded Visiting Fellow, School of Science
University of New South Wales, Canberra at ADFA, February 2019 – May 2019

Associate Professor (with tenure), Department of Mathematics and Statistics, California State University, Chico, Fall 2017 – Spring 2022

Assistant Professor (tenure-track), Department of Mathematics and Statistics, California State University, Chico, Fall 2014 – Spring 2017

Assistant Professor (tenure-track), Department of Mathematics and Computer Science, Ursinus College, Fall 2012 – Summer 2014

Postdoctoral Scholar, Mathematics Department, Oregon State University, Fall 2010 – Spring 2012

RESEARCH INTERESTS

My research is in analytic, algebraic, and computational number theory. Specific interests include Euclidean number fields, arithmetic statistics, class groups of number rings, character sums, primitive roots, L-functions, and applications of ergodic theory and dynamics to number theory.

PUBLICATIONS

(with Amanda Tucker and Frank Thorne) *Counting quintic fields with genus number one.* Submitted.

(with Kyle Hammer and Skip Moses) *S-Euclidean imaginary quadratic fields.* Submitted.

(with Daniel Vallières) *On abelian ℓ-towers of multigraphs III. Annales mathématiques du Québec.* Accepted.

(with Daniel Vallières) *On abelian ℓ-towers of multigraphs II. Annales mathématiques du Québec.* Accepted.

(with Amanda Tucker) *Statistics of genus numbers of cubic fields.* Université de Grenoble. Annales de l'Institut Fourier. Accepted.

(with Enrique Treviño) *The least quadratic non-residue.* Mexican mathematicians in the world — trends and recent contributions, 205–231, Contemp. Math., 775, Amer. Math. Soc., 2021.

(with Jongwoo Choi) *Counting Eisenstein polynomials satisfying a condition from genus theory.* Integers 20 (2020), Paper No. A58, 6 pp.

(with Bryce Kerr and Tim Trudgian) *The least primitive root modulo p^2.* J. Number Theory 215 (2020), 20–27.

(with Tim Trudgian) *Explicit upper bounds on the least primitive root.* Proc. Amer. Math. Soc. 148 (2020), no. 3, 1049–1061.

(with Shilin Ma, Devon Rhodes, and Mathias Wanner) *Explicit bounds for small prime nonresidues.* J. Number Theory, 204 (2019), 599–607.

(with Jonathan Sands and Daniel Vallières) *Numerical evidence for higher order Stark-type conjectures.* Math. Comp. 88 (2019), no. 315, 389–420.

(with Shilin Ma, Devon Rhodes, and Mathias Wanner) *On the number of primes for which a polynomial is Eisenstein.* Integers 18 (2018), Paper No. A101, 7 pp.

(with Pierre Lezowski) *The Euclidean algorithm in cyclic and septic cyclic fields.* Math. Comp. 86 (2017), no. 307, 2535–2549.

(with Enrique Treviño and Tim Trudgian) *Resolving Grosswald's Conjecture on GRH.* Funct. Approx. Comment. Math. 55 (2016), no. 2, 215–225.

On the S-Euclidean minimum of an ideal class. Acta Arith. 171 (2015), no. 2, 125–144.

On the second smallest prime non-residue. J. Number Theory 133 (2013), 1289–1299.

Norm-Euclidean Galois fields and the Generalized Riemann Hypothesis. J. Théor. Nombres Bordeaux 24 (2012), no. 2, 425–445.

Norm-Euclidean cyclic fields of prime degree. Int. J. Number Theory 8 (2012), no. 1, 227–254.

On the constant in Burgess' bound for the number of consecutive residues or non-residues. Funct. Approx. Comment. Math. 46 (2012), no. 2, 273–284.

(with J. William Helton and M. L. Walker) *Conditions for stabilization of the tokamak plasma vertical instability using only a massless plasma analysis.* Automatica, 46 (2010), no. 11, 1762–1772.

(with Harold R. Parks) *An elementary proof of a generalization of Bernoulli's formula.* Elem. Math. 65 (2010), no. 2, 68–77.

(with Harold R. Parks) *The generalization of Faulhaber's formula to sums of non-integral powers.* J. Math. Anal. Appl. 330 (2007), no. 1, 571–575.

(with Paul Cull and Ananda Leininger) *Knight's tour on boards with holes is NP-complete.* Bull. Inst. Combin. Appl. 45 (2005), 33–40.

Conferences Attended

California Mathematical Conference, Northridge, California, 2022

Canadian Number Theory Association Conference, University of Calgary, 2016, Université Laval, 2018

Joint Mathematics Meetings, 2003, 2008, 2010, 2012, 2013, 2015, 2016, 2018

West Coast Number Theory Conference, 2011, 2014, 2015, 2016, 2017, 2018, 2019

Recent developments in Analytic Number Theory Mathematical Sciences Research Institute, University of California, Berkeley, 2017

Introductory Workshop: Analytic Number Theory, Mathematical Sciences Research Institute, University of California, Berkeley, 2017

Fields Medal Symposium, Fields Institute for Research in Mathematical Sciences, University of Toronto, 2016

Pacific Northwest Number Theory Conference, 2011, 2015, 2016

Workshop on Computational Representation Theory in Number Theory, Oregon State University, 2015

Counting Arithmetic Objects, Séminaire de Mathématiques Supérieures, Université de Montréal, 2014

Conference on Stark's Conjectures and Related Topics,
University of California, San Diego, 2013

Summer School on Number Theory and Dynamics, Insitut Fourier, Grenoble, 2013

Journées Arithmétiques, Université Joseph Fourier, Grenoble, 2013

Upstate New York Number Theory Conference, Binghamton University, 2013

Marvin Knopp Memorial Conference, Temple University, 2012

Québec/Maine Number Theory Conference, Université Laval, 2012

Workshop on Arithmetic Statistics, Snowbird, Utah, 2012

Workshop on the Cohen–Lenstra Heuristics, American Institute of Mathematics, 2011

Southern California Number Theory Day, 2006, 2007, 2008, 2009, 2010, 2011

School on the Arithmetic of L-functions, Park City Mathematics Institute, 2009

School on Modular Forms and L-functions, University of Washington, 2008

SAGE Days 2, University of Washington, 2007

Selected Talks

Primes, sieves and pentiums: A tale from the 90s. Humboldt State University, 2019

Irrational and transcendental numbers. Humboldt State University, 2019

An explicit upper bound on the least primitive root. University of California, Irvine, 2019

Explicit bounds on the least primitive root modulo p. University of Rochester, 2019.

Quadratic residues and primitive roots. University of Vermont, 2019.

Statistics of genus numbers of cubic fields. University of Vermont, 2019.

Quadratic residues and primitive roots. University of New South Wales, Canberra, 2019.

Statistics of genus numbers of cubic fields. University of New South Wales, Sydney, 2019.

Norm-Euclidean ideal classes in Galois cubic fields. Canadian Number Theory Association Conference, Université Laval, 2018.

Grosswald's conjecture on the least primitive root. Oregon State University, 2018.

Genus numbers of cubic fields. Oregon State University, 2017.

Grosswald's conjecture on the least primitive root. University of Oregon, 2017.

Statistics of genus number of cubic fields. University of Rochester, 2017.

Quadratic residues and primitive roots. Sacramento State University, 2017.

Quadratic residues and primitive roots. Humboldt State University, 2017.

Heilbronn's criterion in non-Galois cubic fields. West Coast Number Theory Conference, Pacific Grove, 2016

Statistics of genus number of cubic fields, Canadian Number Theory Association Conference, University of Calgary, 2016

Statistics of genus number of cubic and quintic fields, Pacific Northwest Number Theory Conference, Oregon State University, 2016

Resolving Grosswald's Conjecture on GRH, Joint Mathematics Meetings, Seattle, 2016

Resolving Grosswald's Conjecture on GRH, West Coast Number Theory, Pacific Grove, 2015

Euclidean Ideal Classes, Graduate Seminar, CSU Channel Islands, 2014

The Euclidean Algorithm in Cyclic Quintic Fields, Number Theory Seminar, Temple University, 2014

Euclidean Number Fields and Ergodic Theory, Fields Institute Number Theory Seminar, University of Toronto, 2013

The S-Euclidean Minimum of an Ideal Class, Journées Arithmétiques, Université Joseph Fourier, Grenoble, 2013

The S-Euclidean Minimum of an Ideal Class, Upstate New York Number Theory, 2013

Twin Primes, Sieves, and Pentiums, Colloquium, Swarthmore College, 2013

Linnik's Theorem, Number Theory Seminar, Temple University, 2013

Euclidean Minima, Colloquium, Wichita State University, 2013

Euclidean Ideal Classes and Topological Dynamics, Arithmetic Seminar, Binghamton University, SUNY, 2012

The S-Euclidean Minimum of an Ideal Class, Number Theory Seminar, Temple University, 2012

The Second Smallest Prime Non-Residue, The Québec/Maine Number Theory Conference, Université Laval, 2012

Norm-Euclidean Galois Fields, MRC Workshop on Arithmetic Statistics, Snowbird, 2012

Euclidean Number Fields, Colloquium, Ursinus College, 2012

Wildly Ramified Cyclic Euclidean Fields, West Coast Number Theory Conference, Asilomar California, 2011

Prime Numbers, Quadratic Forms, and L-functions, Undergraduate Colloquium, University of Portland, 2010, Oregon State REU Program, 2011

Euclidean Cubic Fields and the Generalized Riemann Hypothesis, Colloquium, Oregon State University, 2010

Euclidean Prime Degree Galois Number Fields, AMS Special Session on L-functions and Analytic Number Theory, Joint Mathematics Meetings, San Francisco, 2010

Teaching Experience

California State University, Chico

Assistant/Associate Professor, Fall 2014 – Present,
Trigonometry, Calculus I, Calculus II, Linear Algebra, Elementary Differential Equations, Discrete Mathematics, Methods of Proof, College Geometry, Number Theory, Cryptography, Advanced Calculus I, Advanced Calculus II, Modern Algebra, Complex Variables, Putnam Competition Seminar, Analytic Number Theory, Measure Theory

Ursinus College

Assistant Professor, Fall 2012 – Summer 2014,
Multivariable Calculus, Linear Algebra, Numerical Analysis, Abstract Algebra, Number Theory, Galois Theory

Oregon State University

Postdoctoral Scholar, Fall 2010 – Spring 2012,
Differential Calculus, Discrete Mathematics, Matrix & Power Series Methods, Vector Calculus, Linear Algebra, Abstract Algebra, Computational Number Theory, Algebraic Number Theory

University of California, San Diego

Senior Teaching Assistant, Summer 2009 – Spring 2010,
Duties included: Running TA training sessions, performing teaching observations, scheduling discussion sections

Associate Instructor, Summer 2009, Linear Algebra

Summer Qual Prep Instructor, Summer 2008, Complex Analysis

Graduate Teaching Assistant, Fall 2005 – Spring 2009,
Differential Calculus, Integral Calculus, Multivariable Calculus, Differential Equations, Linear Algebra, Number Theory, Graduate Complex Analysis

San Diego Miramar College
Adjunct Professor, Summer 2007 – Fall 2008,
Pre-Algebra, Intermediate Algebra & Geometry (pre-calculus level)

Oregon State University
Graduate Teaching Assistant, Spring 2004 – Spring 2005,
Algebra (pre-calculus level), Integral Calculus, Multivariable Calculus, Matrix & Power Series Methods

Undergraduate Teaching Assistant, Spring 2003,
Discrete Mathematics

Undergraduate Grader, Fall 2003 – Winter 2004,
Advanced Calculus, Metric Spaces & Topology

Instructor[1], Summer 2001 – 2005,
"Computer Programming and Problem Solving in C"
"How To Solve the Rubik's Cube"

Honors, Awards, Memberships

(with Eva Goedhart and Amanda Tucker) Conferences and Workshops in the Mathematical Sciences NSF Grant, West Coast Number Theory Conference, 2016–2018, DMS-1646760.

(with Sergei Fomin and Kathy Gray) Research Experience for Undergraduates and Teachers NSF Grant, DMS-1559788.

MRC Collaboration Grant, funded through AMS/NSF, 2012, 2013

Accepted into the AMS Mathematics Research Communities Program, 2012

AMS Graduate Student Travel Grant, 2010

American Mathematical Society, Member

Mathematical Association of America, Member

California State University, Chico
Internal Research Grant, CSU Chico, 2021
Internal Research Grant, CSU Chico, Summer 2015

Ursinus College
Faculty Summer/Short Term Project Grant, 2013
Mellon Supplemental Research Travel Grant, 2013
Faculty Development Research Grant, 2012

Service

Reviewer for AMS Mathematical Reviews, 2016–present
Director for the CSU Chico Mathematics REUT program, Summer 2017
Co-organizer of the West Coast Number Theory Conference, 2016–2019
Co-organizer of AMS Special Session on Arithmetic Statistics, 2013

California State University, Chico
Learning resources committee, Strategic planning committee, Applied mathematics hiring committee, Pure mathematics hiring committee, Assessment committee, Colloquium committee, Department RTP Committee, College scholarship committee, Academic senate formal complaint committee

[1] I taught in two pre-college summer programs for advanced 5th–6th and 7th–8th grade students.

Ursinus College
Diversity committee, Statistics hiring committee, Calculus committee, Department colloquia coordinator, involved in department curriculum review, advisor for math-majors and undeclared freshman, administered Putnam competition

Oregon State University
Organized graduate student number theory seminar

Relevant Work Experience

Ninpro Data, Inc.
Portland, Oregon
Programmer / Analyst, Summer 1998, 2000

Coastal Imaging Lab
College of Oceanic and Atmospheric Sciences, Oregon State University,
Research Assistant, Fall 2001 – Summer 2005

Programming Experience

C, C++, Java, Python, Sage, Matlab, Maple, Mathematica, LaTeX, HTML