

Vita

Gerald Lee Bradley

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Education

Harvey Mudd College (9/58-6/62); Received B.S. degree in Mathematics (June, 1962).
California Institute of Technology (9/62-6/66); Received Ph.D. in Mathematics (June, 1966).

Academic Positions

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| 1962-65 | Teaching assistant, Caltech |
| 1965-66 | Research assistant, Caltech |
| 1966 | Assistant Prof. of Mathematics, Claremont McKenna College (CMC) |
| 1967 | Named to Claremont Graduate School Faculty (CGS) |
| 1972- | Associate Professor of Mathematics, CMC |
| 1973-74 and 1983-86 | Chairman of CMC Mathematics Department |

Publications

1. "The Eigenvalue Set of a Class of Equimodular Matrices.": Linear Algebra and its Application, 1969. Vol 2, pp. 105-116. American Elsevier Publishing Co., Inc.
Summary: The main result of this paper is a generalization of the classical Perron-Frobenius theorem. In addition, certain combinatorial properties of a class of matrices are defined and explored.
2. A Primer of Linear Algebra, text, Prentice-Hall, 1975.
Summary: This text originally evolved out of notes written for the CMC Math 174 course (now Math 90) and is generally regarded as a fairly sophisticated elementary level text.
3. Co-author of the 4th (1989), 5th (1992), 6th (1996), 7th (2000), 8th (2004), 9th (2006), and 10th (2009) editions of Calculus for Business, Economics and the Social and Life Sciences, text with Laurence D. Hoffmann, formerly of the CMC Mathematics Department; McGraw Hill.
This text was designed for the CMC Math 21 course and is one of the three top-selling business calculus texts in the country. The 6th edition introduced calculator examples and featured several hundred new examples and exercises, most of which involved social and life science applications. The 7th edition was a streamlined version of previous editions. Key topics such as the limit and the definite integral have been rewritten with an eye toward more mathematical precision. The 8th edition, pre-published in the fall of 2003 with an official publication date of 2004, is characterized by a greater emphasis on applications to biology. This edition also involved contributions by Kenneth Rosen of AT&T Laboratories, who provided a collection of enrichment modules. The 9th edition, published in early 2006, features a more focused modeling emphasis and contains a variety of new examples and exercises. This edition has been the most successful of all so far and has elevated the text to the brink of market leadership. The 10th edition, published in early 2009, features additional applied examples and problems and a major rearrangement of topics in the chapter on exponential and logarithmic functions. The 11th edition is currently in preparation, to be published early in 2012.
4. Co-author of A Brief Calculus with Applications, (1993) a shortened version of the business calculus text described above.

- 5 Co-author of 10th edition (2009) of *Applied Calculus for Business, Economics and the Social and Life Sciences*, text with Laurence D. Hoffmann.

This is a version of the business calculus text described in 3 above, expanded to include chapters on differential equations, probability, sequences and series, and trigonometry. It features extensive applications to biology as well as to business and economics.

6. Co-author of *Finite Mathematics with Applications, 2nd edition (1995)*, with Laurence D. Hoffmann. McGraw-Hill.

This is a traditional, intermediate level finite mathematics text. Topics include: linear systems and matrices, linear programming, elementary probability and statistics, Markov chains, game theory, graph theory, and the mathematics of finance. A revision with Prof. Jorge Araao, formerly of the CMC Mathematics Department, as co-author is in progress.

7. Co-author of *Finite Mathematics and Calculus with Applications*, with Laurence D. Hoffmann. McGraw-Hill, 1995.

This is a spin-off text, blending the finite mathematics and brief calculus texts described above in items 3 and 4.

8. Co-author of the 1st (1995) and 2nd (1999) editions of *Calculus*, with Karl Smith (of Santa Rosa Community College), and the 3rd edition (2002) with Karl Smith and Monty Strauss (Texas Tech University). Text, Prentice-Hall.

This text is an intermediate level engineering calculus text that features numerous applications to physical science and to business and economics, extensive exercise sets, and special essays on mathematics by prominent mathematical teachers and researchers. The second and third editions feature early introduction of transcendental functions, additional calculator boxes using the TI-92+ CAS graphing calculator, and special Historical Quest problems dealing with the history of mathematics. It is currently being used as the basic text in the CMC calculus sequence.

CMC Committees.

- Library committee, 1966-68.
- Awards committee, 1968-70.
- Academic Standards Committee, 1970-78, 1984-86, 1991-95, 1999-2002, 2004- ; Chair, 1971-77.
- Admission and Financial Aid Committee, 1981-84; 2003-.
- Administration Committee, 2002-2004.
- Faculty Senate Representative for CMC, 1985-87.
- Faculty-Student Judiciary, 1983-85, 1989-90; and 1994-95, 1996-2004; 2005-
- Curriculum Committee, 1984-86.
- Student Recruitment Committee, 1995-96.
- Various FIS Committees: (For Ed Haley, Ward Elliott, Harvey Wichman, Susan Feigenbaum, David Smith, Jack Pitney, Mark Blitz, Peter Skerry, Richard Burdekin, Susan Murphy, James Morrison, Lisa Cody, Brock Blomberg, Heather Antecol, Kersey Black, Cathy Reid, and Ananda Ganguly.)
- Chair, Search Committee for the W.M. Keck Professor, 1984.
- CGS Mathematics field committees:
 - Executive Committee, 1968-72, and 1981-83 and Field Committee, 1969-.

- Admissions Committee, 1968-72.
- Ph.D. Committee for Greg Turner, (1989-90).

CMC Special Activities.

1. Faculty coordinator of mathematics club activities, 1967-70.
2. Faculty advisor for CMC participation in the William Lowell Putnam national undergraduate mathematics competition, 1967-1990.
3. Co-advisor for the joint college undergraduate mathematics research seminar, 1969.
4. Co-chair (with Jerry Garris) for CMC's 1999-2000 United Way Campaign

Additional Professional Activities.

1. Instructor and thesis advisor in the CGS 3-summer masters program, 1966-74; program director, 1974-75. Advisor for theses written by Mary Scherer, Katharine Weber, and Sarah Johnson.
2. Assisted in the preparation and administration of the CMC high school mathematics competition, 1966-68.
3. Chief reviewer and editorial consultant on numerous projects for Prentice-Hall, Wadsworth, Goodyear, Academic Press, Scott-Foresman, and West publishing companies.
4. Consulting editor, Goodyear Publishing Co., 1971-76. Mathematics series co-editor, Goodyear Publishing Co., 1976-81. Developmental editor, Scott-Foresman Publishers, 1981-84.
5. Participant, Sloan Foundation Summer Workshop on the application of mathematics and technology to the New Liberal Arts at Wellesley College, 1986.
6. Participant, Sloan Foundation Summer Workshop on mathematical analysis of voting patterns at Union College, 1988.
7. Participant, workshop on computer and calculator methods in calculus at UCLA, Summer, 1989.
8. Participant, 3-day conferences on computer and calculator methods in calculus:
 - at Ohio State University, Fall, 1989
 - in New Jersey, Fall, 1993
 - in New Orleans, Fall, 1998
 - in San Francisco (Burlingame), Fall, 1999.
9. Observer, New Liberal Arts program, Shakespeare Authorship Clinic (headed by Prof. Ward Elliott), Spring, 1990.
10. Senior thesis advisor for Kenneth Sweat (1990); Amy Ward (1996), Makiko Fujikawa (1999), Nicolas Flacco (2005), Jeffrey Wu (2008).
11. Observer, New Liberal Arts Program, Engineering Clinic at Harvey Mudd College (headed by Prof. Don Remer), Spring, 1992.
12. Participant, Harvard Consortium on Calculus Reform at Harvard University, Summer, 1993.
13. Participant, Workshop in the use of the TI-92 calculator in undergraduate mathematics, at Messiah College, Summer, 1997.

Post-Doctoral Fellowships and Grants.

- 1967 CMC Ford Foundation Summer Grant.
- 1968 NSF Undergraduate Summer Research Program, GY 4490
- 1974-75 Participant, NSF Chautauqua program on Mathematical Modeling and Computing.

- 1985 Participant, Mellon Foundation workshop on discrete mathematics at Harvey Mudd College.
- 1990 Participant, Jonsson Foundation Grant to develop modules for using computers in calculus and linear algebra.

- 1992 Recipient of CMC summer grant to develop applications for Math 111 (Differential Equations) to apply to the Management Science Program.
- 1996 CMC summer course developmental grant; special course materials for Math 60 (Honors Calculus).

Honors.

- 1962 Woodrow Wilson Fellow (declined in order to accept NSF Fellowship).
- 1962-65 National Science Foundation Fellow (at Caltech).

Memberships.

- Mathematical Society (1966-1974)
- Mathematical Association of America (1966-)
- Textbook Authors Association (1991)
- International Linear Algebra Society (1993-)

