Curriculum Vitae
Katherine F. Stevenson
Department of Mathematics, CSUN
katherine.stevenson@csun.edu
Orchid ID: 0000-0001-9899-5066
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Current Position:

August 2001 - Present: California State University, Northridge, California, USA. Current rank: Professor since 2010

Education:

B.S., Mount Holyoke College, South Hadley, MA, USA. August 1985 - June 1989. Cum laude in mathematics, minor in economics. Phi Beta Kappa, Sigma Xi. Honors thesis: *Rational Points on Elliptic Curves*

Somerville College, Oxford University, UK, October 1987- July 1988. Visiting student, mathematics

Ph.D., University of Pennsylvania, Philadelphia, PA, USA. August 1989 - May 1994. Mathematics Dept. Dissertation: *Fundamental Groups of Projective Curves in Characteristic p.* Advisor: David Harbater

Previous Positions.

Sept. 1998 - August 2001: Department of Mathematics, California Institute of Technology, Pasadena, California, USA. Taussky-Todd Instructor (on leave, UMD)
August 1994 - August 2000: Department of Mathematics, University of Maryland, College Park, Maryland, USA. Assistant Professor January 2009 - June 2009 Department of Mathematics, University of Padova, Padova, Italy (sabbatical)
August 1999 - December 1999 MSRI, Berkeley, CA, USA *Galois groups and fundamental groups.* Visiting Postdoctoral Scholar
September 1994 - August 1995 CRM-ISM-CICMA Postdoctoral Fellow. Université de Montréal, Quebec, Canada August 2000 - August 2001 Department of Mathematics, Pomona College (Visiting Professor, on leave from Caltech), Claremont, CA, USA
March - June 1998 Department of Mathematics, Forschungsinstitut Mathematik (FIM), ETH Zurich, Zurich, Switzerland
August - December 1997 Department of Mathematics, University of Southern California, Los Angeles, CA, USA
July 1996 Department of Mathematics, University of Utrecht Mathematics Department, Utrecht, The Netherlands
June 1995, 1996 Department of Mathematics, Département de Mathématique, Université de Bordeaux, Talence, France

Mathematics papers:

15. *Abhyankar's Conjectures in Galois Theory: Current Status and Future Direction* with D. Harbater, A. Obus, R. Pries, Bulletin of the AMS, **55**, no. 2, (2018), 239-287
14. *Almost Omega Free Groups.* With M. Kumar and D. Harbater. In preparation.
13. *Subgroups of profinite surface groups* with L. Bary-Soroker and P. Zalesskii , Math. Res. Lett. **18** (2011), no. 03, 459-471

12. *Embedding problems and open subgroups* with D. Harbater, Proceedings of the AMS, **139** (2011), no. 4, 1141-1154
11. *A survey of Galois theory of curves in characteristic p* with R. Pries; primarily expository, Fields Institute Communications **60**, (2011), 169-191
10. *Semi-direct Galois covers of the affine line* with L. Gruendken, L. Hall-Seelig, B.-H. Im, E. Ozman, R. Pries, Fields Institute Communications **60** (2011), 201-210,
9. *Normal subgroups of the algebraic fundamental group of affine curves in positive characteristic* with A. Pacheco and P. Zalesskii, Math. Annalen, **343** (2009) Issue 2, 463-486 *Erratum,* correcting a hypothesis, Math. Ann. **359** (2014) 1115-1116, adding a hypothesis
8. *On quasi-free profinite groups* with L. Ribes and P. Zalesskii, Proceedings of the American Mathematical Society, **135** (2007), no. 9, 2669-2676 Mathematisches Forschunginstitut Oberwolfach Report, Vol. 01, 2006 The arithmetic of Fields, Conference Proceedings (OWR, ISSN 1660-8933), 331-334
7. *Local Galois Theory in dimension two,* with D. Harbater, Advances in Mathematics Vol. 198, Issue 2 (2005) 623-653
6. *Abhyankar's Local Conjecture on Fundamental Groups* with D. Harbater, Algebra and Algebraic Geometry with Applications, Springer-Verlag (2004) 473-486
5. *Prescribing ramification* with R. Guralnick, Arithmetic fundamental groups and noncommutative algebra (Berkeley, CA, 1999), 387–406, Proc. Sympos. Pure Math., **70**, Amer. Math. Soc., Providence, RI, 2002
4. *Galois modules and the algebraic fundamental group of projective curves in positive characteristic,* with A. Pacheco, Pacific J. of Math. 192 (2000), no. 1, 143–158
3. *Patching and thickening problems* with D. Harbater, J. of Algebra, **212**, (1999) 272-304
2. *Conditions related to π_1 of projective curves,* J. of Number Theory, **69**, No. 1, (1998) 62-79
1. *Galois groups of projective curves in characteristic p,* J. of Algebra, **182** (1996) 777-804

Math Education Papers, Reports, and Textbooks:

Quantitative Reasoning Task Force Report, co-chair and coordinating author, 42 pages. (2016) QRTF Report

Developmental Mathematics: For Whom? To What End? MSRI-CIME Workshop Report **11** 68 pages (2016) MSRI Report

Mathematical Methods for Business - Course Pack, with W. Watkins, published by xyzhomework.com, textbook with exercises (ISBN 978-1-63098-363-5, 287 pages), lecture notes and supplemental instruction workbook (ISBN 978-1-63098-340-6, 289 pages) online homework

Creating the Flow: How hybrid labs can help turn around high failure rate classes, with L. Zweier "EDUCAUSE Quarterly" December 15, 2011. Educause Article

Grants and Awards: Totaling over $3.4 million

Grant: Southern California Edison. Supporting Dual Enrollment Math 196QR 2023-2024, **$79,800**; matched with **$80,000** CSUN University Corporation

Grant: CSU Chancellor's Office. Creating Dual Enrollment Math 196QR Online 2020-2024, **$255,000**

Grant: College Futures, PI Stevenson, CSUN, April 1, 2018 - March 31, 2021, **$350,000**

Grant: LAUSD contract scaling up "Transition to College Math and Statistics Course Implementation." Collaboration with C. Gaspard (CSUN) and Project Grad., Los Angeles, June 2017 - June 2018, **$70,000**; Renewed for Stevenson only **$25,000**

Award: College Service Award 2015

Grant: Bill and Melinda Gates Foundation, NGLC Proven Redesign "Hybrid Math Labs for High Failure Rate Classes." January 2013-August 2016, **$2,300,000**, collaboration with California State University System and California Community College System

Grant: Bill and Melinda Gates Foundation, NGLC Wave I "Hybrid Math Labs for High Failure Rate Classes." January 2011-January 2012 **$150,000**, collaboration with CSULB, HSU, LAPC

Award: Distinguished Teaching Award, CSUN academic year 2007-2008

Award: College of Science and Mathematics Teaching Award, CSUN academic year 2007-2008

Grant: NSF Grant for Undergraduate Research Project (IIS-0534984) "Learning Taxonomies of the Visual World," Co-PI, June 2005-June 2008, **$44,403**

Grant: National Security Agency, Young Investigator's Award, (grant # MSPF-01Y-109) "Covers of Curves and Surfaces," April 2002 - April 2004

Grant: National Security Agency, Young Investigator's Award, (grant #98Y157) "Fundamental groups of curves in characteristic p," Dec. 1998 - Dec. 2000

Grant: National Security Agency, Young Investigator's Award, (grant #96Y118) "Galois Covers of Projective Curves," Dec. 1996 - Dec. 1998

Teaching experience:

- Courses taught: Calculus (I, II, III), Mathematical Methods for Business (Math 103), Foundations of Mathematics (Math 320), Abstract Algebra I (Math 360), Abstract Algebra II (Math 460).
- ACUE Credential in Effective College Instruction April 2021 based on micro-credentials:
  - Creating an Inclusive and Supportive Online Learning Environment October 2020
  - Promoting Active Learning Online January 2021
  - Inspiring Inquiry and Lifelong Learning in Your Online Course April 2021
  - Designing Student-Centered Courses April 2021

Masters Students Advised:

Spencer Gerhardt: Thesis incomplete but completed as Ph.D. Math, University of Southern California, May 2017

Austin Nickel: Thesis incomplete, MS by Exam, started Ph.D. Program in Math University of Arizona 2016

Evelyn Ngo: Thesis "The 3n + 1 Problem" defended July 27, 2010; works as a data scientist

David Wood: Thesis "Secure ballot transmission: Paillier's method" defended Nov. 13, 2009; started Ph.D. Program

Undergraduate Research Advised (2015-2021):

Undergraduate research project in arithmetic geometry (2018): Stanislav Turnov and Vincent Newberry (both now in Ph.D program at Kansas State University)

Learning Taxonomies of the Visual World. (IIS-0534984) 3 yr project. Students studied the main concepts in classification problems. Developed a classifier that classifies images from various categories of urine particles using about 50 features. Their classifier runs on MatLab and worked on all 13 categories of images provided by IRIS Corporation with average accuracy of 85%. It employed multivariable calculus and advanced concepts in linear algebra, including generalized eigen-problems. Later students "modularized" the code to allow us to more easily experiment with new features and implemented 108 new features using derivatives that use the derivative to blur the images.

Nathan Sutter - Bren School of Information and Computer Science at the University of California, Irvine

Yeranuhi Semerdjian - Masters in math at CSUN - Community College Instructor

Aspram Torosian

Elizabeth Layton Chisholm - PhD student at UC Santa Barbara 2015

Service (2015-2021):

Department and College Service (2015-2021):

Chair of Department of Mathematics August 2023-August 2026, elected

College Personnel Committee, 2019/2020 and 2020/2021 (chair), elected

Department Search and Screen Committee for Statistics, 2019-2020, chair, 1 successful search, elected

Department Personnel Committee 2018-2019, chair, elected

Department Adhoc Committee to address CSU Executive Order 1110, 2017-2018, appointed

Department Adhoc Committee to revise Ideas in Math (Math 131), 2016-2017, appointed

Department Hiring Committee 2016-2017, 1 successful search, elected

Department Hiring Committee 2015-2016, 4 successful searches, elected

Department Program Review Committee 2015-2016, responsible for undergraduate program report, appointed

Adhoc Committee to revise Pre-Calculus sequence (Math 102, 104, 105), chair, 2015-2016 Implemented in Fall 2016 with a 15 percentage point improvement in passage rates

Department Curriculum Committee, 2014-2015, appointed

Department Personnel Committee, 2014-2015, elected

Math Chair Elections Committee, Spring 2014, elected

College Personnel Committee Academic years 2011/2012 and 2012/2013, elected

Hiring Committee, 2012-2013, 3 successful searches, elected

Associate Chair, Fall 2008, appointed

Chair Elections Committee, Spring 2008, elected

Course Coordinator for Math 103, Mathematical Methods for Business, Fall 2006 - Fall 2019, appointed

Grader Coordinator, Spring 2004-June 2007, appointed

Curriculum Committee Chair, August 2004-January 2006, created a data base of all syllabi for all math courses; made available to all faculty, appointed

Assessment Committee member, Spring 2005-June 2007, revised the GE SLOs and got approval of them by the department, appointed

Co-authored syllabus for "Algebra for High School Teacher" (math 622)

University Service (2015-2021):

Interim Department Chair, Manufacturing Systems Engineering and Management, College of Engineering and Computer Science, August 2021-July 2022, appointed

At Large Senator, CSUN, AY 2020-2021, elected

Educational Resources Committee, 2019-2025, chair 2021-2022, elected

General Education Task Force Member, Spring 2018, appointed

Academic Oversight Advisory Group for Athletics, August 1, 2015-2018, appointed

AAC&U Equity Group, 2015-2016.

Director of the Developmental Mathematics Program (DMP), August 1, 2009 - August 1, 2018, appointed

TEWS Board, Fall 2014-present, appointed

"Learning Habits Project," Academic Affairs, CSUN, 2008-2016, appointed

Presentation of results on Math 103/103L project to full CSU Senate, November 2008, invited

Panel Member, Beck Grant Panel Discussion, Fall 2008, invited

Participant Honors Day March 5, 2008, invited

Interview Developmental Math faculty candidates, Spring 2006, invited

Preeminent Scholarly Publication Committee, Spring 2006, appointed

Beck Grant Panel, March 2006, invited

Faculty participant at President's Reception for newly admitted students, February 2006, invited

Judge CSUN student research competition, Fall 2005, invited

TNE middle school algebra committee chair, Academic Yr 2005-2006, invited

Senate Executive committee, Fall 2004-Spring 2005, invited

Faculty Senator, Fall 2003-Spring 2005, invited

CSU Service:

Advisory Committee and Liaison Committee for the CSU Center for the Advancement of Quantitative Reasoning, Academic Year 2018-present

Quantitative Reasoning Task Force Co-Chair, February-September 2016 (see Report above)

Mathematical Community Service:

Board of Admissions and Relations with Schools (BOARS) Area C Workgroup, one of three mathematicians representing CSU Spring 2024

Intersegmental Committee of Academic Senates (ICAS), Workgroup to revise ICAS Statement on Competencies in Mathematics Expected of Entering College Students (to UC, CSU and CCCS), one of three mathematicians representing CSU elected by CSU Math Council, 2023-2024

Advisory Committee and Liaison Committee for the CSU Center for the Advancement of Quantitative Reasoning, Academic Year 2018-present

Organizer and moderator TPSE Panel on Grading for Active Learning & Department Change, JMM, January 4, 2024

Referee: Journal of Algebra, Involve - A Journal of Mathematics, February 2022

Ph.D. Thesis Committee: Indian Statistical Institute, Delhi Centre, January 2022

California Mathematics Education Consortium. Founding member. 2018-present. CMEC

AMS Committee on Education, February 1, 2017-January 30, 2021, chair, December 1, 2018 - January 30, 2022, appointed

Lead organizer AMS Committee on Education conference, Washington, DC, October 2020 (canceled due to pandemic)

Lead organizer CIME Conference, MSRI, March 2020, *Critical Issues in Mathematics Education 2020: Today's Mathematics, Social Justice, and Implications for Schools*, appointed link to CIME 2020 talks and materials

Lead organizer AMS Committee on Education conference, Washington, DC, October 2019

Lead organizer AMS Committee on Education conference, Washington, DC, October 2018

Mathematical Sciences Research Institute (MSRI, UC Berkley campus) Education Advisory Committee, April 1, 2017 (3 year term), appointed

Member of the Math Advisory Group for the *Transforming Post Secondary Education – Math (TPSE-math)*, October 2017-Present

Refereed papers for Journal of Algebra, Transactions, and Annalen, invited

Organizer CIME Conference, MSRI, March 2018, *Access to mathematics by opening doors for students currently excluded from mathematics*, appointed Link to CIME 2018

AMS Award Committee for "Impact on the Teaching and Learning of Mathematics" 2018, appointed

External Reviewer for CSUSM Math Department October 1-2, 2015, appointed

Young Scholars Awards Committee, AMS July 1, 2015 - June 31, 2018, appointed

Organizer CIME Conference, MSRI, March 2015, *Developmental Mathematics: For whom? Toward what ends?*, appointed Link to CIME 2015

Implementing a 4th year math course for LAUSD using new curricular material well coordinated with Common Core – Transitions to College Level Math and Statistics (TCMS) January 2014-present, requested

Gates Foundation Grant to improve entry level courses within the CSU and California Community College System, 2011-2016, $2.7 million, selected

Travel Grant Selection Committee, Association of Women in Mathematics, Spring 2013-2016, appointed

General Education Advisory Board, Western Governors University, January 2013-August 2016, appointed

Advisory committee for Title III Grant to Valley College: Accelerated Pathways to STEM (Science, Technology, Engineering and Mathematics) and Articulation Grant from the U.S. Department of Education, invited

Tenure case and pre-tenure case review for faculty at Gettysburg College 2006 & 2008, invited.

Invited talks and conferences:.

Colloquium CSUSM, February 22, 2024

CSUN Math Open House Talk, Spring 2023

Mathematics Education Doctoral Seminar, Math Department, University of Nebraska, Lincoln. November 2022

EdSource Panelist on California Math Framework, July 2022 EdSource Panel

AMS Committee on Education Forum: Evolving Curriculum in High School and Early Undergraduate Mathematical Science Education, Co-Host with Henry Cohn, June 2022 AMS Forum

TPSE Lecture *Formative Assessment: Mastery via micro-tests* July 2020.

MAA SW Sectional Meeting Plenary, *Dramatic Shifts in California Education* October 2019

Panelist, Instructional Design Conference ASCCC, San Jose, CA, March 17, 2017

Participant, Transforming Post Secondary Education in Math (TPSE) Chairs plus one meeting, March 9-11, 2017

Presentation to ASCSU on QRTF, Long Beach, CA, September 15-16, 2016

Presenter, Graduation Initiative 2025 Symposium, Long Beach, CA, September 21-22, 2016

Presenter, Mathematics Readiness Challenge Meeting, California State Department of Finance, Sacramento, CA, April 22, 2016

Presenter with CSUN Team, AASCU 2016 Academic Affairs Winter Meeting, Austin, TX, February 4, 2016

Panelist, Aligning Math Together, UC Articulation Conference, UC Irvine, CA, February 26, 2016

Panelist, RP Group at 2015 Strengthening Student Success Conference, October 7-9, 2015

Educational Outreach address Spring meeting of the Mathematical Institutes Directors, April 30, 2015

USC Algebra Seminar, April 20, 2015

Speaker and Organizer, MSRI CIME March, 2015 (http://www.msri.org/workshops/758)

Women in Science Meeting, CSU Dominguez Hills, April 4, 2014

Educause Meeting, New Orleans, February 3-5, 2014

Gates Foundation Convening, Seattle June 14, 2012

Oberwolfach, Germany, The Arithmetic of Fields, June, 2013

CAPS Conference, Monterey Bay, June 10, 2012

Geometric and differential Galois theory, CIRM, Luminy, France, 3/29-4/2 2010

University of Padova, Department of Mathematics, Algebra Seminar, May 28, 2009

EPFL, Dept. of Math., Lausanne, Switzerland, Seminar & research visit, May 18-22, 2009

TU Wien, Department of Mathematics, Austria, Algebra Seminar, April 15, 2009

Oberwolfach, Germany, Arithmetic of Fields, February 1-7, 2009

WIN: Women in Numbers, BIRS, Banff, Canada, November 2-7, 2008

Visiting Professor, Forschungsinstitut Mathematik (FIM), ETH-Zentrum, Summer 2008

Oberwolfach, Germany, Arithmetic and Differential Galois Groups, Invited speaker, May 13-19, 2007 (unable to attend due to illness)

MAA Sectional Meeting,Project NEXT invited speaker, October 2007

AMS Sectional Meeting, SFSU, Special session "Arithmetic Geometry," invited speaker, Apr. 29-30, 2006

Galois workshop, UPenn. April 24-26, invited participant

AMS Sectional Meeting, UNH, Special session "Galois theory in arithmetic and geometry," invited speaker, Apr. 22-23, 2006

Oberwolfach, Germany, The Arithmetic of Fields, invited speaker, Feb. 5-11, 2006

CSUN Faculty Retreat, Speaker on Student Engagement, Jan. 2006

Colloquium talk, CSUN, February 16, 2005

Summer Institute in Algebraic Geometry, participant. Aug. 8-12, 2005

Leiden, The Neatherlands. Workshop participant: "Automorphisms of curves," August 16-20, 2004

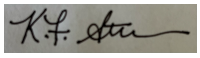
California Institute of Technology, Dept of Math, Oct 23, 2003

BIRS, Banff, Canada, Sept 6-13 2003

UC Irvine, Conference in Arithmetic Geometry, M. Fried organizer, May 2003

Oberwolfach, Germany, Conference on Fundamental Groups and Galois Theory, July 2002

I certify that the information provided is current, accurate, and complete. This includes but is not limited to information related to domestic and foreign appointments and positions. I also certify that, at the time of submission, I am not a party in a malign foreign talent recruitment program. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.
Signature:



Date: July 16, 2024