

James P. Braselton

Office

Department of Mathematical Sciences

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Education

The Ohio State University, Columbus, Ohio, Major in Mathematics, June 1990.

- Certificate of Appreciation for Outstanding Teaching Performance, June 1990.
- Received a Graduate Administrative Associate during Winter 1990 to produce a photographic and biographic history of the Mathematical Association of America, which was founded at The Ohio State University, for the celebration of the 75th Anniversary of the Mathematical Association of America held at The Ohio State University.
- Received a Graduate Research Associateship during Summer 1989 to pursue research interests in algebraic topology concerning the classification of Seifert spaces.
- Received a University Fellowship during the 1987-88 academic year to pursue graduate studies.
- Received a Head-Start Summer Fellowship during Summer 1987 to pursue graduate studies.

Ohio University, Athens, Ohio, Bachelor of Science in Mathematics, June 1987.

- Received President's Scholarship each year.

Employment History

Georgia Southern University, Statesboro, Georgia Department of Mathematics and Computer Science, Assistant Professor¹, 1990-Present.

¹Promoted from the rank of Instructor to the rank of Assistant Professor in Fall 1994.

Teaching

- *Certificate of Training Completion* for **Global Harmonized System Training**, November 8, 2013.
- Taught College Algebra, Pre-Calculus (Algebra and Trigonometry), Business Calculus, Calculus I-IV (with Mathematica and Maple V; Honors sections taught regularly), Linear Algebra (with Mathematica and Matlab), Probability, Differential Equations (with Mathematica and Maple V), Applied Mathematics (Laplace Transforms, Fourier Series and Partial Differential Equations), Real Analysis I, Real Analysis II, Advanced Geometry, Basic Ideas of Problem Solving, Patterns of Problem Solving, Fundamental Ideas of Calculus, Orientation/First-Year Experience/First-Year Seminar for entering freshmen,² Undergraduate Seminar for Mathematics majors, Advanced Differential Equations, and directed numerous honors projects through Math 5090 (Selected Topics/Honors Project) as well as masters' theses.
- Taught and developed the course Implementing Technology into the Secondary Mathematics Curriculum for inservice secondary mathematics teachers incorporating technology, like graphics calculators, computers, computer algebra systems, and topic specific software into their teaching and classrooms during my first year at Georgia Southern in 1990.
- Have good rapport with students and receive good student evaluations.
- Written numerous letters of recommendations for students applying for teaching positions at colleges and school systems, employment in industry, graduate school, scholarships, medical school, dental school, physician assistant programs, anesthesiologist assistant programs, and nursing programs.
- Developed computer labs and projects for Applied Mathematics, Differential Equations, and Calculus.
- Wrote laboratory final exams and review exercises for Calculus courses as well as questions for common items on the final exams that required for Georgia Southern's assessment reports.

Scholarship

- Publications and presentations are detailed in *Professional Activities* beginning on page 7.
- Regular Graduate Faculty Status.

²Applied Mathematics, Real Analysis II, Advanced Geometry, Basic Ideas of Problem Solving, and Patterns of Problem Solving are dual-numbered undergraduate/graduate courses. Advanced Differential Equations is a 7XXX graduate course.

- Received Associate Graduate Faculty Status, Summer 1999.
- Graduate Research/Master’s Theses Supervised
 - * Iulia Inozemtseva, *Epistasis in Predator-Prey Relationships*, 2014.
 - * Iurii Bakach, *A Survey of Mathematical Models of Dengue Fever*, 2015.
 - * Welendawa Acharige Charith Akalanka Elson, *Competition For Two Interactive Complementary Nutrients* , 2015 (not defended).
- Undergraduate research/Honors capstone projects supervised
 - Phillip Brown’s *Which Planet is Largest?* was published in a refereed journal (see detailed publication list).
 - Will Edward’s *Math Applet’s for iPod* received a COUR grant from the College of Science and Technology, Georgia Southern University.
 - Casey Woodrum’s *Calculus Tents: How to Build a Better Tent* was presented at the Phi Kapp Phi Undergraduate Research Symposium in Spring, 2008.
 - Zo Haynes’ *Pattern Design from Module Groups and Algebraic Operations*, (co-advisor with Dr. Hua Wang) 2015.
- 10 distinct texts published in approximately 30 editions that include *Statistics with Mathematica*, *Statistics with Maple V*, *Mathematica By Example*, which has been translated into both German and Japanese, *The Mathematica Handbook*, which has been translated into both German and Japanese, *Calculus Labs Using Mathematica*, *Differential Equations with Mathematica*, *Modern Differential Equations: Theory, Applications, Technology*, *Instructor’s Resource Manual to accompany **Modern Differential Equations: Theory, Applications, Technology***, *Student Resource Manual to accompany **Modern Differential Equations: Theory, Applications, Technology***, *The Maple V Handbook*, *Maple V By Example*, *Differential Equations with Maple V*, and *Introductory Ordinary Differential Equations with Boundary Value Problems*.
- Over 80 presentations and workshops.

Service

- Chair, Pre-Health Professional Review Board, Pre-Professional Program Coordinator, College of Science and Mathematics, August, 2007-Present.
 - During my tenure as chair of the Board, the acceptance rates for medical and dental school applicants have risen from virtually 0% to over 90%. Note that the average is 50%.

AMCAS (MD Schools) Acceptance Data

Year	Board Applied	Board Accepted	Percent	Non-Board Applied	Non-Board Accepted	Percent
2010	9	8	88.89%	3	0	0.00%
2011	11	10	90.91%	1	0	0.00%
2012	11	9	81.82%	5	0	0.00%
2013	12	11	91.67%	6	1	16.67%
2014	14	12	85.71%	2	0	0.00%
2015	20	19	95.00%	5	0	0.00%

- Served as scheduler of the Departmental of Mathematical Science courses Spring 1998-Fall 2000; Fall 2002-Present;. Coordinate room assignments for summer course schedule.
- Chair, Departmental Elections Committee, Department of Mathematical Sciences, 2014-Present.
- Serve as Department of Mathematical Science's liaison to the Honors Program. Attend all recruitment events for prospective honors students as well as disseminate honors policy to faculty working with honors students on their capstone projects.
 - Interview potential honors students at Honors Scholars and Honors Showcase, 2014, 2015.
- Serve as co-chair (with Emil Iacob) of the Recruitment Committee. Emil and I organize and attend all on-campus recruitment events such as the three "Open Houses" that are held each year.
- Founding advisor of the Georgia Southern University chapter of the nation pre-medical/medical honor society *Phi Delta Epsilon*.
- Founding advisor of the Georgia Southern University student organization the *Pre dental Society*.
- Member of Houghton Mifflin Calculus Advisory Board, January 1-December 31, 2008.
- Advisor to undergraduate math majors and minors until departmental advisement was phased out during 2014. (Several faculty serve as advisors to math majors and minors.)
- Member of Faculty Senate (2010-2011)
 - Member of Faculty Welfare Committee
 - Member of Parking and Transportation Committee
- Division of Auxiliary Services
 - Director's Appointee to Parking and Transportation Committee (2011-Present)
 - Served on Search Committee for Director of Parking and Transportation (Summer 2011)
- Georgia Southern Office of Greek Life
 - Member of Scholarships Award Committee (2007)
 - Member of Blue Ribbon Committee (2008-2012)

- Served on Search Committee for Assistant Director of Greek Life (Fall 2011)
- Member of IFC Mentoring Committee (2012-2013)
- Served as Mathematical Science's Library representative (Fall 2003-Spring 2008).
- Served as Calculus I and/or Calculus II coordinator, Fall 2002-Fall 2007.
- Served as faculty evaluation coordinator, 2002-2003.
- Served as Chair of the College of Science and Technology's Post-Tenure Review Committee that developed the College's post-tenure review policy.
- Served as scheduler of the Department's undergraduate and graduate assistants and computer labs Fall 2000-Spring 2007.
- Assisted the Director of Honor's Programs with creation of on-line fill-in application for Bell Honor's and University Honor's programs.
- Served as alternate representative of the College of Science and Technology's representative to the University's Graduate Committee.
- Georgia Southern co-coordinator of *Innovations in Undergraduate Mathematics in Georgia: A Statewide Seminar Conducted via the Georgia Statewide Academic and Medical System (GSAMS)*. Designed and wrote WWW page for *Innovations in Undergraduate Mathematics in Georgia: A Statewide Seminar conducted via the Georgia Statewide Academic and Medical System (GSAMS)*.
- Served on the University's Parking and Transportation Committee and the College's Brochure Committee as well as the Department of Mathematics and Computer Science's Scholarship (Chair), Calculus (Chair), Computer Calculus, Pre-Calculus, Math Education, Technology (Past Chair), Search, World Wide Web (Past Chair), Promotion, Post-Tenure Review, Publicity, Math Tournament (Chair of Junior High Division), Advisory, Common Core/Survey of Calculus/Calculus and Industry Committees.
- Read names during the Conferring of Degrees at the Sixty-Ninth Annual Spring Graduation, Saturday, June 14, 1997, and at the Seventieth Annual Spring Graduation, Saturday, June 13, 1998.
- Served as an Alpha and Beta tester of Maple V, Release 4, December 1995-May 1996; served as an Alpha and Beta tester of Maple V, Release 5, January 1998.
- Served as a Beta tester of Mathematica, Version 3.0, January 1996-December 1996.
- Served as a Beta tester of *Interactive Differential Equations* by Beverly West, Steven Strogatz, Jean Marie McDill, John Cantwell, and Hubert Hohn and published by Addison-Wesley Interactive, January 1996-June 1996.

- Served as faculty mentor to three new faculty members in the Mathematics and Computer Science Department through the departmental Faculty Mentor Program.
- Assisted and served on Search Committees (Math and Computer Science as well as Math and Learning Support/Developmental Studies) in their activities with candidates.
- Assisted with the Georgia Southern Mathematics Tournament each year.
- Assisted with the *Quiz Bowl*, annually sponsored by the Department of Physics, each year.
- Assisted with SACS study by compiling course material for Calculus (Winter 1993).
- Coordinated interdepartmental Mathematica seminar.

The University of Georgia, University System of Georgia Independent Study, Adjunct Assistant Professor, 1997-Present.

- Developed instructional material and graded lessons/labs/ examinations for the Independent Study course Math 1441U and 1441 LU.
- Developed instructional material and graded lessons/examinations for the Independent Study course Math 166Q.

The Ohio State University, Columbus, Ohio Governor's Summer Institute, Instructor, July 1990.

- Wrote Mathematica notebooks and taught talented high school freshmen and sophomores advanced algebraic and geometric concepts using Mathematica.

The Ohio State University, Department of Mathematics, Columbus, Ohio Graduate Teaching Associate, 1987-1990.

- Taught Business Calculus, Calculus for Science and Engineering Majors and Calculus with Mathematica, which involved developing a calculus course with the mathematical software package Mathematica.
- Received Certificate of Appreciation for Outstanding Teaching Performance, June 1990.
- Taught Calculus I (Differential Calculus) at Bell Labs, Columbus, Ohio.
- Served as undergraduate math tutor for The Ohio State University Athletic Department.

Ohio University, Athens, Ohio, Department of Mathematics, Teaching Assistant, 1986-1987.

- Taught Math for Elementary Education Majors and College Algebra.

- Wrote a computer-based test bank for calculus and algebra.
- Verified answers and solutions for the "in-house" college algebra textbook used in the department for its college algebra course.

Computer Experience

- L^AT_EX, Mathematica and Maple V Computer Algebra Systems, Adobe Photoshop, Adobe Acrobat, Microsoft Word, Microsoft Excel.
- Apple, Windows, Unix, Linux Operating Systems

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Professional Activities

Publications

Books

- *Statistics with Maple V* (with Martha L. Abell and John A. Rafter), Academic Press, 2003.
- *Statistics with Mathematica* (with Martha L. Abell and John A. Rafter), Academic Press, 1999.
- *Modern Differential Equations: Theory, Applications, Technology* (with Martha L. Abell), Saunders College Publishing, September 1995.
Second Edition, 2001.
- *Introductory Differential Equations with Boundary Value Problems* (with Martha L. Abell), Academic Press, 2010.
Third Edition, 2010.
Fourth Edition, 2014.
- *Instructor's Resource Manual to accompany **Modern Differential Equations: Theory, Applications, Technology*** (with Martha L. Abell), Saunders College Publishing, 1995.
Second Edition, 2001.
- *Student's Resource Manual to accompany **Modern Differential Equations: Theory, Applications, Technology*** (with Martha L. Abell), Saunders College Publishing, 1995.
Second Edition, 2001.
- *Differential Equations with Maple V* (with Martha L. Abell), Academic Press, January 1994.
Second Edition, 1999.
- *The Maple V Handbook* (with Martha L. Abell), Academic Press Professional, 1994.
- *Maple V By Example* (with Martha L. Abell), Academic Press, 1994.
Second Edition, 1999.
Third Edition, 2005.

- *Instructors Manual for **Calculus Labs Using Mathematica***, Windows Version (with Arthur G. Sparks and John W. Davenport), HarperCollins College Publishers, 1994.
- *Differential Equations with Mathematica* (with Martha L. Abell), Academic Press, 1993.
Second Edition, 1997.
Third Edition, 2004.
Fourth Edition, 2016.
- *Calculus Labs Using Mathematica* (with Arthur G. Sparks and John W. Davenport), HarperCollins College Publishers, 1993.
- *Instructors Manual for **Calculus Labs Using Mathematica*** (with Arthur G. Sparks and John W. Davenport), HarperCollins College Publishers, 1993.
- *The Mathematica Handbook* (with Martha L. Abell), Academic Press, 1992.
- *Mathematica By Example* (with Martha L. Abell), Academic Press/Elsevier, January 1992.
Revised Edition, 1994.
Second Edition, 1997.
Third Edition, 2004.
Fourth Edition, 2009.
Fourth Edition, 2017.

Articles

Refereed

- “Stabilizing the Lorenz Flows Using a Closed Loop Quotient Controller” (with Yan Wu) (2106) *Open Journal of Applied Sciences*, **6**, 560-578. <http://dx.doi.org/10.4236/ojapps.2016.68056>
- “Applying linear controls to chaotic continuous dynamical systems” (with Yan Wu) (2106) *Open Journal of Applied Sciences*, **6**, 141-152. <http://dx.doi.org/10.4236/ojapps.2016.63015>
- ”A survey of mathematical models of Dengue Fever” (with Iurii Bakach), (2015) *Journal of Computer Science Systems Biology*, **8:5**, 255-267. <http://dx.doi.org/10.4172/jcsb.1000198>
- “Epistasis in Predator-Prey Relationships” (with Iuliia Inozemtseva), (2014) *Open Journal of Applied Sciences*, **4**, 473-491. <http://dx.doi.org/10.4236/ojapps.2014.49046>

- “Comparing the Effects of Interactive and Noninteractive Complementary Nutrients on Growth in a Chemostat” (with Martha Abell and Lorraine Braselton), (2013) *Open Journal of Applied Sciences* **3**: 232-331. doi: 10.4236/ojapps.2013.35042
- “Rock-Paper-Scissors in the Chemostat” (with Martha Abell and Lorraine Braselton), (2013) *J Comput Sci Syst Biol* **6**: 118-131. doi:10.4172/jcsb.1000109
- “Effects of genetic immunity and resistance on endemics” (with Martha Abell and Lorraine Braselton), *Applied Mathematics and Computation* **197** (2008), 733-744.
- “The effects of immunity and resistance on the development of AIDS” (with Martha Abell and Lorraine Braselton), *Journal of Mathematical Analysis and Applications* **333** (1) (2007), 8-23.
- “A model of allelopathy in the context of bacteriocin production” (with Martha Abell and Lorraine Braselton), *Applied Mathematics and Computation* **183** (2006), 916-931.
- “Which Planet is Largest?” (with Phillip Brown), *Journal of Online Mathematics and Its Applications* **6** (2006), Article #1275. (Freshman undergraduate research project.)
- “Competition in the chemostat: A comparison of inhibitory and lethal offensive strategies” (with Martha L. Abell and Lorraine M. Braselton), *Mathematics and Computers in Simulation* **72** (2006), 10-25.
- “Visualizing the Method of Finding Volumes by Cross Sections: An *Eggsperiment*,” (with Patricia Humphrey and Jean Uhl), PRIMUS XVI (2), 2006.
- “Selective mating in a continuous model of epistasis” (with Martha Abell and Lorraine Braselton), *Applied Mathematics and Computation* **171** (2005), 225-241.
- “A Host-Microparasite Model with a Resistant Host” (with Martha Abell and Lorraine Braselton), *Ecological Complexity*, Volume 2, 2005, pp. 300-311.
- “A Model of Harmful Algal Blooms” (with Lorraine Braselton), *Mathematical and Computer Modelling*, Volume 40, 2004, pp. 923-934.
- “Why trucks don’t hit power lines and the utility of catenaries to electric utilities” (with Sharon Barrs and Lorraine Braselton), *Demos with Positive Impact*, `mathdemos.mat.gasou.edu/catenary/catenary_demo.html`, 2003.
- “Incorporating Mating Preferences into a Host-Parasite Model” (with Jacalyn Huband and Lorraine Braselton), *Mathematical Biosciences*, Volume 192, Issue 1, November, 2004, pp. 1-18.

- “Visualization of the energy flow for guided surface and fluid waves: comparison and contrast of conventional vector field vs. color coded representation of the Poynting vector” (with Cleon Dean) *Theoretical and Computational Acoustics 2003*, Alexandra Tolstoy, Yu -Chiung Teng, and E. C. Shang, Eds. (World Scientific, River Edge, New Jersey), 2004, 78-90.
- “A Rational Root Theorem for Complex Roots” (with Sharon Barrs and Lorraine Braselton), *The College Mathematics Journal*, Volume 34, Number 5, November, 2003, pp. 380-382.
- “A Fractal Analysis of Human Cranial Sutures” (with Jack Yu, Ronald Wright, Matthew Williamson, and Martha Abell), *The Cleft Palate-Craniofacial Journal*, Volume 40, Number 1, July 2003, pp. 409-415.
- “The Identification of Calcium Oscillators in Immature Rat Cranial Sutures” (with Jack Yu, Martha Abell, and James Borke), *Proceedings of the 9th Conference of International Society of Craniofacial Surgeons*, 2001, pp. 139-141.
- “When is a surface *not* orientable?” (with Martha L. Abell and Lorraine M. Braselton), *International Journal of Mathematical Education in Science and Technology*, Volume 33, Number 4, 2002, pp. 529-541.
- “Multiple Comparison Methods for Means” (with John A. Rafter and Martha L. Abell), *SIAM Review*, Volume 44, No. 2, 2002, pp. 259-278.
- “A Mathematical Model of a Biological Arms Race” (with Paul Waltman and Lorraine Braselton), *Journal of Theoretical Biology*, Volume 218, Issue 1, 2002, pp. 55-70.
- “A Competition Model with Dynamically Allocated Inhibitor Production” (with Paul Waltman), *Mathematical Biosciences*, Volume 173, Issue 2, 2001, pp. 55-84.
- “Visualization of the energy flow in and around a fluid loaded elastic sphere” (with Cleon E. Dean), accepted for publication in *Proceedings of the 4th International Conference on Theoretical and Computational Acoustics*.
- “Visualization of the energy flow for a guided forward wave in and around a fluid loaded elastic cylindrical shell” (with Cleon Dean), *J. Acoust. Soc. Am.*, Volume 109, 2001.
- “Generalized Walker solutions to the Landau-Lifshitz-Gilbert equations” (with Martha L. Abell and Lorraine M. Braselton), *International Journal of Non-Linear Mechanics*, Volume 36, 2001, 571-579.
- “Schryer-Walker quasi-exact solutions to the Landau-Lifshitz-Gilbert equations” (with Martha L. Abell and Lorraine M. Braselton), *Applied Mathematics and Computation*, Volume 124, Issue 2, 2001, pp. 151-167.

- “Randomly walking through Wall Street” (with John Rafter, Patricia Humphrey, and Martha Abell), *Mathematics and Computers in Simulation*, Volume 49, Issue 4-5, 1999, pp. 297-318.
- “Visualization of Symmetric and Antisymmetric Lamb Waves Via the Elastodynamic Poynting Vector” (with Cleon E. Dean), *Theoretical and Computational Acoustics '97*, 1999, pp. 515-526.
- “A New Geometric Interpretation of the Elastodynamic Poynting Vector” (with Cleon E. Dean), *Acoustics Letters*, Volume 20, No. 1, 1997, pp. 5-8.
- “Advancing the Study of Differential Equations with Technology” (with Martha L. Abell), *Mathematics and Computers in Simulation*, Volume 42, Elsevier Science B.V., 1996, pp. 493-508.
- “Giving Meaning to the Circular Membrane Problem with Mathematica” (with Martha L. Abell), *Mathematica in Education*, Volume 1, Number 3, Spring 1992.

Contributed

- “Modernizing Differential Equations” (with Martha L. Abell), *In General Terms: A Newsletter for Innovation and Excellence in College Mathematics Education*, Issue Number 4, Saunders College Publishing, Fall 1995.
- “Topics in Applied Mathematics with Mathematica” (with Martha L. Abell and John W. Davenport), *Proceedings of the Fifth Annual International Conference on Technology in Collegiate Mathematics*, 1993.
- “Advancing the Study of Differential Equations with Technology” (with Martha L. Abell), *Proceedings of the International IMACS Symposium on Symbolic Computation: New Trends and Developments*, June 1993.
- “Technology in the Mathematics Curriculum at Georgia Southern University” (with John W. Davenport and Arthur G. Sparks), *Proceedings of the Fifth Annual International Conference on Technology in Collegiate Mathematics*, 1993.
- “Implementing Calculus as Formal Laboratory Courses using Mathematica” (with John W. Davenport and Arthur G. Sparks), *Proceedings of the Fourth Annual International Conference on Technology in Collegiate Mathematics*, March 1993.
- “Integrating a Computer Algebra System into a Calculus Sequence: Differential and Integral Calculus”, *Proceedings of the 1991 University System Annual Computing Conference*, October, 1991.
- “Mathematica: Beyond Calculus” (with Martha L. Abell), *Proceedings of the 1991 University System Annual Computing Conference*, October, 1991.

- “Integrating Technology into the Mathematics Curriculum” (with Arthur G. Sparks and John W. Davenport), *Conference Proceedings: Computers on Campus National Conference*, November, 1991.

Presentations

Invited

- James Braselton, Martha Abell, Rachel Smith, “Developing and iPod Touch Program to Support the Course presented at Digital Innovation Group Professional Development Series (at GCSU), October 29, 2009.
- “The *Eggs*periment and the largest plant (with Martha Abell and Lorraine Braselton), at the *International Conference on Technology in Collegiate Mathematics*, March 16, 2006, Orlando, FL
- “Technology: Are We There Yet?” (with Martha Abell and John Rafter) at the *Valdosta State University Math Tech Conference*, Valdosta State University, February 22, 2002. (Keynote Address)
- “A host-parasite relationship with a lethal host” (with Patricia Humphrey), *Annual Southeastern MAA Section Meeting*, Georgia Institute of Technology, Atlanta, GA, March 8, 2002.
- “Population Modeling with a Computer Algebra System” (with Martha L. Abell, Lorraine M. Braselton, and John A. Rafter), *T³ Conference*, Armstrong Atlantic State University, Savannah, GA, May 12, 2000.
- “Randomly Walking through Wall Street: A Comparison of Investment Strategies” (with Martha Abell, John Rafter, Patricia Humphrey, and Lorraine Braselton), *Department of Math and Computer Science Colloquium*, Georgia College and State University, Milledgeville, Georgia, April 9, 1998.
- “What Will They Think of Next” (with Martha L. Abell), *Georgia Southern University Faculty/Staff Instructional Technology Showcase*, Statesboro, Georgia, May 21, 1996.
- “A Picture Tells a Thousand Words” (with Martha L. Abell), *Georgia Southern University Faculty/Staff Instructional Technology Showcase Kickoff*, Statesboro, Georgia, May 20, 1996.
- “Changing the Landscape of Calculus and Differential Equations or How Spiders Catch Flies in the 21st Century” (with Martha L. Abell), *Innovations in Undergraduate Mathematics in Georgia: A statewide seminar conducted via the Georgia Statewide Academic and Medical System*, Statesboro, Georgia, November 7, 1995.

- “Incorporating Science and Engineering Design into the Mathematics Curriculum” (panel discussion with Martha L. Abell), at the *Seventh Annual International Conference on Technology in Collegiate Mathematics*, Lake Buena Vista, Florida, November 19, 1994.
- “Geometry and Computer Algebra Systems” (with Martha L. Abell), *Georgia Institute of Technology Fall Geometry Conference*, Georgia Institute of Technology, Atlanta, Georgia, November 12, 1994.
- “Projects in Differential Equations using Maple/Mathematica, part I” (with Martha L. Abell), *Georgia Institute of Technology Workshop on using Technology in the Teaching of Mathematics and Science*, Georgia Institute of Technology, Atlanta, Georgia, May 28, 1994.
- “Projects in Differential Equations using Maple/Mathematica, part II” (with Martha L. Abell), *Georgia Institute of Technology Workshop on using Technology in the Teaching of Mathematics and Science*, Georgia Institute of Technology, Atlanta, Georgia, May 28, 1994.
- Participated in a panel discussion on the use of *Mathematica* in the classroom at *The Sixth International Conference on Technology in Collegiate Mathematics*, November 4-7, 1993, Parsippany, New Jersey.
- “Advancing the Study of Differential Equations with Technology” (with Martha L. Abell), *International IMACS Symposium on Symbolic Computation: New Trends and Developments*, June 17, 1993, Lille, France.
- “Solving Real-Life Problems with Computer Technology” (with Martha L. Abell), *Conference on Technology in the Mathematics Classroom: A Saturday Conference at Georgia Tech*, Georgia Institute of Technology, Atlanta, Georgia, November 7, 1992.
- “Differential Equations with Mathematica” (with Martha L. Abell), *Georgia Tech UAB International Conference on Differential Equations and Mathematical Physics*, Georgia Institute of Technology, Atlanta, Georgia, March 27, 1992.

Contributed

- James Braselton, Lila Roberts, and Jarrett Terry, “Tactile 3-D Demonstrations via Cube and Makerbot,” presented at ICTCM 2014, Saturday, March 22, 2014, San Antonio, Texas.
- Cleon E. Dean and James P. Braselton, “Energy flux streamlines versus acoustic rays for modeling interaction with rigid boundaries: near field of sound from a circular loudspeaker,” Contributed Paper at ICA 2013 Montreal, 21st International Congress on Acoustics (ICA), 165th Meeting of the Acoustical Society of America (ASA), and 52nd Meeting of the

Canadian Acoustical Association (CAA) Palais des congrès de Montréal
 Montréal, Québec, Canada, 27 June 2013.

- Cleon E. Dean and James P. Braselton, “Energy flux streamlines versus acoustic rays for modeling interaction with rigid boundaries: a Lloyds mirror experiment. J. Acoust. Soc. Am., 131 (4) April 2012, p. 3232. (Paper presented at Acoustical Society of America.)
- *Steps to Improving Student Retention and Progression*, Mathematical Association of America Southeastern Section Meeting, Elon University, March 26, 2010. (co-presented with Pat Humphrey with assistance in preparation by Sharon Barrs, Martha Abell, Lori Braselton, and Bridgett Lee)
- Cleon E. Dean and James P. Braselton, “Energy flux streamlines vs. the alternatives for the visualization of energy coupling inside and outside the surface of an ensonified spherical acoustic lens: Preliminary results,” contr. paper to be at the 159th meeting of the Acoustical Society of America, (Baltimore, Maryland 1923 April 2010).
- Cleon E. Dean and James P. Braselton, “Energy flux streamlines vs. the alternatives for the visualization of energy coupling at and inside the surface of an ensonified fluid loaded elastic cylindrical shell with vacuum interior: Preliminary results. J. Acoust. Soc. Am. **125**, 2566 (2009), contr. paper at the 157th meeting of the Acoustical Society of America, (Portland, Oregon 1822 May 2009).
- Cleon E. Dean and James P. Braselton, “The energy flow for a spherical acoustic lens: ray and wave methods vs. experiment. J. Acoust. Soc. Am. **125**, 2627 (2009), contr. paper at the 157th meeting of the Acoustical Society of America, (Portland, Oregon 1822 May 2009).
- “Visualization of the energy flow for elastic waves: comparison and contrast of conventional vector field vs. color coded representation of the Poynting vector” (with Cleon Dean) at the Sixth International Conference on Theoretical & Computational Acoustics, (Honolulu, Hawaii, 11-15 August, 2004).
- “Selective Mating in a Continuous Model of Epistasis” (with Martha Abell) at the Annual Southeastern MAA Section Meeting, Austin Peay University, Clarksville, TN, March 27, 2004.
- “Visualization of the energy flow for elastic waves: comparison and contrast of conventional vector field vs. color coded representation of the Poynting vector” at the *Sixth International Conference on Theoretical & Computational Acoustics*, Honolulu, Hawaii, 11-15 August, 2003.
- “The Predator-Prey Model of Kolmogorov Type” (with Martha Abell) at the *Annual Southeastern Atlantic SIAM Section Meeting*, Western Carolina University, Cullowhee, NC, April 19, 2002.

- “Visualization of the energy flow for a guided forward wave in and around a fluid loaded elastic cylindrical shell: Color coding of the Poynting vector field” (with Cleon Dean) at the 143rd Meeting of the Acoustical Society of America, (Pittsburgh, Pennsylvania, 3-7 June, 2002).
- “Visualization of the energy flow for a guided forward wave in and around a fluid loaded elastic cylindrical shell” (with Cleon Dean) at the *141st Meeting of the Acoustical Society of America*, (Palmer House Hilton Hotel, Chicago, Illinois, 4-8 June, 2001).
- “The Identification of Calcium Oscillators in Immature Rat Cranial Sutures” (with Jack Yu, Martha Abell, and James Borke), *9th International Society of Craniofacial Surgeons Annual Conference*, Visby, Sweden, June 20, 2001.
- “The Identification of Calcium Oscillators in Immature Rat Cranial Sutures” (with Jack Yu, Martha Abell, and James Borke), *45th Annual Conference of The Plastic Surgery Research Council*, Milwaukee, Wisconsin, June 12, 2001.
- “Visualization of the energy flow for a guided forward wave in and around a fluid loaded elastic cylindrical shell” (with Cleon E. Dean), *Fourth International Conference on Theoretical and Computational Acoustics (ICTCA)*, Chicago, Illinois, June 7, 2001.
- “A Fractal Analysis of Human Cranial Sutures” (with Martha Abell, Mathew Williamson, Ronald Wright and Jack Yu), *American Cleft Palate-Craniofacial Association*, 58th Annual Meeting, Minneapolis, Minnesota, April 25, 2001.
- “The Use of Biological Applications in Differential Equations” (with Martha L. Abell), *AMS-MAA Joint Meetings*, Washington, DC, January 22, 2000.
- “The Use of Simulations in the Statistics Classroom” (with John A. Rafter and Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, University of North Carolina at Charlotte, Charlotte, NC, March 10, 2000.
- “Visualization of the energy flow in and around a fluid loaded elastic cylindrical shell” (with Cleon E. Dean), *139th Meeting of the Acoustical Society of America*, Westin Peachtree Plaza, Atlanta, Georgia, 30 May-3 June, 2000.
- “Mathematical Modeling Beyond College Algebra” (with Martha L. Abell and John A. Rafter), *Valdosta State University Math Tech Conference*, Valdosta State University, Valdosta, GA, February 25, 2000.
- “The Chemostat” (with Martha L. Abell), *Department of Mathematics and Computer Science Analysis Seminar*, Statesboro, GA, November 14, 2000.

- “Visualization of the energy flow in an around a fluid loaded elastic sphere” (with Cleon E. Dean), *Fourth International Conference on Theoretical and Computational Acoustics* (ICTCA), Osservatorio Geofisico Sperimentale di Trieste, Trieste, Italy, May 10-15, 1999.
- “Multiple Comparison Methods for Means” (with Martha L. Abell and John A. Rafter), *Fourth International Congress on Industrial and Applied Mathematics* (ICIAM), Edinburgh, Scotland, July 7, 1999.
- “Poynting vector fields in a perpendicularly ensonified fluid loaded elastic cylinder” (with Cleon E. Dean) poster session at the *APS Centennial-March Program*, March 20-26, 1999, Atlanta, Georgia and in *Bulletin of the American Physical Society*, Vol. 44, No. 1, p. 1514.
- “Variations on Newton’s Law of Cooling” (with Martha L. Abell), *Valdosta State University Math Tech Conference*, Valdosta State University, February 26, 1999.
- “The Energy Flow inside an Ensonified Fluid Loaded Elastic Sphere” (with Cleon E. Dean), *Physics Department’s Fall 1998 Brown Bag Colloquium Series*, Georgia Southern University, Statesboro, Georgia, October 13, 1998.
- “Visualization of the energy flux in an ensonified fluid-loaded elastic sphere” (with Cleon E. Dean), *135th Meeting of the Acoustical Society of America*, Seattle, Washington, June 22, 1998.
- “Using Mathematica to Calculate the Exact Distribution of Cochran’s Q Statistic” (with Martha L. Abell, John A. Rafter and P. Humphrey), *Annual Southeastern SIAM Section Meeting*, Florida State University, Tallahassee, Florida, March 20, 1998.
- “Randomly Walking through Wall Street: Comparing Lump-Sum Versus Dollar-Cost Average Investment, Part I” (with Martha Abell, John Rafter and Patricia Humphrey), *Annual Meeting of the Southeastern Section of the MAA*, Charleston, South Carolina, March 13, 1998.
- “Randomly Walking through Wall Street: Comparing Lump-Sum Versus Dollar-Cost Average Investment, Part II” (with John A. Rafter and Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, Charleston, South Carolina, March 13, 1998.
- “Technology: Where Have We Been? Where Are We Going?” (with Martha L. Abell, John A. Rafter, and P. Humphrey), *Third Annual Valdosta Technology Conference*, Valdosta, Georgia, February 27, 1998.
- “Bridging the gap with real world data” (with John A. Rafter and Martha L. Abell), *National Joint AMS/MAA Meetings*, Baltimore, Maryland, January 9, 1998.

- “Visualization of Elastic Waves via the Poynting Vector” (with Cleon E. Dean), Georgia Southern University Physics Colloquium and Journal Club, Statesboro, Georgia, September 30, 1997.
- “Visualization of a symmetric and antisymmetric Lamb waves via the elastodynamic Poynting Vector” (with Cleon E. Dean), *Third International Conference on Theoretical and Computational Acoustics*, Newark, New Jersey, July 16, 1997.
- “Technology and Applications” (with Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, Atlanta, Georgia, March 14, 1997.
- “Technology in Advanced Mathematics Courses” (with Martha L. Abell), *Georgia Southern University Faculty/Staff Instructional Technology Showcase*, Statesboro, Georgia, December 12, 1996.
- “Visualization of a Surface Wave in an Elastic Medium via the Complex Poynting Vector” (with Cleon E. Dean), *Third Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan*, Honolulu, Hawaii, December 3, 1996.
- “O.D.E.’s in the Lab and on the Web” (with Martha L. Abell), *Ninth Annual International Conference on Technology in Collegiate Mathematics*, Reno, Nevada, November 9, 1996.
- “Differential Equations: Concepts, Technology, and Applications” (with Martha L. Abell), *Ninth Annual International Conference on Technology in Collegiate Mathematics*, Reno, Nevada, November 8, 1996.
- “Differential Equations: Technology and Concepts” (with Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, Huntsville, Alabama, April 12, 1996.
- “A Modern Approach to Differential Equations” (with Martha L. Abell), *Eighth Annual International Conference on Technology in Collegiate Mathematics*, Houston, Texas, November 18, 1995.
- “Technology in Multivariable Calculus” (with Martha L. Abell), *Project NExT Summer Workshop*, Burlington, Vermont, August 5, 1995.
- “Mathematics at Work” (with Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, University of North Carolina–Asheville, Asheville, North Carolina, March 31, 1995.
- “Projects in the Undergraduate Mathematics Curriculum” (with Martha L. Abell), *Teachers Teaching with Technology Regional Conference*, Jacksonville, Florida, March 4, 1995.
- “Computer Laboratory Experiences in Mathematical Modeling in Differential Equations” (with Martha L. Abell), *National Joint AMS/MAA Meetings*, San Francisco, California, January 7, 1995.

- “A Structured Approach to Experiments in Differential Equations” (with Martha L. Abell), *Seventh International Conference on Technology in Collegiate Mathematics*, Lake Buena Vista, Florida, November 18, 1994.
- “Some Differences between Polynomial and Trigonometric Functions” (with Martha L. Abell), *Summer Enrichment Program* (for talented high-school students), Georgia Southern University, Statesboro, Georgia, July 12, 1994.
- “Technology: The Choice is Yours” (with Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, Carson-Newman College, Jefferson City, Tennessee, April 8, 1994.
- “Differential Equations: A Technological Approach” (with Martha L. Abell), *National Joint AMS/MAA Meetings*, Cincinnati, Ohio, January 17, 1994.
- “Laboratory Approaches in Differential Equations” (with Martha L. Abell), *National Joint AMS/MAA Meetings*, Cincinnati, Ohio, January 17, 1994.
- “Pendulums, Drums, and Things” (with Martha L. Abell), *The Sixth International Conference on Technology in Collegiate Mathematics*, November 5, 1993, Parsippany, New Jersey.
- “Graphing Quadric Surfaces with Mathematica” (with Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, University of South Carolina-Coastal Carolina, Conway, South Carolina, April 3, 1993.
- “Consultant’s Corners: Decision Making in Mathematics”, (two times) *Annual State Mathematics Conference of The North Carolina Council of Teachers of Mathematics*, Raleigh, North Carolina, October 15, 1992.
- “Problems in Applied Mathematics with Mathematica” (with Martha L. Abell), *Annual Meeting of the Southeastern Section of the MAA*, Kennesaw State College, Kennesaw, Georgia, April 10, 1992.
- “Solving Problems in Applied Mathematics with Mathematica” (with Martha L. Abell), *Southeastern Section SIAM Meeting*, University of Alabama-Huntsville, Huntsville, Alabama, April 3, 1992.
- “Differential Equations with Mathematica” (with Martha L. Abell),
- “Introducing a Computer Lab into the Calculus Sequence, II” (with John W. Davenport), *National Joint AMS/MAA Meetings*, AMS Session on Education, Baltimore, Maryland, January 10-13, 1992.
- “Implementing Calculus as Formal Laboratory Courses Using Mathematica” (with Arthur G. Sparks and John W. Davenport), *Fourth Annual International Conference on Technology in Collegiate Mathematics*, Portland, Oregon, November 16, 1991.

- “Integrating Technology into the Mathematics Curriculum” (with Arthur G. Sparks and John W. Davenport), *Computers on Campus National Conference*, Myrtle Beach, South Carolina, November 10-13, 1991.
- “Exploring the Powers of Mathematica” (with Martha L. Abell), *Student Chapter of the MAA*, Georgia Southern University, Statesboro, Georgia, March 27, 1991.
- “Mathematica: Applications Beyond Calculus” and “Integrating a Computer Algebra System into the Calculus Curriculum” (with Martha L. Abell and John W. Davenport), *Technology in the Mathematics Classroom—A Saturday Conference*, Georgia Institute of Technology, Atlanta, Georgia, November 2, 1991.
- “Implementing Technology into the Mathematics Classroom” (with Arthur G. Sparks), *Statesboro High School* (Bulloch County in-service day), Statesboro, Georgia, October 18, 1991.
- “Mathematica: Beyond Calculus” (with Martha L. Abell), *University System Annual Computing Conference*, October 9, 1991.
- “Integrating Computer Algebra Systems into the Calculus Sequence” (with Arthur G. Sparks and John W. Davenport), *University System Annual Computing Conference*, Rock Eagle, Georgia, October 9, 1991.
- “Calculus II with Mathematica”, *Annual Meeting of the Southeastern Section of the MAA*, Mobile, Alabama, April 6, 1991.
- “Mathematica: Using a Computer Algebra System in Mathematics Courses”, *Apple Seminar*, Henderson Library, Georgia Southern University, Statesboro, Georgia, February 28, 1991.
- “Introducing a Computer Lab into the Calculus Sequence, II” (with John W. Davenport), *National Joint AMS/MAA Meetings*, AMS Session on Education, San Francisco, California, January 18, 1991.

Workshops

- “Introductory Statistics: Computer Laboratories with Mathematica” mini-course presented with John Rafter and Martha Abell at *The Eleventh Annual International Conference on Technology in Collegiate Mathematics*, New Orleans, Louisiana, November 21, 1998.
- “Exploring Undergraduate Mathematical Topics with Maple”, mini-course presented by Martha Abell and James Braselton, at *The Sixth Annual International Conference on Technology in Collegiate Mathematics*, Parsippany, New Jersey, November 6, 1993.

- “Using Mathematica to Solve Problems Encountered in Ordinary and Partial Differential Equations”, mini-course presented by Martha Abell and James Braselton, at the *Southeastern Section SIAM Meeting*, Georgia Southern University, Statesboro, Georgia, March 27, 1993.
- “Topics in Applied Mathematics with Mathematica”, mini-course presented by Martha Abell, John Davenport, James Braselton, and Arthur Sparks, at *The Fifth International Conference on Technology in Collegiate Mathematics*, Rosemont, Illinois, November 15, 1992.
- “Implementing Calculus as Formal Laboratory Courses Using Mathematica”, mini-course presented by Martha Abell, John Davenport, James Braselton, and Arthur Sparks, at the *Southeastern Section of the MAA Annual Meeting*, Kennesaw State College, Marietta, Georgia, April 10, 1992.

Grants Received

- Faculty Development and Welfare Committee for Professional Travel, \$420, February 11, 1997.
- “An Advanced Mathematics Laboratory”, National Science Foundation Instrumentation Laboratory Improvement grant, \$63,200, April 1995, with co-investigators Martha Abell, John Davenport, and Lila Roberts. This grant was used to establish an Advanced Mathematics Computer Laboratory that is used by upper level undergraduate and graduate students.
- Faculty Development and Welfare Committee, Faculty Development Summer Award, \$1500, March 1995. The purpose of this sabbatical was to write Applications Projects that will be used in multi-variable calculus and differential equations (Math 264 and Math 350) so that students can investigate problems presented in journals from fields such as biomechanics, ecology, medicine, sports science, and economics.
- Faculty Development and Welfare Committee for Professional Travel, \$500, November 1994.
- Faculty Development and Welfare Committee for Professional Travel, \$528, November 1992.
- Faculty Development and Welfare Committee, Faculty Development Summer Award, \$2500, March 1991. The purpose of this sabbatical was to continue studying Mathematica and focus on the new features of Version 2.0 of Mathematica.
- Faculty Development and Welfare Committee for Professional Travel, \$400, November 1990.

Undergraduate Research Projects

- Phillip Brown's "Which Planet is Largest?" resulted in a refereed publication in *Journal of Online Mathematics and Its Applications* **6** (2006), Article #1275. (Freshman undergraduate research project.)
- Casey Woodrum's "Calculus Tents" was presented at the Phi Kappa Phi Research Symposium on April 11, 2008. (Joint-enrolled PSO student.) (Poster and presentation.)
- Will Edward's "Math Widgets for iPod" was presented at the 2008 Paulson Student Research Award Symposium on April 9, 2008. (Joint-enrolled GTREP/GSU freshman-sophomore project.) (Poster.)

Texts and Manuscripts Reviewed

- Regularly review for *Applied Mathematics and Computation*, *Mathematics and Computers in Simulations*, and *Mathematical Biosciences*.
- Member of editorial review board for *Demos with Positive Impact*.
- *Linear Algebra: An Applied Course* by Bernard Kolman and David R. Hill for Prentice-Hall, Upper Saddle River, NJ. (September 2006)
- "Lie symmetry of the Landau-Lifshitz-Gilbert equation and exact linearization in the Minkowski space" for the *Journal of Applied Mathematics and Physics*, September, 2003.
- "Mathematical modelling of three bituminous coal seams burning out at contemporary formation of the variegated beds body" for the *International Journal of Coal Geology*, November, 2003.
- "Some Integration Trials on Computer Algebra Systems" for the *Journal of Online Mathematics and its Applications*, September, 2002.
- "A Note on Shuffled Financial Surrogates" for *Mathematical and Computer Modelling*, June, 2002.
- "Literally Changing the Point of View" for *The College Mathematics Journal*, August, 1995.
- *Mathematics and Mathematica for Economists* for Blackwell Publishers, Cambridge, Massachusetts, December, 1995.
- *Introductory Differential Equations: From Linearity to Chaos* for Saunders College Publishing, Philadelphia, Pennsylvania, January, 1996.
- *Geometry with Mathematica* for Academic Press, Boston, Massachusetts, February, 1996.

- *Mastering Mathematica* by John Gray for Academic Press, Inc., Cambridge, Massachusetts, May 1993.
- *Exploring Mathematics with Mathematica* by Cheri Shakiban for Academic Press, Inc., Cambridge, Massachusetts, May 1993.
- *Mathematica Engineering* for Academic Press, Inc., Cambridge, Massachusetts, May 1993.
- *Calculus* for Addison-Wesley Publishing Company, Reading, Massachusetts, May 22, 1992.
- *A Mathematica Programming Primer* for Academic Press, Inc., Cambridge, Massachusetts, November 18, 1992.
- *Fundamentals of College Algebra* for HarperCollins Publisher, Glenview, Illinois, September 16, 1991.
- *Calculus: The Language of Change* for MacGraw-Hill, College Division, San Francisco, California, October 29, 1991.
- “A Central Limit Theorem for a Class of Fuzzy C-Means Clustering Procedures” for *IEEE Trans. on Systems, Man and Cybernetics*, December 1990.

A Few Conferences Attended

- American University of Antigua (AUA) College of Medicine Advisor Trip, Antigua, March 1-5, 2016.
- Medical Professions Educator Tour, U.S. Army 2nd Medical Recruiting Battalion, Fort Benning, Georgia, April 21-22, 2016.
- The Annual Spring Meeting of the Southeastern Section of the Mathematical Association of America, The College of Charleston and The Citadel, Charleston, South Carolina, March 13-14, 1998.
- The Annual Spring Meeting of the Southeastern Section of the Mathematical Association of America, Spellman College and The Georgia Institute of Technology, Atlanta, Georgia, March 13-15, 1997.
- The AMS-MAA Joint Meetings, Orlando, Florida, January, 1996.
- The statewide mathematics seminar Innovations in Undergraduate Mathematics in Georgia, which is conducted via the Georgia State Wide Academic and Medical System (GSAMS), and conducted twice each quarter.
- Teachers Teaching with Technology Regional Conference, Jacksonville, Florida, March 4, 1995.

- The Seventh International Conference on Technology in Collegiate Mathematics, Lake Buena Vista, Florida, November 17-20, 1994.
- Georgia Institute of Technology Fall Geometry Conference, Atlanta, Georgia, November 12, 1994.
- Georgia Institute of Technology Workshop on using Technology in the Teaching of Mathematics and Science, Atlanta, Georgia, May 28, 1994.
- The Annual Southeastern MAA Section Meeting, Carson-Newman College, Jefferson City, Tennessee, April 8, 1994.
- The Sixth International Conference on Technology in Collegiate Mathematics, November 4-7, 1993, Parsippany, New Jersey.
- International IMACS Symposium on Symbolic Computation: New Trends and Developments, June 14-17, 1993, Lille, France.
- The Fifth Annual International Conference on Technology in Collegiate Mathematics, Rosemont, Illinois, November 12-15, 1992.
- Conference on Technology in the Mathematics Classroom, Georgia Tech, Atlanta, Georgia, November 7, 1992.
- Annual State Mathematics Conference of the North Carolina Council of Teachers of Mathematics, Raleigh, North Carolina, October 15-16, 1992.
- Southeastern Section of the MAA Annual Meeting, Kennesaw State College, Marietta, GA, April 10-11, 1992.
- Conference on Technology in the Mathematics Classroom, Georgia Tech, Atlanta, Georgia, November 2, 1991.
- University System Annual Computing Conference, Rock Eagle, Georgia, October 9, 1991.
- Southeastern Section of the MAA, Mobile, Alabama, April 5-6, 1990.
- NSF Workshop "Computer Algebra Systems and Calculus Teaching", University of North Florida, Jacksonville, Florida, November 16-17, 1990.
- Educom Conference, Atlanta, Georgia, October 13-15, 1990.

Teaching Statement

For me, teaching, mentoring, and advising are the most important part of our job. In mathematics, it can be difficult to engage undergraduates into current research. I have been lucky in some regards. I have had some talented students come up with wonderful projects based on calculus. Two students that I refer to are at MIT on full-ride scholarships. I am proud of them but wish they would have stayed at Georgia Southern for the obvious reasons.

Unless one is lucky and comes up with a creative or unique approach on a good day, most undergraduate research at the undergraduate level in mathematics for the good (rather than exceptional) students seems to involve some competence with numerics and computer algebra systems along with a serious faculty member who is willing and wants to spend the time and energy to make it work. All those efforts take a great deal of time if they are given a high priority. However, it is important to remember that when we make it a high priority for top-notch students, we are almost certainly obligated to make it a high priority for all our students who require the fundamentals. We need to do our best in all regards and take them seriously as best as we can.

Although I very much enjoy working on math problems and testing the limits of todays computing powers, the most professional satisfaction I have ever received is a “thank you” from a single mom whose son got into MIT partly (and probably a very small part as he was a very smart young man as a junior in high school) because of me.

As much as we value “research,” teaching is the essence of our job. We must be good faculty citizens so service should not be relegated to the back-burner.

Teaching is first, research and projects need to be explored, especially when they involve our students who care. Nevertheless, being a good community citizen and taking the appropriate service roll in the correct way is very important.

The triad remains important.