

STEFAN ERICKSON

curriculum vitae

Department of Mathematics and Computer Science
Colorado College
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EDUCATION

Ph.D. in Mathematics, June 2005

M.A. in Mathematics, June 2001

University of California, San Diego

Thesis Title: New Settings of the First Order Stark Conjectures

Advisor: Harold Stark

B.A. in Mathematics and Asian Studies, May 1999

Rice University

ACADEMIC POSITIONS

Visiting Assistant Professor, September 2005 - May 2008

Colorado College, Colorado Springs, CO

Courses: Mathematical Explorations, Pre-Calculus, Single and Multivariable Calculus, Linear Algebra,
Number Theory, Geometry, Analysis, Special Topics in Algebraic Number Theory

Teaching Assistant, September 1999 - December 2004, April 2005 - June 2005

Associate Instructor, January 2005 - March 2005

University of California, San Diego

Lower Division Courses: Single and Multivariable Calculus, Differential Equations, Linear Algebra

Upper Division Courses: Modern Algebra, Applied Modern Algebra, Computer Algebra,
Number Theory, Mathematical Reasoning, Complex Analysis,
Foundations of Analysis, Statistical Methods

Graduate Courses: Complex Analysis

Adjunct Professor, July 2001 - December 2004

Mesa Community College, San Diego, CA

Courses Taught: Elementary and Intermediate Algebra, Trigonometry, Single and Multivariable Calculus,
Elementary Statistics

AWARDS

Teaching Assistant Excellence Award, UC San Diego, 2004/2005

Nominated for Lloyd E. Worner Teacher of the Year Award, Colorado College, 2006/2007

PUBLICATIONS

New Settings of the First Order Stark Conjectures

Ph.D. Thesis, University of California, San Diego

An Extension of the First Order Abelian Stark Conjecture

To appear in Rocky Mountain Journal of Mathematics.

Explicit Formulas for Real Hyperelliptic Curves of Genus 2 in Affine Representation

Co-authored with Michael Jacobson, Ning Shang, Shuo Shen, and Andreas Stein.

Arithmetic of Finite Fields, Lecture Notes in Computer Science, Vol. 4547, Springer, 2007, p. 202-218.

Explicit Formulas for Real Hyperelliptic Curves of Genus 2

Co-authored with Michael Jacobson, Ning Shang, Shuo Shen, and Andreas Stein, in preparation.

Generating Pairing-Friendly Genus 2 Curves over Prime Fields

Co-authored with Kristin Lauter and Ning Shang, in progress.

PRESENTATIONS

Explicit Formulas for Real Hyperelliptic Curves of Genus 2

Special Session on Low Genus Curves and Applications, 2008 Joint Mathematics Meetings, San Diego, CA
Algebra/Combinatorics/Number Theory Seminar, University of Wyoming – October 1, 2007

Elliptic Curve Cryptography 2006 Rump Session, Fields Institute, Toronto, ON – September 18, 2006

Computational Evidence of the Stark Conjectures

Front Range Number Theory Conference, University of Colorado, Boulder – October 25, 2007

Microsoft Research, Redmond, WA – August 10, 2007

Computational Number Theory and Applications to Cryptography, U. of Wyoming – July 5, 2006

Fermat's Last Theorem: A Journey from Ancient to Modern Mathematics

Colorado College Faculty Luncheon – September 18, 2007

Complex Multiplication – May 11, 2007

Class Field Theory – March 9, 2007

Modern Day Cryptosystems – September 8, 2006

Primes of the Form $x^2 + ny^2$ – May 10, 2006

Divisibility in the Fibonacci Numbers – January 26, 2006

Colorado College Fearless Friday Seminar

Prime Divisibility in the Lucas Numbers

Session in Number Theory, 2007 Joint Mathematics Meetings, New Orleans, LA

West Coast Number Theory Conference, Las Vegas, NV – December 17, 2004

Variations on a Theme of Stark

Number Theory Seminar, University of British Columbia, Vancouver, BC – March 29, 2007

Gathering on Stark's Conjectures, Centre de Recherches Mathématiques, Montreal – November 1, 2005

Algebra Seminar, Colorado State University, Fort Collins, CO – October 6, 2005

Special Session in Arithmetic Geometry, 2005 AMS Spring Western Section Meeting, Santa Barbara, CA

Session in Number Theory, 2005 Joint Mathematics Meetings, Atlanta, GA

Special Session in Arithmetic Geometry, 2004 AMS Fall Western Section Meeting, Albuquerque, NM

Number Theory Conference in Honor of Harold Stark's 65th Birthday, Minneapolis, MN – August 7, 2004

SEMINARS

Seminar on Algebraic Number Theory, Main Lecturer, Fall 2007 - Spring 2008

Reading Seminar on Algebraic Statistics, Fall 2006 - Spring 2007

Reading Seminar on Computational Biology, Fall 2005 - Spring 2006

Reading Seminar on Drinfeld Modules, Fall 2003 - Spring 2004

Reading Seminar on Arithmetic Geometry, Winter 2004 - Spring 2004

Reading Seminar on Elliptic Curves and Modular Forms, Fall 2002 - Spring 2003

INTERESTS

Research: Elliptic and Hyperelliptic Curve Cryptography, Stark Conjectures, Algebraic Number Theory

Personal: Yoga, Rock Climbing, Hiking, Backpacking, Zen Meditation

COMPUTER SKILLS

Mathematica, Matlab, Maple, Pari, HTML, L^AT_EX, Microsoft Office

REFERENCES

Professor Marlow Anderson, Colorado College (teaching)
manderson@coloradocollege.edu

Dr. Kristin Lauter, Microsoft Research (research)
klauter@microsoft.com

Professor Mike Siddoway, Colorado College (department chair)
msiddoway@coloradocollege.edu

Professor Harold Stark, UC San Diego (thesis advisor)
stark@math.ucsd.edu