

Martin E. Flashman  
December 28, 2024

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## EDUCATION

J.D., New York University School of Law February, 1978  
Ph.D. (Mathematics), Brandeis University May, 1974  
M.A. (Mathematics), Brandeis University June, 1969  
B.A., Cum Laude with Honors in Mathematics, Brandeis University June, 1967  
Graduate, Boston Latin School June, 1964  
Also attended: University of Notre Dame, 1967-1968; Bates College, 1963-1965.

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## POSITIONS HELD

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### **Humboldt State University**, Arcata, California.

Professor of Mathematics Emeritus, 2014- present  
Professor of Mathematics, 1993-2014  
Associate Professor of Mathematics, 1986-1993  
Assistant Professor of Mathematics, 1981-1986

**University of Arizona**, Department of Mathematics, Tucson, AZ, Visitor February 2017  
2017 – 2020, 2021-2024

### **Bridge to Enter Advanced Mathematics (BEAM) Summer Away**, LaVerne, CA.

Professor July 5-19, 2022

### **Bard College**, Annandale-on-Hudson, New York.

Assistant Professor of Mathematics 1975 - 1981  
Department Chair Jan. 1978 - June, 1980  
Director of Academic Computing Spring, 1979 - June, 1981

**Folsom Lake College**, Folsom, CA, Part-time Instructor Fall, 2014

**College of the Redwoods**, Eureka, CA, Part-time Instructor Spring, 1983-Spring, 1987

Spring 2009, Spring, 2010

**Occidental College**, Los Angeles, CA, Visiting Professor of Mathematics 2005-2006

**University of California, Berkeley**, CA, Visiting Assistant /Associate Professor

Summers, 1986-1990, 1992

**University of Toronto**, Toronto, Canada, Visiting Professor Fall, 1988

**University of San Francisco**, San Francisco, CA, Visiting Lecturer Summer, 1984

**Yale University**, New Haven, Conn., Mathematics Department Visiting Fellow Fall, 1980

**University of North Carolina, Chapel Hill**, NC, N.E.H. Fellow Summer, 1980

**Baruch College, CUNY**, New York City, NY, Adjunct Assistant Professor of Mathematics

1974-1975

**Mount Holyoke College**, South Hadley, MA, Instructor of Mathematics

1971-1972

**Brandeis University Upward Bound**, Waltham, MA, Teacher, Consultant, Tutor

1967, 1970, 1973, 1974

**Brandeis University**, Waltham, MA, Teacher of Undergrad Math.

1968-1971, 1972-1973

### **A PARTIAL LIST OF MATHEMATICS COURSES TAUGHT**

#### **Developmental Courses:**

Pre-Algebra

Beginning Algebra

Intermediate Algebra

Geometry

#### **Lower division Courses:**

Pre-calculus (with Trigonometry)

Finite Mathematics

Contemporary Mathematics:

*For All Practical Purposes*

*A Visual Approach to Math*

Calculus I, II, and III

Calculus for the Biological Sciences &

Natural Resources

Calculus for Business and Economics

Elements of Linear Algebra

Introduction to Mathematical Proofs

#### **Upper Division Courses and Tutorials:**

Introduction to Algebraic Structures

Abstract Algebra II

Linear Algebra

Advanced Calculus

Complex Variables

Differential Equations

Topology

Problem Solving Seminar

Geometry (Projective and Euclidean)

Mathematical Logic and Set Theory

History of Mathematics

Philosophy of Mathematics

Tutorial in Writing Proofs

Computer Programming in APL/ Fortran

Game Theory

Real Analysis

### **SELECT PUBLICATIONS**

- 14th International Congress on Mathematical Education, "MAPPING DIAGRAMS: FUNCTION VISUALIZATION OF REAL AND COMPLEX ANALYSIS AND MATRIX ALGEBRA", Shanghai, July 14, 2021. Topic Study Group 23 Visualization in the teaching and learning of mathematics. <https://www.geogebra.org/m/tfhyt4yh>
- Proceedings of Bridges 2019: Mathematics, Art, Music, Architecture, Education, Culture, Edited by Goldstine, McKenna, and Fenyvesi, July, 2019, pp 295-302.  
"Mapping Diagrams and a New Visualization of Complex Functions with GeoGebra"
- British Congress of Mathematics Education 9, April 3-6, 2018, University of Warwick. Informal Proceedings 13- "Mapping Diagrams: Four Sessions, One Theme. Using Mapping Diagrams in Algebra, Calculus, and Complex Analysis".
- "Historical Motivation for a Calculus Course: Barrow's Theorem" in *Vita Mathematica: Historical Research and Integration with Teaching*, edited by Ronald Calinger, MAA Notes, No. 40, 1996.
- Section Editor and contributor to *Calculus, The Dynamics of Change*, A. Wayne Roberts, Editor, MAA Notes, Number 39. January, 1996. Edited and wrote notes for Part II on Planning, pp. 41-65, *Calculus on the Internet*, pp165-166.
- "Concepts to Drive Technology," in *Proceedings of the Fifth Annual International Conference on Technology in Collegiate Mathematics*, Addison-Wesley, 1994, pp 166-172.
- "Probability: Connecting Concepts in Precalculus and Calculus," in *Preparing for a New Calculus: Conference Proceedings*, Anita Solow, ed., MAA Notes #36, 1994, pp 108-110.

- *Isometries*, a module for use in geometry courses, with Orville Bierman, William Blank, Xiaoyun Ma, Delene Perley, Hanna Sandler, and Jean Spath in: *Geometry II, Faculty Advancement in Mathematics Series*, The Consortium for Mathematics and its Applications, 1993, pp. 1B21.
- “For All Practical Purposes: Introduction to Contemporary Mathematics”, Review, The College Mathematics Journal 11/1990; 21(5):436.
- [“A Sensible Calculus”](#) Editorial, The UMAP Journal (1990) 11 : 93-96.

## SELECT PRESENTATIONS, WORKSHOPS, AND ACTIVITIES

- T & L Seminar, University of New South Wales, Sydney. A Second Look at the Presentation from ICME. MAPPING DIAGRAMS: FUNCTION VISUALIZATION OF REAL AND COMPLEX ANALYSIS AND MATRIX ALGEBRA, ( Video On YouTube). July 4, 2024.
- International Study Group on the Relations between History and Pedagogy of Mathematics (HPM 2024). Sydney, Australia. Two Examples from History: Mapping Diagrams to Visualize Relations and Functions. July 1, 2024.
- ESLO Working Group, providing feedback on the Student Learning Objectives for Geometry for Teachers created by GeT: A Pencil, an inter-institutional faculty online learning community of instructors of geometry courses for teachers. February 2023- October 2024.
- Mathematics Educator Appreciation Day (MEAD). Tucson, AZ. " 'And Then'... Compositions of Functions-They're Everywhere ". January 27,2024
- Joint Mathematics Meetings, San Francisco, CA.  
AMS Special Session on Mathematics and Philosophy. "Do We Need a Separate Philosophy of Geometry?" Jan. 5, 2024.
- Fall 2023 ArizMATYC Conference, Chandler AZ. "Visualizing the algebra of equations and inequalities with mapping diagrams." October 6, 2023
- Mathematics Educator Appreciation Day (MEAD). "How Many Ways Can You Solve a Quadratic Equation Visually?" Tucson, AZ. January 21,2023.
- 48th AMATYC Annual Conference Virtual Days. "Darts-Visualizing Probability: Simulations, Graphs & Mapping Diagrams". (GeoGebra book with video) Dec 2, 2022.
- Working Group providing commentary on the Student Learning Objectives for Geometry for Teachers courses, University of Michigan, Ann Arbor, MI. Feb.-May, 2023.
- Mathematics Educator Appreciation Day (MEAD). "How Many Ways Can You Solve a Quadratic Equation Visually?" Tucson, AZ. January 21,2023 .
- 48th AMATYC Annual Conference Virtual Days. "Darts-Visualizing Probability: Simulations, Graphs & Mapping Diagrams". December 2, 2022.
- Mathematics Instruction Colloquium, University of Arizona. "GeoGebra: Why I Use It. Should You?" April 4, 2022.
- ArizMATYC/MAA Southwestern Section Joint Conference, "Visualizing Linear and Nonlinear Functions and Transformations of Several Variables with Mapping Diagrams" ASU Polytechnic Campus, April 1, 2022  
(GeoGebra book: <https://flashman.tiny.us/ArizMATYC>)

- Mathematics Educator Appreciation Day (MEAD). Visualizing Calculus with Mapping Diagrams: Making Sense Of Differentiation And Integration. Tucson, AZ. January 22, 2022.
- CMC-South Annual Conference 2021, "Visualizing the Algebra of Equations with Mapping Diagrams". November 6, 2021.
- 14th International Congress on Mathematical Education, "MAPPING DIAGRAMS: FUNCTION VISUALIZATION OF REAL AND COMPLEX ANALYSIS AND MATRIX ALGEBRA", Shanghai, July 14, 2021. Topic Study Group 23 Visualization in the teaching and learning of mathematics. <https://www.geogebra.org/m/tfhyt4yh>
- ATM Conference 2021. "Visualizing the algebra of equations and inequalities with mapping diagrams", April 7 & 8, 2021. (<https://flashman.neocities.org/Presentations/ATM/ATM2021.LINKS.html>)
- AMATYC Webinar, "Visualizing Solving Equations with Function Mapping Diagrams" September 22, 2020. (On YouTube. <https://www.youtube.com/watch?v=-2MJo6oUWQc>)
- Joint Mathematics Meetings Denver, CO Jan. 15&17, 2020: MAA Minicourse 2020: Visual Complex Analysis- GeoGebra Tools and Mapping Diagrams GeoGebra Book. (<https://www.geogebra.org/m/rsqxtq9t>)
- HSU Math Department Colloquium, "Linear Algebra & Mapping Diagrams: Old & New Visualizations" (<https://www.geogebra.org/m/vydfwmb>) Sept. 5, 2019.
- Bridges Linz, 2019 Conference (Linz, Austria), July 17, 2019.
  - Mapping Diagrams and Visualization of Complex Function. GeoGebra book, "Mapping Diagrams and a New Visualization of Complex Functions with GeoGebra", <https://ggbm.at/gutmhcp8>, July, 2019.
- Mathematics Education Innovation (MEI) Conference (Bath, UK), June 29, 2019.
  - "Visualizing Functions with Mapping Diagrams"
  - "Visualizing Calculus with Mapping Diagrams"
  - "Making Sense of Integration Visually: Mapping Diagrams for Calculus"
  - "Solving Polynomial Equations: Visualization from Linear to Cubic, from Rational to Complex Numbers".
- British Congress of Mathematics Education 9, [Sessions A20 "Visualizing Equation Solutions" D20 "Solve a Quadratic Equation Visually" E20 "Complex Analysis with Mapping Diagrams" H20 "Making Sense of Integration"] April 3-6, 2018.
- Sacramento Valley Community College Mathematics (SVCCM) Conference, American River College (Sacramento), "Solving Polynomials: Mapping Diagram Visualization", Saturday, March 3, 2018.
- Joint Mathematics Meetings San Diego, CA, Jan. 13, 2018: "Mapping Diagrams Visualizing Functions and Equation Solutions: From Algebra Basics to Real and Complex Analysis."
- AMS Special Session on Visualization in Mathematics: Perspectives of Mathematicians and 2017.
  - "Making Sense of Functions with Mapping Diagrams: From Algebra Basics to Calculus."
  - "Complex Variables: Mapping Diagrams for Visualizing Complex Arithmetic and Functions Dynamically with GeoGebra."
- "Making sense of solving equations visually using functions and mapping diagrams" Loughborough University, Mathematics Education Centre Culture, Pedagogy and Identity

Interest Group. March 29, 2017

- “Making Sense of Pre-Calculus and Calculus with Mapping Diagrams: A Visual Alternative to Graphs”, University of Arizona, Mathematics Instruction Colloquium, January 31, 2017
- “The History of Logarithms: A glimpse of some highlights”, Southern Oregon University Colloquium Oct. 14 , 2016.
- “Making Sense of Calculus with Mapping Diagrams: A Visual Alternative to Graphs”, Oregon State University Math Chat; Portland State University Colloquium Oct., 2016; Western Washington University Colloquium, Sept., 2016; Whitman College Math Oregon State University Math Chat; Portland State University Colloquium Oct., 2016; Western Washington University Colloquium, Sept., 2016; Whitman College Math Colloquium, Sept., 2016 .
- “The Role of Philosophy in Proof: Euclid's Proof of Proposition One”, Portland State Univ. Pi Mu Epsilon, Oct., 2016; Washington State Univ. Math Colloquium, Sept., 2016; Willamette University Math Colloquium, Sept., 2016; Folsom Lake Math Club March, 2014.
- Making Sense of Calculus and Differential Equations with Mapping Diagrams: A Visual Alternative to Graphs,” Evergreen State University Special Lecture, Oct. 5, 2016.
- “Making Sense of Solving Linear and Quadratic Equations with Mapping Diagrams”, Western Washington University Association of Mathematics, Sept. 30, 2016.
- “Using Mapping Diagrams to Make Sense of Equations and Functions”, Washington State University Math Ed Seminar, Sept. 27, 2016.
- “What can we learn from Newton's estimate of  $\ln(2)$  and  $\pi$ ?”, University of Idaho Math Club, Sept. 26 , 2016.
- “Complex Variables: Mapping Diagrams for Visualizing Complex Arithmetic and Functions Dynamically with GeoGebra “, Guest Lecture - Intro to Analysis Class, Reed College, Sept. 19, 2016.
- "Using Mapping Diagrams to Make Sense of Functions and Equations" ATM 2016 Conference, March 31, 2016, Warwick, England,
- "Mapping Diagrams for Complex Variable Functions Visualized Dynamically with GeoGebra" ICTCM 2016 March 12, 2016, Atlanta, GA.
- "Visualizing Complex Variable Functions with Mapping Diagrams: Linear Fractional Transformations." MAA Contributed Paper Session on Revitalizing Complex Analysis, Jan.9, 2016.
- “What Place Does Philosophy Have in Teaching Mathematics?” Preliminary report. POMSIGMAA Contributed Paper Session on Using Philosophy to Teach Mathematics, Jan. 7, 2016.
- "Making Sense of Calculus with Mapping Diagrams", JMM, MAA Minicourse #7 Jan., 2016.
- "Making Sense of Solving Linear and Quadratic Equations with Mapping Diagrams", CMC3 Conference, Monterey, CA, December 12, 2015.
- "Equations, Functions, and Mapping Diagrams in Common Core" , CMC North Conference, Pacific Grove, CA, December 12, 2015.

- "Using Mapping Diagrams to Understand Linear Functions", UC Davis Math Project Saturday Series 2014-15, November 1, 2014.
- "Do You Want Your Students To Write Proofs?" Suggestions to Improve Writing Proofs." Project NExT Panel at MathFest, August 6, 2014.
- Introduction to Sensible Calculus: A Thematic Approach, The Anja S. Greer Conference on Mathematics, Science and Technology. June 22 - June 27, 2014.
- "Functions, Duality, and Mapping Diagrams", UC Davis Math Club Presentation, May 22, 2014; Howard University Presentation, December 2, 2013, Washington, DC.
- AMATYC Webinar, "Using Mapping Diagrams to Understand Trigonometric Functions" April 10, 2014.
- "A Sensible Approach to Calculus: Differential Equations, Estimation, and Modelling in The Fundamental Theorem.", Sacramento Valley Community College Mathematics Conference, March 15, 2014
- "Making Sense of Series and Sequences in The First Calculus Course." JMM, Baltimore, MD. January 18, 2014
- "Functions, Duality, and Mapping Diagrams" Folsom Lake College Math Club Presentation, Dec. 11, 2013, Folsom, CA.
- "Visualizing Linearity: Alternatives to Lines and Planes" Sacramento City College, Dec. 10, 2013.
- "Concepts to Drive Technology in the 21st Century" (html), ComputerBasedMath (CBM) Education Summit, UNICEF, NYC, Nov. 22, 2013.
- "Functions, Duality, and Mapping Diagrams" Forty-Second Annual State of Jefferson Mathematics Congress October 5, 2013, Orick, CA
- MathFest, Hartford, CT, August, 2013. "Logic is Not Epistemology: Should Philosophy Play a Larger Role in Learning about Proofs?"  
"A Simple Proof of the Classification of Conics by the Discriminant ,"
- "Designing an Introduction to Proofs Course Understanding the Problem: Unification, Generalization or Abstraction?" JMM. San Diego, January 10, 2013
- "The Benefits of A Habit: Examining Evidence to Understand Statements and Proofs." JMM. San Diego, January 12, 2013
- "Learning from Newton" HPM, Berkeley, CA 10-28-2012
- Utah Workshop Materials: (1) Mapping Diagrams and (2) Sensible Calculus, July, 2012
- "Square Roots: Adding Philosophical Contexts and Issues to Enhance Understanding." JMM, New Orleans, January 8, 2011
- "Two Different Approaches to Getting Students Involved in Writing Proofs ." JMM, New Orleans, January 07, 2011
- "The Articulation of Mathematics-A Pragmatic/Constructive Approach to The Philosophy of Mathematics." Preliminary report. MAA Session on Philosophy of Mathematics for Working Mathematicians, Joint Math Meetings, San Francisco, CA, January, 2010.
- "Which Came First? The Philosophy, the History, or the Mathematics?" Mathfest 2009, Portland Oregon, August 6, 2009
- "Visualizing Linear Functions". Presentation at Annual Fall Conference, Oct. 25, 2008,

CMCFN, Arcata, CA.

- Teaching and the philosophy of mathematics. MAA Minicourse #13: Sunday January 6, and Tuesday January 8, 2008. Joint Mathematics Meetings, San Diego, CA.
- “Math and tonality for the fretted instruments: an introduction with connections to logarithms!”, CMC<sup>3</sup> Conference, Monterey, CA, November 30, 2007.
- “Mathematics, Music, and the Guitar (Preliminary Report)”, MathFest 2007, San Jose, CA. Aug. , 2007; presentation to combined precalculus classes at Boston Latin School, June, 2007, Boston, MA; Presentation at CMC Far North Conference, Oct., 2006. Arcata, CA; Presentation at MESA, Cabrillo College, Sept., 2006. Santa Cruz, CA.
- “Visualizing Mappings with Technology (Preliminary Report)”, MathFest 2007, San Jose, CA. Aug. 5, 2007
- “The Continuum Hypothesis: A Look at the History of the Real Numbers in The Second Millennium.” Math Department Special Seminar, Brandeis University, July 12, 2007
- “What Place Does Philosophy Have in Teaching Mathematics?” Preliminary report. MAA Contributed Paper Session on the Philosophy of Mathematics, Jan. 6, 2007
- “Real Numbers: Models and The Proof of The Continuum Hypothesis “ Math Dept. Colloquium, CSU Sacramento, November 9, 2006.
- “Life on a Torus: Some of the Mathematics from the World of Pacman”, CSUMB Colloquium, Sept. 15, 2006, Monterey, CA.
- “Mathematics and Music: A Colloquium/Concert Presentation” Occidental College Colloquium, April 21, 2006
- Visualizing Partial Derivatives without Graphs." MAA Jan. 14, 20
- "The Square Root of 2, Pi, and the King of France: Ontological and Epistemological Issues Encountered (and Ignored) in Introductory Mathematics Courses.." MAA Jan. 12, 2006
- "Winplot: Freeware for Precalculus through Differential Equations," workshop at AMATYC Conference, Salt Lake City, Nov. 15, 2003. A similar presentation will be made at the CMC<sup>3</sup> Conference, December, 2004 and the CMC -South Conference in March, 2005.<sup>3</sup>
- Winplot 2 Hour Workshop at AMATYC Conference, Salt Lake City, Nov. 15, 2003
- "Winplot -Freeware for Pre-calculus through Calculus III and Differential Equations" ICTCM Nov. 2, 2002
- Participated in On-line NSF workshop “Authoring Online Interactive Materials in Mathematics” July 16-19, 2002. On-line Materials on Mapping figures developed with Ken Yanosko and Yoon Kim
- "Using Probability to Understand Calculus ", MAA Jan. 7, 2002
- "The Continuum Hypothesis: A Look at the History of the Real Numbers in The Second Millennium. ", MAA Jan. 7, 2002
- “Technology and the History of Mathematics”, ICTCM 12, Nov. 6, 1999
- “Dynamic Visualization of PreCalculus and Calculus Concepts with Geometer's Sketchpad” AMATYC Conference Workshop. Nov. 5, 1998

- "Dynamic Visualization of Calculus I-III with The Geometers' Sketchpad" MAA Mathfest '98.
- "Dynamic Visualization of Calculus: More Concepts to Drive Technology," a one hour Address at ICTCM 11, New Orleans, Louisiana, November 21, 1998. .
- "Dynamic Visualization of Precalculus and Calculus Concepts with Geometer's Sketchpad," a two hour Workshop, AMATYC 24th Annual Conference, November 5, 1998. Portland, Oregon.
- Consultation visit and Presentation "Numbers, Real Numbers, and Decimals" at Special Mathematics Department Colloquium, Catholic University, Washington, DC, April 11, 1997.
- "Visualizing Functions with Scalar Fields" presented at a contributed papers session, ICTCM 9, Reno, Nevada, November 9, 1996.
- "Two departments: A fictional tale of change and illusion." presented at the Contributed paper session "Planning Reformed Calculus Programs: Experiences and Advice" for Joint Mathematics Meetings, Orlando, Fl, January, 1996.
- Special Seminar and Workshop on "Visualizing Functions in Calculus I to III" and Colloquium on "Probability and Calculus" at U. of Arizona, Tempe, Arizona, September 7, 1996.
- Three hour Workshop on HP48G at CMC<sup>3</sup> Conference, Monterey, CA, December, 1995
- Introduction to X(PLORE) workshop at the Nineteenth Annual Conference of AMATYC, Boston, November, 1993.
- Workshop with David Meredith (SFSU), "An introduction to X(PLORE)" at the Fifth Annual ICTCM, Chicago, November, 1992.
- "Connecting Themes between sensible Precalculus and Calculus Programs: Estimation, Rates, and Probability." CMC<sup>3</sup> Conference, Monterey, CA, December, 1995.
- "Probability as a Recurring Theme in Calculus," an Invited One Hour Address at the Fourth Conference on Teaching of Mathematics, sponsored by Addison-Wesley and the NSF, San Jose. June, 1995.
- Presentation on "A Mathematics and Liberal Arts General Education" at the State of Jefferson Mathematics Congress, May, 1995.
- MAA Poster Session Presentation on "The Sensible Calculus Project" at the Joint Mathematics Meetings in Cincinnati, Ohio. January, 1994.
- "Sensible Calculus Program Reforms: Concepts and Planning" at CMC<sup>3</sup> Conference, Monterey, CA, December 3, 1993.
- Special seminar on "Calculus and Technology," Northeastern University, Boston, November, 1993.
- Invited Panel presentation on departmental planning for calculus reform. Conference on Teaching Calculus, Harvard University. Summer, 1993.
- "Probability in Teaching Precalculus," at the Winter Mathematics Conference of the California Mathematics Council to the Far North, February, 1993.
- "Visualizing Probability in The First Year of Calculus" at the MAA session on "Use of Visualization in the Teaching of Mathematics," at the joint mathematics meetings of the AMS and MAA, San Antonio, Texas, January, 1993.
- "Concepts to Drive Technology," invited 1 hour presentation, at the Fifth Annual



International Conference On Technology in Collegiate Mathematics(ICTCM), Chicago, November, 1992.

- Co-organizer of Poster Session at the Fifth Annual ICTCM, Chicago, November, 1992.
- "Historical Motivation for A Calculus Course: Barrow's Theorem." 30 minute address made at the quadrennial meeting of the International Study Group on the Relations Between History and Pedagogy of Mathematics in Toronto, CA, August 13, 1992.
- The Sensible Calculus Book - web and text materials. This book was under contract to West Educational Publishing, released from contract by Brooks/Cole (ITP), January, 1997. Added co-author Tami Matsumoto, September, 2006. To find out more about the Sensible Calculus Project <https://flashman.neocities.org/senscalc.Core.html>

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#### OTHER PROFESSIONAL ACTIVITY

- Park City Mathematics Institute Undergraduate Faculty Program in Algebraic Geometry, Participant, July 6-26, 2008.
- Reviewer for Houghton Mifflin, Bracken Intermediate Algebra Chapters Review, Summer, 2008.
- Expert adviser for Cambridge University Press on Proposal for a new linear algebra undergraduate textbook. May, 2008.
- Chair, Philosophy of Mathematics Special Interest Group Mathematical Association of America (POMSIGMAA), (1-07 to 1-09, past-chair for 2-09 to 1-10)
- Reader for Calculus Advanced Placement Examination, Kansas City, MO, June, 2009,2010.
- "The intersection of the history and philosophy of mathematics." A panel discussion. Moderator. Joint Math Meetings, Washington, DC, January, 2009.
- Lead faculty for Mathematics, California IMPAC Project, 2003- 2007.
- Lead faculty for CSU, Mathematics Project on Lower Division Requirements (POL) Project, January, 2004.
- Disciplinary Facilitator for Mathematics for the CSU Lower-Division Transfer Patterns (LDTP) Project, 2004 - 2005.
- Book and Media Editor: UME TRENDS, News and Reports on Undergraduate Mathematics Education, Jan.,1989 - Jan., 1996. I wrote a reviewing column, "Noteworthy Books and Such" that appeared three times annually.
  - Co- PI for NSF Grant - AMATYC, A Workshops for Implementing the AMATYC Standards," 1996-1998.
- Referee/Reviewer: National Science Foundation, American Mathematical Monthly, College Mathematics Journal, PRIMUS, Journal for Research in Mathematics Education, and commercial publishers.
- Consultant to CSU, Sacramento on Mathematics Department Program Review: Spring, 1996.  
Consultant Workshop on Calculus Reform at Math Department retreat. CSU Fullerton. August 23, 1994.
- Organizer/Owner, Calc-reform e-mail list at the American Mathematical Society, [emath.ams.org](http://emath.ams.org), 1991- 2003.

- **Mathematical Association of America CUPM Subcommittee on Calculus Reform and The First Two Years (CRAFTY) Related Activities:**
- Member, 1993-1999. Friend of CRAFTY, 1999- 2006.
- Designed and managed CRAFTY web pages, 1994-2003.
- Organizer, Chair of Panel Discussion on "What Are Colleges Doing with Students with AP Placement?" at Joint Mathematics Meetings, Phoenix, Arizona, 2004.
- Organizer of Contributed paper session "Interactive and Dynamic Visualization for Precalculus and Calculus" at MAA MathFest, 1998 in Toronto, August, 1998 Member of CRAFTY panel on "Calculus Reform" at ASEE meeting in Seattle, WA, June, 1998.
- Organizer of Contributed paper session " Planning Reformed Calculus Programs: Experiences and Advice" at Joint Mathematics Meetings, Orlando, FL, January, 1996.
- Member of panel on "Calculus, the Dynamics of Change" at Joint Mathematics Meetings, Orlando, FL, Jan. 1996.
- Organizer, Chair Panel Discussion on "Institutional approach to calculus reform- Getting everyone on board," at Joint Mathematics Meetings, San Francisco, January, 1995
- Member: Mathematical Association of America (MAA), American Mathematical Association of Two-Year Colleges, Association of Teachers of Mathematics.

#### **Select Continuing Projects and Activities:**

- *The Sensible Calculus Book* - web and text materials. To find out more about the Sensible Calculus Project: <https://flashman.neocities.org/senscalc.Core.html>
- *Mapping Diagrams from A(lgebra) B(asics) to C(alculus) and D(ifferential) E(quation)s. A Reference and Resource Book on Function Visualizations Using Mapping Diagrams.* Web materials, first draft (work in progress):  
[https://flashman.neocities.org/MD/MDbook\\_%20homepage.html](https://flashman.neocities.org/MD/MDbook_%20homepage.html)