# Jerome Goddard II

Department of Mathematics Auburn University Montgomery Montgomery, AL 36124-4023 Phone: (334) 244-3023 Email: jgoddard@aum.edu Website: <u>http://www.jeromegoddard2.com</u>

## Education

<ul> <li>Ph.D. in Mathematical Sciences</li> <li>Mississippi State University <ul> <li>Concentration: Differential Equations (Nonlinear Boundary Value Problems)</li> <li>Major Advisor: Prof. Ratnasingham Shivaji</li> <li>Dissertation: "Classes of reaction diffusion equations with nonlinear boundary conditions"</li> </ul> </li> </ul>	August 2011
<ul> <li>Master of Science in Mathematics</li> <li>Mississippi College <ul> <li>Graduated Summa Cum Laude</li> <li>Major Advisor: Prof. John Travis</li> <li>Thesis: "Mathematical estimation of potential risk of Lyme disease in Mississippi"</li> </ul> </li> </ul>	May 2006
<ul> <li>Bachelor of Science in Mathematics</li> <li>Mississippi College <ul> <li>Graduated Summa Cum Laude</li> <li>Minor: Computer Science</li> </ul> </li> <li>Academic Positions</li> </ul>	May 2004
Distinguished Research Associate Professor of Mathematics Auburn University Montgomery	2019 - present
Assistant to the Chair (Mathematics) Auburn University Montgomery	2018 - present
Associate Professor of Mathematics (with Tenure) Auburn University Montgomery	2015 - 2019
Director of Mathematical Studies Auburn University Montgomery	2015 - 2018
Assistant Professor of Mathematics Auburn University Montgomery	2011 - 2015
Graduate Teaching Assistant Mississippi State University	2006 - 2011

#### **Research Interests**

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

#### **Awards and Honors**

٠	Distinguished Research Associate Professor Award (2019 – 2022, \$3,000), AUM	2019
٠	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	
٠	School of Sciences Junior Faculty award (2012 – 2013, \$1,000), AUM	2013
٠	2011 Graduate Doctoral Student Research award, MSU	2011
٠	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
٠	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
٠	Mu Alpha Theta, Hinds Community College	2002
٠	Phi Theta Kappa, Hinds Community College	2002
٠	Eagle Scout, Troop 99, Boy Scouts of America	1998

#### **Research Publications**

#### **Authored Books:**

1. <u>Goddard's Physician's Guide to Arthropods of Medical Importance, Seventh Edition</u>, 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):

 "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  "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

- "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. <u>http://dx.doi.org/10.1016/j.jmaa.2010.09.057</u>
- "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

- "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. <u>http://dx.doi.org/10.2140/involve.2013.6.399</u>
- "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. <u>http://dx.doi.org/10.1186/1687-2770-2013-97</u>
- 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

- "Halo-shaped bifurcation curves in ecological systems," with R. Shivaji, Electronic Journal of Differential Equations, vol. 2014, no. 88 (2014), 1-27. <u>http://ejde.math.txstate.edu/Volumes/2014/88/abstr.html</u>
- "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. <u>https://www.mdpi.com/2075-4450/6/4/792</u>
- 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
- "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
- "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

- "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. <u>https://doi.org/10.1186/s13661-018-1090-z</u>
- "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

 "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, (2019), 1-15.
 <a href="http://www.aimsciences.org/article/doi/10.3934/dcdss.2020245">http://www.aimsciences.org/article/doi/10.3934/dcdss.2020245</a>

- "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
- "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, *accepted in* Discrete and Continuous Dynamical Systems Series S (2020).

#### **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. <u>http://ejde.math.txstate.edu/conf-proc/19/g2/abstr.html</u>
- 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

<ul> <li>External Funding:</li> <li>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,"</li> </ul>	Aug 2019
<ul> <li>Awarded: \$120,930, 8/1/2019 – 7/31/2022</li> <li>NSF Grant (DMS-1516560) as PI in the Mathematical Biology Program, entitled "Collaborative Research: Mathematical &amp; Experimental Analysis of Ecological Models: Patches, Landscapes, and Conditional Dispersal on the Boundary" Awarded: \$137,822, 8/15/2015 – 7/31/2019</li> </ul>	Aug 2015
<ul> <li>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</li> </ul>	April 2014
<ul> <li>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</li> </ul>	July 2012
Internal Grant Awards:	
<ul> <li>AUM School of Sciences Supplemental Travel Grant to attend the 2015 Joint Mathematics Meetings</li> <li>Awarded: \$1,000</li> </ul>	Jan 2015
<ul> <li>AUM Faculty Research Conference Fund Travel Grant to attend the 2015 Joint Mathematics Meetings Awarded: \$252</li> </ul>	Jan 2015
<ul> <li>AUM School of Sciences Supplemental Travel Grant to attend the 2014 Joint Mathematics Meetings Awarded: \$1,000</li> </ul>	Jan 2014
<ul> <li>AUM Lecturer Program Grant to support the 2013 SK Day keynote speaker's travel expenses (Dr. Katie Johnson, Florida Gulf Coast University)</li> <li>Awarded: \$804</li> </ul>	Nov 2013
<ul> <li>AUM Faculty Research Conference Fund Travel Grant to attend the 2013 Joint Mathematics Meetings</li> <li>Awarded: \$290</li> </ul>	Jan 2013
<ul> <li>AUM School of Sciences Supplemental Travel Grant to attend the 2013 Joint Mathematics Meetings</li> <li>Awarded: \$1,000</li> </ul>	Jan 2013
<ul> <li>AUM Faculty Research Conference Fund Travel Grant to attend the 2012 AIMS 9<sup>th</sup> International Conference on Dynamical Systems and Differential Equations Awarded: \$290</li> </ul>	May 2012
<ul> <li>AUM School of Sciences Supplemental Travel Grant to attend the 2012 AIMS 9<sup>th</sup> International Conference on Dynamical Systems and Differential Equations Awarded: \$1,000</li> </ul>	April 2012
<ul> <li>AUM Research Grant-in-Aid proposal, "Population models with diffusion, harvesting, and nonlinear boundary conditions" Awarded: \$1,100</li> </ul>	Jan 2012
	0 ( 0011

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

#### Ph.D. Student Mentorship

For the following students, I co-directed their dissertation with Prof. R. Shivaji at UNCG, as a significant portion of their dissertations derived from my two NSF grants on habitat fragmentation and served as a member of their Ph.D. Committee: Amila Muthunavake, University of North Carolina Greensboro 2017 - presentDissertation: "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 ٠ Dissertation: "Positive solutions for classes of steady state reaction diffusion equations," successfully defended in Summer 2020. Current position: 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 served as a member of their Ph.D. Committee: **Ouinn Morris,** University of North Carolina Greensboro: 2013 - 2017 Dissertation: "Analysis of classes of superlinear semipositone problems with nonlinear boundary conditions," successfully defended in Summer 2017. Current position: 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 Dissertation: "Analysis of classes of singular steady state reaction diffusion equations," successfully defended in Summer 2017. Current position: Postdoc at University of Maine http://www.byungjaeson.epizy.com/ Undergraduate Student Mentorship

•	<b>NSF UGR in Differential Equations</b> , Auburn University Montgomery Students: Zane Blume-Babcock ('21), Sydney Fields ('21), & Dakota Mills ('20) Title: <i>Modeling trait-mediated dispersal among two competitors</i>	2020 - 2021
•	<b>NSF UGR in Differential Equations,</b> Auburn University Montgomery Students: Kayla Luther ('20) & Joanna Sumner ('20) Title: <i>Modeling constant yield harvesting with density dependent dispersal</i>	2018 - 2019
•	<b>NSF UGR in Differential Equations,</b> Auburn University Montgomery Students: Emily Cosgrove ('18) & Eddie Lindsey ('18) Title: <i>Modeling interaction-mediated dispersal</i>	2016 - 2018
	<ol> <li>Presented a contributed talk at the 2017 Southeastern Section Meeting of the MAA, Clayton State University, Macon, GA</li> </ol>	Mar 2017
	2. Presented a contributed talk at the 2017 This is Research,	Apr 2017

	Auburn University, Auburn, AL		
	<ol> <li>Presented a contributed talk at the 2017 Auburn Montgomery Research Symposium, Montgomery, AL</li> </ol>	, Undergraduate	Apr 2017
	<ol> <li>Presented a contributed talk at the 2017 NimBios Undergrada Conference, University of Tennessee, Knoxville, TN</li> </ol>	uate Research	Nov 2017
	<ol> <li>Presented a contributed talk at the 2018 Southeastern Section MAA, Clemson University, Clemson, SC</li> </ol>	n Meeting of the	Mar 2018
	<ol> <li>Presented a contributed talk at the 2018 This is Research, Auburn University, Auburn, AL</li> </ol>		Apr 2018
	7. Presented a contributed talk at the 2018 Auburn Montgomery Research Symposium, Montgomery, AL	<sup>,</sup> Undergraduate	Apr 2018
	8. Presented a contributed talk at the 2018 Ecological Society of New Orleans, LA	f America Meeting,	Aug 2018
•	<b>NSF UGR in Differential Equations,</b> Auburn University Monta Students: Alyssa Barnett ('16) & Dexter Harrell ('16)	gomery	2015 - 2016
	<ul> <li>Title: Landscape level modeling of habitat fragmentation via rea</li> <li>9. Presented a contributed talk at the 2016 Southeastern Section MAA, University of Alabama Birmingham, Birmingham, AL</li> </ul>	n Meeting of the	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 Research Symposium, Montgomery, AL	<sup>,</sup> Undergraduate	Apr 2016
•	Students: Jordan Berry ('14) & Jordan Price ('16)		2014 - 2015
	<ul> <li>Title: Ecological systems with U-shaped density dependent dispering 12. Presented a contributed talk at the 10<sup>th</sup> University of North C Regional Mathematics &amp; Statistics Conference, Greensboro,</li> </ul>	'arolina Greensboro	Nov 2014
	<ol> <li>Presented a contributed talk at the 2015 Southeastern Section MAA, University of North Carolina Wilmington, Wilmingtor</li> </ol>	n Meeting of the	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 Research Symposium, Montgomery, AL	, Undergraduate	Apr 2015
•	Students: Lyndee Bobo ('14), Zach Burnett ('15), & Heather Pie	erce ('15)	2013 - 2014
	Title: <i>Ecological systems with aggregation, grazing, &amp; Σ-shaped</i> 16. Presented a contributed talk at the 9 <sup>th</sup> University of North Ca	rolina	Nov 2013
	<ul> <li>Greensboro Regional Mathematics &amp; Statistics Conference,</li> <li>17. Presented a contributed talk at the 2014 Southeastern Section MAA, Tennessee Tech University, Cookeville, TN</li> </ul>		Mar 2014
	<ul> <li>18. Presented a contributed talk at the 2014 Auburn Montgomery Research Symposium, Montgomery, AL</li> <li>* UGR Team won Honorable Mention for their presentation</li> </ul>	0	Apr 2014
•	<b>UGR in Differential Equations,</b> Auburn University Montgome Students: Kev Johnson ('15), Daniel McElveen ('13), & Katelyn Title: <i>Diffusive logistic equation with nonlinear boundary condit</i> <i>bifurcation curves</i>	Sanders ('14)	2012-2013
	19. Presented a contributed talk at the $8^{th}$ University of North Ca	rolina Greensboro	Nov 2012

	<ul> <li>Regional Mathematics &amp; Statistics Conference, Greensboro, NC</li> <li>20. Presented a contributed talk at the 2013 Southeastern Section Meeting of the MAA, Winthrop University, Rock Hill, SC</li> </ul>	Mar 2013
	* <b>Kev Johnson</b> won one of only 8 Patterson Awards for Best Undergraduate Talk	M 2012
	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	Apr 2013
	Research Symposium, Montgomery, AL	71p1 2015
•	NSF REU in Applied Mathematics and Biostatistics, Mississippi State University	2010 - 2011
	I had the opportunity to serve in <i>two</i> summer REU programs at multiple levels: 1. served as a graduate student member of the organizing committee	
	<ol> <li>served as a graduate student memoer of the organizing committee</li> <li>taught mini-courses on LaTeX and Mathematica® to the entire group</li> </ol>	
	<ol> <li>aught mini-courses on Larex and Mathematicate to the entire group</li> <li>helped mentor five undergraduates</li> </ol>	
	<ol> <li>4. mentored a first year Ph.D. graduate student in how to lead/teach undergraduates</li> </ol>	
	Thentored a mist year r n.D. graduate student in now to read/teach undergraduates	

- 5. helped design the REU website.
- 6.

## **Conference/Workshop Presentations**

#### **Invited Plenary Presentations:**

1.	<b>Distinguished lecturer for students</b> at the <i>Mathematical Association of America</i> <i>Southeastern 2016 Section Meeting</i> , University of Alabama Birmingham, Birmingham, AL	Mar 2016
2.	Plenary talk at the 10 <sup>th</sup> University of North Carolina Greensboro Regional Mathematics & Statistics Conference, Greensboro, NC	Nov 2014
Invite	ed Seminar/Colloquium Presentations:	
3.	Seminar talk at College of William & Mary, Williamsburg, VA	Jan 2017
4.		Nov 2016
5.	Seminar talk on jobs in academia, Mathematics and Statistics Professional	June 2016
	Development Lecture Series, University of North Carolina Greensboro	
6.	Colloquium talk at College of Arts & Sciences Mini-College, AUM	June 2016
7.	Commencement address at Prattville High School Mu Alpha Theta Induction,	Mar 2016
	Prattville, AL	
8.	Colloquium talk at University of Tennessee Knoxville, Knoxville, TN	Mar 2016
9.	Colloquium talk at CUNY: Graduate Center, New York City, NY	Oct 2015
10	Colloquium talk at Winthrop University, Rock Hill, SC	Jul 2015
11.	Colloquium talk at Spring Fever, Auburn University Montgomery	Mar 2015
12	Colloquium talk at Southern Polytechnic State University, Marietta, GA	Sept 2014
13	Colloquium talk at Birmingham Southern College, Birmingham, AL	Nov 2013
14	Colloquium talk at the 2012 MS School for Math & Science's Math & Science Day,	Mar 2012
	Columbus, MS	
15.	Colloquium talk at the 2012 Research Experience for Teachers (RET) at Mississippi	Feb 2012
	State University, Starkville, MS	
16	Colloquium talk at University of North Carolina Greensboro, Greensboro, NC	Oct 2011
	Colloquium talk to the SIAM Student Chapter, Auburn University, Auburn, AL	Oct 2011
18.	Colloquium talk at the Mississippi College Mathematics Club, Clinton, MS	Feb 2009

## **Invited Special Session Presentations:**

;	Invited to present a talk in the special session, "Evolution Equations and Applications" at the 2019 Spring Southeastern Sectional Meeting of the American Mathematical	Mar 2019
20.	Society, Auburn, AL 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
21.	Invited to present a talk & chaired a session at the 2018 Variational and Topological Methods Conference, Northern Arizona University, Flagstaff, AZ	June 2018
22.	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
23.	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
24.	Invited to present a talk in International Workshop on Recent Advances in Evolution Equations and Applications, Auburn University, Auburn, AL	Jul 2016
25.	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 11 <sup>th</sup> International Conference on Dynamical Systems and Differential Equations, Orlando, FL	Jul 2016
26.	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 <i>Meetings</i> , Seattle, WA	Jan 2016
27.	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
;	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 10 <sup>th</sup> International Conference on Dynamical Systems and Differential Equations, Madrid, Spain	Jul 2014
29.	Invited to present a talk in the special session, "Nonlinear elliptic PDE and applications," <i>SIAM Southeastern Atlantic Sectional Meeting</i> , Florida Tech University, Melbourne, FL	Mar 2014
30.	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
:	Invited to present a talk in the special session, "Nonlinear elliptic and wave equations and applications," <i>AMS Fall Eastern Sectional Meeting</i> , Temple University, Philadelphia, PA	Oct 2013
32. ]	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
33.	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
34.	Chaired a session and presented an invited talk in the special session, "Reaction diffusion equations and applications" at the 2012 <i>AIMS</i> 9 <sup>th</sup> <i>International Conference on Dynamical Systems and Differential Equations</i> , Orlando, FL	Jul 2012
35.	Invited to present a talk & chaired a session at the 2012 Variational and Topological Methods Conference, Northern Arizona University, Flagstaff, AZ	June 2012
36.	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
37 Invited to present a talk in the special session "Workshop on reaction diffusion

37. Invited to present a talk in the special session, "Workshop on reaction diffusion	May 2011
equations and application," at the Sixth International Conference on Dynamic Systems	
and Applications, Atlanta, GA	
38. Invited to present a talk in the special session, "Analysis of reaction-diffusion models,"	Jan 2011
at the 2011 Joint Mathematics Meetings, New Orleans, LA	

## **Contributed Presentations:**

0	ontributed Presentations:	
	39. 2018 Annual Meeting of the Ecological Society of America, New Orleans, LA	Aug 2018
	40. 2017 AACTM (Association of Alabama College Teachers of Mathematics),	Feb 2017
	Samford University, Birmingham, AL	
	41. 2017 Joint Mathematics Meetings, Atlanta, GA	Jan 2017
	42. AMS Fall Eastern Sectional Meeting, University of Alabama	Mar 2015
	Huntsville, Huntsville, AL	
	43. Mathematical Association of America Southeastern 2015 Section Meeting,	Mar 2015
	University of North Carolina Wilmington, Wilmington, NC	
	44. 2015 AACTM (Association of Alabama College Teachers of Mathematics),	Feb 2015
	University of Alabama, Tuscaloosa, AL	
	45. SEARCDE-2014 (Southeastern-Atlantic Regional Conference on Differential	Oct 2014
	Equations), University of Memphis, Memphis, TN	
	46. Mathematical Association of America Southeastern 2014 Section Meeting,	Mar 2014
	Tennessee Tech University, Cookeville, TN	
	47. 2014 AACTM (Association of Alabama College Teachers of Mathematics),	Feb 2014
	Auburn University, Auburn, AL	
	48. SEARCDE-2013 (Southeastern-Atlantic Regional Conference on Differential	Sept 2013
	Equations), University of Tennessee, Knoxville, TN	
	49. 2013 Auburn Research Week, Auburn University, Auburn, AL	Apr 2013
	50. First International Conference on Dynamics of Differential Equations, Georgia Tech,	Mar 2013
	Atlanta, GA	
	51. 2013 AACTM (Association of Alabama College Teachers of Mathematics),	Feb 2013
	Birmingham Southern College, Birmingham, AL	
	52. SEARCDE-2012 (Southeastern-Atlantic Regional Conference on Differential	Oct 2012
	Equations), Wake Forest University, Winston-Salem, NC	
	53. Mathematical Association of America Southeastern 2012 Section Meeting,	Mar 2012
	Clayton State University, Morrow, GA	
	54. SEARCDE-2011 (Southeastern-Atlantic Regional Conference on Differential	Oct 2011
	Equations), Georgia Southern University, Statesboro, GA	
	55. Chaired a contributed session and presented a talk at the 2011 Differential Equations	May 2011
	Weekend Conference, Mississippi State University	
	56. <i>Mathematical Association of America LA/MS 2011 Section Meeting</i> , Oxford, MS,	Mar 2011
	57. SEARCDE-2010 (Southeastern-Atlantic Regional Conference on Differential	Oct 2010
	<i>Equations)</i> , Virginia Tech, Blacksburg, VA	1 2010
	58. 2010 Joint Mathematics Meetings, San Francisco, CA	Jan 2010
	59. 2009 Differential Equations Weekend, University of Memphis, Memphis, TN	Nov 2009
	60. SEARCDE-2009 (Southeastern-Atlantic Regional Conference on Differential	Oct 2009
	<i>Equations)</i> , Mercer University, Macon, GA	Mary 2000
	61. Chaired a contributed session and presented a talk at the 8 <sup>th</sup> Mississippi State and	May 2009
	University of Alabama at Birmingham Differential Equations and Computational	
	Simulations Conference, Starkville, MS	Mar 2000
	62. <i>Mathematical Association of America LA/MS 2009 Section Meeting</i> , Clinton, MS	Mar 2009
	63. SEARCDE-2008 (Southeastern-Atlantic Regional Conference on Differential	Oct 2008

Equations), University of Arkansas, Little Rock, AR		
Poste	er Presentations:	
64	. International Conference on Infectious Diseases, Atlanta, GA, poster presentation	Oct 2006
Conf	erence/Workshop Attendance	
1.	10 <sup>th</sup> Mississippi State Differential Equations and Computational Simulations	Oct 2014
	Conference, Starkville, MS	
2.	9 <sup>th</sup> University of North Carolina Greensboro Regional Mathematics & Statistics	Nov 2013
	Conference, Greensboro, NC	
3.	8 <sup>th</sup> University of North Carolina Greensboro Regional Mathematics & Statistics	Nov 2012
	Conference, Greensboro, NC	
4.	9 <sup>th</sup> Mississippi State and University of Alabama at Birmingham Differential Equations	Oct 2012
	and Computational Simulations Conference, Starkville, MS	
5.	7 <sup>th</sup> University of North Carolina Greensboro Regional Mathematics & Statistics	Nov 2011
	Conference, Greensboro, NC	
6.	AMS Southeastern Section Meeting, Special Session on Nonlinear Boundary Value	Sept 2011

Problems, Wake Forest University, Winston-Salem, NC 7. Mini Workshop on Mathematical Biology and Computational Modeling, High Mar 2010 Performance Computing Collaboratory, Mississippi State University, Starkville, MS

- 8. IMA PI Summer Program for Graduate Students on The Mathematics of Inverse Jun 2009 Problems, University of Delaware, Newark, DE
- 9. Mathematical Applications in Ecology and Evolution Workshop, High Aug 2008 Performance Computing Collaboratory, Mississippi State University, Starkville, MS
- 10. IMA Mathematical Modeling in Industry Workshop XII, University of Minnesota Aug 2008 Minneapolis, MN, (Submitted a report on Stability of Extending Films) 11. MBI Summer Program in Mathematical Bioengineering, Mathematical Biosciences Jul 2008 Institute, Ohio State University, Columbus, OH
- 12. 7<sup>th</sup> Mississippi State and University of Alabama at Birmingham Differential Equations Nov 2007 and Computational Simulations Conference, Birmingham, AL

### **Teaching Experience**

#### **Auburn University Montgomery**

2011 - present

- Fall 2020: MATH 2630 – Calculus III, MATH 3000 – Intro to Higher Mathematics, & MATH 4970 - Special Topics in Differential Equations
- 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
- CSCI 2000 Structured Programming I (C++) & MATH 3690 Ordinary Fall 2017: **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

- 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

- 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

- 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

2007 - 2011

2005 - 2011

2006 - 2009

• Fall 2006: Tutored in the Learning Center and Mathematics Computer Lab

## **Faculty Development**

•	Completed the AUM Faculty Development Institute, for certification to teach	Nov 2011
	online mathematics courses	0 ( 2011
•	Completed the Writing Across the Curriculum training, for certification to teach	Oct 2011
	writing intensive mathematics courses	

## **Professional Service**

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

	1.	<b>Co-organizer</b> of the special session, "Nonlinear Reaction Diffusion Models with Applications in Spatial Ecology" at the <i>2021 Joint Mathematics Meetings</i> , Washington, DC	2020 - 2021
	2.	<b>Co-organizer</b> of the special session, "Advances in theory & application of reaction diffusion equations" at the 13 <sup>th</sup> AIMS International Conference on Dynamical Systems and Differential Equations, Atlanta, GA	2019 - 2021
	3.	<b>Co-organizer</b> of the special session, "Future Directions in Theory & Applications of Nonlinear Reaction-Diffusion Equations" at the <i>2020 Joint Mathematics Meetings</i> , Denver, CO	2019 - 2020
	4.	<b>Co-organizer</b> of the special session, "Nonlinear reaction-diffusion equations and their applications" at the 2019 <i>Spring Southeastern Sectional Meeting of the American Mathematical Society</i> , Auburn, AL	2018 - 2019
	5.	<b>Co-organizer</b> of the special session, "Advances in theory & application of reaction diffusion equations" at the <i>11<sup>th</sup> AIMS International Conference on Dynamical Systems and Differential Equations</i> , Orlando, FL	2015 - 2016
	6.	<b>Co-organizer</b> of the special session, "Advances in theory & application of reaction diffusion equations" at the <i>2016 Joint Mathematics Meetings</i> , Seattle, WA	2015 - 2016
	7.	<b>Co-organizer</b> of the special session, "Theory & application of reaction diffusion equations" at the 2015 Joint Mathematics Meetings, San Antonio, TX	2014 - 2015
	8.	<b>Co-organizer</b> of the special session, "Reaction diffusion equations and applications," at the 10 <sup>th</sup> AIMS International Conference On Dynamical Systems and Differential Equations, Madrid, Spain	2013 - 2014
	9.	<b>Co-organizer</b> of the special session, "Reaction diffusion equations and applications" at the 2014 Joint Mathematics Meetings, Baltimore, MD	2013 - 2014
	10.	<b>Co-organizer</b> of the special session, "Understanding planet earth via reaction diffusion equations," at the <i>2013 Joint Mathematics Meetings</i> , San Diego, CA	2012 - 2013
	11.	<b>Co-organizer</b> of the special session, "Reaction diffusion equations and applications," at the <i>Ninth AIMS International Conference On Dynamical Systems and Differential Equations</i> , Orlando, FL	2011 - 2012
	12.	<b>Co-organizer</b> of the special session, "Reaction diffusion equations and applications," at the <i>2012 Joint Mathematics Meetings</i> , Boston, MA	2011 - 2012
Со	nfe	rence Organization:	
	13.	Main organizer, MAA Southeastern Section Alabama State Dinner, AUM	2015 - 2016

 

 14. Main organizer/Program Chair, Alabama Association of College Teachers of Mathematics' Annual Meeting, AUM, <a href="http://ajmonline.org/AACTM/AACTM/meetings.htm">http://ajmonline.org/AACTM/AACTM/meetings.htm</a>

15. Program chair/webmaster, 10 <sup>th</sup> Mississippi State Conference on Differential	2014 - 2015
Equations & Computational Simulations, Mississippi State University, Starkville, MS	
University, <u>http://www.ccs.msstate.edu/deconf/de2014/</u> 16. <b>Main organizer/webmaster</b> , Department of Mathematics & Computer Science's	2014 - 2015
2015 Sonia Kovalevsky Day (outreach program to encourage young women to explore	2014 - 2013
mathematics-related careers), <u>http://sciences-srv.aum.edu/~jgoddard/skday2015/</u>	
17. Main organizer/webmaster, Department of Mathematics & Computer Science's	2012 - 2013
2013 Sonia Kovalevsky Day (outreach program to encourage young women to explore	2012 - 2013
mathematics-related careers), <u>http://sciences-srv.aum.edu/~jgoddard/skday2013/</u>	
18. <b>Program chair/webmaster</b> , 9 <sup>th</sup> Mississippi State – University of Alabama Birmingham	2011 - 2012
Conference on Differential Equations & Computational Simulations, Mississippi State	_011 _012
University, Starkville, MS http://www.ccs.msstate.edu/deconf/de2012/	
19. Local organizing committee member/webmaster, Differential Equations Weekend,	2010 - 2011
University of Memphis and Mississippi State University, http://shivaji.math.msstate.edu/dew2011/	
20. Local organizing committee member, 8 <sup>th</sup> Mississippi State – University of Alabama	2008 - 2009
Birmingham Conference on Differential Equations & Computational Simulations,	
Mississippi State University, Starkville, MS http://math.msstate.edu/events/de.conf/de2009/	
Professional Society & Miscellaneous Professional Service:	
21. Member, Scientific Committee, UNCG Regional Mathematics and Statistics Conference	2014 - 2019
22. Alabama State Director, Mathematical Association of America, Southeastern Section	2016 - 2019
23. President, Alabama Association of College Teachers of Mathematics	2016 - 2017
24. Vice president, Alabama Association of College Teachers of Mathematics	2015 - 2016
25. Co-founder/president, Pi Club (Association of Mathematics and Statistics Ph. D.	2010 - 2011
graduate students with the purpose of collaboration, service, and fellowship),	
Mississippi State University	
Editorial and Reviewing Service:	
26. Main Editor, Proceedings of the 10 <sup>th</sup> Mississippi State Conference on Differential	2014 - 2016
Equations & Computational Simulations	
http://ejde.math.txstate.edu/	
27. Ad Hoc <b>Reviewer</b> for:	2010 magaint
<ul> <li>Discrete and Continuous Dynamical Systems</li> <li>Mathematical Pieceionees and Engineering</li> </ul>	2019 - present
<ul> <li>Mathematical Biosciences and Engineering</li> <li>AMS Mathematical Reviews</li> </ul>	2016 - present 2014 - present
<ul> <li>AMS Mathematical Reviews</li> <li>Communications in Applied Analysis</li> </ul>	2014 - present 2013 - present
<ul> <li>Journal of Mathematical Analysis and Applications</li> </ul>	2013 - present 2011 - present
28. Textbook <b>Reviewer</b> for Barnett/Ziegler/Byleen's, <i>Finite Mathematics for Business</i> ,	Fall 2012
Economics, Life Sciences and Social Sciences, 12 edition, Pearson	
29. Main Editor, Proceedings of the $9^{th}$ Mississippi State – University of Alabama	2012 - 2013
Birmingham Conference on Differential Equations & Computational Simulations,	
Conference 20, 2013 http://ejde.math.txstate.edu/conf-proc/20/toc.html/	

## **University Service**

•	Chair, AUM Mathematics Tenure & Promotion Committee	Fall 2020
٠	Member, AUM COS Undergraduate Research Committee	2018 - present
٠	Member, AUM Administrator Evaluation Committee (university-wide)	2018 - present
٠	Member, AUM Mathematics Awards Committee	2017 - present
٠	Chair, AUM Mathematics Curriculum Committee	2017 - present

•	Chair, AUM Mathematics Developmental Mathematics Committee	2016 - present
•	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	Fall 2018
	in mathematics	
•	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	2017 - 2018
	Mathematics Program Proposal committee	
•	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	Fall 2017
	in computer science	
•	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	Fall 2015
	in mathematics	
•	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	Fall 2014
	in mathematics	
•	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	Fall 2013
	in computer science	
•	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.	Senior high student small group leader and high school master teacher, Frazer UMC,	2017 - present
	Montgomery, AL	-
2.	College student small group leader, Frazer UMC, Montgomery, AL	2013 - 2016
3.	Invited speaker at the 2012 MS School for Math & Science Math & Science Day,	Mar 2012
	(presented 2 sessions for high school students) Columbus, MS	
4.	Assistant Scoutmaster, Troop 99, Boy Scouts of America, Jackson, MS	2001 - 2015
5.	Board Member, Aldersgate Youth Retreat, Jackson, MS	2000 - 2016
6.	Guest Speaker, Aldersgate Youth Retreat, Jackson, MS	<i>`</i> 10, <i>`</i> 11, <i>`</i> 15
7.	Worship Leader, New Covenant UMC, Jackson, MS	1999 - 2010
8.	Co-Director, Aldersgate Youth Retreat, Jackson, MS	2004 - 2009
9.	Lay Leader, New Covenant UMC, Jackson, MS	2004 - 2009
10.	Assistant Youth Minister, New Covenant UMC, Jackson, MS	2001 - 2008
11.	Leadership Team, Baptist Student Union, Mississippi College, Clinton, MS	2003 - 2004
12.	Assistant Director, Aldersgate Youth Retreat, Jackson, MS	2002 - 2004
13.	Leadership Team, Baptist Student Union, Hinds Community College, Raymond, MS	2001 - 2002
14.	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
  - o C / C++
  - Visual and Quick Basic
  - o HTML, PHP, and JavaScript
  - o 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 <a href="mailto:shij@math.wm.edu">shij@math.wm.edu</a>; (757)221-2030

### 3. Dr. Alfonso Castro

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