

Dr. STAN T YOSHINOBU
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DEGREES

Ph.D. Mathematics, University of California at Los Angeles, 2000
M.A. Mathematics, University of California at Los Angeles, 1997
B.A. Mathematics, Minor in Music, *Magna Cum Laude*,
University of California at San Diego, Revelle College, 1995

AWARDS AND FELLOWSHIPS

UCLA RA/Mentor Program Fellowship, 1998-99
Outstanding Teaching Assistant Award, UCLA Dept of Mathematics (2000)
Annual California State Graduate Fellowship, 1995-2000 (declined in 1998)
Revelle College (UCSD) Provost's Honors, 1992-95
Phi Beta Kappa, 1995

FIELDS OF INTEREST

For Research: Mathematics Education
For Teaching: Undergraduate mathematics courses and inquiry-based learning

EMPLOYMENT EXPERIENCE

Associate Professor, Department of Mathematics, Cal Poly San Luis Obispo
(Beginning Fall 2009)

Associate Professor, Department of Mathematics, CSU Dominguez Hills, (Fall 2002-present).

Courses Taught: Math for Elementary Teachers, Statistics, Advanced Analysis I and II, Calculus I, Calculus II, Calculus II, Problem Solving in Mathematics (for Preservice Teachers), Modern Geometry, Linear Algebra, Computers for Math Teaching, Precalculus, Theory of Functions for Teachers (masters level). The nominal teaching load at CSUDH is 12 units (4 courses) per semester.

Teaching Postdoctoral Fellow, Department of Mathematics, University of Arizona
(Fall 2000-May 2002)

The Teaching Postdoctoral program with the University of Arizona seeks to provide a broad teaching experience to qualified mathematicians interested in pursuing a teaching career at a 4-year or master's granting institution. The nominal teaching load as a teaching postdoctoral fellow is 9 units per semester.

Courses taught: College Algebra, Calculus I, II, Elementary Statistics, Linear Algebra, Discrete Mathematics, Differential Equations

Visiting Assistant Professor, Dept. of Mathematics, UCLA (Summer 2000)
Taught first quarter Calculus for biology and life science majors, and conducted research.

Teaching Assistant/Associate/Fellow, Department of Mathematics, UCLA
(1995-2000)
Taught undergraduate recitation sections. Courses include Honor's Real Analysis, Calculus, Finite Mathematics, Linear Algebra, Game Theory, Differential Equations and Physics Laboratory.

PUBLICATIONS and MANUSCRIPTS

Teaching Teachers to Problem Solve via Inquiry-Based Learning. Working Manuscript. (Target Journal: MATHEMATICS TEACHER.)

A Model for Training Mathematicians to Use Inquiry-Based Learning: The IBL Workshop. Working manuscript. (Target Journal: unknown research-oriented Math Ed Journal.)

The Jug Problem Reloaded, joint with John Wilkins. MATHEMATICS TEACHER, NCTM, Reston, VA. Vol. 101, No. 3, October 2007

Mathematics, Politics, and Greenhouse Gas Intensity: An Example of Using Polya's Problem-Solving Strategy. MATHEMATICS TEACHER, Vol. 96, No.9 December 2003.

Large Sets of Zero Analytic Capacity, joint with John Garnett, UCLA. (2001)
Published in the Proceedings of the American Mathematical Society, v.129, pp. 3543-3548.

GRANTS

Won a \$113,000 grant to conduct a second Inquiry-Based Learning Workshop in June 2007. This project is funded by the Educational Advancement Foundation. This project intends to run a second IBL Workshop, refine the workshop model during the second year, and to disseminate the model to the mathematics and mathematics education community.

Won a \$104,000 to conduct the Inquiry-Based Learning Workshop in July 2006. This is a "proof of concept" grant to determine whether a workshop model is an effective training program for mathematics faculty. This workshop invited 20 college or university mathematics faculty to attend a one-week intensive training session on how to implement inquiry-based learning in upper division math courses, which are proof based. The grant was funded by the Educational Advancement Foundation.

Won a CSUDH RSCAAP Summer Fellowship 2005 for a research project to complete work for innovative course content for Advanced Analysis (MAT 401-403). The project is titled, "The Road to Convergence."

Won a Center for Teaching and Learning (CTL) Mini grant for the 2003-2004 academic year to study alternative assessment strategies for Advanced Analysis (MAT 401-403).

Wrote the grant proposal for the second year of a \$91,000 Eisenhower grant (Board of Regents of Arizona), which funded the Enriching Summer Institute.

SELECTED TALKS AND PRESENTATIONS

A Model for Training Mathematicians to Use Inquiry-Based Learning: The IBL Workshop. American Educational Research Association Annual Meeting, New York, New York, March 2008.

The Inquiry-Based Learning Summer Workshop 2006, invited address at the 10th Annual Legacy of R. L. Moore Conference, April 2007.

Inquiry Based Learning in Mathematics Teacher Education The Coverage Issue. Presented at the 11th Annual Association of Mathematics Teacher Educators conference in Irvine, CA, January 2007.

Discovery-Based Learning for Faculty Who Have Not Experienced It. Presented at the 8th Annual Legacy of the R. L. Moore Project Conference in Austin Texas. May 2005.

Dennis Eckersley vs. Kirk Gibson: The 1988 World Series Game 1 and Basic Game Theory. Presented at the CSU Pomona Math Colloquium. January 2005.

Infusing Problem Solving Across the Curriculum. California Math Council South, Palm Springs, CA. November 2004.

Moving Algebra Beyond Algebra Class: Infusing Algebraic Thinking. Presented at the Los Angeles County Teachers of Mathematics Association (LACTMA) March, 2004

Assessment of Student Understanding Through Written Reports and Oral Presentations in Upper Division Math Courses. Presented at the Joint Meetings of the American Mathematical Society and Mathematical Association of America, Phoenix, AZ. January 2004

Moving Algebra Beyond Algebra Class: Infusing Algebraic Thinking, Presented at the California Mathematics Council – South Meetings (CMC-S) in Palm Springs, CA. November, 2003

Connecting Writing and Contextual Development with Mathematics in Introductory College Math Courses. Presented at the Meeting Alhambra ISAMA/Bridges University of Granada, Granada, Spain. July, 2003

Capture-Tag-Recapture, presented at the CSUDH Center for Math Science Education, California High School Exit Exam Workshop for Teachers. May, 2003

Beekeeping Economics: Uniting Beekeeping, Business and Mathematics for High School Students at the Native America Summer Institute. AMS-MAA Joint Mathematics Meetings, Baltimore, January 2003.

1.5 versus 1.498..., which is better? The answer depends on what tuning you use. Presented at Entry Level Colloquium, Dept. of Mathematics, University of Arizona, October 2000.

OUTREACH AND TEACHING-ENHANCEMENT

Program Committee Chair, 11th Annual Legacy of R. L. Moore Conference, July 10-12, 2008

Chaired the committee charged with the task of creating a program for the entire conference.

Undergraduate Independent Studies

Supervised 4 undergraduate independent studies from 2004-2008 and 1 high school independent study. Topics include Topology, Linear Algebra, undergraduate and graduate level Advanced Analysis.

CO-PI and Faculty Advisor for the California Math Project English Language Development Institute

Taught an intensive summer institute for elementary school teachers primarily from district ABC and Compton Unified. Topics covered: Algebraic reasoning, function sense, proportional reasoning.

Facilitator for the California Math Project with District J

Assisted 7th grade teachers and coaches with the development of units.

Instructor, Native American Summer Institute (Summer 2001)

Taught an intensive summer program called “BeePop” for Native American high school students from the Tohono O’odham and Pascua Yaqui Tribes. The course is part of a broader program to encourage Native American students to attend college.

Instructor, Enriching Summer Institute—Preparing Students for AIMS (Summer 2001)

AIMS is the Arizona Instrument for Measuring Standards, which includes a high school exit exam. Together with faculty and postdoctoral instructors, I worked with local high school and middle school math teachers to enhance their knowledge, teaching methods, and materials on topics covered by the AIMS test. Duties include

teaching and writing materials for logic and probability sessions, and helping teachers develop curriculum lessons.

Instructor, Dept. of Mathematics and Academic Advancement Program, UCLA
(Summer 1998)

Designed and taught a precalculus course for underprivileged, incoming freshmen to smooth the transition from high school to college.

SERVICE

Founder of the CSUDH Discovery Learning Seminar. I created a workshop aimed primarily at junior faculty in the sciences to increase the use of discovery based or inquiry based teaching methods in the sciences and mathematics. This workshop began in September 2005 and is ongoing.

QED Cohort Recruitment Committee. I served on a committee to search for qualified freshmen who would be a part of the freshmen cohort, which is funded by the Quality Educator Development program.

Committee Member for the Liberal Studies Committee (Fall 2003 to present)

MAT 107/207 Committee (Fall 2002 to present) This committee is working on aligning curriculum to the CCTC standards as well as choosing a new textbook.

Hiring Committee Department of Mathematics (AY 2003-2004)

Founder of the Perspectives in Mathematics Seminar, UCLA (2000). Created and organized a new mathematics seminar intended for first year graduate students and advanced undergraduates, providing an opportunity for faculty to present inspiring and accessible topics. The seminar fills a gap between traditional research seminars and basic coursework, and allows students and faculty opportunities to interact. For more details see enclosure, *Perspectives in Mathematics Seminar Statement*.

Teaching Assistant Consultant, Dept. of Mathematics, UCLA (Fall 1999)
Trained and prepared first-time Teaching Assistants for the Mathematics Department. Duties include conducting sessions on teaching methods, classroom observation and evaluation of Teaching Assistants.

PROFESSIONAL AFFILIATIONS

National Council for Teachers of Mathematics (NCTM)
Association of Mathematics Teacher Educators (AMTE)
American Mathematical Society (AMS)
Mathematical Association of America (MAA)