Jerome Goddard II

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Education

Ph.D. in Mathematical Sciences   August 2011
Mississippi State University
- Concentration: Differential Equations (Nonlinear Boundary Value Problems)
- Major Advisor: Prof. Ratnasingham Shivaji
- Dissertation: "Classes of reaction diffusion equations with nonlinear boundary conditions"

Master of Science in Mathematics   May 2006
Mississippi College
- Graduated *Summa Cum Laude*
- Major Advisor: Prof. John Travis
- Thesis: "Mathematical estimation of potential risk of Lyme disease in Mississippi"

Bachelor of Science in Mathematics   May 2004
Mississippi College
- Graduated *Summa Cum Laude*
- Minor: Computer Science

Academic Positions

Professor of Mathematics (with Tenure)   2021 - present
Auburn University Montgomery

Distinguished Research Associate Professor of Mathematics   2019 - present
Auburn University Montgomery

Assistant to the Chair (Mathematics)   2018 - present
Auburn University Montgomery

Associate Professor of Mathematics (with Tenure)   2015 - 2019
Auburn University Montgomery

Director of Mathematical Studies   2015 - 2018
Auburn University Montgomery

Assistant Professor of Mathematics   2011 - 2015
Auburn University Montgomery

Research Interests

- Partial differential equations
- Reaction diffusion equations
- Nonlinear boundary value problems with nonlinear boundary conditions
- Mathematical biology-especially population modeling

Awards and Honors

- **Distinguished Research Associate Professor Award (2019 – 2022, $3,000),** *AUM*   2019
- **2017 Outstanding Faculty Award, Dept. of Math & Comp. Sci.,** *AUM*   2018
- Excellence in Service to Students Award, the National Society of Leadership and   2014
  Success (Sigma Alpha Pi), *AUM*
- **School of Sciences Junior Faculty award (2012 – 2013, $1,000),** *AUM*   2013
- 2011 Graduate Doctoral Student Research award, *MSU*   2011
- Graduate student travel award, for travel to 2011 AMS JMM ($1,000), *MSU*   2010
- Outstanding Graduate Teaching award, Dept. of Mathematics and Statistics, *MSU*   2010
- Nominated for Donald Zacharias Teaching Assistant of the Year award, *MSU*   2010
- Graduate student travel award, for travel to 2010 AMS JMM ($1,000), *MSU*   2009
- Outstanding Graduate Teaching award, Dept. of Mathematics and Statistics, *MSU*   2009
- Outstanding Graduate Student award, Dept. of Mathematics and Statistics, *MSU*   2007
- Junior District Award of Merit, Andrew Jackson Council, *Boy Scouts of America*   2007
- Who's Who among American Colleges and Universities, *Mississippi College*   2004
- Alpha Chi, *Mississippi College*   2004
- Secretary, Pi Mu Epsilon, *Mississippi College*   2004
- Burnside Mathematics Scholarship award ($1,000), *Mississippi College*   2003
- Finalist, Persuasive Speaking Contest, *Hinds Community College*   2002
- Mu Alpha Theta, *Hinds Community College*   2002
- Phi Theta Kappa, *Hinds Community College*   2002
- Eagle Scout, Troop 99, *Boy Scouts of America*   1998

Research Publications

Authored Books:

1. Goddard's Physician's Guide to Arthropods of Medical Importance, Seventh Edition, CRC/Taylor & Francis Group, with Gail Moraru, Spring 2019.
   > Note: Previous editions of this book are world-renowned and authored by Jerome Goddard (https://www.crcpress.com/Physicians-Guide-to-Arthropods-of-Medical-Importance-Sixth-Edition/Goddard/p/book/9781439850855). For this edition, Jerome Goddard has stepped down from the role of author, giving the authorship and responsibility of maintaining and updating this and future editions to Jerome Goddard II and Gail Moraru.

Journal Articles (Peer-Reviewed):

2. "Estimating populations of adult *Ixodes scapularis* in Mississippi using a sequential Bayesian algorithm," with Jerome Goddard, **Journal of Medical Entomology,** vol. 45, no. 3, 556-562(2008).
   http://dx.doi.org/10.1603/0022-2585(2008)45[556:EPOAIS]2.0.CO;2

3. "A double S-shaped bifurcation curve for a reaction-diffusion model with nonlinear boundary conditions," with Eun Kyoung Lee & R. Shivaji, **Boundary Value Problems,** vol. 2010, Article ID: 357542: 23 pages.
http://dx.doi.org/10.1155/2010/357542

4. "Diffusive logistic equation with non-linear boundary conditions," with Eun Kyoung Lee & R. Shivaji, **Journal of Mathematical Analysis and Applications,** vol. 375, no. 1, (2011): 365-370.
http://dx.doi.org/10.1016/j.jmaa.2010.09.057

5. "Population models with diffusion, strong Allee effect, and nonlinear boundary conditions," with Eun Kyoung Lee & R. Shivaji, **Nonlinear Analysis: Theory, Methods & Applications,** vol. 74, no. 17, (2011): 6202-6208.
http://dx.doi.org/10.1016/j.na.2011.06.001

6. "Ecological systems, nonlinear boundary conditions, and Σ-shaped bifurcation curves," with Kathryn Ashley & Victoria Sincavage, **Involve: A Journal of Mathematics**, vol. 6, no. 4, (2013): 399-430.
http://dx.doi.org/10.2140/involve.2013.6.399

7. "Existence results for classes of infinite semipositone problems," with Eun Kyoung Lee, Lakshmi Sankar, & R. Shivaji, **Boundary Value Problems**, vol. 2013, no. 97, 1-9.
http://dx.doi.org/10.1186/1687-2770-2013-97

8. "Diffusive logistic equation with constant yield harvesting and negative density dependent emigration on the boundary," with R. Shivaji, **Journal of Mathematical Analysis and Applications**, vol. 414, no. 2 (2014), 561-573.
http://dx.doi.org/10.1016/j.jmaa.2014.01.016

9. "Halo-shaped bifurcation curves in ecological systems," with R. Shivaji, **Electronic Journal of Differential Equations**, vol. 2014, no. 88 (2014), 1-27.
http://ejde.math.txstate.edu/Volumes/2014/88/abstr.html

10. "Diffusion Rates and Dispersal Patterns of Starved Versus Recently Fed Bed Bugs (*Cimex lectularius L.*)," with Michael Caprio & Jerome Goddard, **Insects**, vol. 6, no. 4 (2015), 792-804.
https://www.mdpi.com/2075-4450/6/4/792

11. "Biomedical researchers should declare their assumptions (research letter)," with Jerome Goddard, **Journal of the Mississippi Academy of Sciences**, vol. 60, no. 3 (2015).
https://msacad.org/wp-content/uploads/2016/01/MAS-July-2015-Number-Vol-60-3a.pdf

12. "Stability and instability of positive solutions for classes of semilinear elliptic boundary value problems with nonlinear boundary conditions," with R. Shivaji, **Royal Society of Edinburgh Proceedings A: Mathematics**, vol. 147, no. 5 (2017).
https://doi.org/10.1017/S0308210516000408

13. "Bifurcation curves for some singular and nonsingular problems with nonlinear boundary conditions," with Q. Morris, R. Shivaji, & B. Son, **Electronic Journal of Differential Equations**, vol. 2018, no. 26 (2018), 1-12.
https://ejde.math.txstate.edu/Volumes/2018/26/abstr.html

14. "An exact bifurcation diagram for a reaction diffusion equation arising in population dynamics," with Q. Morris, S. Robinson, & R. Shivaji, **Boundary Value Problems**, vol. 2018, no. 1, (2018), 170.
https://doi.org/10.1186/s13661-018-1090-z

15. "A diffusive logistic equation with U-shaped density dependent dispersal on the boundary," with Q. Morris, C. Payne, & R. Shivaji, **Topological Methods in Nonlinear Analysis**, vol. 53, no. 1, (2019), 335-349.
https://projecteuclid.org/euclid.tmna/1547434818

16. "Effects of patch-matrix composition and individual movement response on population persistence at the patch-level," with J. Cronin & R. Shivaji, **Bulletin of Mathematical Biology,** vol. 81, no. 10, (2019), 3933-3975.
https://link.springer.com/article/10.1007/s11538-019-00634-9

17. "On the effects of the exterior matrix hostility and a U-shaped density dependent dispersal on a diffusive logistic growth model," with N. Fonseka, Q. Morris, R. Shivaji, & B. Son, **Discrete and Continuous Dynamical Systems Series S**, vol. 13, no. 12, (2020), 3401-3415.
http://www.aimsciences.org/article/doi/10.3934/dcdss.2020245

18. "Modeling the effects of density dependent emigration, weak Allee effects, and matrix hostility on patch-level population persistence", with J. T. Cronin, N. Fonseka, R. Shivaji, & B. Son, **Mathematical Biosciences and Engineering**, vol. 17, no. 2, (2019), 1718-1742.
    https://www.aimspress.com/article/10.3934/mbe.2020090/fulltext.html
19. "Frequency of Occurrence and Population-Dynamic Consequences of Different Forms of Density-Dependent Emigration," with J. T. Cronin, R. Harmon, & R. Shivaji, **The American Naturalist**, 195:5, (2020), 851-867.
    https://doi.org/10.1086/708156
20. "Modeling the effects of trait-mediated dispersal on the coexistence of mutualists," with J. T. Cronin, A. Muthunayake, & R. Shivaji, **Mathematical Biosciences and Engineering**, vol. 17, no. 6, (2020), 7838-7861.
    http://www.aimspress.com/article/10.3934/mbe.2020399
21. "A diffusive weak Allee effect model with U-shaped density dependent dispersal and hostile matrix effects," with N. Fonseka, R. Shivaji, & B. Son, **Discrete and Continuous Dynamical Systems Series B**, vol. 26**,** no. 10 (2021), 5509-5517.
    https://www.aimsciences.org/article/doi/10.3934/dcdsb.2020356

Conference Proceedings (Peer-Reviewed):

22. "Relative risk of acquiring Black-legged ticks, *Ixodes scapularis*, in Central Mississippi," with Jerome Goddard, **Midsouth Entomologist**, Vol. 3 (2010): 97-100.
    http://www.midsouthentomologist.org.msstate.edu/Volume3/Vol3_2_html_files/Vol3_2_004.html
23. "Population models with nonlinear boundary conditions," with Eun Kyoung Lee & R. Shivaji, **Electronic Journal of Differential Equations,** Conf. 19 (2010): 135-149.
    http://ejde.math.txstate.edu/conf-proc/19/g2/abstr.html
24. "A population model with nonlinear boundary conditions and constant yield harvesting," with R. Shivaji, **Proceedings of Dynamic Systems and Applications,** vol. 6 (2012): 150-157.
    http://www.dynamicpublishers.com/dynamic.htm

Technical Reports (Not Peer-Reviewed):

25. "Stability of Extending Films," with Olus, N. Boratav, Li Taebeom Kim, Jill Klentzman, Dias Kurmashev, Mauricio Osorio, & Gregory Richards. **IMA Mathematical Modeling in Industry Workshop XII**, (2008): 1-26.
    http://citeseer.uark.edu:8080/citeseerx/viewdoc/summary;jsessionid=92C034DAB79E1D157051B2CC4BB906D9?doi=10.1.1.140.6689
26. "Proportion of Adult Lone Star ticks (*Amblyomma americanum*) questing in a tick population," with Jerome Goddard & Xueyan Wang, **Journal of Mississippi Academy of Sciences**, Vol. 54 No 3-4 (2009): 206-209.
    https://pdfs.semanticscholar.org/0c94/404adbd6f08914a666e7ad0fd8c7a6150f3a.pdf#page=20

In Preparation:

27. "Analysis of steady states for classes of reaction-diffusion equations with U-shaped density dependent dispersal on the boundary," with J. Price & R. Shivaji, in preparation.
28. "Landscape level modeling of habitat fragmentation via reaction diffusion equations," with A. Barnett, D. Harrell, & R. Shivaji, in preparation.
29. "Modeling competition-mediated dispersal with the reaction diffusion framework," with E. Cosgrove, E. Lindsey, & R. Shivaji, in preparation.
30. "Movement behavior of *Ischnodemus falicus* (Say) (Hemiptera: Blissidae) in fragmented salt-marsh habitats," with R. R. Harman, R. Shivaji, and J. T. Cronin, in preparation.

Grants

External Funding:

- NSF Grant (DMS-1853372) as PI in the Mathematical Biology Program, entitled "Collaborative Research: Mathematical and Experimental Analysis of Competitive Ecological Models: Patches, Landscapes, Stage Structure, and Conditional Dispersal on the Boundary," **Awarded: $120,930, 8/1/2019 – 7/31/2022**   Aug 2019

- NSF Grant (DMS-1516560) as PI in the Mathematical Biology Program, entitled "Collaborative Research: Mathematical & Experimental Analysis of Ecological Models: Patches, Landscapes, and Conditional Dispersal on the Boundary," **Awarded: $137,822, 8/15/2015 – 7/31/2019**   Aug 2015

- NSF Grant (DMS-1438811) as Co-PI in the Applied Mathematics Program, entitled "The Tenth Mississippi State Conference on Differential Equations and Computational Simulations" **Awarded: $35,000**   April 2014

- NSF Grant (DMS-1237586) as Co-PI in the Applied Mathematics Program, entitled "The Ninth Mississippi State - UAB Conference on Differential Equations and Computational Simulations" **Awarded: $35,000**   July 2012

Internal Grant Awards:

- AUM School of Sciences Supplemental Travel Grant to attend the *2015 Joint Mathematics Meetings* **Awarded: $1,000**   Jan 2015

- AUM Faculty Research Conference Fund Travel Grant to attend the *2015 Joint Mathematics Meetings* **Awarded: $252**   Jan 2015

- AUM School of Sciences Supplemental Travel Grant to attend the *2014 Joint Mathematics Meetings* **Awarded: $1,000**   Jan 2014

- AUM Lecturer Program Grant to support the 2013 SK Day keynote speaker's travel expenses (Dr. Katie Johnson, Florida Gulf Coast University) **Awarded: $804**   Nov 2013

- AUM Faculty Research Conference Fund Travel Grant to attend the *2013 Joint Mathematics Meetings* **Awarded: $290**   Jan 2013

- AUM School of Sciences Supplemental Travel Grant to attend the *2013 Joint Mathematics Meetings* **Awarded: $1,000**   Jan 2013

- AUM Faculty Research Conference Fund Travel Grant to attend the *2012 AIMS 9th International Conference on Dynamical Systems and Differential Equations* **Awarded: $290**   May 2012

- AUM School of Sciences Supplemental Travel Grant to attend the *2012 AIMS 9th International Conference on Dynamical Systems and Differential Equations* **Awarded: $1,000**   April 2012

- AUM Research Grant-in-Aid proposal, "Population models with diffusion, harvesting, and nonlinear boundary conditions" **Awarded: $1,100**   Jan 2012

- AUM Lecturer Program Grant to bring Prof. R. Shivaji to campus to present a lecture,   Oct 2011

Awarded: $500

Ph.D. Student Mentorship

For the following students, I <u>co-directed their dissertation</u> with Prof. R. Shivaji at UNCG, as a significant portion of their dissertations derived from my two NSF grants on habitat fragmentation and <u>served as a member of their Ph.D. Committee</u>:

- **Amila Muthunayake,** University of North Carolina Greensboro   2017 – present
  <u>Dissertation:</u> "Analysis of positive solutions for classes of nonlinear reaction diffusion equations and systems"
  https://mathstats.uncg.edu/people/directory/amila-muthunayake/

- **Nalin Fonseka,** University of North Carolina Greensboro: 2016 - 2020
  <u>Dissertation:</u> "Positive solutions for classes of steady state reaction diffusion equations," *successfully defended in Summer 2020.*
  <u>Current position:</u> Assistant Professor of Mathematics (tenure-track), School of Arts and Sciences, Carolina University
  https://carolinau.edu/faculty-staff/fonseka-nalin

For the following students, I <u>served as a member of their Ph.D. Committee</u>:

- **Quinn Morris,** University of North Carolina Greensboro: 2013 - 2017
  <u>Dissertation:</u> "Analysis of classes of superlinear semipositone problems with nonlinear boundary conditions," *successfully defended in Summer 2017.*
  <u>Current position:</u> Assistant Professor of Mathematics (tenure-track), Department of Mathematical Sciences, Appalachian State University
  https://mathsci.appstate.edu/people/quinn-morris

- **Byungje Son,** University of North Carolina Greensboro: 2013 - 2017
  <u>Dissertation:</u> "Analysis of classes of singular steady state reaction diffusion equations," *successfully defended in Summer 2017.*
  <u>Current position:</u> Postdoc at University of Maine
  http://www.byungjaeson.epizy.com/

Undergraduate Student Mentorship

- **NSF UGR in Differential Equations,** Auburn University Montgomery   2020 - 2021
  Students: Zane Blume-Babcock ('21), Sydney Fields ('21), & Dakota Mills ('20)
  Title: *Modeling trait-mediated dispersal among two competitors*

- **NSF UGR in Differential Equations,** Auburn University Montgomery   2018 - 2019
  Students: Kayla Luther ('20) & Joanna Sumner ('20)
  Title: *Modeling constant yield harvesting with density dependent dispersal*

- **NSF UGR in Differential Equations,** Auburn University Montgomery   2016 - 2018
  Students: Emily Cosgrove ('18) & Eddie Lindsey ('18)
  Title: *Modeling interaction-mediated dispersal*
  1. Presented a contributed talk at the *2017 Southeastern Section Meeting of the MAA*, Clayton State University, Macon, GA   Mar 2017
  2. Presented a contributed talk at the *2017 This is Research,*   Apr 2017

Auburn University, Auburn, AL

3. Presented a contributed talk at the *2017 Auburn Montgomery Undergraduate Research Symposium*, Montgomery, AL	Apr 2017
4. Presented a contributed talk at the *2017 NimBios Undergraduate Research Conference*, University of Tennessee, Knoxville, TN	Nov 2017
5. Presented a contributed talk at the *2018 Southeastern Section Meeting of the MAA*, Clemson University, Clemson, SC	Mar 2018
6. Presented a contributed talk at the *2018 This is Research*, Auburn University, Auburn, AL	Apr 2018
7. Presented a contributed talk at the *2018 Auburn Montgomery Undergraduate Research Symposium*, Montgomery, AL	Apr 2018
8. Presented a contributed talk at the *2018 Ecological Society of America Meeting*, New Orleans, LA	Aug 2018

- **NSF UGR in Differential Equations,** Auburn University Montgomery   2015 - 2016
  Students: Alyssa Barnett ('16) & Dexter Harrell ('16)
  Title: *Landscape level modeling of habitat fragmentation via reaction diffusion equations*

9. Presented a contributed talk at the *2016 Southeastern Section Meeting of the MAA*, University of Alabama Birmingham, Birmingham, AL	Mar 2016
10. Presented a contributed talk at the *2016 This is Research*, Auburn University, Auburn, AL	Apr 2016
11. Presented a contributed talk at the *2016 Auburn Montgomery Undergraduate Research Symposium*, Montgomery, AL	Apr 2016

- **UGR in Differential Equations,** Auburn University Montgomery   2014 - 2015
  Students: Jordan Berry ('14) & Jordan Price ('16)
  Title: *Ecological systems with U-shaped density dependent dispersal*

12. Presented a contributed talk at the *10th University of North Carolina Greensboro Regional Mathematics & Statistics Conference*, Greensboro, NC	Nov 2014
13. Presented a contributed talk at the *2015 Southeastern Section Meeting of the MAA*, University of North Carolina Wilmington, Wilmington, NC	Mar 2015
14. Presented a contributed talk at the *2015 This is Research*, Auburn University, Auburn, AL	Apr 2015
15. Presented a contributed talk at the *2015 Auburn Montgomery Undergraduate Research Symposium*, Montgomery, AL	Apr 2015

- **UGR in Differential Equations,** Auburn University Montgomery   2013 - 2014
  Students: Lyndee Bobo ('14), Zach Burnett ('15), & Heather Pierce ('15)
  Title: *Ecological systems with aggregation, grazing, & Σ-shaped bifurcation curves*

16. Presented a contributed talk at the *9th University of North Carolina Greensboro Regional Mathematics & Statistics Conference*, Greensboro, NC	Nov 2013
17. Presented a contributed talk at the *2014 Southeastern Section Meeting of the MAA*, Tennessee Tech University, Cookeville, TN	Mar 2014
18. Presented a contributed talk at the *2014 Auburn Montgomery Undergraduate Research Symposium*, Montgomery, AL * **UGR Team** won Honorable Mention for their presentation	Apr 2014

- **UGR in Differential Equations,** Auburn University Montgomery   2012-2013
  Students: Kev Johnson ('15), Daniel McElveen ('13), & Katelyn Sanders ('14)
  Title: *Diffusive logistic equation with nonlinear boundary conditions and Σ-shaped bifurcation curves*

19. Presented a contributed talk at the *8th University of North Carolina Greensboro*	Nov 2012

Regional Mathematics & Statistics Conference, Greensboro, NC

20. Presented a contributed talk at the *2013 Southeastern Section Meeting of the MAA*, Winthrop University, Rock Hill, SC   Mar 2013

     * Kev Johnson won one of only 8 Patterson Awards for Best Undergraduate Talk

21. Presented a contributed talk at the *2013 Auburn Research Week*, Auburn University, Auburn, AL   Mar 2013

22. Presented a contributed talk at the *2013 Auburn Montgomery Undergraduate Research Symposium*, Montgomery, AL   Apr 2013

- **NSF REU in Applied Mathematics and Biostatistics,** Mississippi State University   2010 - 2011
  I had the opportunity to serve in *two* summer REU programs at multiple levels:
  1. served as a graduate student member of the organizing committee
  2. taught mini-courses on LaTeX and Mathematica® to the entire group
  3. helped mentor five undergraduates
  4. mentored a first year Ph.D. graduate student in how to lead/teach undergraduates
  5. helped design the REU website.
  6.

Conference/Workshop Presentations

Invited Plenary Presentations:

1. **Distinguished lecturer for students** at the *Mathematical Association of America Southeastern 2016 Section Meeting*, University of Alabama Birmingham, Birmingham, AL   Mar 2016

2. Plenary talk at the *10ᵗʰ University of North Carolina Greensboro Regional Mathematics & Statistics Conference*, Greensboro, NC   Nov 2014

Invited Seminar/Colloquium Presentations:

3. Seminar talk at *University of North Carolina Greensboro*, Greensboro, NC (virtual)   Nov 2020
4. Seminar talk at *College of William & Mary*, Williamsburg, VA   Jan 2017
5. Seminar talk at *Kennesaw State University*, Marietta, GA   Nov 2016
6. Seminar talk on jobs in academia, *Mathematics and Statistics Professional Development Lecture Series*, University of North Carolina Greensboro   June 2016
7. Colloquium talk at *College of Arts & Sciences Mini-College*, AUM   June 2016
8. Commencement address at Prattville High School Mu Alpha Theta Induction, Prattville, AL   Mar 2016
9. Colloquium talk at *University of Tennessee Knoxville,* Knoxville, TN   Mar 2016
10. Colloquium talk at *CUNY: Graduate Center,* New York City, NY   Oct 2015
11. Colloquium talk at *Winthrop University,* Rock Hill, SC   Jul 2015
12. Colloquium talk at Spring Fever, *Auburn University Montgomery*   Mar 2015
13. Colloquium talk at *Southern Polytechnic State University*, Marietta, GA   Sept 2014
14. Colloquium talk at *Birmingham Southern College*, Birmingham, AL   Nov 2013
15. Colloquium talk at the *2012 MS School for Math & Science's Math & Science Day,* Columbus, MS   Mar 2012
16. Colloquium talk at the *2012 Research Experience for Teachers (RET)* at Mississippi State University, Starkville, MS   Feb 2012
17. Colloquium talk at *University of North Carolina Greensboro*, Greensboro, NC   Oct 2011
18. Colloquium talk to the *SIAM Student Chapter*, Auburn University, Auburn, AL   Oct 2011
19. Colloquium talk at the *Mississippi College Mathematics Club*, Clinton, MS   Feb 2009

Invited Special Session Presentations:

20. Invited to present a talk in the special session, "Evolution Equations and Applications" at the 2019 *Spring Southeastern Sectional Meeting of the American Mathematical Society*, Auburn, AL — Mar 2019

21. Invited to present a talk in the special session, "Nonlinear Reaction-Diffusion Equations and their Applications" at the 2019 *Spring Southeastern Sectional Meeting of the American Mathematical Society*, Auburn, AL — Mar 2019

22. Invited to present a talk & chaired a session at the *2018 Variational and Topological Methods Conference*, Northern Arizona University, Flagstaff, AZ — June 2018

23. Invited to present a talk in the special session, "Nonlinear reaction diffusion equations and their applications" at the *2018 Fall Eastern Sectional Meeting of the AMS*, Boston University, Boston, MA — Apr 2018

24. Invited to present a talk in the special session, "Nonlinear boundary value problems" at the *2016 Fall Southeastern Section Meeting of the AMS*, NC State University, Raleigh, NC — Nov 2016

25. Invited to present a talk in *International Workshop on Recent Advances in Evolution Equations and Applications*, Auburn University, Auburn, AL — Jul 2016

26. Chaired a session and presented invited talks in the special sessions, "Advances in theory and application of reaction diffusion equations" & "Dissipative systems and applications" at the *2016 AIMS 11th International Conference on Dynamical Systems and Differential Equations*, Orlando, FL — Jul 2016

27. Chaired a session and presented an invited talk in the special session, "Advances in theory & application of reaction diffusion equations," at the *2016 Joint Mathematics Meetings*, Seattle, WA — Jan 2016

28. Chaired a session and presented an invited talk in the special session, "Theory & application of reaction diffusion equations," at the *2015 Joint Mathematics Meetings*, San Antonio, TX — Jan 2015

29. Chaired a session and presented invited talks in the special sessions, "Reaction diffusion equations and applications" & "Quasilinear elliptic and parabolic problems and their applications" at the *2014 AIMS 10th International Conference on Dynamical Systems and Differential Equations*, Madrid, Spain — Jul 2014

30. Invited to present a talk in the special session, "Nonlinear elliptic PDE and applications," *SIAM Southeastern Atlantic Sectional Meeting*, Florida Tech University, Melbourne, FL — Mar 2014

31. Chaired a session and presented an invited talk in the special session, "Reaction diffusion equations and applications" at the *2014 Joint Mathematics Meetings*, Baltimore, MD — Jan 2014

32. Invited to present a talk in the special session, "Nonlinear elliptic and wave equations and applications," *AMS Fall Eastern Sectional Meeting*, Temple University, Philadelphia, PA — Oct 2013

33. Presented an invited talk in the special session, "Mathematics of planet earth" at the *2013 Southeastern Section Meeting of the MAA,* Winthrop University, Rock Hill, SC — Mar 2013

34. Chaired a session and presented an invited talk in the special session, "Understanding planet earth via reaction diffusion equations" at the *2013 Joint Mathematics Meetings*, San Diego, CA — Jan 2013

35. Chaired a session and presented an invited talk in the special session, "Reaction diffusion equations and applications" at the 2012 *AIMS 9th International Conference on Dynamical Systems and Differential Equations*, Orlando, FL — Jul 2012

36. Invited to present a talk & chaired a session at the *2012 Variational and Topological Methods Conference*, Northern Arizona University, Flagstaff, AZ — June 2012

37. Chaired a session and presented an invited talk in the special session, "Reaction — Jan 2012

diffusion equations and applications" at the *2012 Joint Mathematics Meetings*, Boston, MA

38. Invited to present a talk in the special session, "Workshop on reaction diffusion equations and application," at the *Sixth International Conference on Dynamic Systems and Applications*, Atlanta, GA — May 2011

39. Invited to present a talk in the special session, "Analysis of reaction-diffusion models," at the *2011 Joint Mathematics Meetings*, New Orleans, LA — Jan 2011

Contributed Presentations:

40. *2018 Annual Meeting of the Ecological Society of America*, New Orleans, LA — Aug 2018
41. *2017 AACTM (Association of Alabama College Teachers of Mathematics)*, Samford University, Birmingham, AL — Feb 2017
42. *2017 Joint Mathematics Meetings*, Atlanta, GA — Jan 2017
43. *AMS Fall Eastern Sectional Meeting*, University of Alabama Huntsville, Huntsville, AL — Mar 2015
44. *Mathematical Association of America Southeastern 2015 Section Meeting*, University of North Carolina Wilmington, Wilmington, NC — Mar 2015
45. *2015 AACTM (Association of Alabama College Teachers of Mathematics)*, University of Alabama, Tuscaloosa, AL — Feb 2015
46. *SEARCDE-2014 (Southeastern-Atlantic Regional Conference on Differential Equations)*, University of Memphis, Memphis, TN — Oct 2014
47. *Mathematical Association of America Southeastern 2014 Section Meeting*, Tennessee Tech University, Cookeville, TN — Mar 2014
48. *2014 AACTM (Association of Alabama College Teachers of Mathematics)*, Auburn University, Auburn, AL — Feb 2014
49. *SEARCDE-2013 (Southeastern-Atlantic Regional Conference on Differential Equations)*, University of Tennessee, Knoxville, TN — Sept 2013
50. *2013 Auburn Research Week*, Auburn University, Auburn, AL — Apr 2013
51. *First International Conference on Dynamics of Differential Equations*, Georgia Tech, Atlanta, GA — Mar 2013
52. *2013 AACTM (Association of Alabama College Teachers of Mathematics)*, Birmingham Southern College, Birmingham, AL — Feb 2013
53. *SEARCDE-2012 (Southeastern-Atlantic Regional Conference on Differential Equations)*, Wake Forest University, Winston-Salem, NC — Oct 2012
54. *Mathematical Association of America Southeastern 2012 Section Meeting*, Clayton State University, Morrow, GA — Mar 2012
55. *SEARCDE-2011 (Southeastern-Atlantic Regional Conference on Differential Equations)*, Georgia Southern University, Statesboro, GA — Oct 2011
56. Chaired a contributed session and presented a talk at the *2011 Differential Equations Weekend Conference*, Mississippi State University — May 2011
57. *Mathematical Association of America LA/MS 2011 Section Meeting*, Oxford, MS, — Mar 2011
58. *SEARCDE-2010 (Southeastern-Atlantic Regional Conference on Differential Equations)*, Virginia Tech, Blacksburg, VA — Oct 2010
59. *2010 Joint Mathematics Meetings*, San Francisco, CA — Jan 2010
60. *2009 Differential Equations Weekend*, University of Memphis, Memphis, TN — Nov 2009
61. *SEARCDE-2009 (Southeastern-Atlantic Regional Conference on Differential Equations)*, Mercer University, Macon, GA — Oct 2009
62. Chaired a contributed session and presented a talk at the *8th Mississippi State and University of Alabama at Birmingham Differential Equations and Computational Simulations Conference*, Starkville, MS — May 2009
63. *Mathematical Association of America LA/MS 2009 Section Meeting*, Clinton, MS — Mar 2009
64. *SEARCDE-2008 (Southeastern-Atlantic Regional Conference on Differential* — Oct 2008

Equations), University of Arkansas, Little Rock, AR

Poster Presentations:
65. *International Conference on Infectious Diseases*, Atlanta, GA, poster presentation   Oct 2006

Conference/Workshop Attendance

1. *2020 Joint Mathematics Meetings,* Denver, CO   Jan 2020
2. *10th Mississippi State Differential Equations and Computational Simulations Conference*, Starkville, MS   Oct 2014
3. *9th University of North Carolina Greensboro Regional Mathematics & Statistics Conference*, Greensboro, NC   Nov 2013
4. *8th University of North Carolina Greensboro Regional Mathematics & Statistics Conference*, Greensboro, NC   Nov 2012
5. *9th Mississippi State and University of Alabama at Birmingham Differential Equations and Computational Simulations Conference*, Starkville, MS   Oct 2012
6. *7th University of North Carolina Greensboro Regional Mathematics & Statistics Conference*, Greensboro, NC   Nov 2011
7. *AMS Southeastern Section Meeting*, Special Session on Nonlinear Boundary Value Problems, Wake Forest University, Winston-Salem, NC   Sept 2011
8. *Mini Workshop on Mathematical Biology and Computational Modeling*, High Performance Computing Collaboratory, Mississippi State University, Starkville, MS   Mar 2010
9. *IMA PI Summer Program for Graduate Students on The Mathematics of Inverse Problems*, University of Delaware, Newark, DE   Jun 2009
10. *Mathematical Applications in Ecology and Evolution Workshop*, High Performance Computing Collaboratory, Mississippi State University, Starkville, MS   Aug 2008
11. *IMA - Mathematical Modeling in Industry Workshop XII*, University of Minnesota Minneapolis, MN, (Submitted a report on *Stability of Extending Films*)   Aug 2008
12. *MBI Summer Program in Mathematical Bioengineering*, Mathematical Biosciences Institute, Ohio State University, Columbus, OH   Jul 2008
13. *7th Mississippi State and University of Alabama at Birmingham Differential Equations and Computational Simulations Conference*, Birmingham, AL   Nov 2007

Teaching Experience

Auburn University Montgomery   2011 - present
- Fall 2021:   MATH 1610 – Calculus II, MATH 3000 – Intro to Higher Mathematics, & MATH 3690 – Ordinary Differential Equations
- Summer 2021: MATH 1050 – College Algebra & MATH 1610 – Calculus I
- Spring 2021:   MATH 3000 – Intro to Higher Mathematics, MATH 4950 – Senior Seminar, & MATH 4970 – Undergrad Research in ODEs
- Fall 2020:   MATH 2630 – Calculus III, MATH 3000 – Intro to Higher Mathematics, & MATH 4970 – Undergrad Research in ODEs
- Summer 2020: MATH 1050 – College Algebra & MATH 1620 – Calculus II
- Spring 2020:   MATH 3000 – Intro to Higher Mathematics & MATH4950 – Senior Seminar
- Fall 2019:   MATH 1620 – Calculus II, MATH 3000 – Intro to Higher Mathematics, & MATH 4210/5210 – Analysis I
- Summer 2019: MATH 1620 – Calculus II & MATH 1100 – Finite Mathematics

- Spring 2019: MATH 4950 – Senior Seminar & MATH 4970 – Special Topics in Differential Equations
- Fall 2018: MATH 1610 – Calculus I & MATH 2630 – Calculus III
- Summer 2018: None (NSF funded research)
- Spring 2018: MATH 1620 – Calculus II & MATH4950 – Senior Seminar
- Fall 2017: CSCI 2000 – Structured Programming I (C++) & MATH 3690 – Ordinary Differential Equations
- Summer 2017: None (NSF funded research)
- Spring 2017 MATH 1610 – Calculus I, MATH 2660 – Linear Algebra, & MATH 4970 – Special Topics in Differential Equations
- Fall 2016: None (AUM Sabbatical)
- Summer 2016: None (NSF funded research)
- Spring 2016: MATH 1620 – Calculus II & MATH 4220/6220 – Analysis II
- Fall 2015: MATH 2690 – Ordinary Differential Equations & MATH 4210/6210 – Analysis I
- Summer 2015: MATH 0800 – Intermediate Algebra, MATH 1150 – Precalculus Algebra & Trig, & MATH 4970 – Special Topics in Differential Equations
- Spring 2015: CSCI 2000 – Structured Programming I (C++), MATH 1610 – Calculus I, & MATH 2660 – Linear Algebra
- Fall 2014: CSCI 2000 – Structured Programming I (C++), MATH 2630 – Calculus III, MATH 1120 – Precalculus Algebra, & HONR 4937 – UHP Independent Study
- Summer 2014: MATH 0800 – Intermediate Algebra (2 sections) & MATH 6970 – Ordinary Differential Equations I
- Spring 2014: MATH 4220/6220 – Analysis II & MATH 1620 – Calculus II
- Fall 2013: CSCI 2000 – Structured Programming I (C++), MATH 1620 – Calculus II, & MATH 4210/6210 – Analysis I
- Summer 2013: MATH 1100 – Finite Mathematics, MATH 0800 – Intermediate Algebra, MATH 6970 – Ordinary Differential Equations I, MATH 4970 – Special Topics in Differential Equations
- Spring 2013: MATH 4220/6220 – Analysis II & MATH 2660 – Linear Algebra
- Fall 2012: MATH 1100 – Finite Mathematics (2 sections), MATH 1610 – Calculus I, & MATH 4210/6210 – Analysis I
- Summer 2012: MATH 1100 – Finite Mathematics, MATH 1610 – Calculus I, & MATH 4970 – Special Topics in Differential Equations
- Spring 2012: MATH 1150 – Precalculus Alg. & Trig., MATH 1620 – Calculus II, & MATH 2660 – Linear Algebra
- Fall 2011: MATH 1150 – Precalculus Alg. & Trig. and MATH 1610 – Calculus I

Instructor of Record at Mississippi State University   2007 - 2011
- Spring 2011: MA 1723 – Calculus II, 1 section
- Fall 2010: MA 1713 – Calculus I, 3 sections
- Spring 2010: MA 1713 – Calculus I, 2 sections
- Fall 2009: MA1713 – Calculus I, 2 sections
- Spring 2009: MA1713 – Calculus I and MA1313 – College Algebra
- Fall 2008: MA1713 – Calculus I, 2 sections
- Spring 2008: MA1713 – Calculus I, 2 sections
- Fall 2007: MA 1713 – Calculus I, 2 sections

Adjunct Instructor at Mississippi College   2005 - 2011
- Summer 2009: MAT 101 – College Algebra
- Summer 2007: MAT 101 – College Algebra
- Spring 2006: MAT 207 – Finite Mathematics

- Fall 2005:   MAT 101 – College Algebra

Teaching Assistant at Mississippi State University   2006 - 2009
- Maymester 2009: Tutored in the Math Domain
- Maymester 2008: Tutored in the Learning Center
- Spring 2007: Tutored in the Learning Center and Mathematics Computer Lab
- Fall 2006: Tutored in the Learning Center and Mathematics Computer Lab\

Faculty Development

- Completed the **AUM Faculty Development Institute**, for certification to teach online mathematics courses   Nov 2011
- Completed the **Writing Across the Curriculum training**, for certification to teach writing intensive mathematics courses   Oct 2011

Professional Service

Special Session Organization at Regional, National, and International Conferences:

1. **Co-organizer** of the special session, "Reaction Diffusion Models with Applications in Spatial Ecology" at the *2022 Joint Mathematics Meetings*, Seattle, WA   2021 - 2022
2. **Co-organizer** of the special session, "Advances in theory & application of reaction diffusion equations" at the *13th AIMS International Conference on Dynamical Systems and Differential Equations*, Atlanta, GA (moved to Summer 2022)   2019 - 2022
3. **Co-organizer** of the special session, "Nonlinear Reaction Diffusion Models with Applications in Spatial Ecology" at the *2021 Joint Mathematics Meetings*, Washington, DC   2020 - 2021
4. **Co-organizer** of the special session, "Future Directions in Theory & Applications of Nonlinear Reaction-Diffusion Equations" at the *2020 Joint Mathematics Meetings*, Denver, CO   2019 - 2020
5. **Co-organizer** of the special session, "Nonlinear reaction-diffusion equations and their applications" at the 2019 *Spring Southeastern Sectional Meeting of the American Mathematical Society*, Auburn, AL   2018 - 2019
6. **Co-organizer** of the special session, "Advances in theory & application of reaction diffusion equations" at the *11th AIMS International Conference on Dynamical Systems and Differential Equations*, Orlando, FL   2015 - 2016
7. **Co-organizer** of the special session, "Advances in theory & application of reaction diffusion equations" at the *2016 Joint Mathematics Meetings*, Seattle, WA   2015 - 2016
8. **Co-organizer** of the special session, "Theory & application of reaction diffusion equations" at the *2015 Joint Mathematics Meetings*, San Antonio, TX   2014 - 2015
9. **Co-organizer** of the special session, "Reaction diffusion equations and applications," at the *10th AIMS International Conference On Dynamical Systems and Differential Equations*, Madrid, Spain   2013 - 2014
10. **Co-organizer** of the special session, "Reaction diffusion equations and applications" at the *2014 Joint Mathematics Meetings*, Baltimore, MD   2013 - 2014
11. **Co-organizer** of the special session, "Understanding planet earth via reaction diffusion equations," at the *2013 Joint Mathematics Meetings*, San Diego, CA   2012 - 2013
12. **Co-organizer** of the special session, "Reaction diffusion equations and applications," at   2011 - 2012

the *Ninth AIMS International Conference On Dynamical Systems and Differential Equations*, Orlando, FL

13. **Co-organizer** of the special session, "Reaction diffusion equations and applications," at the *2012 Joint Mathematics Meetings*, Boston, MA — 2011 - 2012

Conference Organization:

14. **Main organizer**, MAA Southeastern Section Alabama State Dinner, AUM — 2015 - 2016
http://sections.maa.org/southeastern/

15. **Main organizer/Program Chair**, Alabama Association of College Teachers of Mathematics' Annual Meeting, AUM, http://ajmonline.org/AACTM/AACTMmeetings.htm — 2015 - 2016

16. **Program chair/webmaster**, *10th Mississippi State Conference on Differential Equations & Computational Simulations*, Mississippi State University, Starkville, MS University, http://www.ccs.msstate.edu/deconf/de2014/ — 2014 - 2015

17. **Main organizer/webmaster**, Department of Mathematics & Computer Science's 2015 Sonia Kovalevsky Day (outreach program to encourage young women to explore mathematics-related careers), http://sciences-srv.aum.edu/~jgoddard/skday2015/ — 2014 - 2015

18. **Main organizer/webmaster**, Department of Mathematics & Computer Science's 2013 Sonia Kovalevsky Day (outreach program to encourage young women to explore mathematics-related careers), http://sciences-srv.aum.edu/~jgoddard/skday2013/ — 2012 - 2013

19. **Program chair/webmaster**, *9th Mississippi State – University of Alabama Birmingham Conference on Differential Equations & Computational Simulations*, Mississippi State University, Starkville, MS http://www.ccs.msstate.edu/deconf/de2012/ — 2011 - 2012

20. **Local organizing committee member/webmaster**, *Differential Equations Weekend*, University of Memphis and Mississippi State University, http://shivaji.math.msstate.edu/dew2011/ — 2010 - 2011

21. **Local organizing committee member**, *8th Mississippi State – University of Alabama Birmingham Conference on Differential Equations & Computational Simulations*, Mississippi State University, Starkville, MS http://math.msstate.edu/events/de.conf/de2009/ — 2008 - 2009

Professional Society & Miscellaneous Professional Service:

22. **Member,** Scientific Committee, *UNCG Regional Mathematics and Statistics Conference* — 2014 - 2019
23. **Alabama State Director,** *Mathematical Association of America,* Southeastern Section — 2016 - 2019
24. **President,** Alabama Association of College Teachers of Mathematics — 2016 - 2017
25. **Vice president,** Alabama Association of College Teachers of Mathematics — 2015 - 2016
26. **Co-founder/president**, *Pi Club* (Association of Mathematics and Statistics Ph. D. graduate students with the purpose of collaboration, service, and fellowship), Mississippi State University — 2010 - 2011

Editorial and Reviewing Service:

27. **Main Editor**, Proceedings of the *10th Mississippi State Conference on Differential Equations & Computational Simulations* — 2014 - 2016
http://ejde.math.txstate.edu/

28. Ad Hoc **Reviewer** for:
    - Discrete and Continuous Dynamical Systems — 2019 - present
    - *Mathematical Biosciences and Engineering* — 2016 - present
    - *AMS Mathematical Reviews* — 2014 - present
    - *Communications in Applied Analysis* — 2013 - present
    - *Journal of Mathematical Analysis and Applications* — 2011 - present

29. Textbook **Reviewer** for Barnett/Ziegler/Byleen's, *Finite Mathematics for Business, Economics, Life Sciences and Social Sciences*, 12 edition, Pearson — Fall 2012

30. **Main Editor**, Proceedings of the *9th Mississippi State – University of Alabama Birmingham Conference on Differential Equations & Computational Simulations*, Conference 20, 2013 http://ejde.math.txstate.edu/conf-proc/20/toc.html/ — 2012 - 2013

University Service

Member, AUM COS Undergraduate Research Committee	2018 - present
Member, AUM Mathematics Awards Committee	2017 - present
Chair, AUM Mathematics Curriculum Committee	2017 - present
Chair, AUM Mathematics Developmental Mathematics Committee	2016 – present
Member, AUM Administrator Evaluation Committee (university-wide)	2018 - 2021
Chair, AUM Mathematics Tenure & Promotion Committee	Fall 2020
Member, AUM COS Hiring Committee for QEP director	Spring 2020
Chair, AUM Mathematics Grade Appeals Review Committee	Spring 2020
Member, AUM Computer Science Third Year Review Committee	Spring 2020
Chair, AUM Mathematics Tenure & Promotion Committee	Fall 2019
Member, AUM Mathematics Hiring Committee for a lecturer position in math	Spring 2019
Chair, AUM Mathematics Third Year Review Committee	Spring 2019
Member, AUM Mathematics Hiring Committee for an assistant professor position in mathematics	Fall 2018
Member, AUM Mathematics Hiring Committee for Math Lab Coordinator	Summer 2018
Member, AUM Mathematics Hiring Committee for QEP Director	Summer 2018
Chair, AUM Mathematics Third Year Review Committee	Spring 2018
Member, AUM Mathematics Master's Degree in Applied and Computational Mathematics Program Proposal committee	2017 - 2018
Chair, AUM CAS Undergraduate Research Committee	2015 - 2018
Member, AUM SACS Quality Enhancement Program Committee (university-wide)	2017 - 2018
Member, AUM Administrator Evaluation Committee (university-wide)	2011 - 2017
Member, AUM Mathematics Hiring Committee for an assistant professor position in computer science	Fall 2017
Member, AUM Mathematics Hiring Committee for an instructor's position	Fall 2017
Member, AUM Mathematics SK Day Organizing Committee	Fall 2017
Member, AUM Mathematics Hiring Committee for several instructor's positions	Spring 2016
Co-advisor for the AUM Mathematics/Pre-Engineering major	2012 - 2016
Faculty advisor for the AUM Mathematics Club	2012 - 2016
Member, AUM Mathematics Scholarship Committee	2015 - 2016
Member, AUM CAS Undergraduate Research Committee	2014 - 2015
Member, AUM Mathematics Hiring Committee for an instructor's position	Fall 2015
Chair, AUM Mathematics Hiring Committee for an assistant professor position in mathematics	Fall 2015
Member, AUM CAS Distinguished Teaching Award Nominations Committee	Spring 2015
Member, AUM CAS Advisory Committee for the SSRP	Spring 2015
Chair/Webmaster, AUM Mathematics SK Day Organizing Committee	Fall 2015
Chair, AUM Mathematics Hiring Committee for an assistant professor position in mathematics	Fall 2014
Member, AUM Mathematics Annual Assessment Committee	Spring 2014
Member of the AUM Mathematics SRAC 2014 Local Organizing Committee	Spring 2014
Member of the AUM Mathematics Calculus Textbook Selection Committee	Spring 2014
Member, AUM Mathematics Hiring Committee for an assistant professor position in computer science	Fall 2013
Co-Chair/Webmaster, AUM Mathematics SK Day Organizing Committee	Fall 2013
Chair, AUM Mathematics Hiring Committee for an instructor's position	Spring 2013
Member, AUM Mathematics ASPE Scholarship Selection Committee	2012 - 2015

- **Chair,** AUM Mathematics Hiring Committee for an instructor's position   Fall 2012
- **Participated** in AUM Mathematics new student orientation   2012 - 2015
- **Member,** AUM Mathematics Hiring Committee for an instructor's position   Summer 2012
- **Judge**, 2012 AUM SOS Undergraduate Research Symposium   April 2012
- **Member,** AUM Mathematics Master's Degree in Computational Mathematics   2011 - 2012
  Program Proposal committee

Community Service

1. College student leader, Frazer UMC, Montgomery, AL   2020 -
2. Senior high student small group leader and high school master teacher, Frazer UMC,   2017 - 2020
   Montgomery, AL
3. College student small group leader, Frazer UMC, Montgomery, AL   2013 - 2016
4. Invited speaker at the *2012 MS School for Math & Science Math & Science Day,*   Mar 2012
   (presented 2 sessions for high school students) Columbus, MS
5. Assistant Scoutmaster, Troop 99, Boy Scouts of America, Jackson, MS   2001 - 2015
6. Board Member, Aldersgate Youth Retreat, Jackson, MS   2000 - 2016
7. Guest Speaker, Aldersgate Youth Retreat, Jackson, MS   '10, '11, '15
8. Worship Leader, New Covenant UMC, Jackson, MS   1999 - 2010
9. Co-Director, Aldersgate Youth Retreat, Jackson, MS   2004 - 2009
10. Lay Leader, New Covenant UMC, Jackson, MS   2004 - 2009
11. Assistant Youth Minister, New Covenant UMC, Jackson, MS   2001 - 2008
12. Leadership Team, Baptist Student Union, Mississippi College, Clinton, MS   2003 - 2004
13. Assistant Director, Aldersgate Youth Retreat, Jackson, MS   2002 - 2004
14. Leadership Team, Baptist Student Union, Hinds Community College, Raymond, MS   2001 - 2002
15. Praise Band, Baptist Student Union, Hinds Community College, Raymond, MS   2000 - 2001

Professional Memberships

- Mathematical Association of America   2010 - present
- American Mathematical Society   2006 – present
- Ecological Society of America   2020 – present

Computational and Technical Skills

- Programming Knowledge
  - C / C++
  - Visual and Quick Basic
  - HTML, PHP, and JavaScript
  - Java
- Operating Systems used: DOS, Windows 3.1, 95, 98, 2000, ME, XP, Vista, 7, 10, and Linux
- Mathematica, MatLab, and LaTeX
- Web designing in HTML with PHP server-side scripting

References

1. **Dr. R. Shivaji**
   H. Barton Excellence Professor
   Department of Mathematics and Statistics
   University of North Carolina Greensboro
   shivaji@uncg.edu

2. **Dr. Junping Shi**
   Professor & Department Chair
   Department of Mathematics
   College of William and Mary
   shij@math.wm.edu; (757)221-2030

3. **Dr. Alfonso Castro**
   Professor
   Department of Mathematics
   Harvey Mudd College
   castro@g.hmc.edu; (909)607-3171