

Curriculum Vitae

ROBBIN LERCH O'LEARY, PhD

Education

University of Texas at Austin. Ph.D. in Mathematics, August 1990. Dissertation: Small Solutions to Inhomogeneous Systems of Linear Equations over an Algebraic Number Field.

Idaho State University. M.S. in Mathematics, August 1985.

Goshen College. B.A. in Mathematics and Music, December 1980. Indiana state teaching certification in math (7-12) and music (K-12) 1981.

Experience

- 2011-present **Professor of Mathematics,**
1995-2011 **Associate Professor of Mathematics,**
1990-1995 **Assistant Professor of Mathematics,** Seattle Pacific University.
Chair of the Mathematics Department: 1996-2000, 2003-2007, 2012-present. Taught courses at all levels, including Algebra and Trigonometry, Calculus I, II, and III, Survey of Calculus, Introduction to Statistics, Mathematics for Liberal Arts (Introduction to Contemporary Mathematics), Mathematics for Elementary Teachers, Multivariable Calculus, Vector Calculus, Linear Algebra, Discrete Mathematics, Number Theory, Axiomatic Geometry, Introduction to Analysis, Real Analysis, Modern Algebra, and seminar topics in Number Theory, Topology, Philosophy and History of Mathematics. Taught University Seminar course on infinity and multiple dimensions four years. Developed and taught a senior capstone seminar. Team taught summer courses for teachers in applications of mathematics and calculus. Assisted in developmental math lab. Sabbatical quarters: Winter, 2001 studying infinity and Winter & Spring, 2009 studying mathematics education.
- 1986- 1990 **Assistant Instructor and Teaching Assistant,** University of Texas at Austin, Department of Mathematics. Taught Mathematics of Finance; Pre-calculus; Foundations of Arithmetic; and Foundations of Geometry, Statistics and Probability (math content courses for elementary teachers). Led discussion sections for Calculus and College Algebra.
- 1983-1985 **Graduate Teaching Assistant,** Idaho State University, Department of Mathematics. Taught College Algebra with Trigonometry.
- 1982- 1983 **Secondary Math and Physics Teacher,** Academia Los Pinares, Tegucigalpa, Honduras, Central America. Taught 7th grade math, Geometry, Algebra II, and Physics in a private, bilingual school. Director of Student choir; College bowl team sponsor.

1981-1982 **Mathematics Teacher**, Argos Jr./Sr. High School, Argos, IN. Taught Algebra I, Geometry, Business Math; Assistant Director of Fall dramatic and Spring musical productions; Sophomore class sponsor.

Publications

Young, Sharon, and Robbin O'Leary. "Creating Numerical Scales for Measuring Tools." *Exploring Mathematics through Literature: Articles and Lessons for Prekindergarten through Grade 8*. Ed. D. Thiessen. 2nd. Reston, VA: National Council of Teachers of Mathematics, 2015.

O'Leary, Robbin. "Thinking about the Infinite." Response. Winter, 2012.

Young, Sharon and O'Leary, Robbin. "Creating Numerical Scales for Measuring Tools" Teaching Children Mathematics **Vol. 8 No. 7**, (2002), 400-405.

O'Leary, Robbin and Jeffrey D. Vaaler. "Small Solutions to Inhomogeneous Linear Equations Over Number Fields" Transactions of the American Mathematical Society **336** (1993), 915-931.

Contributed Papers and Invited Lectures

Northwest Mathematics Conference, Bellevue, WA. Contributed paper (50 minute session): "Top Ten (or so) Prerequisite Skills for Success in College Level Calculus." October, 2013.

Northwest Mathematics Conference, Bellevue, WA. Contributed paper (50 minute session): "Teaching Flatland Mathematics." October, 2007.

Northwest Mathematics Conference, Victoria, BC. Contributed paper (50 minute session): "Infinity in the classroom—small ideas on a rather large topic." October, 2006.

Mini-conference on teaching calculus—Calculus: From the Classroom to the Concrete. **Invited lecture:** "To Eat or Not To Eat: Solids For Understanding Volume in Calculus." May, 2006.

Northwest Mathematics Conference, Whistler, BC. Contributed paper (50 minute session): "To Eat or Not To Eat: Solids For Understanding Volume in Calculus." October, 2003.

Northwest Mathematics Conference, Whistler, BC. Contributed paper (50 minute session) with Russ Killingsworth: "Connecting Pedagogy With Content In Middle School: A Report On In-service Successes." October, 2003.

MAA Pacific Northwest Section Annual Meeting, Seattle, WA. Contributed paper with Russ Killingsworth: "A University/Public School Partnership to Improve Mathematics Knowledge of Elementary School Teachers." April, 2001.

MAA/AMS Annual Meeting, San Antonio, TX. MAA Contributed Paper: Solids for Teaching Volume Calculation." January, 1993.

Grant Participation

Co-PI on NSF-Noyce Scholars Project: Seattle Pacific University Robert Noyce Scholarship Program, DUE 0630460. John Lindberg, PI, Elaine Woo, Frank M. Kline, Greg Phelan, Robbin L. O'Leary, co-PI's (10/01/06-09/30/11; \$494,600)

Co-PI on NSF-Noyce Planning Grant: Development of Discipline Centered national Model for STEM Teacher Preparation, DUE 0934743. John Lindberg, PI, Eleanor W. Close, Frank M. Kline, Robbin L. O'Leary, co-PI's (07/01/2009-06/30/2010; \$74,998)

Co-PI on NSF-Noyce Teaching Fellows Grant proposal: An Enhanced Model for Science Teacher Preparation, DUE 1035505. John Lindberg, PI, Eleanor W. Close, Frank M. Kline, Robbin L. O'Leary, co-PI's (submitted 3/10/2010, unfunded)

Consulting

Seattle Public Schools High School Mathematics Materials Adoption Committee; community representative, December 2008-May 2009. Served on committee to recommend materials for adoption and use in Seattle Public Schools. Provided additional written review of materials included in School Board adoption packet.

Consulted with the Highline School District to conduct workshops in mathematical content and methods for fourth through eighth grade mathematics teachers (during the school year and summer institutes.) September 2000-July 2003. School year 2000-2001 under the auspices of The National Faculty funded by a Goals 2000 grant.

Reviewed proposal and initial manuscripts for publisher, spring, 1999. Class tested web-based software version of interactive number theory textbook during following autumn quarter. (Holt, Jeff and Jones, John. Discovering Number Theory. WH Freeman, 2001.)

Student Research Mentoring:

Mentored senior mathematics major research projects (approximately 28 between 2002 and 2015) in Mathematics and Music, Cryptography, Multiple Dimensions, Number Theory, Randomness, Mathematics and Art, Mathematics History and Philosophy, Graph Theory, Combinatorics, Knot Theory, Game Theory, Infinity, Ethnomathematics, Mathematics Education, and Mathematics Curriculum. Served as second reader on University Honors project on Mathematics and Music.

Professional Memberships

Mathematical Association of America
American Mathematical Society
Association for Women in Mathematics
Washington Teachers of Teachers of Mathematics
Association of Christians in the Mathematical Sciences