

CURRICULUM VITÆ

December 2011

Douglas Bradley Meade
Department of Mathematics
University of South Carolina
Columbia, SC 29208

home:
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Degrees

Ph.D. in Mathematics, Carnegie Mellon University, 1989.

Thesis Title: Interface Problems in Elastodynamics

Thesis Advisor: Richard C. MacCamy

M.S. in Applied Mathematics, Carnegie Mellon University, 1986.

Thesis Title: Reaction-Diffusion Models

Thesis Advisor: Richard C. MacCamy

B.S. in Computer Science, Bowling Green State University, 1984.

B.S. in Mathematics, Bowling Green State University, 1984.

Summa Cum Laude and *with University Honors*.

Thesis Title: Bezier Polynomials in Robotic Path Design

Thesis Advisor: Clifford Long

Experience

1997 – present	Associate Professor	University of South Carolina
2001 – present	Undergraduate Director Department of Mathematics	University of South Carolina
1999 – present	Member, Industrial Mathematics Institute	University of South Carolina
1997 – present	Associated Faculty, School of the Environment	University of South Carolina
1991 – 1997	Assistant Professor	University of South Carolina
1989 – 1991	Research Assistant Professor	Purdue University
1984 – 1989	Lecturer/Teaching Assistant	Carnegie Mellon University

Visiting Positions

Spring 1999	Visiting Research Professor, Institute for Mathematics and Its Applications	University of Minnesota Minneapolis, MN
Summer 1994	ASEE Consultant	Naval Air Weapons Center, China Lake, CA
1982 – 1985	Industrial Mathematician Intern/Co-op	Eastman Kodak Company, Rochester, NY

Honors

MaplePrimes Mentor of the Year, MaplePrimes community (www.mapleprimes.com), 2008

ICTCM Award for Excellence in Innovation using Technology in Collegiate Mathematics, with Phil Yasskin (TAMU) for Maplets for Calculus, 2008

Maple Mentor Award, MaplePrimes community (www.mapleprimes.com), November 2007

Golden Key Faculty Award for Creative Integration of Research and Undergraduate Teaching (nominated: 1997, 1998)

Maple Ambassador, 1994–2003

Lilly Teaching Fellow, University of South Carolina, 1994–1995

Phi Beta Kappa, Bowling Green State University, 1984

Memberships

American Mathematical Society (AMS)

Mathematical Association of America (MAA)

Society for Industrial and Applied Mathematics (SIAM)

Society for Mathematical Biology (SMB)

Publications

In Preparation

1. Douglas B. Meade and Philip B. Yasskin, *Overview of Maplets for Calculus 1.3*, 13 pgs, draft copy available at <http://www.math.sc.edu/~meade/M4C/M4C1-3-0overview.pdf>.

Refereed Journal Articles

2. Douglas B. Meade and Wei-Chi Yang, *Analytic, Geometric, and Numeric Analysis of the Shrinking Circle and Sphere Problems*, *Electronic Journal for Mathematics and Technology (EJMT)*, vol 1, issue 1, pp 40–54, ISSN 1933-2823, February 2007. Supplemental materials available at <http://www.math.sc.edu/~meade/EJMT-Shrink/>.
3. M. Filaseta and D. B. Meade, *Irreducibility testing of lacunary 0,1-polynomials*, *Journal of Algorithms*, **55**(1) 2005, pp. 21–28. (Science Direct URL: <http://dx.doi.org/10.1016/j.jalgor.2004.10.005>)
4. D. B. Meade and A. A. Struthers, *Differential equations in the new millennium: the parachute problem*, *Int. J. Engng. Ed.* **15**(6) 1999, pp. 417–424.
5. G. Donald Allen, Jim Herod, Mark Holmes, Vince Ervin, Robert Lopez, Joe Marlin, Douglas B. Meade, and David Sanchez, *Strategies and Guidelines for Using a Computer Algebra System in the Classroom*, *Int. J. Engng. Ed.* **15**(6) 1999, pp. 411–416.

6. Douglas B. Meade, *ODE models for the parachute problem*, SIAM Review **40**(2) June 1998, pp. 327–332.
7. Douglas B. Meade, *Maple and the parachute problem: modelling with an impact*, MapleTech, **4**(1) 1997, pp. 68–76.
8. B. Lichtenberg, K.J. Webb, D.B. Meade, and A.F. Peterson, *Comparison of two-dimensional conformal local radiation boundary conditions*, Electromagnetics, **16**(4) July-August 1996, pp. 359–384.
9. Douglas B. Meade, Bala S. Haran, and Ralph E. White, *The shooting technique for the solution of two-point boundary value problems*, MapleTech, **3**(1) 1996, pp. 85–93.
10. Douglas B. Meade, *Numerical, graphical and symbolic analysis of Bernoulli equations*, MapleTech, **2**(1) 1995, pp. 67–77.
11. Douglas B. Meade, G. William Slade, Andrew F. Peterson, and Kevin J. Webb, *Comparison of local radiation boundary conditions for the scalar Helmholtz equation with general boundary shapes*, IEEE Trans. on Antennas and Propagation (43) 1995, pp. 6–10.
12. Douglas B. Meade, *Applications of generalized stress in elastodynamics*, Quart. Appl. Math. (49) 1991, pp. 121–145.

Refereed Conference Proceedings

13. Douglas B. Meade and Philip B. Yasskin, *Maplets for Calculus: Improving Student Skills and Understanding in Calculus*, Proceedings of Twentieth Annual ICTCM, pp. 173–178, ISBN 0-321-64488-3, 2009. Electronic reprint available at <http://archives.math.utk.edu/ICTCM/i/20/M010.html>.
14. Douglas B. Meade and Philip B. Yasskin, *Maplets for Calculus — Tutoring without the Tutor*, Electronic Proceedings of the Thirteenth Asian Technology Conference in Mathematics, ISBN 978-0-9821164-1-8 (hard copy), 1940-4204 (online), 2008. Electronic reprint available at http://atcm.mathandtech.org/EP2008/papers_invited/2412008_14970.pdf.
15. Jim Douglas, Jr. and Douglas B. Meade, *Second-order transmission conditions for the Helmholtz equation*, in Ninth International Conference on Domain Decomposition Methods, P. Björstad, M. Espedal, and D. Keyes (eds.), Domain Decomposition Press, Bergen (Norway), 1998, pp. 434–440.
16. Douglas B. Meade, Andrew F. Peterson, and Catherine Piellusch-Castle, *Derivation and comparison of radiation boundary conditions for the two-dimensional Helmholtz equation with non-circular artificial boundaries*, in Proceedings of the Third International Conference on Mathematical and Numerical Aspects of Wave Propagation Phenomena, E. Bécache, G. Cohen, P. Joly, J.E. Roberts (eds), SIAM Proceedings in Applied Mathematics **77**, Mandelieu-La Napoule, France, 1995, pp. 506–514.

17. Bernd Lichtenberg, Ying-shang Liu, Jeffrey S. Reynolds, Kevin J. Webb, and Douglas B. Meade, *Applications and performance of a local conformal radiation boundary condition*, in IEEE Antennas and Propagation Society International Symposium, 1994 Digest, pp. 406–409.
18. Catherine Piellusch–Castle, Ying-shang Liu, Bernd Lichtenberg, Douglas B. Meade, and Kevin J. Webb, *A comparison of radiation boundary condition strategies for Helmholtz equations*, Proceedings of the Fourteenth IMACS World Congress on Computation and Applied Mathematics, Atlanta, GA, pp. 886–889, July 1994.
19. Douglas B. Meade and Fabio A. Milner, *S–I–R epidemic models with directed diffusion*, in “Mathematical Aspects of Human Diseases”, Giuseppe Da Prato (ed.), Applied Mathematics Monographs 3, Giardini Editori, Pisa, 1992.
20. Douglas B. Meade, G. William Slade, Andrew F. Peterson, and Kevin J. Webb, *Analytic evaluation of the accuracy of several conformable local absorbing boundary conditions* in IEEE Antennas and Propagation Society International Symposium, 1992 Digest, Volume 1, pp. 540–543.
21. Douglas B. Meade and Fabio A. Milner, *An S–I–R model for epidemics with diffusion to avoid infection and overcrowding*, Proceedings of the 13th IMACS World Congress on Computation and Applied Mathematics (v. 3), R. Vichnevetsky, J.J.H. Miller, eds., IMACS, Dublin, 1991, pp. 1444–1445.
22. Richard C. MacCamy and Douglas B. Meade, *An epidemic model with directed diffusion*, in Biomedical Modelling and Simulation, J. Eisenfeld and D.S. Levine, eds., IMACS Ann. Comput. Appl. Math., 5, Paris, 1989, pp. 197–199.

Books

23. Douglas B. Meade, Michael May, C-K. Cheung, and G. E. Keough, *Getting Started with Maple*, John Wiley & Sons, Third Edition, 2009, ISBN 978-0-470-45554-8 (x+209 pp.).
24. Douglas B. Meade and Etan Bourkoff, *Engineer’s Toolkit: Maple V for Engineers*, Addison–Wesley, 1998, ISBN 0-8053-6445-5 (vi + 154 pp. + 74 pp. available only in electronic form via the WWW).

Software Projects

25. Philip B. Yasskin and Douglas B. Meade, *Maplets for Calculus*, a collection of Maplet-based applets for use in single-variable calculus, available through MapleConnect at the URL http://www.maplesoft.com/products/thirdparty/maplets_calc/,
 - version 1.1: September 2005 (40 maplets)
 - version 1.2: January 2008 (94 maplets)
 - version 1.3: August 2010 (129 maplets)

26. Douglas B. Meade, Introduction to Calculus, ISBN: 1-894511-54-9 (2003).
Self-contained Calculus I course presented in the form of Maple worksheets and maplets using MapleTA to administer homework, quizzes, and exams. Available on CD from Maplesoft (mail:dmcintry@maplesoft.com).
27. Douglas B. Meade *ODE PowerTool*, a collection of 35 Maple worksheets for a complete introductory course in differential equations available for free download from Waterloo Maple, Inc., 2001, URL: <http://www.mapleapps.com/powertools/des/des.shtml>.
Updated for Maple 8 and Maple 9, 2003.

Manuals / Textbook Supplements

28. Douglas B. Meade, Instructor's Maple Manual (for Maple 14) to accompany *Linear Algebra and Its Applications*, Fourth Edition, by David C. Lay, Addison Wesley Longman, 2012, ISBN 0-321-75605-3 (in press).
29. Douglas B. Meade, Instructor's Maple Manual (for Maple 10) to accompany *Linear Algebra and Its Applications*, Updated Third Edition, by David C. Lay, Addison Wesley Longman, 2008, ISBN 0-321-38886-0 (vi+79 pp.).
30. Douglas B. Meade, Maple Manual to accompany *Linear Algebra and Its Applications*, Updated Third Edition, by David C. Lay, Addison Wesley Longman, 2006, ISBN 0-321-28064-4 (vi+72 pp.).
31. Douglas B. Meade, Instructor's Maple Manual to accompany *Linear Algebra and Its Applications*, Third Edition, by David C. Lay, Addison Wesley Longman, 2003, ISBN 0-321-12219-4 (vi+72 pp.).
32. Robert J. Lopez, Constant Goutziers, and Douglas B. Meade, Instructor's Technology Resources and Solutions Guide that supplements Robert J. Lopez' *Advanced Engineering Mathematics*, Addison Wesley Longman, 2002, ISBN 0-201-71001-3 (xxviii+333 pp.).
33. Robert J. Lopez, Constant Goutziers, and Douglas B. Meade, Student's Technology Resources and Solutions Guide that supplements Robert J. Lopez' *Advanced Engineering Mathematics*, Addison Wesley Longman, 2002, ISBN 0-201-71004-8 (xxviii+181 pp.).
34. Douglas B. Meade, Technology Resource Manual: Maple to accompany Thomas' *Calculus and Thomas' Calculus, Early Transcendentals*, Tenth Edition, Addison Wesley Longman, 2001, ISBN 0-201-72197-x (iv+55 pp.).
35. Douglas B. Meade, Instructor's Maple Manual to accompany *Linear Algebra and Its Applications*, Updated Second Edition, by David C. Lay, Addison Wesley Longman, 2000, ISBN 0-201-64849-0 (56 pp.).
36. Douglas B. Meade and Etan Bourkoff, Chapters 6 & 7 of Engineer's Toolkit: Maple V for Engineers, Addison-Wesley, 1998, ISBN 0-8053-6445-5 (74 pp.) available only as a PDF file via the WWW:

Chapter 6	Advanced Engineering Computations http://www.math.sc.edu/~meade/toolkit/ch06.pdf
Chapter 7	Introduction to Maple Programming http://www.math.sc.edu/~meade/toolkit/ch07.pdf

37. Douglas B. Meade, Maple-Based Instructor's Guide for Introductory Differential Equations with Sample Worksheets and Projects: A Supplement to *Fundamentals of Differential Equations*, by R.K. Nagle and E.B. Saff, Addison–Wesley, 1996, ISBN 0-201-96429-5 (v + 142 pp. plus WWW pages containing Maple worksheets and PostScript files for downloading, updated to Maple V Release 4 in January 1997).

Chapters in Books

38. Douglas B. Meade, *Notes for the Maple Computer Algebra System*, Appendix to *Study Guide — Linear Algebra and Its Applications*, Fourth Edition, by David C. Lay, Addison Wesley Longman, 2012, ISBN 0-321-38883-6 (in press).
39. Douglas B. Meade, Maple Technology Resource Manual, in Technology Resource Manual that accompanies Johnson, Reiss, and Arnold's *Introduction to Linear Algebra*, Sixth Edition, Addison Wesley Longman, 2009, (\approx 80 pp.).
40. Douglas B. Meade, *Notes for the Maple Computer Algebra System*, Appendix to *Study Guide — Linear Algebra and Its Applications*, Third Edition, by David C. Lay, Addison Wesley Longman, 2003, ISBN 0-201-77013-X (23 pp.).
41. Douglas B. Meade, Maple Manual to accompany Calculus by Elgin H. Johnston and Jerold Mathews, Addison Wesley Longman, 2002 (iv+53 pp.) available as a PDF file at URL: <http://www.awl.com/johnston/>
42. Douglas B. Meade, Maple Technology Resource Manual, in Technology Resource Manual that accompanies Johnson, Reiss, and Arnold's *Introduction to Linear Algebra*, Fifth Edition, Addison Wesley Longman, 2002, ISBN 0-201-75812-1 (49 pp.).
43. Douglas B. Meade, *Notes for the Maple Computer Algebra System*, Appendix to *Study Guide for Linear Algebra*, Updated Second Edition, by David C. Lay, Addison Wesley Longman, 2000, ISBN 0-201-64847-4 (18 pp.).

General and Survey Articles

44. Douglas B. Meade, *Maple and Its Role in the Development of a Mathematician*, in Proceedings of the 2004 Maple Summer Workshop, Wilfred Laurier University, Waterloo, Ontario, Canada (July 2004), Robert Lopez, ed. Electronic distribution by Waterloo Maple Inc. <http://www.maplesoft.com/>.

Unrefereed Conference Proceedings

45. Douglas B. Meade, *Maple 8 and Maplets: A New Way to Use Computer Algebra in the Classroom* in Electronic Proceedings for Using Technology to Teach Mathematics and

Science, CUNY — Borough of Manhattan Community College, New York (November 2002), available online at the URL:

<http://www.bmcc.cuny.edu/mathsci/2002/presentations/meade.html>

Technical Reports

46. Douglas B. Meade and Charles A. Nicol, *Maple tools for use in conjecture testing and iteration mappings in number theory*, IMI Research Report 1993:06 (Department of Mathematics, University of South Carolina), 1993.
47. Douglas B. Meade, *Qualitative analysis of an epidemic model with directed dispersion*, IMA Preprint Series, #916, 1992.
48. Douglas B. Meade, *Analysis for an epidemic model with diffusion to avoid infection*, Technical Report #140, Center for Applied Mathematics, Purdue University, 1990.

Other Publications

49. Douglas B. Meade (ed.), *WV — A User-Friendly Image Processing Package using Wavelets: Documentation for Version 1.0*, 1994.

Grant Support

1. NSF TUES (PI, collaborative proposal with Philip Yasskin, TAMU) August 2011 - August 2014
\$ 399,999 total (\$ 205,586 USC / \$ 194,413 TAMU)
Collaborative Research: Maplets for Calculus (M4C) .

Received

2. NSF CCLI (PI, collaborative proposal with Philip Yasskin, TAMU) June 2008 – May 2011
\$ 76,833 USC (\$149,977 total)
Collaborative Proposal: Maplets for Calculus
3. NSF STEP (co-PI; PI Tim Mousseau, USC) August 2007 – July 2010 \$ 2,000,000
SC STEPs to STEM
4. USC College of Arts and Sciences (PI) April 2007 – 2010(?) *Associate Professor Professional Development Program*
5. USC College of Arts and Sciences (PI) January 2007 – August 2008 \$10,400
Improving the First-Year Experience in Mathematics: Finding the Correct First Course in Mathematics and Creating Comfortable and Convenient Study Environments
6. NSA (co-PI w/Michael Filaseta, USC) November 2004 – January 2007 \$ 94,483
On the Factoring of Lacunary Polynomials and Galois Groups of Laguerre Polynomials
7. NSF DMS (co-PI w/Michael Filaseta, USC) June 2002 – May 2006 \$151,151
On the Factorization of Lacunary Polynomials

8. Department of Education (co-PI; PI: Jon Singer, USC) July 2001 – June 2002 \$1,885,564
Preparing Tomorrow's Teachers to Use Technology (PT³)
9. NSF SCREMS (co-PI; PI: Robert Sharpley, USC) July 2000 – June 2003 \$48,000
Scientific Computing Research Environments for the Mathematical Sciences
10. Institute for Mathematics and Its Applications [U. Minn.] (PI), Spring 1999 \$9,500
Long-Term Visitor during IMA program on "Mathematics in Biology".
11. Mathematical Sciences Research Institute [Cal – Berkeley] (PI), October 1998 \$500
Travel Support for Parallel Symbolic Computation Workshop.
12. DOD/ONR: University Research Initiative Program for Combat Readiness, November 1997
– November 2000 (co-PI on 1 of 19 projects), \$9,300,000 (USC), \$440,000 (DeVore)
Wavelet Based Image Processing for Military Applications
13. Provost's Teaching Development Grant (PI), June 1997 \$1,000
Travel Support for Two Conferences.
14. USC Instructional Innovation Fund (co-PI w/Matt Miller), July 1996 – June 1997 \$3,000
Computer Demonstrations in the Mathematics Classroom
15. Ninth International Symposium on Domain Decomposition Methods for Partial Differential
Equations (PI), June 1996 \$500
A Nonoverlapping Domain Decomposition Method for the Helmholtz Equation
16. DEPSCoR – ONR (co-PI; PI: DeVore), \$1,169,827
July 1996 – June 1999
Wavelet-Based Image Processing for Military and Commercial Applications
17. Provost's Teaching Development Fund (PI), October 1995 – January 1996 \$800
Travel Support for Two Conferences.
18. Provost's Instructional Development Fund (PI), October 1994 – May 1995 \$1,500
A Seminar Series on Educational Uses of Symbolic Algebra.
19. NSF (PI), July 1994 – December 1997 \$40,000
Boundary Conditions for Linear Wave Propagation on Unbounded Domains.
20. NSF Instrumentation and Laboratory Improvement Program (co-PI; PI: G. McNulty),
August 1994 – July 1996 \$45,885
*Undergraduate Mathematics Computation Laboratory for Students of Science and
Engineering.*
21. DEPSCoR – ONR (co-PI; PI: DeVore/Jawerth), \$735,000
July 1994 – June 1997
Industrial Mathematics Initiative.

22. Lilly Teaching Fellowship, USC Office of the Provost (PI),
(with Ralph White, Chemical Engineering), July 1994 – June 1995 \$ 400
Differential Equations for Engineers: An Interdisciplinary Approach.
23. Mathematics Research Grant, NSF–EPSCoR (PI), Summer 1993 \$6,283
Numerical Implementation of Approximate Boundary Conditions for the Scalar Helmholtz Equation.
24. Mathematics Research Grant, NSF–EPSCoR (co-PI; PI: Bennett), Summer 1992 \$2,888
Analysis of Systems of PDEs with Nonlinear Diffusion.
25. Summer Research Grant, Department of Mathematics (PI), Summer 1992 \$5,666
26. PICS (co-PI; PI: Sharpley), Summer 1992

Invited Conference Addresses

1. Sixteenth Asian Technology Conference in Mathematics (URL: <http://atcm2011.org/>), AIBU, Bolu, Turkey (September 2011), *TBD* (invited speaker)
2. Joint Mathematics Meetings New Orleans (January 2011)
Electronic Study Guide — Maplets for Calculus, with Philip B. Yasskin (Texas A&M)
3. Thirteenth Asian Technology Conference in Mathematics
(URL: <http://atcm.mathandtech.org/>), Suan Sunandha Rajabhat University, Bangkok, Thailand (December 2008), *Using Computer Algebra Systems to Improve Mathematics Education – A Case for Customized Interfaces*, (invited speaker)
[Presentation canceled due to political unrest in Bangkok in December 2008.]
4. Second WebALT Conference (Educa Berlin), Berlin, Germany (November 2006) *WebALT Maplets for Calculus – Including Proofs* (presented by Philip B. Yasskin (TAMU), with Mika Seppala (Helsinki))
5. Communicating Mathematics in the Digital Era (URL: <http://www.cmd2006.org/>), Aveiro University, Aveiro, Portugal (August 2006) *High-Level Programming Tools for Interactive Mathematics* (with Philip B. Yasskin (TAMU))
6. South Carolina Junior Academy of Science (Spring 2006), *Geometry in the 21st Century: Dynamic and Symbolic* (invited general speaker).
7. Tenth Asian Technology Conference in Mathematics
(URL: <http://www.atcminc.com/mConferences/ATCM05/>), Korean National University of Education, Cheong-Ju, South Korea (December 2005) *Recent Developments in Computer Algebra Technology and Their Impact on Mathematical Research and Teaching* (invited plenary speaker)
8. Tenth Annual Mathematics Technology Conference
(URL: <http://www.valdosta.edu/~dboyd/MTC/>), Valdosta State University, Valdosta, Georgia (February 2005)

- Perspectives on the Maturation of Computer Algebra in the Academic World* (keynote speaker)
9. Joint Mathematics Meetings, Atlanta, Georgia (January 2005)
Appropriate Uses of Technology in the Collegiate Classroom (Project NExT panel discussion session) (invited panelist)
 10. Maple Summer Workshop, Waterloo, Ontario, Canada (July 2004)
Maple and the Development of a Mathematician
 11. 963rd Meeting of the AMS, University of South Carolina; Columbia, SC (March 2001) A
New Irreducibility Test for Lacunary 0,1-Polynomials
 12. Congreso Nacional de Matemáticas, Santafé de Bogotá, Colombia (August 2000)
Talleres de Maple en Red, Parte I
 13. Congreso Nacional de Matemáticas, Santafé de Bogotá, Colombia (August 2000)
Talleres de Maple en Red, Parte II
 14. Joint Mathematics Meetings, San Antonio, Texas (January 1999)
Jerks Don't Jump: Applied Mathematics with an Impact
 15. Calculus Reform Meeting, NSF, Arlington, Virginia (April 1998)
Maple in the Mathematics Classroom at USC
 16. Joint Mathematics Meetings, Baltimore, Maryland (January 1998)
Mathematics Awareness Week Panel Discussion, invited panelist
 17. 926th Meeting of the AMS, Georgia Institute of Technology; Atlanta, Georgia (October 1997)
Theory and Application of Boundary Value Problems for ODEs
 18. 1997 SIAM Annual Meeting, Stanford (July 1997)
Mathematics Education in the 21st Century, invited panelist
 19. MAA Ohio Section Regional Meeting, Bowling Green State University, Bowling Green, Ohio (October 1996)
Differential Equations: Past, Present, and Future
 20. 1996 SIAM Annual Meeting, Kansas City, Missouri (July 1996)
Approximate Boundary Conditions on Non-Circular Domains
 21. 1996 SIAM Annual Meeting, Kansas City, Missouri (July 1996)
Using Modelling to Increase the Impact of Differential Equations
 22. Revitalizing the Engineering, Mathematics, and Science Curricula via Symbolic Algebra; Rose-Hulman Institute of Technology (July 1995)
Symbolic Algebra in the Classroom: Discuss, Demonstrate, or Do?

23. Three Rivers Mathematics Colloquia; Pittsburgh, Pennsylvania (March 1989)
Epidemic Models with Directed Diffusion
24. *Praktische Behandlung von Integralgleichungen, Randelementmethoden und singulären Gleichungen*, Mathematisches Forschungsinstitut; Oberwolfach, West Germany (December 1988)
An Interface Problem in Two-Dimensional Elastodynamics: The Plane Strain Case

Contributed Conference Addresses

1. CAMT 2011, TBD, with Philip B. Yasskin (TAMU) and Matthew Barry (TAMU undergrad)
2. TAMU Teaching with Technology Conference College Station, TX (Feb 2011)
Electronic Study Guide for Precalculus and Calculus with Philip B. Yasskin (TAMU) and Matthew Barry (TAMU undergrad)
3. MathFest 2010 Pittsburgh (August 2010)
Maplets for Calculus [with Philip B. Yasskin (Texas A&M)]
4. International Conference on Technology in Collegiate Mathematics (ICTCM XXI), New Orleans (March 2009)
Computer-Based Supplemental Instruction (panel co-organized with Philip Yasskin (Texas A&M))
5. Joint Mathematics Meetings Washington, DC (January 2009) *Effective Teaching and Learning with the Right Web-Based Resources*, with Philip B. Yasskin (Texas A&M University)
6. ICTCM XX (March 2008) *Using Symbolic Geometry Software to (Re-)Connect Calculus and Geometry*, with Philip Todd (Saltire, Inc.)
7. Joint Mathematics Meetings San Diego, California (January 2008) *Maplets for Calculus*, with Philip B. Yasskin (Texas A&M University)
8. Joint Annual Meetings of the Society for Mathematical Biology and the Japanese Society for Mathematical Biology, San Jose, California (August 2007) *Vaccination Strategies for an SEIQR Model for an Infectious Disease*
9. AP Annual Conference 2007, Las Vegas, Nevada (July 2007)
Maplets for AP Calculus, in the panel discussion on Technology in AP Calculus
10. 16th Biennial Conference of Association of Christians in the Mathematical Sciences, Messiah College, Pennsylvania (June 2007)
Maplets for Calculus [with Philip B. Yasskin (Texas A&M)]
11. 16th Biennial Conference of Association of Christians in the Mathematical Sciences, Messiah College, Pennsylvania (June 2007)
Uses and Limitations of Dynamic Geometry and Computer Algebra in the Analysis of the Shrinking Circle Problem

12. Joint Mathematics Meetings, New Orleans, Louisiana (January 2007)
Multilingual Maplets for WebALT Calculus [with Philip B. Yasskin (Texas A&M) and Mika Seppälä (Helsinki)]
13. Joint Mathematics Meetings, New Orleans, Louisiana (January 2007)
Maplets for Calculus – Now with Proofs [with Philip B. Yasskin (Texas A&M) and Mika Seppälä (Helsinki)]
14. Joint Mathematics Meetings, New Orleans, Louisiana (January 2007)
Demonstration of Maplets for Calculus (in Math on the Web forum) [with Philip B. Yasskin (Texas A&M)]
15. MathFest 2006 Knoxville, Tennessee (August 2006)
Maplets for Calculus [with Philip B. Yasskin (Texas A&M)]
16. Maple Conference 2006, Wilfred Laurier University, Waterloo, Ontario, Canada (July 2006)
Maplets for Calculus [with Philip B. Yasskin (Texas A&M)]
17. Maple Conference 2006, Wilfred Laurier University, Waterloo, Ontario, Canada (July 2006)
Maple Labs for Calculus at The University of South Carolina [with Xian Wu (USC)]
18. International Conference on Technology in Collegiate Mathematics (ICTCM 18), Orlando (March 2006)
Maplets for Calculus [with Philip B. Yasskin (Texas A&M)]
19. International Conference on Technology in Collegiate Mathematics (ICTCM 18), Orlando (March 2006)
Cryptography in the Classroom (mini-symposium panelist)
20. Joint Mathematics Meetings, San Antonio, Texas (January 2006)
Demonstration of Maplets for Calculus (in Math on the Web forum) [with Philip B. Yasskin (Texas A&M)]
21. Joint Mathematics Meetings, San Antonio, Texas (January 2006) *Maplets for Calculus* (in MAA Session on Mathlets for Teaching and Learning Mathematics) [with Philip B. Yasskin (Texas A&M)]
22. Maple Conference 2005, Waterloo, Ontario, Canada (July 2005)
Maplets for Calculus [with Philip B. Yasskin (Texas A&M)] Abstract: [PDF] [DOC]
23. International Conference on Technology in Collegiate Mathematics (ICTCM XVII), New Orleans (October 2004)
Computer Algebra in Calculus — A Selection of Different Approaches (mini-symposium co-organized with Philip Yasskin (Texas A&M))
24. Joint Mathematics Meetings, Phoenix, Arizona (January 2004)
Evolution of the Undergraduate Curriculum at the University of South Carolina (in AMS-MAA-MER Special Session on Mathematics and Education Reform)

25. InfoTech 2003, University of South Carolina, Columbia, SC (May 2003)
Web-based Homework and Assessment for Mathematics
26. Maple Summer Workshop, Waterloo, Ontario, Canada (July 2002)
Implementing Parallel Algorithms with Maple's Sockets Package
27. Joint Mathematics Meetings, San Diego (January 2002)
Bifurcation Analysis of a Dynamical System using Linear Algebra and Differential Equations
28. International Conference on Technology in Collegiate Mathematics (ICTCM XIII), Atlanta (November 2000)
Publishing with Maple (panel co-organized with Philip Yasskin (Texas A&M))
29. International Conference on Technology in Collegiate Mathematics (ICTCM XII), San Francisco (November 1999)
Linear Algebra Tools for Classroom Use
30. International Conference on Technology in Collegiate Mathematics (ICTCM XI), New Orleans (November 1998)
Using Maple to Bridge between Calculus and Freshman Engineering
31. 1998 SIAM Annual Meeting, Toronto, Canada (July 1998)
A Test for the Irreducibility of Lacunary 0-1 Polynomials [with Michael Filaseta]
32. International Conference on Technology in Collegiate Mathematics (ICTCM X), Chicago (November 1997)
Mathematical Models with Boundary Value Problems [with Allan Struthers]
33. International Conference on Technology in Collegiate Mathematics (ICTCM X), Chicago (November 1997)
Mathematical Models of Everyday Phenomena [with Allan Struthers]
34. Tenth International Conference on Domain Decomposition, Boulder, Colorado (August 1997)
Transmission Conditions and Convergence of Nonoverlapping Methods for the Helmholtz Equation (paper accepted for presentation in mini-symposium on "Optimization of Interface Conditions", organized by Frederic Nataf (nataf@cmapx.polytechnic.fr))
35. 1997 ASEE Annual Conference, Milwaukee, WI (June 1997)
Engineering Applications for the First Two Years [with Etan Bourkoff]
36. International Conference on Technology in Collegiate Mathematics (ICTCM IX), Reno, Nevada (November 1996)
Mathematical Modelling with an Impact
37. Ninth International Conference on Domain Decomposition, Bergen, Norway (June 1996)
A Nonoverlapping Domain Decomposition Method for the Helmholtz Equation (with J. Douglas, Jr.)

38. Finite Element Circus, University of South Carolina, Columbia (April 1996)
Domain Decomposition Methods for Elliptic Problems on Unbounded Domains
39. Joint Mathematics Meetings, Orlando, Florida (January 1996)
Maple: A Comprehensive Tool for Introductory ODEs
40. International Conference on Technology in Collegiate Mathematics (ICTCM VIII), Houston, Texas (November 1995)
Revitalizing Differential Equations with a Coordinated Use of Numerical, Graphical, and Analytical Methods
41. Finite Element Circus, University of Maryland–Baltimore County, Baltimore (October 1995)
Time-Harmonic Wave Propagation on Unbounded Domains – Preliminary Results and Open Questions
42. Lilly Conference on College Teaching–South, University of South Carolina, (June 1995)
Differential Equations for Engineers: An Interdisciplinary Approach
43. Third International Conference on Mathematical and Numerical Aspects of Wave Propagation Phenomena, Mandelieu–La Napoule, France (April 1995)
Derivation and comparison of radiation boundary conditions for the two-dimensional Helmholtz equation with non-circular artificial boundaries
44. 1993 Joint Symposia of the URSI Radio Science Meeting; University of Michigan (June 1993)
Radiation Boundary Conditions for the Vector Helmholtz Equation
45. 1992 Joint Symposia of the IEEE Antennas and Propagation Society; Chicago, Illinois (July 1992)
Analytic Evaluation of the Accuracy of Several Conformable Local Absorbing Boundary Conditions
46. IMA Workshop on Degenerate Diffusion; University of Minnesota (May 1991)
Qualitative Analysis of an Epidemic Model with Directed Diffusion
47. 852nd Meeting of the AMS, Ball State University; Muncie, Indiana (October 1989)
Artificial Boundary Conditions for Elastodynamics

Poster Sessions

1. CCLI PI Workshop Washington, DC (January 2011) *Maplets for Calculus — An NSF CCLI Phase I Project*, with Philip B. Yasskin (Texas A&M University)
2. Joint Mathematics Meetings, New Orleans (January 2011) *Maplets for Calculus — An NSF CCLI Phase I Project*, with Philip B. Yasskin (Texas A&M University)
3. Joint Mathematics Meetings, San Francisco (January 2010) *Maplets for Calculus — An NSF CCLI Phase I Project*, with Philip B. Yasskin (Texas A&M University)

4. Fourteenth Asian Technology Conference in Mathematics, Beijing, China (December 2009)
Maplets for Calculus — An Electronic Study Guide for Calculus, with Philip B. Yasskin
(Texas A&M University)
5. Joint Mathematics Meetings, Washington, DC (January 2009) *Maplets for Calculus — An NSF CCLI Phase I Project*, with Philip B. Yasskin (Texas A&M University)
6. Maple Summer Workshop, Waterloo, Ontario, Canada (July 2002)
The ODE PowerTool: A First Course in Differential Equations

Other Conferences Attended

MathFest; San Jose (August 2007)

Joint Mathematics Meetings; Baltimore (January 2003)

Joint Mathematics Meetings; Washington, DC (January 2000)

1995 SIAM Annual Meeting; Charlotte, NC (October 1995)

Waves and Memory in Continua: A Meeting in Honor of Richard C. MacCamy; Carnegie Mellon, Pittsburgh (August 1995)

Lilly Teaching Fellows Conference; Atlanta (March 1995)

Lilly Teaching Fellows Conference; Indianapolis (November 1994)

PICS Semi-Annual Meeting; Oak Ridge National Laboratory (May 1993)

PICS Groundwater Meeting; University of South Carolina (February 1993)

PICS Groundwater Meeting; Texas A&M University (August 1992)

PICS Semi-Annual Meeting; Brookhaven National Laboratory (May 1992)

ONR Workshop on Conservation Laws and Shock Capturing; University of South Carolina (September 1991)

1990 SIAM Annual Meeting; Chicago (July 1990)

NSF-CBMS Regional Conference on *Mathematical Foundations of the Boundary Element Method*; University of Kentucky (May 1988)

Three Rivers Mathematics Colloquia; University of Pittsburgh (March 1988)

Invited WorkshopsPresentations

1. CCLI PI Workshop, (January 2011) with Mark Bergland (BIOL, U Wisconsin — River Falls) *Developing and Using Applets and Other Computer Resources for STEM Education*
2. Thirteenth Asian Technology Conference in Mathematics Suan Sunandha Rajabhat University, Bangkok, Thailand (December 2008), with Philip B. Yasskin (Texas A&M University)
Introduction to Maple 12, Part I - Getting Started
Introduction to Maple 12, Part II - The GUI
Introduction to Maple 12, Part III - Maplets for Calculus and Other Educational Resources
 NOTE: Each of these 90 minute hands-on workshops was delivered completely via the Internet. Skype was used for 2-way voice communication and Centra for interactive computer desktop sharing. They were scheduled back-to-back-to-back from noon to 5:30 p.m. for conference attendees; that was midnight to 5:30 a.m. in Columbia. I was in my dining room, Phil was in his house in College Station, TX, and everyone else was in Bangkok.
3. Fifth International Conference on the Computer-Assisted Teaching of Mathematics (CIEMAC V), Cartago, Costa Rica (December 2007) *An Introduction to Maple* (2-day workshop)
4. Sixth Colombian and First Latin American Calculus Meetings, Bogota, Colombia (December 2007) *Using Maple 11 in the Calculus Classroom* (3-day workshop)
5. Systemwide Workshop for Calculus and Maple at USC, Columbia, SC (May 2003)
Introduction to Maple 8
6. Using Technology to Teach Mathematics and Science, CUNY — Borough of Manhattan Community College, New York (November 2002) *Maple 8 and Maplets: A New Way to Use Computer Algebra in the Classroom*
7. Waterloo Maple Regional Training Workshop, Raleigh, NC (July 2000)
Introduction to Maple 6
8. Waterloo Maple Regional Training Workshop, NIST, Gaithersburg, MD (May 2000)
Three-Day Introduction to Maple 6
9. Miami-Dade Community College, Miami, FL (March 1999)
Maple in the Classroom at The University of South Carolina
10. St. Andrews Presbyterian College, Laurinburg, NC (February 1999)
Introduction to Maple V, Release 5.1
11. Ohlone College, Fremont, CA (August 1998)
Introduction to Maple V, Release 5

12. High Point Universtiy, High Point, NC (August 1998)
Introduction to Maple V, Release 5
13. Savannah State Universtiy, Savannah, GA (June 1998)
Introduction to Maple V, Release 5
14. Humble (TX) Independent School District, Humble, TX (May 1998)
Introduction to Maple V, Release 5
15. USC Teaching Breakfast, Columbia, SC (November 1996; delivered twice)
WWW and Teaching in the Sciences and Engineering at USC – An Overview
(other panel members: Reginald Bain (School of Music) and Cheryl Wissick (Education))

Contributed Workshops

1. International Conference on Technology in Collegiate Mathematics (ICTCM XXIII), (March 2011) with Philip B. Yasskin (Texas A&M University) *Creating Customized Graphical User Interfaces in Maple*
2. International Conference on Technology in Collegiate Mathematics (ICTCM XXII), (March 2010) with Philip B. Yasskin (Texas A&M University) *Maplets for Calculus: Electronic Study Guide*
3. International Conference on Technology in Collegiate Mathematics (ICTCM XXI), New Orleans (March 2009) with Philip B. Yasskin (Texas A&M University) *Maplets for Calculus: Tutoring without the Tutor*
4. International Conference on Technology in Collegiate Mathematics (ICTCM XX), San Antonio (March 2008) with Philip B. Yasskin (Texas A&M University) *Maplets for Calculus: Improving Student Skills and Understanding in Calculus*
5. International Conference on Technology in Collegiate Mathematics (ICTCM XVII), New Orleans (November 2004)
Writing and Teaching with Maplets, with Philip Yasskin (Mathematics, Texas A&M)
6. International Conference on Technology in Collegiate Mathematics (ICTCM XVI), Chicago (November 2003)
Introduction to Maple TA
7. International Conference on Technology in Collegiate Mathematics (ICTCM XV), Orlando (November 2002)
Introduction to Maplets: User-Defined GUIs for Calculus
8. International Conference on Technology in Collegiate Mathematics (ICTCM XIII), Baltimore (November 2001)
Introduction to Maple 7 for Differential Equations
9. International Conference on Technology in Collegiate Mathematics (ICTCM XIII), Atlanta (November 2000)
Introduction to Maple 6

10. International Conference on Technology in Collegiate Mathematics (ICTCM XII), San Francisco (November 1999)
Distance Education = Distance Teaching + Distance Learning (invited presenter and panelist; other panelists: D. Allen (Texas A&M), M. Gage (Rochester), D. Kinney (Minnesota), R. Robson (Oregon State))
11. International Conference on Technology in Collegiate Mathematics (ICTCM XII), San Francisco (November 1999)
Mathematics Online: The Present and Future (invited panelist; other panelists: D. Allen (Texas A&M), D. Woods (Illinois), D. Smith (Duke), D. Schori (Oregon))
12. International Conference on Technology in Collegiate Mathematics (ICTCM XII), San Francisco (November 1999)
Introduction to Maple and Its Use on the WWW
13. Sixth Conference on the Teaching of Mathematics, Milwaukee, Wisconsin (June 1997)
Mathematical Models in Biology (with Matt Miller)
14. Workshop on the Teaching of Differential Equations Using a Dynamical Systems Perspective, Davidson, NC (June 1997)
ODEs at THE USC (with Matt Miller, John VanZee, and Dave Wethey)
15. International Conference on Technology in Collegiate Mathematics (ICTCM IX), Reno, Nevada (November 1996)
Interdisciplinary Mathematics, Computer Algebra, and the WWW
(2 hour workshop, co-presented with Matt Miller and Bob Murphy)
16. Revitalizing the Engineering, Mathematics, and Science Curricula via Symbolic Algebra; Rose-Hulman Institute of Technology (July 1995)
Computer Algebra in the Classroom: Discuss, Demo, or Do?
(invited mentor/group leader; one of six)
17. EPSCoR Summer Program in Industrial Mathematics; USC (May–August 1992)
(presented lectures and laboratory exercises for one week)

Other Workshops Attended

- AMS Workshop on Mentoring and Nurturing Students, Tuscon, AZ (December 2004)
- McGraw–Hill 2003 Calculus Symposium, Santa Fe, NM (March 2003)
- AMS-MER Workshop on Excellence in Undergraduate Mathematics: Mathematics for the Nontraditional Major, Washington University, St. Louis, MO (May 2002)
- In Silico* Biology, Medical University of South Carolina, Charleston, SC (December 2001)
- IMA Special Workshop on “BIOCOMPLEXITY: Special Competition 2000” – Opportunities in the Mathematical Sciences, Institute for Mathematics and Its Applications, University of Minnesota (January 2000)

Parallel Symbolic Computation Workshop, Mathematical Sciences Research Institute, University of California – Berkeley (September/October 1998)

Workshop on the Teaching of Differential Equations Using a Dynamical Systems Perspective, Davidson, NC (June 1997)

Maple Summer Workshop and Symposium; Rensselaer Polytechnic Institute (August 1994)

Revitalizing the Engineering, Mathematics, and Science Curricula via Symbolic Algebra; Rose-Hulman Institute of Technology (July 1994)

Maple Summer Workshop and Symposium; University of Michigan (June 1993)

Intel Paragon Workshop; Oak Ridge National Laboratory (January 1993)

Intel Paragon Workshop; University of South Carolina (June 1992)

Kendall Square Research Workshop; Oak Ridge National Laboratory (April 1992)

Seminars and Colloquia

1. Department of Mathematics, Universidad Antonio Nariño, Bogota, Colombia (December 2007)
Teaching with the Graphical User Interface in Maple 11
2. University of Helsinki, Department of Mathematics; Helsinki, Finland (May 2006)
Maplets for Calculus
3. Texas A&M University Computer Algebra Seminar; College Station, TX (January 2006)
Graphic, Numeric, and Symbolic Analysis for a Class of Geometric Limits
4. IMA Mathematical Biology Seminar; Minneapolis, MN (May 1999)
Vaccination Strategies for Epidemic Models
5. Michigan Technological University; Houghton, MI (June 1997)
Jerks Don't Jump – Mathematical Modelling with an Impact
6. University of North Carolina – Asheville; Asheville, NC (February 1997)
Jerks Don't Jump – Mathematical Modelling with an Impact
7. Worcester Polytechnic Institute; Worcester, MA (October 1996)
An Overview of Domain Decomposition Methods for Elliptic Boundary Value Problems
8. Bowling Green State University; Bowling Green, Ohio (October 1996)
Mathematical Modelling with an Impact
9. Texas Institute for Computational and Applied Mathematics (TICAM), University of Texas–Austin (January 1996)
Radiation Boundary Conditions for Wave Propagation

10. College of Engineering, University of South Carolina; Columbia, South Carolina (January 1995)
Introduction to Maple
11. University of South Carolina; Columbia, South Carolina (August 1994 – offered 3 times)
Introduction to Unix and Maple
12. University of South Carolina; Columbia, South Carolina (May 1994)
Some Uses of Maple in the Teaching of Calculus (with Matt Miller)
13. Georgia Institute of Technology; Atlanta, Georgia (February 1994)
Wave Propagation in Unbounded Domains
14. University of South Carolina; Columbia, South Carolina (March 1991)
Degenerate Nonlinear Parabolic Equations with Applications in Population Dynamics
15. University of New Hampshire; Durham, New Hampshire (March 1991)
Degenerate Nonlinear Parabolic Equations with Applications in Population Dynamics
16. University of Oklahoma; Norman, Oklahoma (February 1991)
Degenerate Nonlinear Parabolic Equations with Applications in Population Dynamics
17. Memphis State University; Memphis, Tennessee (February 1991)
Degenerate Nonlinear Parabolic Equations with Applications in Population Dynamics
18. University of Southern Illinois; Carbondale, Illinois (March 1989)
Variational Methods in Two-Dimensional Elasticity
19. Worcester Polytechnic Institute; Worcester, Massachusetts (February 1989)
Variational Methods in Two-Dimensional Elasticity
20. University of Kentucky; Lexington, Kentucky (February 1989)
Variational Methods in Two-Dimensional Elasticity
21. Georgia Institute of Technology; Atlanta, Georgia (February 1989)
Variational Methods in Two-Dimensional Elasticity
22. University of Pittsburgh; Pittsburgh, Pennsylvania (February 1989)
Variational Methods in Two-Dimensional Elasticity
23. University of South Carolina (≈ 6 , 1991–present).
24. Purdue University (≈ 4 , 1989–1991).
25. Carnegie Mellon University (≈ 12 , 1986–1989).

Year	Semester	Course	Enrollment	Course	Enrollment	Course	Enrollment	Institution
Teaching Experience								
Year	Semester	Course	Enrollment	Course	Enrollment	Course	Enrollment	Institution
1989	Fall	262	40	303	38			Purdue
1990	Spring	261	30	261	33			Purdue
	Fall	524	5					Purdue
1991	Spring	261	44	304	27			Purdue
	Fall	221	33					USC
1992	Spring	141	69	550	24			USC
	Fall	520	34	720	11			USC
1993	Spring	142H	29	721	6			USC
	Fall	526	22	720	12			USC
1994	Spring	142	67	721	10			USC
	Summer	798	1					USC
	Fall	242	30	524	8			USC
1995	Spring	242	20	799	1			USC
	Fall	142	68	524	10			USC
1996	Spring	142H	21	726	7			USC
	Summer	798	1					USC
	Fall	544	35	798	1			USC
1997	Spring	141	59	550	26			USC
	Fall	122	62	550	25			USC
1998	Spring	122	60	242	21			USC
	Fall	524	14	720	11			USC
1999	Spring	799	1					USC
	Summer	799	1					USC
	Fall	122	59	552	13	799	1	USC
2000	Spring	242H	8	544	25	799	1	USC
	Fall	241H	13	524	12	799	1	USC
2001	Spring	241	30	554	19	799	1	USC
	Spring			703I	2			USC
	Fall	526	29					USC
2002	Spring	241H	16			799	2	USC
	Fall	141	66			799	1	USC
2003	Spring					799	2	USC
	Summer	799	1					USC
	Fall	142H	25			799	1	USC
2004	Spring	511	21	STAT 511	11	799	1	USC
	Fall	141	52			799	1	USC
2005	Spring	142L	280			799	1	USC
	Summer	799	1					USC
	Fall	526	36					USC
2006	Spring	706	4					USC
	Fall	520H	13					USC
2007	Spring	526	25	SCCC 390Z	1			USC
	Fall	141	51	SCCC 499	1			USC
2008	Spring	520	26					USC
	Fall	142H	15					USC
2009	Spring	550H	12					USC

Year	Semester	Course	Enrollment	Course	Enrollment	Course	Enrollment	Institution
2010	Fall	141	47					USC
	Spring	544H	18					USC
	Fall	241H	18					USC
2011	Spring	544H	18					USC

Undergraduate Research Assistants

Funded by NSF CCLI Grant (Maplets for Calculus)

Matthew Barry	TAMU/Math & CS	2010–present
Maliek McKnight	USC/CSCE & CS	2010–present

EPSCoR Summer Research Program

Katie Spurrier	USC/Math	2001–2002
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Industrial Mathematics Institute Students

Jonathan Mason	USC/Math	2001–2003
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South Carolina Honors College

Thesis Director

Kevin Ludwick	Physics	2007 – 2008
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Second Reader

James Blair	Mathematics	1997
Brian Justice	Computer Science	1996

Student Awards

Goldwater Scholar

Katie Spurrier	Mathematics	2002 – 2004
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Graduate Students

Thesis Advisor

Aparna Desai	USC/Math	M.S.	2005
Alana Becnel	USC/Math	M.S.	2003
Catherine Piellusch-Castle	USC/Math	M.S.	1995

Member of Thesis Committee

James McNeish	USC/Educ	Ph.D.	pending
Trip Hartman	USC/Educ	Ph.D.	pending
Kening Wang	USC/Math	Ph.D.	2006
Robert Murphy	USC/Math	M.S.	2003
Brenden John Lane	USC/Math	Ph.D.	2001
Mark Whisler	USC/Math	M.S.	1999
Aaron Lewis	USC/Physics	Ph.D.	1999
Mohammed Al-Lawatia	USC/Math	Ph.D.	1997
Brian Hipp	USC/Math	M.S.	1997
Brian Dalpiaz	USC/Math	M.S.	1997
Dragos Bica	USC/ECE	Ph.D.	1997
Weimin Zheng	USC/Math	Ph.D.	1996
Christoper Balcerek	USC/Math	M.S.	1995
Qun Wu	USC/Math	Ph.D.	1994
Yanbing Yu	USC/Math	M.S.	1992
G. William Slade	Purdue/EE	Ph.D.	1991
DongWoo Sheen	Purdue/Math	Ph.D.	1991
Zhangxin Chen	Purdue/Math	Ph.D.	1991

ReviewsJournals

Electronic Journal of Mathematics and Technology, 2007 (2 papers), 2008 (4 papers), 2009 (4 papers), 2010 (3 papers)

Numerical Methods for Partial Differential Equations, 1995, 1997, 1999, 2008

Advances in Engineering Structures, 2007

Mathematical Population Studies, 2007

SIAM Journal on Numerical Analysis, 2005, 2006

SIAM Journal on Applied Mathematics, 2004

Mathematics of Computation, 2002

Applied Mathematical Modelling, 2002

Applied Mathematics Letters, 1999

Mathematical Biosciences, 1998

MapleTech, 1996 (9 manuscripts), 1998 (2 manuscripts), 1999 (3 manuscripts)

Computers and Mathematics with Applications, 1994, 1995, 1998

IEEE Transactions on Antennas and Propagation, 1993, 1994

SIAM Journal on Numerical Analysis, 1990

Proposals

USC Magellan Undergraduate Research Program: 2008 (4 proposals), 2010 (3 proposals), 2011 (1 proposal)

CUNY Internal Research Award Program, 2008.

USC Research Opportunities Program (ROP), 2007 (ad-hoc reviewer)

Undergraduate Research Experience and Knowledge Award (UREKA), Science Foundation Ireland, 2006 (panel member for 13 proposals).

USC Research and Productive Scholarship Program, 2006 (ad-hoc reviewer)

Department of Education (Advanced Placement Incentive Grant Program), 2005 (complete review of 12 proposals)

National Science Foundation (Program in Computer and Information Science and Engineering), 2000 (9 proposals, panel member for ITR program)

National Science Foundation (Program in Computational Mathematics), 2000 (2 proposals)

Woods Hole Oceanographic Institution (Sea Grant Program), 1999

National Science Foundation (Program in Applied Mathematics), 1995, 1996, 1997

National Science Foundation (Program in Classical Analysis), 1993

Conference Proceedings

Asian Technology Conference in Mathematics, 2007, 2008, 2009, 2010

Maple Summer Workshop, 2004

International Symposium on Symbolic and Algebraic Computation (ISSAC), 2001

Lilly Conference on College Teaching–South, 1995

Maple Summer Workshop and Symposium, 1994

Books

The Maple V Handbook, by Abell and Braselton, (AP Professional, 1994), in Math Comp, **65**, October 1996, pp. 1764–1767.

Software Reviews

Addison-Wesley Publishing Company 1995, 1999

Brooks/Cole Publishing Company 1995

John Wiley & Sons 2004

Consulting

Book/Manuscript Reviews

Addison Wesley Longman 2000 (5), 2001, 2002, 2004 (2), 2006 (2), 2007

Brooks/Cole Publishing Company 1998, 1996, 1995 (2)

Cambridge University Press

Cengage 2010

CRC Press 2001

W. H. Freeman and Company Publishers 1998 (2), 2003

Harcourt College Publishers 2000, 2002 (2)

Houghton Mifflin Company

Houghton Mifflin Company, September 1999

Key College Publishing 2001 (2)

Mathematical Association of America 2003, 2001 (2)

McGraw-Hill 1999 (2), 2000 (3), 2002, 2004

Oxford Univeristy Press 2007

Prentice–Hall 2003

PWS Publishing Company 1996

Saunders College Publishing 1999, 1997 (2)

John Wiley & Sons 2003 (4), 2004 (2), 2009 (1)

Industrial

Bierer & Associates, Blythewood, SC, 2000, 2001

Software

Saltire Software, Inc, Beaverton, OR (2007 – present)

- member of planning panel for NSF SBIR Phase I grant (2007-2008)
- member of planning panel for NSF SBIR Phase II grant (2008-2010)

ServiceDepartment of Mathematics

Applied and Computational Mathematics Committee, 2009–present

Bicentennial Committee, 2000–2001.

Chair Search Committee, 2006.

Committee of Tenured Faculty, 1997–present;
Chair: 1999–2000.

Computer Algebra Seminar, Organizer: Spring 1995, Fall 1998.

Computer Advisory Committee, Department of Mathematics, 1991–2001, 2007–present;
Chair: 1993–1994, 1994–1995, 1996–1997, 1998–2001.

Computational Mathematics Committee, *ex officio*, 2004–2006.

Course Coordinator:

- MATH 242: 2010 – present

Executive Committee, Department of Mathematics, 2001–present.

Grant Mentoring Committee, 2007–present.

Mathematics Education Committee (*ex officio*), 2006–present.

Mentoring Through Critical Transition Points (MCTP) Proposal Committee, 2004–2006.

Peer Review of Teaching Committee “T”, Department of Mathematics, 2000–2001, 2004–2005.

Physical Facilities Committee, Department of Mathematics, 1997–2001.

Undergraduate Advisor, Department of Mathematics, 1991–present.

Undergraduate Advisory Council, Department of Mathematics, 1992–1994, 1995–1996,
2001–present;
Chair: 2001–present.

VIGRE Proposal Committee, 2002–2004.

World Wide Web (WWW) Committee, 1994–2001;
Chair: 1994–1995.

Calculus Renovation Committee, Department of Mathematics, 1993–1994.

Faculty Advisor for COMAP Mathematical Contest in Modeling, 1994.

Faculty Advisor for Pi Mu Epsilon/Math Club, 1991–1995;
Chair: 1991–1994.

Faculty Senate, Spring 1993.

Ph. D. Admission to Candidacy Examination Committee, August 1994, January 1997, August 2006 (Numerical Linear Algebra), January 2007 (Numerical Linear Algebra). Chair: August 1994, January 1997.

College of Arts and Sciences

Scholarship Committee, College of Arts and Sciences, 2010–

Computer Advisory Committee, College of Arts and Sciences, 2005–2009;
Subcommittees:

- Science and Mathematics Subcommittee, 2005–2009 (Chair: 2005–2007)

Curriculum Committee, College of Arts and Sciences, 2005–2007

Executive Committee for Information Technology and Computing Laboratories, 2005–2007

Internship Focus Group, 2004–2006.

Task Force on Summer School, 2008.

College of Science and Mathematics

Geological Sciences Chair Search Committee, 2004;
Chair: 2004.

Computer Advisory Committee, College of Science and Mathematics, 1996–2005;
Chair: 2001–2005.

Subcommittees:

- Subcommittee on Planning for 1999–2002 (1999, Chair: 1999)

Transition Committee for CoSM/CLA Merger, 2004 – 2005

Subcommittees:

- Undergraduate Curriculum Subcommittee, 2004–2005
- Technology and Internet Subcommittee, 2004–2005 (co-chair)

CoSM Summer Science Camp for Middle School Students (with George Johnson), July 2001.

College of Science and Mathematics Undergraduate Teaching Forum, February 1996.

University of South Carolina

Bookstore Committee, 2011 – present

Carolina Judicial Council, 2008 – present

Dean's Review Committee for Dean of the SC Honors College, 2009 – 2010

Faculty Committee on Instructional Development, 1996 – 1999, 2007 – 2010
Subcommittees:

- Teaching Development Grant (Fall 1996, Fall 1999)
- Consultant to Telecommunications Advisory Committee (1996 – 1997)
- Carolina Teaching Fellows Program (1997 – 1998; Chair: 1997 – 1998)

Faculty Committee on Scholarships and Financial Aid, 1995 – 1998, 1999 – present;
Chair: 1999 – 2002

Subcommittees:

- Satisfactory Academic Progress Appeals Subcommittee (August 1996, April 1997, August 1999 (Chair), August 2000 (Chair), August 2003)
- Athletic Appeals Subcommittee (July 2002 (Chair), July 2003, January 2007)

Fellowships and Scholar Programs Advisory Council, 1996 – present

Finance FEI Hiring Committee, 2008 – 2009

General Education Work Team – Effective Mathematical Reasoning and Problem Solving, 2007 – 2008.

Goldwater Scholarship Selection Committee, 1995 – present;
Chair: 1996 – present

South Carolina Honors College Policy Committee, 2010 – present

University Committee on Religious Affairs, 2010 – present

University Information Technology Council, 2002 – 2009
Subcommittee:

- Academic Computing Subcommittee, 2002 – 2008

Woody Actuarial Foundation Scholarship Selection Committee, 2005 – present;
Chair: 2005 – present

Carolina Scholars and McNair Scholars Core Committee, 2001 – 2004;
Chair: 2003 – 2004.

Carolina Scholars and McNair Scholars Selection Committee, 1998 – 2006, 2008, 2010, 2011.

Discovery Day, Judge, 2004, 2006

Search Committee for Academic Program Director for Instructional Technology, 2004 – 2005.

Search Committee for Academic Vice President for Instructional Technology, 2007.

Search Committee for Coordinator of Supplemental Instruction, 2010.

Community Service

Faculty Advisor, Gamecock Cycling Club, 1996 – 1998

Faculty Research Mentor for students in Discovery Program at Spring Valley High School, 2006–2007, 2007–2008.

Region II Science and Engineering Fair, 1992 – 1997 (Judge), 2005, 2007, 2009 (Awards Presentator)

External Activities

International Organizing Committee, Asian Technology Conference in Mathematics, 2009 – present

Member of South Carolina Mathematics Advisory Panel, 2008 – present

Panel co-organizer, Technology in AP Calculus, AP Annual Conference, Las Vegas, NV, 2007 (with Phillip Yasskin, Texas A&M)

Editorial Board, *Electronic Journal of Mathematics and Technology*, 2006 – present.

Co-organized mini-symposium, ICTCM XVII, New Orleans, LA, 2004 (with Phillip Yasskin, Texas A&M)

Editorial Board, *Problem Books Series*, MAA, 2011 – present

Editorial Board, *Textbooks Series*, MAA, 2007 – present

Editorial Board, *Classroom Resource Materials*, MAA, 2002 – 2007

Faculty Consultant, AP Calculus Exam, (Reader: 1999 – 2004, Table Leader: 2005 – 2006, 2008, 2009)

Mathematics Digital Library (Math DL) New Collections Working Group

- Differential Equations (team coordinator: 2010 – present)
- Single Variable Calculus (team member: 2009 – present)

Program Committee (Computer Minicourse) for ICTCM, 2001 – present;
Subcommittee:

- Computer Minicourse Subcommittee, Chair: 2001 – present
- Minisymposium Subcommittee, Co-chair (with Bill Fox, Francis Marion University): 2003 – 2004

Web SIGMAA Nominating Committee, 2009 – present

Faculty Exchange Consultant, McGraw-Hill, 2003 – 2004

Co-organizer (with Matt Miller, Math, and David Wethey, Biology) of Special Session on Mathematical Biology, 2001 Spring Southeastern Section Meeting of the American Mathematical Society (Meeting #963), March 2001

Panel Review Board, Thinkwell, Austin, TX, 2000 – 2001

Board of Directors, Mathematics Division, ASEE, 1997 – 1999

Editorial Board, MapleTech, 1996 – 1999

Program Committee (Post-Calculus) for ICTCM, 1996 – 1998

Co-organizer (with Jim Herod, Georgia Tech) of Special Sessions on Enhanced Computer Modelling, MAA Southeastern Section Meeting, 1997

Organized two mini-symposia, SIAM Annual Meeting, 1996

Other Professional Activities

Applied for USC SECAC Academic Leadership Development Program, March 2008.

Guest lecturer for STEM 101, Spring 2008 (2 lectures), Fall 2008 (2 lectures)

Interview Team for the Coordinator of Tutoring and Academic Recovery Programs, April 2007.

PDA Project, USC Office of Student Affairs, (HP Tablet PC Team Sponsor) 2005 – 2006.

Guest lecturer for AP Calculus, Spring Valley High School, Columbia, SC (October 2005, February 2006, October 2006, November 2007)

Contribution to Maple Applications Center (shooting method for boundary value problems, rewritten for Maple 9.5), November 2004.

AP Calculus Day, Department of Mathematics, USC, 2004 – present.

Organized Systemwide Workshop for Calculus and Maple at USC, USC, May 2003.

Career Goals and Mathematics, Summit Parkway Middle School, May 2003.

AP Calculus Day, Department of Mathematics, USC, May 2003.

Chaired ad hoc committee to prepare Review of Undergraduate Program (for VIGRE Proposal), April 2003.

First-Year Scholar and Mentor Program, USC, 2002 – 2005.

Fifth-Grade Classroom Presentation on Geometry, Bookman Road Elementary School, October 2001.

Participate in Career Day, Bookman Road Elementary School, March 2001.

Contribution to Maple Applications Center (shooting method for boundary value problems, rewritten for Maple 6), October 2000.

Contribution to Maple Applications Center (parachute problem, updated for Maple 6), September 2000.

Invited speaker at “Superstars” Math Banquet, Bookman Road Elementary School, May 2000.

Supervised and assisted with the updating of software for Hiring Committee, 1999–2000.

Beta tester for Waterloo Maple (Maple V, Releases 4 and 5, Maple 6, Maple 7, Maple 9, Maple 9.5, Maple 10, Maple 11, and Maple 12.)

Authored `laylinalg` package, a collection of Maple procedures for use with Linear Algebra and Its Applications by David Lay; distributed by Addison–Wesley on CD and via the WWW, 2000.

Guest lecturer in CRJU 762 (Continuing Professional Development), “Using the WWW as an Educational Tool”, March 30, 1998

Updated software for Hiring Committee, 1997–1998.

Panelist for “Mathematics Education in the 21st Century”, KQED (PBS – San Francisco), July 17, 1997

Contribution to Maple Share Library (shooting method for boundary value problems), 1996

Designed, implemented, and administered WWW-based software for use by the Hiring Committee (with David Sumner and Michael Filaseta), 1995–1996

Contribution to Maple Share Library (orthogonal curvilinear coordinates), 1995

Created, organized, and received funding for the Computer Algebra Seminar, 1995

Installed and maintained Departmental World-Wide Web server and home page, 1994

Contribution to Maple Share Library (Hankel functions), 1993