

CURRICULUM VITAE

Jialing Dai
Mathematics Department
University of The Pacific
3601 Pacific Ave, Stockton, CA, 95211

Spring 2007

Math 37- Introduction to Probability and Statistics

Math155-Real Analysis I

Fall 2007

Math 37 (two Sections)- Introduction to Probability and Statistics

Math 131-Mathematical Statistics I

Spring 2008

Math 39- Probability and Its Application in Statistics

Math 168-Modern Geometry

Fall 2011

Math 51-Calculus I (two sections)

Math 143-Abstract Algebra

Spring 2012

Math 37-Probability and Its Application in Statistics (two sections)

Fall 2012

Math 55- Calculus III (two sections)

Math 193A-Financial Mathematics (special topic course)

Spring 2013

Math 39-Probability and Its Application in Statistics

Math 168-Modern Geometry

Fall 2013

Math 55-Calculus III (three sections)

Spring 2014

Sabbatical

Fall 2014

Math 55-Calculus III (two sections)

Math 193A-Financial Mathematics (special topic course)

Spring 2015

Math 39-Probability and Its Application in Statistics

Math 168-Modern Geometry

Fall 2015

Math 35-Elementary Statistical Inference (two sections)

Math 193A-Financial Mathematics (special topic course)

Research Interests

Lie Theory and Representation Theory, Linear Algebra, Discrete Mathematics, Differential Equations, Statistics, Mathematical Finance, Operations Research, Mathematics Education

Work in Progress/Publications

Work in Progress

Case Study on Students' Attitudes Toward Statistics. Work in progress

In uence of Curriculum Reform: Strategies that Help Math Teachers Making Transition. Work in progress

Math Teacher Education in China: What is the Appropriate Balance between Math Content Knowledge and Pedagogical Knowledge? Work in progress

(With A. Lim) *A Study on Pandovan Numbers.* Work in progress

Publications/Preprints

Impact of Mathematics Teachers Classroom Discourse on Developing Student's Mathematical Thinking in Elementary Schools in China. Submitted in October, 2015.

(With A. Lim) *Conjectures on Random Fibonacci Numbers*, submitted in December, 2014.

(With A. Lim) *On Product of Companion Matrices*, Linear Algebra and its Applications, Volume 435, Issue 11, December 2011, P 2921-2935

(With Daoyuan Fang and Zheng Han) *The Nonlinear Schrödinger Equations with Combined Nonlinearities of Power-type and Hartree-type*, Chinese Annals of Mathematics, Series B, 32(B), 2011, 435-474.

(With C. Crawford, et al) *Association Rule Mining*, DIMACS Educational Module Series 10-3.

(With Doug Pickrell), *The orbital method and the Virasoro extension of $Di + S^1$* I. *Orbital Integrals*, Journal of Geometry and Physics, Vol. 44(2003), 623-653.

(With Doug Pickrell), *Coadjoint Orbits for the Central Extension of $Di + (S^1)$ and Their Representatives*, Acta Mathematica Scientia, 24B(2)(2004), 185-205.

Conjugacy Classes, Coadjoint Orbits and Characters of $Di + S^1$, PhD dissertation, 2000, The University of Arizona.

A survey of Representations and Related Results of $SL(2; \mathbb{R})$, Preprint.

(With A. Lim) *Fibonacci Rabbits Leave Home*, Preprint.

Presentations

Impact of Mathematics Teachers Classroom Discourse on Developing Student's Mathematical Thinking in Elementary Schools in China, AMS Joint Meetings San Antonio, TX, Jan.8-12, 2015

Math Education in Elementary Schools in China and in the USA, May 6, 7, and 8, 2014, Yangchuan, China. Two-hour discussion with math teachers at three elementary schools in Yangchuan, China.

Overview of K-12 Math Education in the United States, May 16, 2014, Bishan, China

Difference of K-12 Math Curriculum/Structure between USA and China, May 23, 2014, Bishan, China

On Product of Companion Matrices, AMS Joint Meetings Baltimore, MD, Jan.15-18, 2014.

The Set Game, San Joaquin Math Teachers Circle (SJMTC) Workshop Classroom Building Room 205, University of the Pacific, Dec. 10, 2013

Paper Homework or Online Homework? AMS Joint Meeting in New Orleans in January, 2011

Origami and Mathematics Youth Fellowship of Stockton Chinese Christian Church in Spring, 2010

A Few Gems and Pearls of Mathematics Youth Fellowship of Stockton Chinese Christian Church in Fall, 2009

Want to Become an Actuary? Mathematics Department, University of the Pacific, November 2009.

MAA Committee on Graduate Students Panel Discussion Teaching Postdocs{A Journey from Graduate School to a Position in the World of Mathematics AMS Joint Meeting in Washington, D.C. in January, 2009.

Semi Inquiry-Based Learning in Undergraduate Real Analysis AMS Joint Meeting in Washington, D.C. in January, 2009.

Examples of Inductive Reasoning and Recursive Thinking in Undergraduate Mathematics AMS Joint Meetings in San Diego, January 6, 2008.

Committee on Mathematics and Mathematicians in Emerging Nations AMS Joint Meetings in New Orleans, January 5, 2007.

Mis-display Statistical Graphics in Presentation AMS Joint Meetings in New Orleans, January 7, 2007.

Committee on Education Panel Discussion: International Perspectives on Undergraduate Mathematics AMS Joint Meetings in San Antonio, January 15, 2006.

What if we lived in a hyperbolic, non-Euclidean world? Entry Level Colloquium, Mathematics Department , University of Arizona, April , 2005.

Switch or Not Switch? The Monty Hall Problem Entry Level Colloquium, Mathematics Department , University of Arizona, November, 2003.

Coadjoint Orbits for the Central Extension of $D\mathbb{R}^n + (S^1)$ and Their Representatives International Congress of Mathematicians, Aug. 21- 28, 2002, Beijing, P.R.China

Other Conferences/Workshops

Panel discussion: "Sharing our success stories and challenges at Pacific as a faculty member" 2:00pm-4:30pm on May 21, 2013 University of the Pacific.

AMS Joint Meetings, January, 2004-2011, Various Locations.

MAA Sectional Annual Meetings, February at Various Universities and Colleges in Northern California.

Northern California Undergraduate Mathematics Conference, April at Various Universities and Colleges in Northern California.

The 11th Annual Legacy of R. L. Moore Conference, June 17-19, 2010, Austin, Texas.

Annual Meeting American Association of Colleges and Universities, January 2010 in Washington D.C.

Math Consortium Workshop, March 9, 2008 in San Antonio, Texas.

DyDAn Reconnect 2007: Data Analysis in Law Enforcement and Homeland Security, July 29 - August 4, 2007, Rutgers University, NJ.

The 10th Annual Legacy of R. L. Moore Conference, April 12-14, Austin, Texas.

Random Shapes Tutorial Workshop, March 13-16, 2007, IPAM at University of California in Los Angeles, California.

Inquiry-Based Learning (IBL) Workshop, July 16-22, 2006, California

Preparing Mathematicians to Educate Teachers (PMET) summer workshop, July 11-15, 2005, Park City, Utah.

AMS Joint Meetings, January, 2004-2015, Various Locations.

Business Mathematics I instructor training workshop, Fall, 2003, Tucson, Arizona.

International Congress of Mathematicians, Beijing, Aug. 21-28, 2002, P.R.China

International String Theory Conference, Hangzhou, Aug. 15-17, 2002, P.R.China.

Grants (Internal)

(Jointly with Dr. Chris Go) CAPD \$3050 (2009-2010)

(Jointly with Dr. Chris Go) Paci c Fund \$6500 (2009-2010)

Scholarly/Artistic Activities Grant (SAAG) from Paci c (Summer 2008, \$3055)

Organization committee of Northern California Undergraduate Mathematics Conference, Fall 2010-April 2011.

Council on Teacher Education, Fall 2010-2013.

Faculty search committee, Academic year 2010-2011.

Curriculum committee, Fall 2009-2012.

Calculus committee, Spring, 2009-2013.

Faculty search committee for a statistician, Academic year 2008-2009.

Faculty search committee for a statistician and an applied mathematician, Academic year 2007-2008.

Proposal Writing/Curriculum Activities/Supervising

Proposal for the new concentration in actuarial science (within the B.S. in applied mathematics) and proposals for two new math

Proposal for two new courses math 121-Financial Mathematics I and Math 122-Financial Mathematics II.

Edited and reviewed the Instructor's Manual for "Applied Calculus" by Hughes Hallett.

Worked jointly with Prof. Mouchumi Bhattacharyya and Prof. John Mayberry on the proposal for a new concentration in actuarial science (within the B.S. in applied mathematics), and was the primary writer of the proposal.

Conducted a comparison study on the impact of different homework platform (online versus paper) on student's learning in pre-Calculus, Fall 2010.

Jointly coordinated the undergraduate teaching assistant program(UTA) in mathematics (fall 2009-spring 2010)

Jointly supervised four undergraduate teaching assistants (fall 2009-spring 2010)

Participated two pre-calculus focus groups discussion organized by Wiley and Pearson Higher Education.

Wrote online Test Bank for Hughes Hallett Calculus (Fifth Edition) published by Wiley, Fall 2008.

Wrote Math 37 common final exams in fall 2006.

Co-wrote (with Meg Rosasco) Math 37 common final exam in spring 2007.

Supervised five Stats Lab TAs

Service/Community Outreach

Membership

Mathematical Association of America (MAA)