AZMY S. ACKLEH
CURRICULUM VITAE

PERSONAL

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EDUCATION

- Ph.D. Mathematics, University of Tennessee, Knoxville, August 1993.
- M.S. Mathematics, University of Tennessee, Knoxville, August 1990.
- B.S. Data Processing and Mathematics, University of the Cumberlands, Williamsburg KY, May 1988.

PROFESSIONAL POSITIONS

- November 2017 -- Present: Dr. Ray P. Authement Eminent Scholar Endowed Chair in Computational Mathematics, University of Louisiana at Lafayette.
- August 2016 -- October 2017: Devon Endowed Professor of Mathematics, University of Louisiana at Lafayette.
- August 2013 -- present: Dean of the R.P. Authement College of Sciences, University of Louisiana at Lafayette.
- January 2011 -- August 2013: Head of the Department of Mathematics, University of Louisiana at Lafayette.
- March 2010 -- July 2013: Director of Computation And Visualization Enterprise (CAVE).
- August 2007 -- July 2013: Dr. Ray P. Authement Eminent Scholar Endowed Chair in Computational Mathematics, University of Louisiana at Lafayette.
- August 2003 -- present: Professor of Mathematics, University of Louisiana at Lafayette.
- August 2002 -- July 2007: SLEMCO Endowed Professor of Mathematics, University of Louisiana at Lafayette.
- August 2002 -- July 2003: Associate Professor of Mathematics, University of Louisiana at Lafayette.
- August 2001 -- July 2002: Associate Professor of Mathematics, Texas Tech University.
- August 2000 -- July 2001: Associate Professor of Mathematics, University of Louisiana at Lafayette.
- August 1995 -- July 2000: Assistant Professor of Mathematics, University of Louisiana at Lafayette.
- March 1994 -- July1995: Visiting Assistant Professor, Center for Research in Scientific Computation, North Carolina State University.
- August 1993 -- February 1994: Visiting Assistant Professor of Mathematics, University of Tennessee.

RESEARCH INTERESTS

My current research interests are in the following areas of mathematical biology:

- The development of deterministic and stochastic population models with particular emphasis on age/size structured populations, invasive species, amphibians, phenotypic selection-mutation, and epidemics. The tools I use are ordinary/partial differential equations, difference equations, discrete and continuous Markov chain models, and Ito stochastic differential equations.
- Theoretical and computational approaches to stability analysis and long time behavior of solutions to mathematical models arising in biology.
- Computational methods for partial differential equations arising in biology with particular emphasis on finite difference and finite element methods and convergence analysis for these methods.
- Parameter estimation techniques with particular emphasis on identifying parameters in ordinary/partial differential equations arising in biology.

HONORS AND AWARDS

- Outstanding Doctoral Student Mentor 2016-17, University of Louisiana at Lafayette.
- Distinguished Professor Award 2007, University of Louisiana at Lafayette.
- Summer Research Award 1999, University of Louisiana at Lafayette.
- Summer Research Award 1996, University of Louisiana at Lafayette.
- The Graduate Student Achievement Award 1993, Department of Mathematics, University of Tennessee-Knoxville.
- Science Alliance scholarship 1991-1993, Department of Mathematics, University of Tennessee-Knoxville.
- Outstanding Student Award 1988, Department of Computer Information Systems, University of the Cumberlands, Williamsburg, Kentucky.
- Recipient of Summa Cum Laude graduation award 1988, University of the Cumberlands, Williamsburg, Kentucky.

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS

- Associate Editor, Journal of Mathematical Biosciences and Engineering, 2009-present.
- Member of:
  - American Mathematical Society (AMS).
  - Society of Industrial and Applied Mathematics (SIAM)
  - Society of Mathematical Biology (SMB).
  - International Society of Difference Equations (ISDE).

JOURNAL PUBLICATIONS

1. J. Banks, A.S. Ackleh, A. Veprauskas, R. Vargas and J. Stark, Environmental Indicators: The Trouble with Surrogates, Ecotoxicology, accepted for publication.
2. A.S. Ackleh, H. Caswell, R.A. Chiquet, T. Tang and A. Veprauskas, Sensitivity Analysis of the Recovery Time for a Population under the Impact of an Environmental Disturbance, accepted for publication in Natural Resource Modeling.

3. A. Veprauskas, A.S. Ackleh and T. Tang, Examining the Effect of Reoccurring Disturbances on Population Persistence with Application to Marine Mammals, Theoretical Biology, 455(2018), 109-117.
4. A.S. Ackleh, K.L. Sutton, T. Tang and L. Zhao, A Second Order Finite Difference Scheme for a Variable Infection-Structured Model of Mycobacterium Marinum Dynamics in Aquatic Animals, Journal of Nonlinear and Variational Analysis, 2(2018), 177-202.
5. A. Veprauskas, A.S. Ackleh, J.E. Banks, J.D. Stark, The Evolution of Toxicant Resistance in Daphnids and its Role on Surrogate Species, Theoretical Population Biology, 119(2018), 15-25.
6. A.S. Ackleh and R.L. Miller, A Model for the Interaction of Phytoplankton Aggregates and the Environment: Approximation and Parameter Estimation, Inverse Problems in Science and Engineering, 26(2018), 152-182.
7. J.E. Banks, R.I. Vargas, A.S. Ackleh, and J.D. Stark, Sublethal Effects in Pest Management: A Surrogate Species Perspective on Fruit Fly Control, Insects 8(2017), 1-6.
8. A.S. Ackleh and K.L. Sutton, Disparate Disease Outcomes in Chronic Infection: the Role of Intra-Host Variability, International Journal of Pure and Applied Mathematics, 116(2017), 343-352.
9. A.S. Ackleh, B. Ma, T. Tang, A High Resolution Finite Difference Method for a Model of Structured Susceptible-Infected Populations Coupled with the Environment, Numerical Methods for Partial Differential Equations, 33(2017), 1420-1458.
10. A.S. Ackleh, R.A. Chiquet, B. Ma, T. Tang, H. Caswell, A. Veprauskas, N. Sidorovskaia, Analysis of Lethal and Sublethal Impacts of Environmental Disasters on Sperm Whales Using Stochastic Modeling, Ecotoxicology 26(2017), 820-830.
11. A.S. Ackleh, B. Ma, R.L. Miller, A General Nonlinear Model for the Interaction of a Size-Structured Population and its Environment: Well-posedness and Approximation, Quarterly of Applied Mathematics, 74(2016), 671-704.
12. A.S. Ackleh, J. Cleveland, H.R. Thieme, Population Dynamics under Selection and Mutation: Long-Time Behavior for Differential Equations in Measure Spaces, Journal of Differential Equations, 261(2016), 1472-1505.
13. A.S. Ackleh, J. Carter, V.K. Chellamuthu and B. Ma, A Model for the Interaction of Frog Population Dynamics with Batrachochytrium dendrobatidis, Janthinobacterium lividum and Temperature and its Implication for Chytridiomycosis Management, Ecological Modelling, 320(2016), 158-169.
14. A.S. Ackleh, K. Deng, and Y. Wu, Competitive Exclusion and Coexistence in a Two-Strain Pathogen Model with Diffusion, Mathematical Biosciences and Engineering, 13(2016), 1-18.
15. A.S. Ackleh, J.M. Cushing and P.L. Salceanu, On the Dynamics of Evolutionary Competition Models, Natural Resource Modeling, 28(2015), 380-397.
16. A.S. Ackleh and P.L. Salceanu, Competitive exclusion and coexistence in an n-species Ricker model, Journal of Biological Dynamics, 9(2015), 321-331.
17. A.S. Ackleh, M. Delcambre, K. Sutton, A Size-Structured Model for the Spread of Mycobacterium marinum Using a Second-Order High Resolution Finite Difference Scheme, Journal of Biological Dynamics, 9(2015), 156-187.
18. R.A. Chiquet, T. Montgomery, B. Ma, A.S. Ackleh, A Matrix Population Model of Beaked Whales, Neural, Parallel, and Scientific Computations, 23(2015), 179-192.

19. A.S. Ackleh, J.Z. Farkas X. Li and B. Ma, Finite Difference Approximations for a Size-Structured Population Model with Distributed States in the Recruitment, Journal of Biological Dynamics, 9(2015), 2-31.
20. A.S. Ackleh, V.K. Chellamuthu and K. Ito, Finite Difference Approximations for Measure-Valued Solutions of a Hierarchically Size-Structured Population Model, Mathematical Biosciences and Engineering, 12(2015), 233-258.
21. A.S. Ackleh, R.J. Sacker and P.L. Salceanu, On a Discrete Selection-Mutation Model, Journal of Difference Equations and Applications, 20(2014), 1383-1403.
22. A.S. Ackleh, M. Delcambre, K.L. Sutton, D. Ennis, Structured Models for the Spread of Mycobacterium marinum: Foundations for a Numerical Approximation Scheme, Mathematical Biosciences and Engineering, 11(2014), 679-721.
23. J.E. Banks, J. Stark, R.I. Vargas and A.S. Ackleh, Deconstructing the Surrogate Species Concept: A Life History Approach to the Protection of Ecosystem Services, Ecological Applications, 24(2014), 770-778.
24. A.S. Ackleh, K.L. Sutton, K.N. Mutoji, A. Mallick and D.G. Ennis, A Structured Model for the Transmission Dynamics of *Mycobacterium marinum* Between Aquatic Animals, Journal of Biological Systems, 22(2014), 29-60.
25. A.S. Ackleh and P.L. Salceanu, Robust Uniform Persistence and Competitive Exclusion in a Nonautonomous Multi-Strain SIR Epidemic Model with Disease-Induced Mortality, Journal of Mathematical Biology, 68(2014), 453-475.
26. A. S. Ackleh and J. Z. Farkas, On the Net Reproduction Rate of Continuous Structured Populations with Distributed States at Birth, Computers and Mathematics with Applications, 66(2013), 1685-1694.
27. A.S. Ackleh, B. Ma, J. Thibodeaux, A Second Order High Resolution Finite Difference Scheme for a Structured Erythropoiesis Model Subject to Malaria Infection, Mathematical Biosciences, 245(2013), 2-11.
28. A.S. Ackleh and J. Thibodeaux, A Second-Order Finite Difference Approximation for a Mathematical Model of Erythropoiesis, Numerical Methods for Partial Differential Equations, 29(2013), 1821-1836.
29. A.S. Ackleh and B. Ma, A Second Order High Resolution Scheme for a Juvenile-Adult Model of Amphibians, Numerical Functional Analysis and Optimization, 34(2013), 365-403.
30. R. Chiquet, B. Ma, A.S. Ackleh, N. Pal, S. Sidorovskaia, Demographic Analysis of Sperm Whales Using Matrix Population Models, Ecological Modelling, 248(2013), 71-79.
31. J. Cleveland and A.S. Ackleh, Evolutionary Game Theory on Measure Spaces: Well-Posedness, Nonlinear Analysis: Real World Applications, 14(2013), 785-797.
32. B.G. Fitzpatrick, R. Scribner, A.S. Ackleh, G. Jacquez, J. Rasul, R. Rommel and N. Simonsen, Forecasting the Effect of the Amethyst Initiative on College Drinking, Alcoholism: Clinical and Experimental Research, 36(2012), 1608-1613.
33. A.S. Ackleh, K. Deng, X. Yang, Sensitivity Analysis for a Structured Juvenile-Adult Model, Computers and Mathematics with Applications, 64(2012), 190-200.
34. J.M. Cushing and A.S. Ackleh, A Net Reproductive Number for Periodic Matrix Models, Journal of Biological Dynamics, 6(2012), 166-188.
35. A.S. Ackleh, G.E. Ioup, J.W. Ioup, B. Ma, J.J. Newcomb, N. Pal, N. Sidorovskaia, C. Tiemann, Assessing the Deepwater Horizon Oil Spill Impact on Marine Mammal

Population Through Acoustics: Endangered Sperm Whales, Journal of Acoustical Society of America (JASA), 131(2012), 2306-2314.

36. A.S. Ackleh, J. Carter, K. Deng, Q. Huang, N. Pal and X. Yang, Fitting a Structured Juvenile-Adult Model for Green Tree Frogs to Population Estimates from Capture-Mark-Recapture Field Data, Bulletin of Mathematical Biology, 74(2012), 641-665.
37. P. Zhang and A.S. Ackleh, A Discrete Stage-Structured Two Species Competition Model with Sexual and Clonal Reproduction, Journal of Biological Dynamics, 6(2012), 2-16.
38. J.E. Banks, J.D. Stark, R.I. Vargas and A.S. Ackleh, Parasitoids and ecological risk assessment: Can toxicity data developed for one species be used to protect an entire guild? Biological Control, 59(2011), 336-339.
39. X. Yang, N. Pal, A.S. Ackleh and J. Carter, A Case Study of Green Tree Frog Population Size Estimation by Repeated Capture-Mark-Recapture Method with Individual Tagging. Journal of Statistical Computation and Simulation, 81(2011), 1879-1895.
40. A.S. Ackleh, R.A. Chiquet and P. Zhang, A Discrete Dispersal Model with Constant and Periodic Environments. Journal of Biological Dynamics,5(2011), 563-578.
41. A.S. Ackleh, B. Ma, P.L. Salceanu, Persistence and Global Stability in a Selection-Mutation Size-Structured Model, Journal of Biological Dynamics, 5(2011), 436-453.
42. A.S. Ackleh and R. A. Chiquet, Competitive Exclusion in a Discrete Juvenile-Adult Model with Continuous and Seasonal Reproduction. Journal of Difference Equations and Applications, 17(2011), 955-975.
43. J. Rasul, R. Rommel, G.M. Jacquez, B.G. Fitzpatrick, A.S. Ackleh, N. Simonson, R. Scribner, Heavy Episodic Drinking on College Campuses: Does Changing the Legal Drinking Age Make a Difference?. Journal of Studies on Alcohol and Drugs, 72(2011), 15-23.
44. A.S. Ackleh, K. Deng and Q. Huang, Stochastic Juvenile-Adult Models with Application to a Green Tree Frog Population. Journal of Biological Dynamics, 5(2011), 64-83.
45. A.S. Ackleh and K. Deng, Stability of a Delay Equation Arising From a Juvenile-Adult Model. Mathematical Biosciences and Engineering, 7(2010), 729-737.
46. J.E. Banks, A.S. Ackleh and J. Stark, The Use of Surrogate Species in Risk Assessment: Using Life History Data to Safeguard Against False Negatives. Risk Analysis, 30(2010), 175-182.
47. A.S. Ackleh, J. Carter , L. Cole , T. Nguyen, J. Monte and C. Pettit, Measuring and Modeling the Seasonal Changes of an Urban Green Treefrog (Hyla cinerea) Population. Ecological Modeling, 221(2010), 281-289.
48. A.S. Ackleh and P. Zhang, Competitive Exclusion in a Discrete Stage-Structured Two Species Model. Mathematical Modelling of Natural Phenomenon, 4(2009), 156-175.
49. R. Scribner, A.S. Ackleh, B.G. Fitzpatrick, G. Jacquez, J. Thibodeaux, R. Rommel, and N. Simonsen, Ecosystem Modeling of College Drinking: Development of a Deterministic Model for Testing Alcohol Control Policies. Journal of Studies on Alcohol and Drugs, 70(2009), 805-821.
50. A.S. Ackleh, B.G. Fitzpatrick, S. Scribner, N. Simonsen, J. Thibodeaux, Ecosystem Modeling of College Drinking: Parameter Estimation and Comparing Models to Data. Mathematical and Computer Modelling, 50(2009), 481-497.
51. A.S. Ackleh and K. Deng, A Nonautonomous Juvenile-Adult Model: Well-Posedness and Long-Time Behavior via a Comparison Principle. SIAM Journal on Applied Mathematics, 69(2009), 1644-1661.

52. S. Pathikonda, A.S. Ackleh, K. H. Hasenstein, S. Mopper, Invasion, Disturbance, and Competition: Modeling the Fate of Coastal Plant Populations. Conservation Biology, 23(2009), 164-173.
53. A.S. Ackleh and R. Chiquet, The Global Dynamics of a Discrete Juvenile-Adult Model with Continuous and Seasonal Reproduction. Journal of Biological Dynamics, 3(2009), 101-115.
54. A.S. Ackleh and P. DeLeenheer, Discrete Three-Stage Population Model: Persistence and Global Stability Results. Journal of Biological Dynamics, 2(2008), 415-427.
55. A.S. Ackleh and J.J. Thibodeaux, Parameter Estimation in a Structured Erythropoiesis Model. Mathematical Biosciences and Engineering, 5(2008), 601-616.
56. A.S. Ackleh, K. Deng and J. Thibodeaux, A Monotone Approximation for a Size-Structured Population Model with a Generalized Environment. Journal of Biological Dynamics, 1(2007), 291-304.
57. A.S. Ackleh, Y. Dib and S. Jang, A Three-Stage Discrete-Time Population Model: Seasonal Versus Continuous Reproduction. Journal of Biological Dynamics, 1(2007), 305-319.
58. L. Pham, S. Boudreaux, S. Karhbet, B. Price, A. S. Ackleh, J. Carter, and N. Pal, Population estimates of Hyla cinerea (Schneider) (Green Treefrog) in an urban environment. Southeastern Naturalist, 6(2007), 203-216
59. A.S. Ackleh, K. Deng, S. Hu, On a Nonlinear Size-Structured Phytoplankton-Zooplankton Aggregation Model. Dynamics of Continuous, Discrete and Impulsive Systems, Series A, 14(2007), 265-285.
60. A. S. Ackleh, L.J.S. Allen and J. Carter, Establishing a beachhead: A Stochastic Population Model with an Allee Effect Applied to Species Invasion. Theoretical Population Biology, 71(2007), 290-300.
61. A.S. Ackleh and S. Jang, A Discrete Two-Stage Population Model: Continuous Versus Seasonal Reproduction. Journal of Difference Equations and Applications, 13(2007), 261-274.
62. A.S. Ackleh, Y. Dib and S. Jang, Competitive Exclusion and Coexistence in a Nonlinear Refuge-Mediated Selection Model. Discrete and Continuous Dynamical Systems Series B, 7(2007), 683-698.
63. A.S. Ackleh and S. Hu, Comparison between Stochastic and Deterministic Selection-Mutation Models. Mathematical Biosciences and Engineering, 4(2007), 133-157.
64. A.S. Ackleh, K. Deng, X. Wang, Asymptotic Behavior of Solutions to a Nonlinear Size-Structured Population Model. International Journal of Information and System Sciences, 2(2006), 316-325.
65. A.S. Ackleh, K. Deng, K. Ito and J.J. Thibodeaux, A Structured Erythropoiesis Model with Nonlinear Cell Maturation Velocity and Hormone Decay Rate. Mathematical Biosciences, 204(2006), 21-48.
66. A.S. Ackleh, K. Deng and X. Wang, Existence-Uniqueness and Monotone Approximation for a Phytoplankton-Zooplankton Aggregation Model. Zeitschrift Angewandte Mathematik und Physik (ZAMP), 57(2006), 733-749.
67. A.S. Ackleh and K. Ito, Measure-Valued Solutions for a Hierarchically Size-Structured Population. Journal of Differential Equations, 217(2005), 431-455.
68. S. Jang and A.S. Ackleh, Discrete-Time, Discrete Stage-Structured Predator-Prey Models. Journal of Difference Equations and Applications, 11(2005), 399-413.

69. A.S. Ackleh, B.G. Fitzpatrick and H.R. Thieme, Rate Distributions and Survival of the Fittest: A Formulation on the Space of Measures. Discrete and Continuous Dynamical Systems Series B, 5(2005), 917-928.
70. A.S. Ackleh, H.T. Banks, K. Deng and S. Hu, Parameter Estimation in a Coupled System of Nonlinear Size-Structured Populations. Mathematical Biosciences and Engineering, 2(2005), 289-315.
71. A.S. Ackleh and K. Deng, Monotone Approximation for a Hierarchical Age-Structured Population Model. Dynamics of Continuous, Discrete and Impulsive Systems, Series B,12(2005), 203-214.
72. A.S. Ackleh and L.J.S. Allen, Competitive Exclusion in SIS and SIR Epidemic Models with Total Cross Immunity and density-Dependent Host Mortality. Discrete and Continuous Dynamical Systems Series B, 5(2005), 175-188.
73. A.S. Ackleh, K. Deng, and S. Hu, A Quasilinear Hierarchical Size Structured Model: Well-Posedness and Approximation. Applied Mathematics and Optimization, 51(2005), 35-59.
74. A.S. Ackleh, K. Deng, and X. Wang, Competitive Exclusion and Coexistence in a Quasilinear Size-Structured Population Model. Mathematical Biosciences, 192(2004), 177-192.
75. A.S. Ackleh and K. Deng, On Critical Exponents for the Schrodinger Equation with a Nonlinear Boundary Condition. Differential and Integral Equations, 17(2004), 1293-1307.
76. A.S. Ackleh and K. Deng, Existence and Nonexistence of Global Solutions of a Nonlocal Wave Equation. Mathematical Methods in the Applied Sciences, 27(2004), 1747-1754.
77. A.S. Ackleh and K. Deng, Survival of the Fittest in a Quasilinear Size-Structured Population Model. Natural Resource Modelling, 17(2004), 213-228.
78. A.S Ackleh, K. Deng, C. Cole and H. Tran, Existence-Uniqueness and Monotone Approximation for an Erythropoiesis Age-Structured Model. Journal of Mathematical Analysis and Applications, 289(2004), 530-544.
79. A.S. Ackleh, K. Deng, J. Derouen and W. Li, A Numerical Method for a Nonlocal Hyperbolic Model Arising from a Reliability System. Computers and Mathematics with Applications, 47(2004), 135-147.
80. A.S. Ackleh and K. Deng, Existence-Uniqueness Results for a System of Integral Equations Arising from a Reliability Model. Communications on Applied Nonlinear Analysis, 10(2003), 23-32.
81. A.S. Ackleh and L.J.S. Allen, Competitive Exclusion Principle for Pathogens in an Epidemic Model with Variable Population Size. Journal of Mathematical Biology, 47(2003), 153-168.
82. A.S. Ackleh and K. Deng, On a First Order Hyperbolic Coagulation Model. Mathematical Methods in the Applied Sciences, 26(2003), 703-715.
83. A.S. Ackleh, K. Deng and W. Li, Solvability of a Nonlocal Hyperbolic Model Arising from a Reliability System. IMA Journal of Applied Mathematics, 68(2003), 135-148.
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85. A.S. Ackleh, H.T. Banks and G.A. Pinter, Well-Posedness Results for Models of Elastomers. Journal of Mathematical Analysis and Applications, 268(2002), 440-456.
86. A.S. Ackleh, On the Unique Solvability of a Nonlinear Functional Evolution Equation. Journal of Mathematical Analysis and Applications, 267(2002), 522-530.

87. A.S. Ackleh, H.T. Banks and G.A. Pinter, A Nonlinear Beam Equation. Applied Mathematics Letters, 15(2002), 381-387.
88. A.S. Ackleh and K. Deng, Global Existence and Blow-up for a System of Wave Equations Coupled in the Boundary Conditions. Dynamics of Continuous, Discrete and Impulsive Systems, 8(2001), 415-423.
89. A.S. Ackleh and K. Deng, Existence and Nonexistence of Global Solutions of the Wave Equations with a Nonlinear Boundary Condition. Quarterly of Applied Mathematics, 59(2001), 153-158.
90. A.S. Ackleh and K. Deng, Existence-Uniqueness of solutions for a Nonlinear Nonautonomous Size-Structured Population Model: An Upper-Lower Solution Approach. Canadian Applied Mathematics Quarterly, 8 (2000), 1-15.
91. A.S. Ackleh and D.F. Marshall and H.E. Heatherly, Extinction in a Generalized Lotka-Volterra Predator-Prey Model. Journal of Applied Mathematics and Stochastic Analysis, 13(2000), 287-297.
92. A.S. Ackleh and L. Ke, Existence-Uniqueness and Long Time Behavior for a Class of Nonlocal Nonlinear Parablic Evolution Equations. Proceedings of the American Mathematical Society, 128 (2000), 3483-3492.
93. A.S. Ackleh and L. Ke, The Behavior of a Finite Difference Difference Approximation to a Singular Initial-Boundary Value Problem. Applicable Analysis, 76(2000), 115-130.
94. A.S. Ackleh, S. Aizicovici and S. Reich, Parameter Identification in Nonlocal Nonlinear Evolution Equations. Numerical Functional Analysis and Optimization, 21(2000), 553-570.
95. A.S. Ackleh and K. Deng, Monotone Scheme for Nonlinear First Order Hyperbolic Initial-Boundary Value Problems. Applied Mathematics Letters, 13(2000), 111-119.
96. A.S. Ackleh and L. Ke, Dynamical Behavior of Solutions of a Quasilinear Nonlocal Parabolic Problem. Dynamics of Continuous, Discrete and Impulsive Systems, 7(2000), 123-144.
97. M.A. Demetriou, A.S. Ackleh and S. Reich, Detection and Accommodation of Second Order Distributed Parameter Systems with Abrupt Changes in the Input Term: Existence and Approximation. Kybernetika, 36(2000), 117-132.
98. A.S. Ackleh and K. Deng, A Monotone Approximation for a Nonlinear Nonautonomous Size-Structured Population Model. Applied Mathematics and Computations, 108(2000), 103-113.
99. A.S. Ackleh, Parameter Identification in Size-Structured Population Models With Nonlinear Individual Rates. Mathematical and Computer Modelling, 30(1999), 81-92.
100. A.S. Ackleh and R. R. Ferdinand, A Nonlinear Phytoplankton Aggregation Model with Light Shading. SIAM Journal on Applied Mathematics, 60(1999), 316-336.
101. J. Carter, A.S. Ackleh, B.P. Leonard and H. Wang, Giant Panda (Ailuropoda Melanoleuca) Population Dynamics and Bamboo (subfamily Bambusoideae) life history: A Structured Population Approach to Examining Carrying Capacity when the Prey are Semelparous. Ecological Modelling, 123 (1999), 207-223.
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105. A.S. Ackleh, R.R. Ferdinand and S. Reich, Numerical Studies of Parameter Estimation Techniques in Nonlinear Evolution Equations. Kybernetika, 34(1998), 693-712.
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108. A.S. Ackleh and K. Deng, A Monotone Method for First Order Nonlocal Hyperbolic Initial-Boundary Value Problems. Applicable Analysis, 67(1997), 173-183.
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115. A.S. Ackleh, T.G. Hallam and H. C. Muller-Landau, Estimation of Sticking and Contact Efficiencies in Aggregation of Phytoplankton: The 1993 SIGMA Tank Experiment. Deep Sea Research II, 42(1995), 185-201.
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BOOK CHAPTERS & CONFERENCE PROCEEDINGS PUBLICATIONS

118. A.S. Ackleh, B. Ma, X. Li, Parameter Estimation in a Size-Structured Population Model with Distributed States-at-Birth, System Modeling and Optimization, 27th IFIP TC 7 Conference, CSMO 2015 Sophia Antipolis, France, June 29-July 3, 2015, (L. Bociu, J.A. Desideri, A. Habbal, eds), IFIP AICT 494, (2017), 43-57.
119. N.A. Sidorovskaia , A.S. Ackleh, C.O. Tiemann, B. Ma, J.W. Ioup, G.E. Ioup, Passive Acoustic Monitoring of the Environmental Impact of Oil Exploration on Marine Mammals in the Gulf of Mexico, Advances in Experimental Medicine and Biology, 875(2016), 1007-1014.
120. A.S. Ackleh and P.L. Salceanu, Competitive Exclusion Through Discrete Time Models, Theory and Applications of Difference Equations and Discrete Dynamical Systems (Z.

Alsharawi, J.M. Cushing, S. Elaydi, eds), Springer Proceedings in Mathematics & Statistics, Volume 102, (2014), 3-21.
121. Banks, J.E., Ackleh, A.S., and J.D. Stark, Population Models & Data in Applied Ecology: Surrogate species. Simulation and Modeling related to Computational Science and Robotics Technology (F. Kojima, F. Kobayashi and H. Nakamoto, eds.), Proceedings Series, IOS Press, Amsterdam, Netherlands, (2012), 34-43.
122. A.S. Ackleh, K. Deng, Q. Huang, Difference Approximation for an Amphibian Juvenile-Adult Dispersal Model. Dynamical Systems and Differential Equations, Discrete and Continuous Dynamical Systems Supplement, Proceedings of 8th AIMS International Conference in Dresden Germany (Wei Feng, Zhaosheng Feng, Maurizio Grasselli, Akif Ibragimov, Xin Lu, Stefan Siegmund and Jurgen Voigt, eds), (2011), 1-12.
123. A.S. Ackleh, K. Deng and Q. Huang, Existence-Uniqueness Results and Difference Approximations for an Amphibian Juvenile-Adult Model. AMS Series in Contemporary Mathematics, Nonlinear Analysis and Optimization, 513(2010), 1-23.
124. A.S Ackleh, K. Deng and J.J. Thibodeaux, An Explicit Finite Difference Method for a Structured Erythropoiesis Model, Proceedings of Dynamic Systems and Applications Volume 5 (G.S. Ladde, N.G. Medhin, C. Peng, M. Sambandham, eds), (2008), 1-5.
125. A.S. Ackleh, Y. Dib and S. Jang, A discrete-time Beverton-Holt competition model. Difference Equations and Discrete Dynamical Systems (L.J.S. Allen, B. Aulback, S. Elaydi, R. Sacker, eds), World Scientific, (2005), 1-10.
126. A.S. Ackleh and K. Deng, On a Nonlocal Hyperbolic Model Arising from a Reliability System. Proceedings of Dynamic Systems and Application Volume 4 (G.S. Ladde, N.G. Medhin, M. Sambandham, eds), (2004), 113-120.
127. A.S. Ackleh, K. Deng and J. Derouen, An Adaptive Numerical Method for the Wave Equation with a Nonlinear Boundary Condition. Electronic Journal of Differential Equations, Conference 10, (2003), 23-31.
128. A.S. Ackleh and K. Deng, Monotone Method for Nonlinear Nonlocal Hyperbolic Equations. Electronic Journal of Differential Equations, Conference 10, (2003), 11-22.
129. A.S. Ackleh and S. Reich, Approximation Theory for Parameter Identification in Nonlinear Delay Evolution Equations. Mathematics and Mathematics Education, (S. Elaydi, E.S. Titi, M. Saleh, S. K. Jain, eds.), World Scientific, (2002), 239-252.
130. A.S. Ackleh, S. Aizicovici, M. Demetriou and S. Reich, Existence and Uniqueness of Solutions to a Second Order Nonlinear Nonlocal Hyperbolic Equation. Differential Equations and Control Theory (S. Aizicovici and N. Pavel, eds.), Marcel Dekker, New York, (2001), 1-17.
131. A.S. Ackleh, Regularity of Solutions to a Quasilinear Size-Structured Population Model. Proceedings of Dynamic Systems and Applications Volume 3 (G.S. Ladde, N.G. Medhin, M. Sambandham, eds), (2001), 1-8.
132. A.S. Ackleh, S. Aizicovici, M. Demetriou and S. Reich, Existence and Uniqueness of Solutions to a Nonlinear Nonlocal Second Order Initial-Boundary Value Problem. Proceedings of the 8th IEEE Mediterranean Conference on Control and Automation, Patras, Greece. CD-ROM publication (2000).
133. A.S. Ackleh, S. Aizicovici, R.R. Ferdinand and S. Reich, Parameter Identification in a Nonautonomous Nonlinear Volterra Integral Equations. Proceedings of the 7th IEEE Mediterranean Conference on Control and Automation, Haifa, Israel, (1999), 2200-2206.

134. A.S. Ackleh, Parameter Estimation Problems for a Nonlinear Parabolic Equation with a Singular Nonlocal Diffusion Term. Proceedings of the 7th IEEE Mediterranean Conference on Control and Automation, Haifa, Israel, (1999), 2191-2199.
135. A.S. Ackleh, D.F. Marshall and H.E. Heatherly, Asymptotic Behavior of a Generalized Logistic Model. Proceedings of the 14th annual of CAM, Edmond, Oklahoma, (1998), 19-23.
136. A.S. Ackleh and K. Deng, Asymptotic Behavior for a Nonlinear Nonautonomous Size-Structured Population Model. Proceedings of 14th annual of CAM, Edmond, Oklahoma, (1998), 8-12.
137. A.S. Ackleh and R.R. Ferdinand, Parameter Estimation in a Two Dimensional Nonlinear Tree Population Model with Shading Effects. Proceedings of the 14th annual of CAM, Edmond, Oklahoma, (1998), 13-18.
138. M.D. Demetriou, A.S. Ackleh and S. Reich, Detection and Accommodation of Second Order Distributed Parameter Systems with Abrupt Changes in Input Term: Existence and Approximation. Theory and Practice of Control and Systems (A. Tornambe, G. Conte and A.M. Perdon, eds.), World Scientific, Singapore, (1998), 720-725.
139. A.S. Ackleh and K. Ito, An Approximation Scheme for a Nonlinear Size-Dependent Population Model. Dynamical Systems & Differential Equations (W. Chen and S. Hu, eds), an added volume to Discrete and Continuous Dynamical Systems, 1(1998), 1-6.
140. A.S. Ackleh, R.R. Ferdinand, S. Aizicovici and S. Reich, Numerical Studies of Parameter Estimation Techniques for Nonlinear Volterra Equations. Theory and Practice of Control and Systems (A. Tornambe, G. Conte and A.M. Perdon, eds.), World Scientific, Singapore, (1998), 310-315.
141. A.S. Ackleh and S. Reich (1997) Inverse Problems for Nonautonomous Nonlinear Distributed Parameter Sytems. Proceedings of the 5th IEEE Mediterranean Conference on Control and Systems, Paphos, Cyprus. CD-ROM publication by Focus Interactive Inc. (1997).
142. A.S. Ackleh, Parameter Estimation in a Nonlinear Structured Tree Population Model With Self Shading Effects. Proceedings of the 5th IEEE Mediterranean Conference on Control and Systems, Paphos, Cyprus. CD-ROM publication by Focus Interactive Inc. (1997).
143. A.S. Ackleh and R.R. Ferdinand, An Approximation to a Nonlinear Size-Structured Phytoplankton Aggregation Model with a Spatial Dimension. Proceedings of the 13th annual Conference on Applied Mathematics (CAM), Edmond, Oklahoma, (1997), 82-94.
144. A.S. Ackleh, Estimation of Discontinuous Parameters in a Class of Nonautonomous Semilinear Parabolic Systems. Proceedings of the 13th annual Conference on Applied Mathematics (CAM), Edmond, Oklahoma, (1997), 1-11.
145. A.S. Ackleh and B.G. Fitzpatrick, Estimation of Temporally Discontinuous Parameters in a General Parabolic Evolution System. Proceedings of the 3rd IEEE Mediterranean Conference on New Directions in Control and Automation, Limassol, Cyprus, 1(1995), 280-286.

SUBMITTED PAPERS

146. A.S. Ackleh and N. Saintier, Well-posedness for a system of transport and diffusion equations in measure spaces.

147. A.S. Ackleh and R. Miller, A Model for Structured Population Dynamics with Indefinite Growth Rates Coupled with the Environment.

BOOKS/EDITED VOLUMES

148. Special Issue Mathematical Biosciences and Engineering, 12(2)(2015), (A.S. Ackleh, R.M. Colombo, S.C. Hille and A. Muntean, Eds.)
149. A.S. Ackleh, E. Allen, R.B. Kearfott, P. Seshaiyer, Numerical Analysis: Theory Methods and Practice (Graduate Textbook). Taylor and Francis Publishing, 2009.
150. Special Issue Mathematical Biosciences and Engineering, 5(4)(2008), (A.S. Ackleh, L.J.S. Allen, G. Canziani, S. Henson, J. Li, Z. Ma, Eds.)

CONFERENCES AND WORKSHOPS PRESENTATIONS

1. Modeling Biological Processes in Aggregation and Estimation of Stickiness Parameter. Annual SIGMA meeting, University of California Santa Barbara, 1993.
2. Estimation of Stickiness Function and Effects of Grazing in Algal Aggregation Models. The Oceanographic Society Third Scientific meeting, 1993.
3. A Community Aggregation Model and Application of an Inverse Method to Stickiness Estimation. The Ocean Sciences Meeting, 1994.
4. Estimation of Temporally Discontinuous Time Dependent Parameters in a General Parabolic System. 3rd IEEE Mediterranean Conference on New Directions in Control and Automation, Limassol, Cyprus, July 11-13, 1995 (Invited).
5. An Approximation Scheme for the Nonlinear Size Structured Model. International Conference on Dynamical Systems and Differential Equations, Springfield, Missouri, May 29 - June 1, 1996 (Invited).
6. Estimation of Discontinuous Parameters in a Class of Nonautonomous Parabolic System. The 13th annual Conference on Applied Mathematics, Edmond, Oklahoma, February 21-22, 1997.
7. Parameter Estimation in a Nonlinear Structured Tree Population Model With Self Shading Effects. 5th IEEE Mediterranean Conference on Control and Systems, Paphos, Cyprus, July 21-23, 1997 (Invited).
8. Parameter Estimation in Nonlinear Evolution Equations. The 928th AMS Meeting, Albuquerque, New Mexico, November 8-9, 1997 (Invited).
9. A Monotone Approximation for a Nonlinear Nonlocal Hyperbolic Initial-Boundary Value Problem. The 14th annual Conference on Applied Mathematics, Edmond, OK, Feb 20-21, 1998.
10. A Difference Approximation for A Coupled System of Structured Population Models. The Third International Conference on Dynamic Systems and Applications, Atlanta, GA, May 26-29, 1999 (Invited).
11. Parameter Estimation Problem for a Nonlinear Parabolic Equation With a Singular Nonlocal Diffusion Term. The 7th IEEE Mediterranean Conference on Control and Automation, Haifa, Israel, June 28-30, 1999 (Invited).
12. Parameter Identification in a Nonautonomous Nonlinear Volterra Integral Equation. The 7th IEEE Mediterranean Conference on Control and Automation, Haifa, Israel, June 28-30, 1999 (Invited).

13. Approximation Theory for Parameter Identification in Nonlinear Nonlocal Evolution Equations. AMS Sectional Meeting #954, Lafayette, Louisiana, April 14-16, 2000 (Invited).
14. Parameter Identification in a Class of Nonlocal Nonlinear Evolution Equations. International Workshop at Ohio University, Athens, OH, May 12-14, 2000 (Invited).
15. Parameter Identification in Nonlocal Nonlinear Evolution Equations. International Conference on Dynamical Systems and Differential Equations, Atlanta, GA, May 18-21, 2000 (Invited).
16. Parameter estimation in nonlocal evolution equations, Conference on Future Directions in Distributed Parameter Systems, Raleigh, North Carolina, October 5-7, 2000.
17. A Coupled System of Nonlinear Size-Structured Populations, National AMS Meeting, New Orleans, LA, January 10-13, 2001 (Invited).
18. On a Nonlinear Functional Evolution Equation, Fifth Mississippi State Conference on Differential Equations & Computational Simulations, Starkville, MS, May 18-19, 2001.
19. Competitive Exclusion and Coexistence for Pathogens in an Epidemic Model with Variable Population Size, Annual Meeting of the Society of Mathematical Biology, Knoxville, TN, July 13-16, 2002 (Invited).
20. A quasilinear size-structured population model: approximation and long-time behavior, Workshop on Transport in Supply Chain, Traffic and Biology, Arizona State University, Tempe, Arizona, January 31 to February 1, 2003 (Invited).
21. Competitive Exclusion and Coexistence for a Quasilinear Size-Structured Population Model, Fourth International Conference on Dynamic Systems and Applications, Atlanta, GA, May 21-24, 2003 (Invited).
22. Competitive Exclusion and Coexistence Results for a Nonlinear Size-Structured Population Model, AMS meeting #989, Boulder, CO, October 2-4, 2003 (Invited).
23. Measure-Valued Solutions for a Hierarchically Size-Structured Population Model, AMS meeting #995, Athens, OH, March 25-27, 2004 (Invited).
24. Competitive Exclusion in Epidemic Models with Total Cross Immunity and Density-Dependent Host Mortality, Computational and Mathematical Population Dynamics, Trento, Italy, June 21-25, 2004 (Invited).
25. Rate Disribution and Survival of the Fittest: A Formulation on the Space of Measures, AMS meeting #1006, Lubbock, TX, April 8-10, 2005 (Invited).
26. Mathematics Meets Biology: Competitive Exclusion, Coexistence and Data Fitting, Louisiana, May 25-28, 2005.
27. Parameter Estimation in a Size-Structured Population Model, Sixth SIAM Conference on Control and Its Applications, New Orleans, LA, July 11-14, 2005.
28. A Hierarchical Size-Structured Population Model: Existence of Measure-Valued Solutions, The European Conference on Mathematical and Theoretical Biology, Dresden, Germany, July 18-22, 2005.
29. Understanding Hyla cinerea Green Treefrog Population Dynamics via Modeling and Field Studies, Joint AMS/MAA Mathematical Meeting, San Antonio, Texas, January 12-15, 2006 (Invited).
30. Mathematical and Statistical Modeling in Biology: Competitive Exclusion and Coexistence, MAA minicourse # 8, Joint AMS/MAA Mathematical Meeting, San Antonio, Texas, January 12-15, 2006 (2-hours presentation).

31. Ecosystem Modeling of College Drinking: A Compartmental Approach, 29th Annual Scientific Meeting of the Research Society on Alcoholism, Baltimore, Maryland, June 24-28, 2006 (Invited).
32. Mathematical Biology Program at the University of Louisiana: Curriculum Development and Research, Joint AMS/MAA Mathematical Meeting, New Orleans, LA, January 5-8, 2007 (Invited).
33. Difference Approximation for Measure Valued Solutions to a Hierarchically Size Structured Population, Joint AMS/MAA Mathematical Meeting, New Orleans, LA, January 5-8, 2007 (Invited).
34. Recent Applications of Structured Population Modeling, 2nd International Conference on Approximation Methods for Design and Control, Buenos Aires, Argentina, March 7-9, 2007 (Plenary).
35. Continuous Versus Seasonal Reproduction in Discrete Stage-Structured Population Models, AMS Meeting # 1027, Tucson, Arizona, April 21-22, 2007 (Invited).
36. Structured Population Models: Measure-Valued Solutions and Difference Approximations, Workshop on Control Theory and Mathematical Biology, Baton Rouge, Louisiana, July 26-27, 2007 (Invited one hour talk).
37. A Discrete Stage Structured Model for an Urban Green Tree Frog Population, Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Tucson, AZ, October 5-7, 2007 (Invited).
38. A Selection-Mutation Model, Joint AMS/MAA Mathematical Meeting, San Diego, CA, January 6-9, 2008 (Invited).
39. Parameter Identification for Structured Population Models, International Conference on Inverse Problems: Modeling and Simulations, Fethiye, Turkey, May 24-30, 2008 (Invited).
40. Structured Population Models with Application to Green Treefrogs, The Fifth World Congress of Nonlinear Analysts, Orlando, FL, July 2-9, 2008 (Invited).
41. Finite-Difference Approximation for a Nonlinear Juvenile-Adult Model with Age-Size Structured Model, AMS Meeting #1044, Huntsville, AL, October 24-26, 2008.
42. A Selection Mutation-Model Formulated on the space of Measures. Differential Equations and Applications in Ecology and Epidemiology, West Lafayette, Indiana, December 8-10, 2008 (Invited).
43. Deterministic and Stochastic Juvenile-Adult Models with Application to Amphibians. Joint AMS/MAA Mathematical Meeting, Washington, DC, January 5-8, 2009 (Invited).
44. A Juvenile-Adult Structured Model and a Selection Mutation Model. Conference on Mathematical Biology: Modeling and Differential Equations, Barcelona, Spain, February 9-13, 2009 (Plenary).
45. Deterministic and Stochastic Juvenile-Adult Models with Application to Amphibians. South African Symposium for Numerical and Applied Mathematics, Stellenbosch, South Africa, April 6-8, 2009 (Invited).
46. Ecosystem Modeling of College Drinking: Parameter Estimation and Comparing Models to Data. Annual RSA Research Conference, San Diego, CA, June 20-24, 2009.
47. Competitive Exclusion Results for a Discrete Stage-Structured Model with Application to Blue and Yellow Irises. Istanbul Conference on Mathematical Methods and Modeling in Life Sciences and Biomedicine, Istanbul, Turkey, August 17-21, 2009 (Invited).

48. Competitive Exclusion in a Discrete-Time, Stage-Structured Population Model.The Second International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Huntsville, Alabama, October 9-11, 2009 (Invited).
49. A Replicator-Mutator Model on the Space of Measures. AMS Meeting # 1053, Boca Raton, Florida, October 30-November 1, 2009 (Invited).
50. Competitive Exclusion in a Juvenile-Adult Model with Continuous and Seasonal Reproduction. Joint Mathematical Meeting, San Francisco, California, January 13-16, 2010 (Invited).
51. A Nonlinear Evolutionary Game Replicator-Mutator Model on the Space of Measures, The 8th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Dresden, Germany, May 25-28, 2010 (Invited).
52. A Structured Juvenile-Adult Model with Application to Amphibians, The 8th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Dresden, Germany, May 25-28, 2010 (Invited).
53. An Evolutionary Game Replicator-Mutator Model on Measure Spaces, Joint SIAM/RSME-SCM-SEMA Meeting Emerging Topics in Dynamical Systems and Partial Differential Equations DSPDEs'10, Barcelona, Spain, May 31 - June 4, 2010.
54. Structured Juvenile Adult Models with Application to Amphibians, SIAM Conference on Life Sciences, Pittsburgh, PA, July 12-15, 2010 (Invited).
55. Juvenile-Adult Models with Application to a Green Tree Frog Population, 4th International Conference on Neural, Parallel and Scientific Computation, Atlanta, GA, August 11-14, 2010 (Invited).
56. Persistence and Global Stability in a Size-Structured Model with Selection and Mutation, AMS Sectional Meeting #1063, Los Angeles, CA, October 9-10, 2010 (Invited).
57. A Stage-Structured Dispersal Model with Constant and Periodic Environments, Joint Mathematical Meeting, New Orleans, January 6-9, 2011 (Invited).
58. Littoral Acoustic Demonstration Center (LADC): Assessing the Long-Term Impact and Recovery of Marine Mammal Populations after the Oil Spill in the Gulf of Mexico, Marine Mammals Commission Annual Meeting, New Orleans, May 10-12, 2011 (Invited).
59. Selection-Mutation Models With and Without Size Structure, Biomath 2011: International Conference on Mathematical Methods and Models in Biosciences, Sofia, Bulgaria, June 15-18, 2011 (Keynote).
60. A High Resolution Finite Difference Scheme for a Juvenile-Adult Amphibian Model, Third Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Albena, Bulgaria, June 20-25, 2011 (Plenary).
61. Using Statistical Modeling and Acoustic Data to Access the Gulf Oil Spill Impact on Sperm Whales, Istanbul Conference on Mathematical Methods and Modeling in Life Sciences and Biomedicine 2011, August 15-19, 2011 (Invited).
62. Persistence and Competitive Exclusion for a Nonautonomous Multi-Strain SIR Epidemic Model with Nonlinear Host Mortality, Joint Mathematical Meeting,Boston MA, January 4-8, 2012 (Invited).
63. A High Resolution Second-Order Computational Method for a Continuous Structured Erythropoiesis Model, BIOCOMP 2012 Mathematical Modeling and Computational Topics in Biosciences, Vietri sul Mere, Italy, June 4-8, 2012 (Invited).

64. A Continuous Structured Model for Amphibians: Numerical Approximation and Parameter Estimation, Third Palestinian Conference on Modern Trends in Mathematics and Physics (PCMTMP-III), July 16-18, 2012, Hebron, Palestine (Plenary).
65. Competitive Exclusion and Coexistence in Discrete Population Models, The 19th International Conference on Difference Equations and Applications, May 26 - 30, 2013, Muscat, Oman (Plenary).
66. Stability Analysis of Small Perturbations of Pure Selection Models on Measure Spaces, Modeling with Measure: From Structured Populations to Crowd Dynamics, August 26-30, 2013, Leiden, The Netherlands (Open Problem Lecture).
67. Measure-Valued Solutions to Selection-Mutation and Structured Population Models, August 26-30, 2013, Leiden, The Netherlands (Tutorial Lecture).
68. Finite Difference Approximations for Measure-Valued Solutions of a Hierarchically Size-Structured Population Model, The Fourth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Lubbock, Texas, October 4-6, 2013 (Invited).
69. A Structured Model for the Spread of Mycobacterium marinum, The 10th AIMS Conference on Dynamical Systems,Differential Equations and Applications, Madrid, Spain, July 7 - 11, 2014 (Invited).
70. A Structured Model for the Transmission Dynamics of Mycobacterium Marinum Between Aquatic Animals, SIAM Conference on the Life Sciences, Charlotte NC, August 4-7, 2014 (Invited).
71. A general structured population model with application to amphibians and associated diseases, Joint Mathematical Meeting, San Antonio TX, January 9-14, 2015 (Invited).
72. Competitive Exclusion and Coexistence in Population Models, MAA 77th Annual Meeting of the Oklahoma-Arkansas Section, Tulsa OK, April 10-11, 2015 (N.A. Court Lecture, invited).
73. Understanding the Dynamics of Amphibians and Associated Diseased Using a Structured Modeling Approach, 27th IFIP TC7 Conference, Sohpia Tech Campus, Sohpia Antipolis France, June 29- July 3, 2015 (Invited).
74. Competitive Exclusion and Coexistence in Discrete-Time Population Models, IV International Conference on Approximation Methods for Design and Control, Universidad Nacional de San Martin, Buenos Aires, Argentina, November 5-6, 2015 (Invited).
75. A Model for the Interaction of Phytoplankton Aggregates and the Environment: Approximation and Parameter Estimation, Joint Mathematical Meeting, Atlanta GA, January 4-7, 2017.
76. Analysis of Lethal and Sublethal Impacts of Environmental Disasters on Sperm Whales Using Stochastic Modeling, Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans LA, February 6-9, 2017.
77. Combining Acoustic Data and Statistical Modeling to Understand Marine Mammal Population Dynamics and Abundance, The 42nd IEEE International Conference on acoustics, Speech and Signal Processing (ICASSP), New Orleans LA, March 5-9, 2017 (Invited).
78. Population models with discrete or continuous trait spaces: Competitive exclusion or coexistence? 7th Annual Conference of the Lebanese Society for the Mathematical Sciences (LSMS), Balamand, Lebanon, April 20-21, 2017 (Keynote).

79. A High-Resolution Finite Difference Method for a Nonlinear Model of Structured Susceptible-Infected Population Coupled with the Environment, AMS Meeting #1131, Denton, TX, September 9-10, 2017 (Invited).
80. Disparate Disease Outcomes in Chronic Infection: the Role of Intra-Host Variability, ICMA VI: The Sixth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Tucson AZ, October 20-22, 2017. (Invited).
81. Modeling as a Complementary Tool to Acoustic Data for Understanding the Impact of Environmental Disasters on Marine Mammals, 174th Meeting of the Acoustical Society of America, New Orleans, LA, December 4-8, 2017 (Invited).
82. Changes in Population Outcomes Resulting from Evolutionary Responses to a Disturbance, Joint Mathematical Meeting, San Diego, CA, January 9-14, 2018. (Invited)
83. Examining the Effect of Evolution in Response to a Disturbance on Population Dynamics, Nashville, TN, April 14-15, 2018. (Invited)
84. Changes in Population Dynamics Resulting from Evolutionary Response to an Environmental Disturbance, Frontiers of Mathematical Biology: Modeling, Computation and Analysis, Orlando, FL, May 2-4, 2018. (Invited)
85. A Second Order Finite Difference Scheme for a Variable Infection-Structured Model of Mycobacterium Marinum Dynamics in Aquatic Animals, Sixth Palestinian Conference on Modern Trends in Mathematics and Physics (PCMTMP-VI), Kadoori, Palestine, August 5-8, 2018 (Invited, Main Speaker).
86. The Effect of Toxicant Resistance Evolution in the Prey Population on the Dynamics of a Predator-Prey System, AMS Meeting #1144, San Francisco, CA, October 27-28, 2018 (Invited).
87. A Model for Structured Population Dynamics with Indefinite Growth Rates Coupled with the Environment, Mathematical Methods and Modeling in Engineering and Life Sciences, Buenos Aires, Argentina, November 7-9, 2018 (Invited).

INVITED COLLOQUIA AND SEMINAR TALKS

88. Mathematics Department, North Carolina State University, February 1995.
89. Mathematics Department, Florida State University, April 1995.
90. Mathematics Department, University of Louisiana at Lafayette, June 1995.
91. Mathematics Department, The Technion-Israel Institute of Technology, July, 1997.
92. Mathematics, Statistics and Computer Science Department, Marquette University, March, 1998.
93. The National Wetlands Research Center, Lafayette, LA, March, 1998.
94. Mathematics Department, The Technion-Israel Institute of Technology, June, 1999.
95. Mathematics and Statistics Department, Texas Tech University, November, 2000.
96. Mathematics and Statistics Department, Texas Tech University, July, 2001.
97. Mathematics Department, University of Louisiana at Lafayette, March, 2002.
98. Mathematics Department, University of Wyoming, November, 2003.
99. Mathematics Department, Loyola Maymount University, April, 2004.
100. Mathematics Department, The Technion-Israel Institute of Technology, July, 2004.
101. Mathematics Department, University of Dayton, November, 2005.
102. Mathematics Department, Union College, May, 2006.
103. Mathematics Department, The Technion-Israel Institute of Technology, June, 2006.
104. Mathematics Department, Loyola University, November, 2006.

105. Mathematics Department, University of Louisiana at Lafayette, June, 2007.
106. Mathematics Department, University of Florida, March, 2008.
107. Mathematics and Statistics Department, Arizona State University, March, 2008.
108. Mathematics Department, Trinity University, March, 2009.
109. Mathematics Department, The Technion-Israel Institute of Technology, July, 2009.
110. Mathematics and Computer Science Department, Weizmann Institute of Science, Israel, July, 2009.
111. Computing Science and Mathematics Department, University of Stirling, Scotland, August, 2011.
112. Department of Mathematics and Statistics, Sam Houston State University, Huntsville, Texas, April, 2016.
113. Department of Mathematical Sciences, Dr. Karen A. Ames Lecture Series on Applied Mathematics, University of Alabama at Huntsville, Huntsville, Alabama, March 31, 2017.
114. Department of Physics, University of New Orleans, New Orleans, Louisiana, April 5, 2017.
115. College of Sciences, Kasetsart University, Bangkok, Thailand, June 7, 2017.
116. Department of Mathematics, Trinity University, San Antonio, TX, October 3, 2018.

EXTERNAL RESEARCH FUNDING

- Co-Principal Investigator, Gulf of Mexico Research Initiative Fund, Littoral Acoustic Demonstration Center: Gulf Ecological Monitoring and Modeling (LADC-GEMM), 2015-2019, $5,918,725.
- Principal Investigator, National Science Foundation, Nonautonomous Structured Population Models with Application to Amphibians and Associated Diseases, 2013-2017, $235,000. Grant number DMS-1312963.
- Principal Investigator, U.S. Department of the Interior, Computer Simulation Model Upgrade for Hurricane, Sea-Level, and Wetland Ecosystem Application, 2013-2016, $176,794. Grant number G13AC00373.
- Principal Investigator, U.S. Department of the Interior, US Geological Survey, Modeling Population with Explicit Spatial Component, 2013-2014, $26,500. Grant number G13AC00333.
- Principal Investigator, U.S. Department of the Interior, US Geological Survey, Graphic Visualization Tool and Animation Product of Mekong River Flow, Dam Effects and Impact on Food Security, 2011-2016, $194,145. Grant number G11AC20139.
- Principal Investigator, U.S. Department of the Interior, US Geological Survey, Modeling Nutria Dynamics, 2011-2012, $16,000.
- Principal Investigator, National Science Foundation, RAPID: Modeling of Short-Term and Long-Term MarineMammal Population Trends in the Vicinity of the Deepwater Horizon Oil Spill Using Passive Acoustic Monitoring Cues, 2010-2011, $192,197. Grant number DMS-1059753.
- Principal Investigator, U.S. Department of the Interior, US Geological Survey, Modeling Nutira Population Dynamics, 2009-2010, $12,000.
- Principal Investigator, National Science Foundation, Continuous Structured Population Models with Application to Green Treefrogs, 2007-2010, $250,000. Grant number DMS-0718465

- Principal Investigator, Ducks Unlimited Inc., Modeling and Simulation of the Western Gulf Coast Population of Mottled Ducks, 2006, $9,700.
- Principal Investigator, National Science Foundation, UBM: Training Undergraduate Students in Mathematics and Biology at UL Lafayette, 2005-2011, $534,000. Grant number DUE-0531915.
- Co-investigator, National Institutes of Health, Ecological Modeling of College Drinking, 2005-2010, $1,101,437. Grant number 5R01AA015573.
- Principal Investigator, National Science Foundation, UBM: Training Undergraduate Students in Mathematical Biology, Supplement Award to Collaborative Research: Nonlinear Nonlocal First Order Hyperbolic Problems in Population Models, 2003-2005, $75,625. Grant number DMS-0311969.
- Principal Investigator, U.S. Department of the Interior, US Geological Survey, A Spatially Explicit Model for Nutria Population Dynamics and Management, 2003-2008, $42,956.
- Principal Investigator, National Science Foundation, Collaborative Research: Nonlinear Nonlocal First Order Hyperbolic Problems in Population Models, 2002-2005, $118,157. Grant number DMS-0211453 and DMS-0311969. This is a collaborative grant, total funding $205,021.
- Principal Investigator, Maryland Cooperative Fish and Wildlife Research Unit, Modeling Nutria (Myocastor coypus) Population Dynamics in Marshes on the Eastern Shore of Maryland, 2002-2003, $5,000.
- Principal Investigator, USGS Wetlands Research Center, Nutria Impact on Marsh Loss, 2001, $6,450.
- Principal Investigator, Louisiana Education Quality Support Fund, Modeling and Parameter Estimation in Nonlinear Size-Structured Population Dynamics, 1996-1999, $49,503.

EXTERNAL FUNDING FOR WORKSHOPS, GRADUATE FELLOWSHIPS, AND TRAVEL

- Principal Investigator, Mathematical Association of America/ Statistical and Applied Mathematical Institute, Mathematics Meets Biology: Competitive Exclusion, Coexistence, and Data Fitting, PREP Workshop, 2005, $18,500.
- Principal Investigator, Mathematical Association of America/Statistical and Applied Mathematical Sciences Institute, Mathematics Meets Biology: Epidemics, Data Fitting, and Chaos, PREP Workshop, 2004, $29,599.
- Principal Investigator, Board of Regents Science Fund, Regents' Fellowship Proposal for the Mathematical Sciences at UL Lafayette, 2001-2005, $68,000.
- Principal Investigator, Travel Grant for Emerging Faculty (TGEF), National Science Foundation and Board of Regents Science Fund, 1999, $1,000.

REFEREE AND REVIEW ACTIVITIES

1. Book reviews
    - Gender Structured Population Modeling: Mathematical Methods, Numerics, and Simulations, by M. Iannelli, M. Marcheva, and F.A. Milner, SIAM Frontiers in Applied Mathematics, SIAM, Philadelphia, 2005. (Review appeared in Journal of Difference Equations and Applications, 14(2005), 1229).

    - Numerical Methods Using Matlab, Fourth Edition, By J. H. Mathews and K. D. Fink. Pearson-Prentice Hall, New Jersey, 2004.
2. Referee for the following journals:
    - SIAM Journal of Applied Mathematics.
    - Journal of Mathematical Biology.
    - Journal of Mathematical Analysis and Applications.
    - Natural Resource Modeling.
    - Mathematical Biosciences.
    - Dynamics of Discrete, Continuous and Impulsive Systems.
    - Nonlinear Analysis, Theory Methods and Applications.
    - Dynamic Systems and Applications.
    - Journal of Computational and Applied Mathematics.
    - International Journal of Mathematics and Mathematical Sciences.
    - Computers & Mathematics with Applications.
    - Kybernetika.
    - Applied Mathematics Letters.
    - Applicable Analysis.
    - Journal of Biological Systems.
    - Discrete and Continuous Dynamical Systems, Series B.
    - Journal of Difference Equations and Applications.
    - Rocky Mountain Journal of Mathematics.
    - Applied Numerical Mathematics.
    - Journal of Biological Dynamics.
    - Journal of Scientific Computing.
    - International Journal of Numerical Analysis and Modeling.
    - Journal of Theoretical Biology.
    - Applied Mathematics and Computation.
    - Computers and Mathematics with Applications.
    - Inverse Problems in Science and Engineering.
3. Reviewed proposals for NSF.
4. Served as an NSF panelist.
5. Reviews proposals for CINSAM at Northern Kentucky University.

DEVELOPMENT OF SOFTWARE PACKAGES

- A Spatially Explicit Model for Nutria Population Dynamics and Management (with J. Carter, J. Derouen, and S. Hu). This package development was funded by the USGS-National Wetlands Research Center.
- A Numerical Solver for General Size Structured Population Models (with J. Derouen and S. Hu). This package development was funded by NSF.

POSTDOCS

1. Baoling Ma, January 1, 2014-June 30, 2015. (Assistant Professor, Millersville State University, Millersville, PA)
2. Amy Veprauskas, July 1, 2016-July 31, 2018.

3. Aijun Zhang, August 1, 2018-present.

PH.D. DISSERTATIONS DIRECTED/CO-DIRECTED

1. Robert R. Ferdinand, May 1999. (Professor and Chair, Department of Mathematics and Computer Science, East Central University, Eda, Oklahoma)
2. David Marshall, May 1999.
3. Shuhua Hu, December 2004. (Certara).
4. Xubo Wang, August 2005. (Associate Professor, Macon State College, Macon, Georgia)
5. Jeremy Thibodeaux, May 2007. (Associate Professor, Loyola University, New Orleans)
6. Youssef Dib, May 2007. (Assistant Professor, University of Balamand, Lebanon)
7. John Cleveland, December 2009.
8. Ross Chiquet, December 2009. (Assistant Professor of Practice and Assistant Department Head, University of Louisiana at Lafayette)
9. Qihua Huang, August 2011. (Professor, Southwest University in China)
10. Pei Zhang, December 2011. (Lecturer, Arizona State University).
11. Baoling Ma, August 2012. (Assistant Professor, Millersville State University, Millersville PA).
12. Mark Delcambre, May 2014. (CGI).
13. Vinodh Chellamuyhu, August 2015. (Assistant Professor, Dixie State University, Utah).
14. Robert Miller, December 2015. (Assistant Professor, University of Louisiana at Lafayette).
15. Xinyu Li, May 2016. (Lecturer, University of Houston Downtown).
16. Tingting Tang, August 2017. (Postdoc, University of Notre Dame) .
17. Md. Istiaq Hossain, May 2020 (expected)
18. Rainey Lyons, May 2021 (expected)

PH.D. DISSERTATIONS COMMITTEE MEMBER

1. Scott Semel, 1996.
2. Jianmin Kevin Zhu, 1998.
3. Jason Huffman, 1999.
4. Xiaoou Jiang, 2004.
5. Julio Cesar Carrillo-Escobar, 2007.
6. Tawikan Treeyaprasert, 2007.
7. Fei Lu, 2007.
8. Jei peng, 2008.
9. Patcharin Tragoonsirisak, 2009.
10. Julie Roy, 2010.
11. Abhinandan Chowdhury, 2010.
12. Xing Yang, 2011.
13. Yi Wang, 2013.
14. Yixiang Wu, 2015.
15. Lihong Zhao, 2017.

RESEARCH DIRECTION FOR UNDERGRADUATES

1. Seth Boudreaux (Mathematics), August 2003-2005.
2. Sam Karhbet (Mathematics), August 2003-July 2005.
3. Lanminh Pham (Biology), August 2003-July 2005.
4. Becky Price (Mathematics), August 2003-July 2005.
5. Hanh Naguyen (Biology), February 2005-July 2005.
6. Joanna Nunez (Biology), February 2005-July 2005.
7. Lauren Orillion (Biology), August 2005-December 2005.
8. Lauren Cole (Biology), August 2005-August 2007.
9. Tom Nguyen (Mathematics), August 2005-August 2007.
10. Jay Monte (Mathematics), August 2005-August 2007.
11. Claire Pettit (Mathematics), August 2005-August 2007.
12. Les Begnaud (Mathematics), August 2006-May 2008.
13. Caleb Williams (Biology), August 2006-May 2008.
14. Jessie Castille (Mathematics), August 2006-August 2008
15. Brandon Dejean (Mathematics), August 2006-August 2008
16. Grant Guidry (Biology), August 2006-August 2008.
17. Robert Tesch (Mathematics), August 2006-August 2008.
18. Amber Gordon (Biology), August 2007-May 2008.
19. Amy Demoruelle (Mathematics), August 2007- August 2009.
20. Geoffery Goudeau (Mathematics), August 2007-August 2009.
21. Jared Guilbeau (Mathematics), August 2007-August 2009.
22. Anthony Mai (Mathematics), August 2007-August 2009.
23. Daniel Sutton (Mathematics), August 2008-October 2009.
24. Faran Dietz (Biology), August 2008-August 2010.
25. Tracy Robin (Mathematics), August 2008-August 2010.
26. Camile Dugas (Biology), August 2009-August 2010.
27. Daniel Gould (Biology), August 2009-August 2011.
28. Ariane Martin (Biology), August 2009-August 2011.
29. Alex Richard (Mathematics), August 2010-August 2011.
30. Brandy Thibodeaux (Mathematics), August 2010-August 2011.
31. Forest Huval (Biology), January 2011-August 2011.

PAST AND PRESENT RESEARCH COLLABORATORS

- L.J.S. Allen, Department of Mathematics and Statistics, Texas Tech University, Lubbock, TX 79409.
- S. Aizicovici, Department of Mathematics, Ohio University, Athens, OH 45701.
- J.E. Banks, Department of Environmental Science, University of Washington, Tacoma, WA 98402.
- H.T. Banks, Center for Research in Scientific Computation, North Carolina State University, Raleigh, NC 27695-8205.
- J. Carter, US Geological Survey-The National Wetlands Research Center, Lafayette, LA 70506-3152.

- C. E. Cole, Ph.D., Department of Mathematics and Computer Science, Meredith College, Raleigh, NC 27607-5298
- Patrick DeLeenheer, Department of Mathematics, University of Florida, Gainesville, FL 32611-8105.
- M. Demetriou, Department of Mechanical Engineering, Worcester Polytechnic Institute, Worcester, MA 01609.
- K. Deng, Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- B.G. Fitzpatrick, Department of Mathematics MC-8130, Loyola Marymount University , Los Angeles, CA 90045-8130.
- K. Hasenstein, Department of Biology, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- H.E. Heatherly, Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- G.E. Ioup, Department of Physics, University of New Orleans, New Orleans, LA 70148.
- J.W. Ioup, Department of Physics, University of New Orleans, New Orleans, LA 70148.
- K. Ito, Department of Mathematics, North Carolina State University, Raleigh, NC 27695-8205.
- G. Jacquez, Biomedware Corporation, Ann Arbor, MI 48104-1236.
- S. Jang, Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- W. Li, Department of Electrical and Computer Engineering, University of Louisiana at Lafayette, Lafayette, LA 70504.
- S. Mopper, Department of Biology, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- J.J. Newcomb, Naval Oceanographic Office, Stennis Space Center, MS 39522.
- N. Pal, Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- G.A. Pinter, Center for Industrial Mathematics, University of Wisconsin-Milwaukee, Milwaukee, WI 53201-0413.
- S. Reich, Department of Mathematics, Technion-Israel Institute of Technology, Haifa, 32000 Israel.
- R. Rommel, Biomedware Corporation, Ann Arbor, MI 48104-1236.
- P. Salceanu, University of Louisiana at Lafayette, Lafayette, LA 70504-1010.
- R. Scribner, School of Public Health, Louisiana State University, New Orleans, LA 70112.
- N. Simonsen, School of Public Health, Louisiana State University, New Orleans, LA 70112.
- J. Stark, Department of Entomology, Washington State University, Pullman, WA 99164.
- H. Thieme, Department of Mathematics and Statistics, Arizona State University, Tempe, AZ 85287-1804.
- Tiemann, Applied Research Laboratories, University of Texas at Austin, Austin, TX 78713.
- H. Tran, Department of Mathematics, North Carolina State University, Raleigh, NC 27695-8205.

ORGANIZED CONFERENCES, SPECIAL SESSIONS AND SEMINARS

- Co-organizer of the Twenty-Eight Annual Lloyd Roeling/UL Lafayette Mathematics Conference, 1997.
- Co-organizer of a special session on Mathematical Models in the Biological and Physical Sciences. AMS Meeting #954, Lafayette, LA, April 14-16, 2000.
- Co-organizer of the Biomathematics Seminar in the Department of Mathematics and Statistics at Texas Tech University, Fall 2001 and Spring 2002.
- Co-organizer of a special session in honor of T. G. Hallam for the 2002 Annual Meeting of the Society for Mathematical Biology and International Conference on Mathematics and Biology, U. of Tennessee, Knoxville, July, 2002.
- Co-organizer of the Biomathematics Seminar in the Department of Mathematics at UL Lafayette, Spring 2003.
- Chair of the organizing committee for the Thirty-Third Annual Lloyd Roeling/UL Lafayette Mathematics Conference, 2003.
- Co-organizer of an MAA PREP workshop Mathematics Meets Biology: Epidemics, Data Fitting, and Chaos, University of Louisiana at Lafayette, May 26-29, 2004.
- Co-organizer of an MAA PREP workshop Mathematics Meets Biology: Competitive Exclusion, Coexistence and Data Fitting, University of Louisiana at Lafayette, May 25-28, 2005.
- Co-orgainzer of a minisymposium on Inverse Problems on Electromagnetic and Biology. Six SIAM Conference on Control and Its Applications, New Orleans, LA, July 11-14, 2005.
- Co-organizer of an MAA minicourse on Mathematical and statistical modeling in biology: Competitive exclusion, coexistence, estimation, and control, Joint AMS/MAA Mathematics Meeting, San Antonio, January 12-15, 2006.
- Co-organizer of the Thirty-Eight Annual Lloyd Roeling/UL Lafayette Mathematics Conference, October 10-12, 2008.
- Co-organizer of Special Session on Mathematical Biology: Modeling, Analysis, and Simulations. AMS Meeting #1044, Huntsville, AL, October 24-26, 2008.
- Co-organizer of minisymposium on Continuous and Discrete Dynamical Systems with Applications to Biology, Joint SIAM/RSME-SCM-SEMA Meeting Emerging Topics in Dynamical Systems and Partial Differential Equations DSPDEs'10, Barcelona, Spain, May 31-June 4, 2010.
- Co-organizer of the special session on Modeling in Biology, Ecology and Epidemiology, as a part of the Third Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Albena, Bulgaria, June 20-25, 2011.
- Co-organizer of the Fourth Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, St.St. Constantine and Helena, Varna, Bulgaria, June 11-16, 2012.
- Co-organizer of the Fifth Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Albena, Bulgaria, June 24-29, 2013.
- Co-organizer of the workshop Modeling with Measures: from Structured Populations to Crowd Dynamics, Lorentz Center, Leiden, The Netherlands, August 26-30, 2013.

- Co-organizer of the special session on Fusion of Bio-physical Data and Predictive Modeling to Understand Gulf of Mexico Marine Species Resilience to Environmental Stresses and Disasters, Gulf of Mexico Oil Spill and Ecosystem Science Conference, Tampa, FL, February 1-4, 2016.

COURSES TAUGHT AT UL LAFAYETTE

- MATH 695-696 (Advanced Topics in Differential Equations).
- MATH 655-656 (Advanced Topics in Numerical Analysis).
- MATH 555-556 (Advanced Numerical Analysis).
- MATH 497(G)-498(G) (Special Projects I-II).
- MATH 451(G)-452(G) (Biomathematics I-II)
- MATH 493(G)-494(G) (Advanced Calculus I-II).
- MATH 455(G) (Numerical Analysis).
- MATH 450(G) (Mathematical Modeling).
- MATH 370 (Undergraduate Research).
- MATH 362 (Elementary Linear Algebra).
- MATH 350 (Differential Equations).
- MATH 301 (Calulus II).
- MATH 270 (Calculus I).
- MATH 250 (Survey of Calculus).
- MATH 110 (Precalculus Trigonometry and Function Theory).
- MATH 109 (Precalculus Algebra).

CURRICULUM DEVELOPMENT

In 2005 I developed the following courses. These courses have been running every year with graduate and undergraduate student enrollment.

- MATH 451(G). BIOMATHEMATICS I. (3 hours). Development and analysis of discrete-time models in biology.
- MATH 452(G). BIOMATHEMATICS II. (3 hours). Development and analysis of continuous-time models in biology.

OTHER ADMINISTRATIVE EXPERIENCE AT UL LAFAYETTE

- Graduate Coordinator for the Department of Mathematics, 1999-2001
- A member of the Board of Directors for the Department of Mathematics at UL Lafayette, 2000-2001.
- Chair of the Graduate Council, 2005-2007.

DEPARTMENTAL COMMITTEE SERVICE

- Applied Mathematics, 1995-2000 (member), 2002-2005 (member), 2005-2010 (chair).
- Undergraduate Recruitment Committee, 1995-2000 (member).
- Calculus, 1996-1997 (member).

- Conferences, 1997-1998 (member), 1999-2000 (member), 2003-2004 (chair), 2008-2009 (Chair).
- Graduate Affairs Committee, 1997-1998 (member), 1999-2000 (chair).
- Colloquium, 1998-1999 (chair), 2002-2003 (member).
- Centennial Committee, 1999-2000 (chair).
- Graduate Students Admissions and Advising, 2000-2001 (chair), 2003-2005 (member).
- Graduate Students Recruiting, 2000-2001 (chair), 2002-2003 (member), 2006-2013 (member).
- Graduate Courses, Sequences, and Testing, 2000-2001 (member), 2002-2005 (member).
- Teaching in Labs, 2000-2001 (member).
- Publicity and Web Page, 2002-2003 (chair).
- Newsletter, 2002-2004 (chair), 2004-2005 (member).
- Tenure and Promotion, 2004-2005 (member), 2007-2013 (member).
- Hiring, 2005-2010 (member), 2011-2013 (chair).
- Assessment, 2007-2011 (member).

COLLEGE AND UNIVERSITY SERVICE

- Member of the College of Sciences Centennial Committee, 1999-2000.
- Faculty Senator, 2003-2013.
- A member of the Graduate Council, 2004-2005.
- Mentor for LAMP scholar Joel Derouen, 2001.
- Member of the College Computational Biology Search Committee, 2008-2009.
- Member of the University of Louisiana at Lafayette Budget Task Force Committee on Research and Development, 2009. (chaired the subcommittee on Grants and Contracts Overhead Uses).
- Chair of the College of Sciences Graduate Faculty Peer Review Committee, 2009-2010.
- Member of the QSN Committee for Graduate Dean, 2013-2014.
- Member of the QSN Committee for Provost and VP for Academic Affairs, 2016-2018.
- Member of the QSN Committee for Dean of Nursing and Allied Health Profession, 2017-2018.

GRADUATE COUNCIL COMMITTEE SERVICE

- Awards and Honorary Doctorates, 2005-2007 (member).
- Curriculum, 2005-2007 (member).
- Graduate Students Appeals, 2004-2007 (member).
- Fellowships, 2005-2007 (member).
- Graduate Faculty, 2005-2007 (member).

SERVED AS MASTER OF CEREMONIES FOR GRADUATE SCHOOL

- Fall 2005.
- Spring 2006.
- Fall 2006.
- Spring 2007.