

C. Ray Rosentrater Curriculum Vita

I. Personal

C. Ray Rosentrater,
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II. Education

1988, M.Sc., Computer Science, University of Toronto.
1980, Ph.D., Mathematics (Operator Theory), Indiana University.
1978, M.A., Probability and Statistics, Indiana University.
1975, M.A., Mathematics, Indiana University.
1973, B.A., Mathematics, Messiah College.

Ph.D. Dissertation: "Weighted Shifts and d-Symmetry"
Advisor: J. P. Williams

III. Teaching Experience

1991- Professor, Westmont College.
1985-1991, Associate Professor, Westmont College.
1980-1985, Assistant Professor, Westmont College.
1975-1976, Interim Instructor, Houghton College.
1976-1979, 1974-1975, Associate Instructor, Indiana University.
(Including one year teaching in the Compensatory Education Program.)

IV. Administrative Experience

1981-1983 Faculty Senate (Personnel Committee).
1982-1983 Campus Security Task Force.
1983-1986 Athletic Committee (Chair).
1983-1987 Faculty Athletic Representative.
1984-1987 Computer Committee.
1986-1987 Faculty Council (Chair).
1986-1987 Vice Chair of the Faculty.
Developed college retrenchment policy which was later incorporated into the Faculty Handbook.
Spring 1989 Computer Committee.
1989-1990 Personnel Committee.
1990-1995 Computer Committee (Chair).

	<i>Developed networking proposal.</i>
1991-1994	Academic Senate Executive Committee.
1991-1995	Chair, Department of Mathematics and Computer Science. <i>Coordinated a curriculum revision and the writing of a mathematics subject matter preparation program proposal for the California Commission of Teacher Credentialing.</i>
1991-1995	Academic Senate.
1996-1997	Faculty Salary and Benefits Committee. <i>Developed revised salary schedule.</i>
1997-1999	Faculty Council.
1998-1999	Vice Chair of the Faculty.
1998-1999	Accreditation Report Task Force.
1998-2001	Building Advisory Task Force.
1999-2002	G.E. Task Force
2003-2010	Associate Dean for Curriculum <i>Chair Academic Senate and its subcommittees. Chair G.E. Committee. Serve on: WASC Committee, WASC Educational Effectiveness Subcommittee, Program Review Committee, and President's Council</i>
2009-2010	Interim Director of Assessment
2012-2015	Athletic Committee
2015-	Academic Senate, Academic Senate Review Committee.

Awards/Grants

Faculty Development Grant, support for preparation of "Compact Operators and Derivations Induced by Weighted Shifts.", 1981.

Westmont College Faculty Research Award, 1987

Westmont College Teacher of the Year Award (Natural & Behavioral Sciences Division), 1991

Faculty Development Grant, support for preparation of group exercise workbooks for Fundamentals of Mathematics, 1993.

Fulbright, Honduras, 1995.

Westmont College Summer Research Grant, Machine *Learning*, with students Manny Reyes and Justin Marks, 2004.

V. Publications

"Not Every d -Symmetric Operator is GCR." *Proceedings of the American Mathematical Society*, **81** (1981), 443-446.

"Clustering Means: Problem 1122." *Mathematics Magazine*, **55** (1982), 238-239.

"Compact Operators and Derivations Induced by Weighted Shifts." *Pacific Journal of Mathematics*, **104** (1983), 465-470.

"Real Number Representations and the Distribution of Following Segments." *Proceedings of the ACMS*, **8** (1991), 90-100.

(with Jim Gleason) "The Mosaic and Principal Function of a Subnormal Operator." *Integral Equations and Operator Theory*, **55** (2006), 69-82.

"Another Stick-Breaking Game: Problem 11089." *The American Mathematical Monthly*, **113** (2006), 571-572.

"The Sample Correlation Coefficient from a Linear Algebra Perspective." *The College Mathematics Journal*, **36** (2006), 47-50.

(with Jim Gleason) "Xia's Analytic Model of a subnormal Operator and its Applications." *Rocky Mountain Journal of Mathematics*, **38** (2008).

"Representational Efficiency." *Mathematics Magazine*, **84** (2011), 185-195.

(with Kim Jongerius) "Infinity." *Mathematics Through the Eyes of Faith*. Ed. James Bradley and Russell Howell, 2011. 37-63.

(with Kim Jongerius) "Dimension." *Mathematics Through the Eyes of Faith*. Ed. James Bradley and Russell Howell, 2011. 64-92.

Varieties of Integration. Mathematical Association of America, Dolciani Series #51. (2015).

In Progress:

"Faking It." (Submitted to *Mathematics Magazine*)

"Non-reversing Euler Double Paths." In preparation.

VI. Professional and related Activities

Memberships:

Association for Christians in the Mathematical Sciences (Board member 2002-2009, Vice-President 2005-2007, President 2007-2009)

Mathematical Association of America

Phi Kappa Phi (Chapter V.P. 1997-1999, Pres. 1999-2001)

Sigma Delta Pi

Presentations:

Respondent, Phi Kappa Phi Spring Lecture, 1987, 1993.

"A Gentle Introduction to d -Symmetric Operators."

Operator Theory Seminar, University of Toronto, 1989.

"The Theory of d -Symmetric Operators.",

Operator Theory Group, University of Waterloo, 1989.

"Leading Digits and the Efficiency of Real Number Representations." ACMS biannual conference, 1991.

"Efficiency of Real Number Representation."
Mathematics-Computer Science Colloquium, California Lutheran University, 1992

"Panel on Computer Science: The New ACM Curriculum."
ACMS biannual conference, 1993.

"Connecting Linear Algebra Concepts."
Joint Mathematics Meetings, 2011.

"A Geometry-first Introduction to Determinants."
Joint Mathematics Meetings, 2013.

"An IBL-Influenced Approach to Linear Algebra."
Joint Mathematics Meetings, 2015.

"Bicycle Routes and Euler-Double-Paths."
Joint Mathematics Meetings, 2016.

Supervision of Student Research

Machine Learning, students Manny Reyes and Justin Marks, 2004.

Amateur Political Candidates, student Austin Zuidema, 2015.

Curriculum:

Created several workbooks containing group exercises in Logic, Sets, Numeration systems and associated algorithms, Probability, Statistics, and Geometry for the Fundamentals of Mathematics courses. These courses are designed to provide prospective elementary education teachers with a mature understanding of the mathematical topics which appear in the elementary school curriculum.

"Finite Mathematics: Tools for Decision Making." (Textbook)

Other Activities:

Regular attendance at local and national professional meetings.

Submission of solutions to *Mathematical Monthly*, and *Mathematics Magazine* problems.

Periodic coach of the Westmont College Putnam Competition Team.

Computing consultant to Financial Planning Services, Santa Barbara, 1981-1982.

Curriculum consultant to CompuCamp, 1983.

Reviewer for Wiley, *Elementary Linear Algebra (5th Ed.)* by Howard Anton, 1990.

Reviewer for Houghton Mifflin, *Applied Finite Mathematics*, by Alan Hoenig, 1992

Statistical consultant to Scott Wentz. *Using impedance to estimate percentage of body fat.* 1992-1993

Reviewer for West Publishing, Prospectus for CS-1/CS-2 text based on C++, Spring, 1994.

Reviewer for West Publishing, *Programming and Problem Solving with C++*, Fall, 1994.

Statistical consultant, Bruce Hull, *Assessing real estate values from tax roll values*, 1995 – 2000.

Reviewer for Addison Wesley, supplemental chapter to *Linear Algebra and Its Applications*, by David Lay, Spring, 2006.

Resident Director, Westmont in Mexico, Fall, 2006.

Introduction to Determinants chapter, *Linear Algebra and Its Applications*, 4th ed., by David Lay, 2012.

Introduction to Orthogonality and Least Squares chapter, *Linear Algebra and Its Applications*, 4th ed., by David Lay, 2012.

Contributing Editor, *Active Calculus*, Matt Boelkins, Lead Author and Editor, Orthogonal Publishing L3C, 2014 and 2015 editions.

VIII. Community Service

Director: CYC, Santa Barbara Free Methodist Church, 1981-1982.

Choir Director, Santa Barbara Free Methodist Church, 1982-1985.

Member of chorus and soloist, "Music of Penman Lovingood," Labero Theater, March 1982.

Chair, Direction and Development Committee, Carpinteria Free Methodist Church, July-November 1989.

Treasurer, Carpinteria Free Methodist Church, 1989-1991.

Guest speaker, "Elementary Graph Theory," 4th grade class, Cold Springs School, April 1990.

Local coordinator, Bike-A-Thon to support St. Jude's Children Research Hospital, October 1990, October 1991.

Guest speaker, "Elementary Graph Theory," Aliso School, October 1990.

Trustee, Santa Barbara Free Methodist Church, 1992-1995.

Teacher 3-4th grade Sunday School class, Free Methodist Church, 1991-2001.

Property and Finance Board, Santa Barbara Free Methodist Church, 1993-1999 (chair 1993-1996).

Director of Occasional Choir, Santa Barbara Free Methodist Church, 1998-2010.

Official Board, Santa Barbara Free Methodist Church, 2000-2008.

Compensation Committee, Santa Barbara Free Methodist Church, 2006-present.

Ministerial Education and Guidance Board, Free Methodist Church, Southern California Conference,
2006-present.