

College of Engineering and Science

RESUME - William F. Moss

PERSONAL DATA

Professor
Department of Mathematical Sciences
Clemson University
Clemson, SC 29634-1907
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EDUCATION

Ph.D., University of Delaware, 1974, Mathematics
B.S., M.I.T., 1966, Electrical Engineering

PROFESSIONAL EXPERIENCE

Clemson University, 1990- , Professor of Mathematical Sciences
Clemson University, 1983-90, Associate Professor of Mathematical Sciences
Old Dominion University, 1981-1983, Assistant Professor of Mathematics
Georgia Institute of Technology, 1974-1981, Assistant Professor of Mathematics
Naval Nuclear Power School, 1967-1971, Instructor of Physics and Mathematics
Lockheed-Georgia Company, 1966-1967, Associate Aircraft Design Engineer

CONSULTING EXPERIENCE

College of Engineering and Science, "Math Out of the Box" Project (2002-)
United Arab Emirates University, Laptop Program (2002)
Product Advisory Board, Silicon Chalk, Vancouver, BC (2001-2003)
Product Advisory Board, WebCT.com, Vancouver, BC (1998-2000)
Consultant to IMSL, Houston, Texas (1986-92), software testing.
Consultant to ICASE, NASA Langley, Langley, Virginia (1982-1985), noise reduction modeling.

MEMBERSHIPS

Member: NCTM, NSTA, ASEE, MAA

AWARDS

Award for Innovative Excellence in Teaching, Learning, and Technology, 14th
International Conference on College Teaching and Learning, April 2003
Fifth Best Full Professor, Clemson Tiger Survey, Fall 2003
Alumni Distinguished Professor Award, August 2006

PUBLICATIONS.

Refereed Journal Publications

Moss, W.F., "A remark on convergence of test functions," *J. Austrial. Math. Soc.*, **20** (Series A), 73-76 (1975).

Moss, W.F., "Approximation of exterior conformal mappings," *Anales Polonici Mathematici*, **XXXV**, 55-56 (1977).

Moss, W.F. and Piepenbrink, J., "Positive solutions of elliptic equations," *Pac. J. Math.*, **75**, 219-226 (1978).

Moss, W.F. and Christensen, J "Scattering and heat transfer by a strip," *J. of Integral Equations*, **4**, 299-317 (1980).

Moss, W.F., "Fundamental solutions of degenerate or singular elliptic equations," *JMAA*, **78**, 574-587 (1980).

Moss, W.F. and Weyland, N "Zeros of functions of finite order on the ball," *Bulletin Malaysian Math. Soc.*, **4**, No. 1 (1982).

Moss, W.F., "Numerical solution of integral equations with convolution kernels," *J. of Integral Equations*, **4**, 253-264 (1982).

Moss, W.F., "The two-dimensional oscillating airfoil: a new implementation of the Galerkin method," *SIAM J. of Numer. Anal.*, **20**, No. 2, 391-399 (1983).

Moss, W.F., "Numerical solution of integral equations with convolution kernels - II," *J. of Integral Equations*, **1**, 1-9 (1984).

Demko, S., Moss, W.F. and Smith, P.W., "Decay rates for inverses of band matrices," *Math. Comp.*, **43**, No. 168, 491-499 (1984).

Moss, W.F. and Smith, P.W., "Generalized eigenvalue approximation for band matrices," *Approximation Theory and its Applications*, **1**, No. 2, 51-70 (1985).

Moss, W.F., "Collocation for an integral equation arising in duct acoustics," *JCP*, **64**, No. 2, 443-457 (1986).

Moss, W.F., Smith, P.W. and Ward, J.D., "Nonlinear eigenvalue approximation," *Numer. Math.*, **52**, 365-375 (1988).

Cox, C. and Moss, W.F., "Backward error analysis for a pole assignment algorithm," *SIAM J. Matrix Anal. Appl.*, **10**, No. 4, 446-457 (1989).

Riedl, C., Qian, C., Savitsky, G.B., Spencer, H.G. and Moss, W.F., "Mathematical modeling of the concentration dependence of competitive binding of counterions in polyelectrolytes," *Macromolecules*, **22**, 3982-3986 (1989).

Riedl, C., Savitsky, G.B., Spencer, H.G. and Moss, W.F., "Numerical and NMR studies of the competitive binding of counterions in polyelectrolytes," *Polymer*, **32**, No. 8, 1504-1509 (1991).

Cox, C. and Moss, W.F., "Backward error analysis for a pole assignment algorithm II: the complex case," *SIAM J. Matrix Anal. Appl.*, **13**, No. 4, 1159-1171 (1992).

Zhang, H. and Moss, W.F., "Using Parallel Banded Linear System Solvers in Generalized Eigenvalue Problems," *Parallel Computing*, **20**, 1089-1105 (1994).

Lagu, S., Bearden, G., Savitsky, G.B., Spencer, H.G. and Moss, W.F., "Numerical and experimental studies of territorial binding of counterions in polyelectrolyte solutions including the added salt case," *Polymer*, **35**, No. 15, 3268-3271 (1994).

Forney, G.P. and Moss, W.F., "Numerical characteristics of zone fire models," *J. of Fire Science and Technology*, **14**, 49-60 (1994).

Books

D.P. Diaz, E.L Lashley, D.A. Moss, W.F. Moss, and S.P. Sanders, Developing Algebraic Logic, Rhythm and Design, Grade K, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2005.

D.P. Diaz, E.L Lashley, D.A. Moss, W.F. Moss, and S.P. Sanders, Developing Algebraic Logic, Together and Apart, Grade 1, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2005.

D.P. Diaz, E.L Lashley, D.A. Moss, W.F. Moss, and S.P. Sanders, Developing Algebraic Logic, Collecting and Sorting, Grade 2, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2005.

D.P. Diaz, E.L Lashley, D.A. Moss, W.F. Moss, and S.P. Sanders, Developing Algebraic Logic, Plotting and Growing, Grade 3, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2005.

D.P. Diaz, E.L Lashley, D.A. Moss, W.F. Moss, and S.P. Sanders, Developing Algebraic Logic, Signs and Symbols, Grade 4, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2005.

D.P. Diaz, E.L Lashley, D.A. Moss, W.F. Moss, and S.P. Sanders, Developing Algebraic Logic, Steps and Distance, Grade 5, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2005.

D.P. Diaz, P.P. King, E.L Lashley, D.A. Moss, and W.F. Moss, Developing Geometric Logic, Towers and Trails, Grade K, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2006.

D.P. Diaz, P.P. King, E.L Lashley, D.A. Moss, and W.F. Moss, Developing Geometric Logic, Symmetry and Shapes, Grade 1, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2006.

D.P. Diaz, P.P. King, E.L Lashley, D.A. Moss, and W.F. Moss, Developing Geometric Logic, Rows and Columns, Grade 2, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2006.

D.P. Diaz, P.P. King, E.L Lashley, D.A. Moss, and W.F. Moss, Developing Geometric Logic, Shapes and Paths, Grade 3, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2006.

D.P. Diaz, P.P. King, E.L Lashley, D.A. Moss, and W.F. Moss, Developing Geometric Logic, Corners and Containers, Grade 4, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2006.

D.P. Diaz, P.P. King, E.L Lashley, D.A. Moss, and W.F. Moss, Developing Geometric Logic, Conjectures and Transformations, Grade 5, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2006.

D.P. Diaz, D.J. Gunderson, P.P. King, E.L Lashley , D.A. Moss, and W.F. Moss, Developing Measurement Benchmarks, Over and Under, Grade K, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2007.

D.P. Diaz, D.J. Gunderson, P.P. King, E.L Lashley , D.A. Moss, and W.F. Moss, Developing Measurement Benchmarks, Up and Down, Grade 1, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2007.

D.P. Diaz, D.J. Gunderson, P.P. King, E.L Lashley , D.A. Moss, and W.F. Moss, Developing Measurement Benchmarks, Large and Small, Grade 2, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2007.

D.P. Diaz, D.J. Gunderson, P.P. King, E.L Lashley , D.A. Moss, and W.F. Moss, Developing Measurement Benchmarks, Scales and Balances, Grade 3, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2007.

D.P. Diaz, D.J. Gunderson, P.P. King, E.L Lashley , D.A. Moss, and W.F. Moss, Developing Measurement Benchmarks, Inside and Outside, Grade 4, Math Out of the Box™, Carolina Biological Supply, Burlington, NC, 2007.

D.P. Diaz, D.J. Gunderson, P.P. King, E.L. Lashley, D.A. Moss, and W.F. Moss, *Developing Measurement Benchmarks, Tools and Time, Grade 5, Math Out of the Box™*, Carolina Biological Supply, Burlington, NC, 2007.

Conference Proceedings (Reviewed)

Moss, W.F. and Moss, D.A., "Math Out of the Box: A K-5 Mathematics Curriculum and Teacher Professional Development Program," *Proceedings of the American Society of Engineering Education*, Honolulu, HI, (June 2007).

Schiff, S.D., Biggers, S.B., Benson, L.C., Ohland, M.W., Orr, M.L., and Moss, W.F., "Adapting and Implementing the SCALE-UP Approach in Statics, Dynamics, and Multivariable Calculus," *Proceedings of the American Society of Engineering Education*, Honolulu, HI, (June 2007).

Moss, W.F., "Numerical Solution of Singular Integral Equations: A new implementation of the Galerkin method for a class of singular and Cauchy singular integral equations," *Proceedings of the Fifth IMACS International Symposium on Computer Methods for Partial Differential Equations*, Lehigh University, Bethlehem, Pennsylvania (June 1984).

Moss, W.F., Smith, P.W. and Ward, J.D., "On nonlinear eigenvalue problems," *Proceedings of the Fifth International Symposium on Approximation Theory*, Texas A&M University (January 1986).

Moss, W.F., "Exploring shape preserving interpolation using interactive graphics," *Proceedings of the Sixth International Symposium on Approximation Theory*, Texas A&M University (January 1989).

Moss, W.F., "Pilot Laptop Program," *ASEE-SE Conference Proceedings*, April 1999.

Conference Proceedings (Unreviewed)

Moss, W.F., Pargas, R.P., Grimes, L.W. and Weaver, B.E., "Technology + Innovation = Pedagogy," *The Forum*, Louisiana State University, Baton Rouge, LA (April 2004) <http://www.celt.lsu.edu/CFD/E-proceedings04/Weaver.pdf>

Moss, W.F. and Smith, P.W., "The Penurious Grapher," *Proceedings of the IMSL User Group North America Third Annual Conference*, (May 1990).

Research Reports

Moss, D.A., Diaz, D.P., and Moss, W.F. (2005). The Research Base for Math Out of the Box™. *Center of Excellence Mathematics and Science Education, Clemson University*. Retrieved March 31, 2005, from <http://www.mathoutofthebox.org/research/researchbase.shtml>.

Moss, W.F., “Computational Heat Transfer for Zone Fire Modeling,” Clemson University, *Final Report for Grant No. 60NANB2D1281*, NIST, (March 1996).

Zhang, H. and Moss. W.F, “Using Parallel Banded Linear System Solvers in Generalized Eigenvalue Problems,” *Contractor Report 191540, ICASE Report No. 93-71*, NASA, (September 1993).

Brannan, J.R., Cox, C.L., and Moss, W.F., “The Effects of Heterogeneity and Diffusion on the Performance of a Recovery Well,” *SCUREF Task Order No. 22*, (April 1993).

Moss, W.F., “Computational Heat Transfer for Zone Fire Modeling,” *Report for Grant No. 60NANB2D1281*, NIST , (December 1993).

Forney, G.P. and Moss, W.F., “Implicitly Coupling Heat Conduction into a Zone Fire Model,” *NISTIR 4886*, NIST, (July 1992).

Moss, W.F., “Numerical Analysis Support for Compartment Fire Modeling and Incorporation of Heat Conduction into a Zone Fire Model,” *NISTGCR*, NIST, (April 1992).

Forney, G.P. and Moss, W.F., “Numerical Characteristics of Zone Fire Models,” *NISTIR 4763*, NIST, (March 1992).

Moss, W.F., “Spinning mode acoustic radiation from the flight inlet,” *NASA Contractor Report 172273*, ICASE (1983).

Other Scholarly Publications

Moss, D.A., Diaz, D.P., & Moss, W.F. (2005). About Math Out of the Box™. *Center of Excellence in Mathematics and Science Education, Clemson University*. Retrieved March 31, 2005, from <http://www.mathoutofthebox.org/research/about.shtml>.

Moss, W. F., “Maple Tutorial Worksheets: Differential Equations based on Brannan and Boyce (38 lessons),” Clemson University, (May 2007).

Moss, W. F., “Maple Tutorial Worksheets: Advanced Engineering Mathematics based on Lopez (33 lessons),” Clemson University, available on CDROM (December 2004).

Moss, W. F., “Maple Tutorial Worksheets: Calculus III based on Stewart (36 lessons), Differential Equations based on Polking, Boggess, and Arnold (38 lessons), Linear Algebra based on Lay (32 lessons),” Clemson University, available on CDROM (December 2003).

Moss, W.F., “WebCT Enrollment (Perl) Scripts,” DCIT, Clemson University (June 2003),

http://www.ces.clemson.edu/~bmoss/webct_ims_scripts.tar.gz

http://www.ces.clemson.edu/~bmoss/webct_std_scripts.tar.gz

Moss, W. F., “Mathematics in WebCT V,” Clemson University (June 2003),

http://www.ces.clemson.edu/~bmoss/math_on_web/mathwebctV.pdf

Moss, W. F., Pargas, R., Weaver, B., and Grimes, L., “Technology + Innovation = Pedagogy”, 14th International Conference on College Teaching and Learning, Jacksonville, FL (April 2003),

http://www.math.clemson.edu/~bmoss/laptop_pedagogy/ExploringTeachTech.pdf

Moss, W.F., “Clemson Linux Initiative,” Clemson University (April 2002 to present), collection of articles on installing Linux on university supported laptops,

http://www.math.clemson.edu/~bmoss/math_on_web/linux_laptop_project/

Moss, W.F., “Calculus III Taught as a Studio Class,” Faculty Directions, Clemson University (January 2003).

Moss, W.F., “Laptops in the Engineering Classroom,” United Engineering Foundation Conference, Davos Switzerland (August 2002),

http://www.math.clemson.edu/~bmoss/uef_brief.pdf

Moss, W.F., “Mathematics in WebCT IV,” College of Engineering and Science, Clemson University (July 2002),

http://www.math.clemson.edu/~bmoss/math_on_web/math4.htm

Moss, W.F., “Mathematics in WebCT III,” College of Engineering and Science, Clemson University (June 2001),

http://www.math.clemson.edu/~bmoss/math_on_web/math3C.htm

Moss, W.F., “Customizing RealPresenter 8,” College of Engineering and Science, Clemson University (April 2001),

<http://www.math.clemson.edu/~bmoss/realpresenter8/realpresenter8.htm>

Moss, W.F., “Enhancing Distance and Face-to-face Learning Using WebCT 3.0,” College of Engineering and Science, Clemson University (June 2000),

<http://www.ces.clemson.edu/webct/webct3slideshow/webct-dl.htm>

Moss, W.F., “Mathematics in WebCT II,” College of Engineering and Science, Clemson University (June 2000),

http://www.math.clemson.edu/~bmoss/math_on_web/math2C.htm

Moss, W.F., Weaver, B., Park, W., Sherrod, L., Cartner, J., Keitzer, R., “Extending Classrooms over Electronic Bridges,” College of Engineering and

Science, Clemson University (May 2000),

<http://www.math.clemson.edu/~bmooss/furman.pdf>

Moss, W.F., "RealSystem G2 Streaming Mini-Lectures," College of Engineering and Science, Clemson University (March 2000),

<http://www.math.clemson.edu/~bmooss/streaming/streamv4.htm>

Moss, W.F., "Getting the Most Out of Clemson Smart Classrooms," College of Engineering and Science, Clemson University (Feb 2000),

<http://www.math.clemson.edu/~bmooss/smartC.htm>

Moss, W.F., "Developing and Implementing a Pilot Laptop Program," College of Engineering and Science, Clemson University (Feb 2000),

<http://www.math.clemson.edu/~bmooss/developC.htm>

Moss, W.F., "Mathematics in WebCT," College of Engineering and Science, Clemson University (June 1999),

http://www.math.clemson.edu/~bmooss/math_on_web/math.htm

Moss, W.F., Melsheimer, S., Sherrod, L. "Pilot Laptop Program: Planning Summary," College of Engineering and Science, Clemson University, (December 1998), http://www.ces.clemson.edu/~bmooss/laptop_planning.pdf

Moss, W.F., "Pilot Laptop Program," Communication Across the Curriculum Newsletter, Clemson University, (January 1999).

Moss, W.F. and Crosbie, S., "SOP: Standard Operating Procedures for the Unix Network, Department of Mathematical Sciences," Clemson University, (June 1992).

Moss, W.F. and Crosbie, S., "MUG: Mathematical Sciences Unix Network Users Guide, Department of Mathematical Science," Clemson University, (June 1992).

Moss, W.F., "IMSL Libraries Training Manual," IMSL, Houston, Texas, (1991).

Cooper, L.Y., Forney, G.P., and Moss, W.F., "Consolidated Compartment Fire Model (CCFM), Computer Application CCFM.VENTS, Part IV: Users' Reference Guide," NIST Technical Report, (1989).

Moss, W.F. and Smith, P.W., "Nonlinear eigenvalue problems," *IMSL Directions*, 3, No. 1 (1986).

PRESENTATIONS

Moss, D.A., Diaz, D.P., Moss, W.F., “Math Out of the Box: A K-5 Mathematics Curriculum and Teacher Professional Development Program,” paper presented at the American Society of Engineering Education annual conference, Honolulu, HI (June 2007).

King, P.P., Gunderson, D.J., Moss, W.F., “Geometry Jigsaw,” National Science Teachers Association, St. Louis, MO (March 2007).

Moss, W.F., Diaz, D.P., “Investigating Mathematical Ideas Using Elementary Mathematics Curriculum Materials,” Joint MAA-AMS annual meeting, New Orleans, LA (January 2007).

Moss, W.F., “Math Out of the Box,” Innovations in the Classroom Seminar, Department of Mathematical Sciences, Clemson University, Clemson, SC (October 2006).

Moss, W.F., “SCALE-UP,” Scale-up Instructor Training, Department of Mathematical Sciences, Clemson University, Clemson, SC (July 2006).

Moss, W.F., Moss, D.A., “Developing Algebraic Thinking: Day One K-5 Vertical Model,” Workshop, Educational Testing Service, Princeton, NJ (March 2006).

Moss, W.F., Moss, D.A., “Teaching and Learning in the STEM Disciplines,” Colloquium, Department of Mathematics and Statistics, Texas Tech University, Lubock, TX (March 2006).

Moss, W.F., “SCALE-UP Calculus III,” Innovations in the Classroom Seminar, Department of Mathematical Sciences, Clemson University, Clemson, SC (March 2006).

Moss, W.F., Ohland, M., “The SCALE-UP Approach in General Engineering and Calculus III,” College of Engineering and Science Advisory Board, Clemson University, Clemson, SC (November 2005).

Moss, W.F., “Introduction to Maple 10,” Innovations in the Classroom Seminar, Department of Mathematical Sciences, Clemson University, Clemson, SC (October 2005).

Moss, D.A., Moss, W.F., “Connecting Science and Mathematics through Patterns and Data,” Exhibitor Workshop, National Science Teachers Association, Dallas, TX (March 2005).

Moss, W.F., Moss, D.A., “Connecting Assessments in Science and Math Classrooms,” Workshop, National Science Teachers Association, Dallas, TX (March 2005).

Moss, D.A., Moss, W.F., King, P., Lashley, E., “Presenting Math Out of the Box™,” Focus on Research Day, Clemson University, Clemson, SC (April 2005).

Moss, W.F., Moss, D.A., Diaz, D.P., “A Vertical Look at Data Analysis K-5,” Workshop, Varennes Elementary, Anderson, South Carolina (August 2004).

Moss, W.F., Moss, D.A., “Developing Algebraic Thinking in Grades K-2” and “Developing Algebraic Thinking in Grades 3-5,” SECME Annual Conference, Houston, TX (July 2004).

Moss, W.F., Moss, D.A., Diaz, D.P., “Developing Algebraic Thinking Vertically K-5,” Workshop, Varennes Elementary, Anderson, South Carolina (July 2004).

Moss, W.F., Moss, D.A., “Developing Algebraic Thinking: K-5 Vertical Model,” Workshop, E. B. Morse Elementary School, Laurens, SC (May 2004).

Moss, W.F., Diaz, D.P., “Developing Algebraic Thinking in Grades K-5,” National Science Teachers Association Annual Conference, Atlanta, GA (April 2004).

Moss, W.F., Pargas, R.P., Grimes, L.W., Weaver, B.E., “Technology + Innovation = Pedagogy”, The Forum, Louisiana State University (video presentation followed by questions and answers via video conference), Baton Rouge, LA (April 2004).

Moss, W.F., Moss, D.A., “Developing Algebraic Thinking in Grades K-5,” The Second Annual Brand New Hope Technology Summit, Nassau, Bahamas (February 2004).

Moss, W.F., Pargas, R.P., Grimes, L.W., Weaver, B.E., “Delivering Content through Breeze,” Southern Educational Technology Conference (video presentation followed by questions and answers via video conference), Fayetteville, AR (January 2004).

Moss, W.F., Pargas, R.P., Grimes, L.W., Weaver, B.E., “Technology + Innovation = Pedagogy”, (paper presented by presentation Pargas), 2nd International Multimedia and Information and Communication Technologies in Education Conference, Badjoz, Spain (December 2003).

Moss, W.F., Moss, D.A., Diaz, D.P., Lashley, E., “Developing Algebraic Thinking with Patterns and Data (three hour workshop),” NCTM Regional Meeting, Charleston, SC (October 2003).

Moss, W. F., Pargas, R., Weaver, B., and Grimes, L., "Technology + Innovation = Pedagogy", 14th International Conference on College Teaching and Learning, Jacksonville, FL (April 2003)

Moss, W.F., "Train the Trainers Workshop," DCIT Staff Development Workshop (July 2003).

Moss, W. F., "Studio Calculus III, Differential Equations and Linear Algebra," Clemson Laptop Faculty Development Workshop (May 2003).

Moss, W. F., "Laptop Program Time Line," Clemson Laptop Faculty Development Workshop (March 2003).

Moss, W. F., Sherrod, L., "Clemson's Laptop Program and Studio Calculus III," SUCCEED Workshop, Western Michigan University (March 2003).

Moss, W.F. and Sherrod, L., "Pilot Laptop Program," SUCCEED-Gateway Conference, Gainesville, FL, (March 2002).

Moss, W.F., "Laptop Program Administration," Colleges of Engineering, Business, and Information Technology, UAE U, Al-Ain, United Arab Emirates, (March 2002).

Moss, W.F., "Teaching with Laptops," Colleges of Engineering, Business, and Information Technology, UAE U, Al-Ain, United Arab Emirates, (March 2002).

Moss, W.F., "SUCCEED Teaching Effectiveness Workshop," Colleges of Engineering, Business, and Information Technology, UAE U, Al-Ain, United Arab Emirates, (March 2002).

Moss, W.F., "United States University Laptop Program," Address to Minister of Education and Provost, UAE U, Al-Ain, United Arab Emirates, (March 2002).

Moss, W.F., "Mathematics in WebCT Campus Edition," Raritan Valley Community College, Somerset, NJ, (April 2002).

Moss, W.F., "Mathematics in WebCT IV," Fourth International WebCT Conference, Vancouver, BC, (July 2002).

Moss, W.F., "Mathematics in WebCT III," Third International WebCT Conference, Vancouver, BC, (June 2001).

Moss, W.F. and Sherrod, L., "Pilot Laptop Program," SUCCEED-Gateway Conference, Clemson, SC, (March 2001).

Moss, W.F., "Laptop Pedagogy," colloquium, Heathwood Hall Episcopal School, Columbia, SC, (December 2000).

Moss, W.F., "Getting the Most out of Clemson Smart Classrooms," UCF-Dell Laptops in the Classroom Conference, Orlando, FL, (February 2000).

Moss, W.F. and Sherrod, L., "Pilot Laptop Program and WebCT," SUCCEED-Gateway Conference, Greensboro, NC, (March 2000).

Moss, W.F., "Using WebCT to Teach Mathematics," Colloquium, Department of Mathematics, Texas Tech, Lubock, TX, (May 2000).

Moss, W.F., "Enhancing Distance and Face-to-Face Learning using WebCT 3.0," Distance Learning Symposium, Clemson, SC, (June 2000).

Moss, W.F. et. al., "Extending Classrooms Over Electronic Bridges," Furman Conference on Technology in the Liberal Arts, Greenville, SC, (May 2000).

Moss, W.F., "Mathematics in WebCT II," Second International WebCT Conference, Athens, GA, (June 2000).

Moss, W.F., "RealSystem G2 Streaming Mini-Lectures," First International WebCT Conference, Vancouver, BC, (June 1999).

Moss, W.F., "Mathematics in WebCT," First International WebCT Conference, Vancouver, BC, (June 1999).

Moss, W.F., "Pilot Laptop Program," Pearce Center Presentation, Clemson, SC, (December 1998).

Moss, W.F., "Coupling Heat Conduction to a Zone Fire Model," Annual Conference on Fire Research, NIST, Gaithersburg, MD, (October 1993).

Moss, W.F., "Numerical Characteristics of a Zone Fire Model," Fourth CIB Workshop on Fire Modeling, NIST, (February 1990).

Moss, W.F., "Numerical Characteristics of Zone Fire Models Center for Fire Research Annual Conference, Gaithersburg, Maryland (November 1989).

Moss, W.F., "Numerical Characteristics of Zone Fire Models," SIAM Annual Meeting, San Diego, California, (July 1989).

Moss, W.F., "Stiff Equations Arising in Fire Modeling," SIAM Annual Meeting, San Diego, California, (July 1989).

Moss, W.F., "Exponential Decay of the Inverse of Infinite Band Matrices", Canadian Applied Mathematics Society Tenth Annual Meeting, Winnipeg, Manitoba, (June 1989).

Moss, W.F., "Improvements to the Fire Simulation Code CCFM.VENTS," Center for Fire Research, NIST, Gaithersburg, Maryland, (February 1989).

Moss, W.F., "Decay Rates for the Inverses of Band Matrices," Thompson Lectures on Matrix Theory, The Johns Hopkins University, Baltimore, Maryland, (June 1988).

Moss, W.F., "Sensitivity Analysis for the Pole Assignment Problem," SIAM Conference on Applied Linear Algebra, Madison, Wisconsin, (May 1988).

Moss, W.F., "Backward Error Analysis for a Pole Assignment Algorithm," SEAS SIAM Meeting, Athens, Georgia, (March 1987).

Moss, W.F., "Nonlinear Eigenvalue Approximation," SIAM Conference on Linear Algebra, Boston, Massachusetts, (August 1986).

Moss, W.F., "Generalized Eigenvalue Approximation for Band Matrices," SIAM Spring Meeting, Pittsburgh, Pennsylvania, (June 1985).

Moss, W.F., "Nonlinear Eigenvalue Approximation," Second SIAM Conference on Applied Linear Algebra, Raleigh, North Carolina, (April 1985).

Moss, W.F., "Spin Mode Acoustic Radiation from a Thick Wall Duct," SIAM 1983 Fall Meeting, Norfolk, Virginia, (November 1983).

Moss, W.F., "The Two-Dimensional Oscillating Airfoil," SEAS SIAM Meeting, Marietta, Georgia, April 1981.

Moss, W.F., "Scattering and Heat Transfer by a Strip," AFOSR/ARO Symposium on Ill-posed Problems, Newark, Delaware, (October 1979).

PROPOSALS SUBMITTED

"Math Out of the Box™: A Research and Standards-Based K-5 Curriculum," NSF IMD, co- principal investigator, \$1,351,568, (\$337,892), (March 2006).

"Math Out of the Box™: A Research and Standards-Based K-5 Curriculum," DOE, co- principal investigator, \$1,500,000, (\$375,000), (March 2006).

"Improving K-5 Mathematics Teachers' Content Knowledge and Instructional Practice Using an In-service Model of Teacher Learning Communities," NSF Preliminary Proposal, Program: Teacher Professional Continuum, (May 2004), PI.

“Math Out of the Box™, an inquiry based K-5 mathematics curriculum,” NSF Preliminary Proposal, Program: Instructional Materials Development, (May 2003), PI.

“Studio Design of Calculus III, Differential Equations, and Linear Algebra Courses,” NSF Preliminary Proposal, Program: Course, Curriculum, and Laboratory Improvement, (May 2003), PI.

SPONSORED RESEARCH

“Building a Mathematical Learning Community,” SC CHE, principal investigator, YR1, \$125,000, YR2, \$93,750, YR3 pending (2006-2009).

“Adapting K-8 Curriculum Materials for Pre-Service Teacher Education,” NSF CCLI, co- principal investigator, \$128,801, (\$32,200), (2005-2008).

“Adapting and Implementing the SCALE-UP Approach in Statics, Dynamics, and Multivariate Calculus,” NSF CCLI, co- principal investigator, \$180,000, (\$45,000), (2005-2008).

“SUCCEED Year 10,” NSF, co-principal investigator for Technology Based Curriculum Development, \$38,000, (\$38,000), (2001-2002).

“SUCCEED Year 9,” NSF, co-principal investigator for Technology Based Curriculum Development, \$38,000, (\$38,000), (2000-2001).

“SUCCEED Year 8,” NSF, co-principal investigator for Technology Based Curriculum Development, \$38,000, (\$38,000), (1999-2000).

“Numerical Analysis for a Zone Fire Model with Many Compartments,” NIST, Principal Investigator, \$58,176, (\$58,176), (1997-1999).

“Computational Heat Transfer in Zone Fire Modeling,” NIST, Principal Investigator, \$53,879, (\$53,879), (1994-1996).

“Computational Heat Transfer in Zone Fire Modeling,” NIST, Principal Investigator, \$60,733, (\$60,733), (1992-1993).

“Matrix Visualization using IMSL/IDL,” IMSL, Principal Investigator, \$10,000, (\$10,000), (1992).

“Competitive Analysis of Scientific Fortran and C Libraries,” IMSL, Principal Investigator, \$13,100, (\$13,100), (1991).

“The Effects of Heterogeneity and Diffusion on the Performance of a Recovery Well,” SCUREF, Co-principal Investigator, \$201,751, (\$50,000), (1991-1993).

“Incorporating Convective and Radiative Heat Transfer into the Code CCFM.VENTS,” NIST, Principal Investigator, \$32,977, (\$32,977), (1989-1990).

“Numerical Analysis Support for Compartment Fire Modeling Code Development,” NIST, Principal Investigator, \$54,233, (\$54,233), (1988-1989).

SCREMS Equipment Grant, NSF, \$20,000, (1994).

OTHER SPONSORED RESEARCH

SUCCEED Implementation Team Coordinator, NSF, \$2500, (2001).

Engineering Problems from Texts of the 1700's On, Provost Innovation Grant, co-principal investigator with Ben Sill, \$23,000, (1999-2000).

CoES Laptop Program, Provost Innovation Grant and Matching CoES Funding, \$225,000, (1998-2000) with Steve Melsheimer et. al.

Mathematical Sciences Laptop Project, Provost Innovation Grant, co-principal investigator with Gil Proctor, \$49,000, (1997-1998).

GRADUATE STUDENT ADVISING

Doctoral Graduates

Nylen, P.M., “Submultiplicativity and Matrix Products,” (May 1992).

Masters Graduates

Bernasconi, K., “Education Reform: Algebra in Elementary School,” (May 2001).

Massoud, M., “Mathematics Reform: A Report on the ‘Connected Mathematics’ Project,” (May 2000).

Miller, K., “A Case Study of a First Grades Class Using the ‘Investigations’ Reform Curriculum,” (May 2000).

Twarek, M., (MS), “A Feasibility Study of Arcview Internet Map Server Extension for the South Carolina Botanical Garden,” (May 1999).

Hammond, C., (MS) “GPS Mapping of the SC Botanical Garden,” (May 1998).

Guest, A., (MS) “GPS Mapping of the Bike Trails in the Clemson Experimental Forest,” (May 1998).

Kennedy, S., (MS) “Trail Mapping in the Clemson Experimental Forest,” (May 1997).

Ward, A., (MS) “fat2dview: A 2-D Flow and Transport Viewer,” (May 1996).

Wassermann, R., (MS) “Simulation of 2-D Contaminant Transport in Groundwater,” (May 1993).

Rivers, J., (MS) “An Interactive Algorithm for Shape Preserving Quadratic Interpolants,” (May 1988).

Anderson, B., (MS) “Shape Preserving Piecewise Rational Interpolants,” (May 1987).

Owens, M., (MS) “An Eigenvalue Assignment Algorithm,” (August 1987).

Nylen, P., (MS) “Piecewise Cubic Interpolants from Optimization Problems in the Hilbert Space $L_2[a,b]$,” (August 1986).

Hudnall, L., (MS) “Adaptive Gauss-Kronrod Integration,” (August 1986).

Aneja, A., (MS) “Application of Complete Elliptic Integrals to the Boundary Integral Equation Formulation of Axisymmetric Problems,” (August 1984).

TEACHING

Courses Taught (Beginning Fall 1990)

MTHSC 206, Calculus III, F90, S91
MTHSC 460, Num. Anal. I, F90, S91

MTHSC 434/634, Adv. Eng. Math, F91, S92
MTHSC 460/660, Num. Anal. I, F91, S92

MTHSC 434/634, Adv. Eng. Math, F92, S93
MTHSC 460/660, Num. Anal. I, F92, S93

MTHSC 434/634, Adv. Eng. Math, F93, S94
MTHSC 460/660, Num. Anal. I, F93, S94

MTHSC 434/634, Adv. Eng. Math, F94, S95
MTHSC 826, Intro. PDE, F94
MTHSC 460/660, Num. Anal. I, S95

MTHSC 434/634, Adv. Eng. Math, F95, S96
MTHSC 460/660, Num. Anal. I, F95, S96

MTHSC 434/634, Adv. Eng. Math, F96, S97
MTHSC 861, Num. Linear Algebra, F96
MTHSC 460/660, Num. Anal. I, S97

MTHSC 434/634, Adv. Eng. Math, F97, S98
MTHSC 460/660, Num. Anal. I, F97, S98

MTHSC 434/634, Adv. Eng. Math., F98, S99
MTHSC 311 Linear Algebra, F98
MTHSC 460/660, Num. Anal. I, S99

MTHSC 434/634, Adv. Eng. Math., F99, S00
MTHSC 208, Diff. Eqns., F99, S00 (laptop)

MTHSC 434/634, Adv. Eng. Math., F00, S01
MTHSC 208 Diff. Eqns., F00 (laptop)

MTHSC 434/634, Adv. Eng. Math., F01, S02
MTHSC 206, Calculus III, F01 (laptop)
MTHSC 208 Diff. Eqns., S02 (laptop)

MTHSC 311 Linear Algebra, F02 (studio, laptop)
MTHSC 206, Calculus III, F02 (studio, laptop)
MTHSC 208 Diff. Eqns., S03 (studio, laptop)

MTHSC 311 Linear Algebra, F03 (studio, laptop)
MTHSC 206, Calculus III, F03 (studio, laptop)
MTHSC 311 Linear Algebra, S04 (studio, laptop)
MTHSC 208 Diff. Eqns., S04 (studio, laptop)

MTHSC 434 Adv. Eng. Math., F04 (studio, laptop)
MTHSC 206, Calculus III, F04 (studio, laptop)
MTHSC 208 Diff. Eqns., S05 (scale-up, laptop)

MTHSC 434 Adv. Eng. Math, F05 (scale-up, laptop)
MTHSC 206, Calculus III, F05 (scale-up, laptop)
MTHSC 208 Diff. Eqns., S06 (scale-up, laptop)
MTHSC 481 CI Pre-service Teachers S06

MTHSC 434 Adv. Eng. Math, F06 (scale-up, laptop)
MTHSC 206, Calculus III, F06 (scale-up, laptop)
MTHSC 208 Diff. Eqns., S07 (scale-up, laptop)
MTHSC 481 CI Pre-service Teachers S07

Course Redesign Projects

MTHSC 434/634, MATLAB simulations, homework, projects, WebCT (98-01)
MTHSC 208 Laptop, Maple examples, homework, projects, WebCT (99-01)
MTHSC 206 Laptop, Maple examples, homework, projects, WebCT (99-01)
MTHSC 311 Laptop – studio course redesign (02-04)

MTHSC 206 Laptop – studio course redesign (02-03)
MTHSC 208 Laptop – studio course redesign (02-03)
MTHSC 206 Laptop – scale-up course redesign (04-)
MTHSC 208 Laptop – scale-up course redesign (04-)
MTHSC 434 Laptop – scale-up course redesign (04-)
MTHSC 481 CI Pre-service Teachers (06-)
MTHSC 208 Laptop – scale-up (07-)

UNIVERSITY AND PUBLIC SERVICE

Committees

Department: Chair, Tenure Promotion and Reappointment (95-96)
Member, Tenure Promotion and Reappointment (91-)
Member, Mathematical Sciences Council (06-07,85-87, 88-89, 91-92, 98-99)
Member, Vision and Renewal in Mathematics Education (99-00)
Member, Undergraduate Affairs (83-87, 96-97, 99-01)
Member, Personnel (84-86)
Member, Educational Computing (83-87)
Member, Computing (92-)
Chair, Computing (92-93)
Member, Research (92-93, 96-97)
Member, Graduate Affairs (87-89, 90-91, 93-94, 02-03, 04-06)
Member, Head Search (87-88)

College: Member, Teaching Effectiveness (97-02)
Member, Laptop Committee (98-02)
Member, Computing Resources Committee (98-)
Chair, Computing Resources Committee (90-91, 03-07)
Member, Computing Executive (98-00)
Member, SUCCEED CIT, FD, TBCD (98-02)
Member, Research Strategic Planning (97-98)
Member, Associate Dean Search (07)

University: Member, Research Council (97-00)
Member, CLE (97-99)
Member, Laptop Committee (00-03)
Member, ODCE Task Force (99-03)
Member, DCIT CMS Task Force (03-04)
Member, DCIT API Integration Team (03-04)
Member, HEHD Ph.D. Committees (2) (03-04)
Member, Computing Advisory (04-05, 06-07)
Member, Dean Search (05-06)
Member, CCIT Services Director Search (07)

Other Service

Presenter, SUCCEED New Faculty Workshop, (98, 99, 01)
Developer and presenter, CoES New Laptop Faculty Workshop (01)

Presenter, WebCT Workshops (3 per year (98-02)
Presenter, MATLAB Workshop (97)
Department Webmaster (92-96)
Department Unix Network Manager (90-93)
Co-developer of Martin Hall renovation plan (96-97)
College Pilot Laptop Program Planning (97-01)
WebCT Administrator (98-02)
WebCT Administrator, Lander University (02)
WebCT Workshops (2), Lander University (02)
WebCT Advisory Board (99-00)
Reviewer for Mathematical Reviews (90-98)
Co-planner "Math Counts" presentations (00, 01)
Anderson, Oconee, Pickens Regional Science Fair Judge (00-05)
Clemson ODCE workshops (2 per year) (01, 02)
Math Out of the Box Development Team (02-04)
Clemson Linux Initiative, articles on installation of Linux on university
supported laptops (01-05)
Presentation to High School Students, SCJAS (04)
Laptop Pedagogy Weekly Focus Group (02-05)
Assistant Scout Master, Six Mile Troop 134 (95-05)
President Six Mile Lions Club (04-05)
Redesign Martin M-205 for SCALE-UP (04-05)
Engineering and Science Education Planning (06-07)
Freshman Calculus Scale-up Planning (06-07)

September, 2007