Department of Mathematics
Summary
The Department of Mathematics offers programs of study leading to the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in mathematics. The faculty consists of 7 full professors, 7 associate professors, 10 assistant professors, and 10 instructors. In this report, we summarize the professional activities of the faculty from 2012 to present. Over this period, we produced 201 peer-reviewed journal publications, received external funding awards totaling $9,259,316, and awarded 83 B.S. degrees, 31 M.S. degrees, and 24 Ph.D. degrees.
Books Published


Edited Volumes

- **A.S. Vatsala and G. S. Ladde.** Special issue in *Communications in Applied Analysis*. Tribute to Professor V. Lakshmikantham, 17 (3 & 4) (2013).

Editorship

- **G.F. Birkenmeier,** Editorial Board Member. *Ege University Journal of the Faculty of Science*, 2013-present.


• C.Y. Chan, Editorial Board member. *Communications in Applied Analysis*, 1997-present.


• K. Deng, Associate Editor. *International Journal for Information & Systems Sciences*, 2006-present.


• A.S. Vatsala, Editorial Board member. *Fractional Dynamic Systems*, 2010-present.

**Journal Papers (Published)**

**2017**


5. **P. Beaulieu**, C. Eubanks-Turner, and **N. Pal**, Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Groups in the Mathematical


2016


38. C. J. Browne and S. S. Pilyugin, Minimizing R0 for In-Host Virus Model with Periodic Combination Antiviral Therapy, *Discrete and Continuous Dynamical Systems – B*, 21(10) (2016), 3315-3330.


42. D. Davis and G. Quick: Profinite and discrete G-spectra and iterated homotopy fixed points, *Algebraic & Geometric Topology*, 16 (4), 2016, 2257-2303.


2015


93. **V. Dolgushev and C. Rogers.** A Version of the Goldman-Millson Theorem for Filtered L-inf
94. **A.S. Vatsala** and B. Sambandham. Basic Results for Sequential Caputo Fractional
95. M. Sowmya and **A.S. Vatsala.** Generalized Iterative Methods for Caputo Fractional
96. T. T. Marinov, R. S. Marinova and **A.S. Vatsala.** Coefficient Identification in Euler-
97. J. D. Ramiréz and **A.S. Vatsala.** Generalized Monotone Iterative Techniques for
98. B. Sambandham and **A.S. Vatsala.** Numerical Results for Linear Caputo Fractional
99. A. Setia, B. Prakash, and **A.S. Vatsala.** Numerical Solution by Fourth Order Fractional
101. D. B. Szyld and **F. Xue.** Local convergence of Newton-like methods for degenerate
102. D. B. Szyld and **F. Xue.** Local convergence of Newton-like methods for degenerate
103. D. B. Szyld, E. Vecharynski and **F. Xue.** Preconditioned eigensolvers for large-scale
nonlinear Hermitian eigenproblems with variational characterizations. II. Interior

2014
107. J. E. Banks, J. Stark, R. I. Vargas and **A.S. Ackleh.** Deconstructing the Surrogate Species


2013


**Journal Papers (Accepted)**


12. K. Krishnamoorthy and E. Oral, Standardized LRT for comparing several lognormal means and confidence interval for the common mean, *Statistical Methods in Medical Research.*


16. P. Ng, L. Robert, and P. Skoufranis, Majorization in C*-algebras, *Transactions of the AMS.*


33. **G. Birkenmeier**, M. Ghirati and A. Taherifor. When Is The Sum of Annihilator Ideals an Annihilator Ideal? *Communications in Algebra*.


44. **R.B. Kearfott**. Some observations on exclusion regions in branch and bound algorithms. *Journal of Global Optimization*.


52. V. Kaftal, **P. Ng** and S. Zhang. Projection decomposition in multiplier algebras. *Mathematische Annalen.*


55. **M. Niebrzydowski**. On some ternary operations in knot theory. *Fundamenta Mathematicae.*


61. V. Dolgushev and **C. Rogers**. On an enhancement of the category of shifted L-infinity algebras. *Applied Categorical Structures.*


**Book Chapters**

Conference Papers (Published)

2017

2. **A.S. Vatsala** and M. Sowmya, Laplace transform method for linear sequential Riemann Liouville and Caputo fractional differential equations Citation: 1798, 020171 (2017); doi: 10.1063/1.4972763, View online: http://dx.doi.org/10.1063/1.4972763 View Table of Contents: http://aip.scitation.org/to... Published by the American Institute of Physics.

3. M. Sowmya and **A.S. Vatsala**, Generalized monotone method and numerical approach for coupled reaction diffusion systems M. Citation: 1798, 020153 (2017); doi: 10.1063/1.4972745, View online: http://dx.doi.org/10.1063/1.4972745 View Table of Contents: http://aip.scitation.org/to... Published by the American Institute of Physics

4. B. Parkash, A. Setia, **A.S. Vatsala**, Haar based numerical solution of Fredholm-Volterra fractional integro-differential equation with nonlocal boundary conditions, Citation: 1798, 020140 (2017); doi: 10.1063/1.4972732 View online: http://dx.doi.org/10.1063/1.4972732 View Table of Contents: http://aip.scitation.org/to... Published by the American Institute of Physics.

2014


2012


**Plenary and Keynote Presentations**

1. **A.S. Vatsala.** World Congress: 11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences. La Rochelle, France, July 05-08, 2016, (Keynote).


**Colloquia and Seminar Talks**

1. **A.S. Ackleh,** Department of Mathematical Sciences, Dr. Karen A. Ames Lecture Series on Applied Mathematics, University of Alabama at Huntsville, Huntsville, AL, March 31, 2017.
13. **D. Davis**, Topology Seminar, University of Louisiana at Lafayette, (5 lectures), Fall 2017.
15. **L. Li**, Overcoming the added-mass instability for coupling incompressible flows and elastic beams, College of Mathematics, Sichuan University, Chengdu, China, December, 2017
16. **L. Li**, Overcoming the added-mass instability for coupling incompressible flows and elastic beams, School of Mathematical Sciences, University of Electronic Science and Technology of China, Chengdu, China, December, 2017.
28. **A.S. Ackleh**, Department of Mathematics and Statistics, Sam Houston State University, Huntsville, Texas, April, 2016.
37. **D. Davis**, Comparing continuous and discrete homotopy fixed points, with an application to the Ausoni-Rognes conjecture, Topology Seminar, University of Rochester, April 1, 2016.
38. **D. Davis**, UL Mathematics Department Topology Seminar, 7 talks in Spring 2016 and 8 talks in Fall 2016.
39. **K. Deng**, Competitive exclusion and coexistence in a two-strain pathogen model with diffusion, Indiana-Purdue University, April 18, 2016.
42. **A. Magidin**, UL Algebra Seminar, 12 talks in Spring 2016 and Fall 2016.
45. **N. Pal.** Real rank zero for purely infinite corona algebras, Canadian Annual Symposium on Operator Algebras and their Applications (COSy), Centre de Recherches Mathematiques (CRM), Montreal, Quebec, June 13-18, 2016.


52. **G. F. Birkenmeier.** UL Algebra Seminar. 10 talks in Spring 2015 and Fall 2015.

53. **D. Davis.** UL Topology Seminar. 4 talks in Spring 2015 and 6 talks in Fall 2015.

54. **K. Deng.** Blow-up for the heat equation with a general memory boundary condition. Huazhong University of Science & Technology, June 1, 2015.


58. **C. Rogers.** From the Dold-Kan correspondence to Sullivan’s realization functor. Topology Seminar, UL Lafayette, Fall 2015.


60. **C. Rogers.** Sullivan’s realization functor and Sullivan models for spheres. Topology Seminar, UL Lafayette, Fall 2015.

61. **D. Davis.** UL Topology Seminar. 2 talks in Spring 2014 and 7 talks in Fall 2014.


64. **K.L. Sutton.** Department of Physics Colloquium, February 5, 2014.


66. **G.F. Birkenmeier.** University of Louisiana at Lafayette, October 2013


68. **K.L. Sutton.** Department of Biology Colloquium, September 2013.


70. **K.L. Sutton.** Computational and Visualization Enterprise Seminar, February 2013

71. **F. Xue.** Southern Methodist University, November 2013.

72. **F. Xue.** University of Louisiana at Lafayette, May, 2013.

73. **G. Birkenmeier.** Clayton State University, March 2012.

74. **G. Birkenmeier.** Ohio State University, May 2012.

75. **K. Deng.** Wuhan University, June 2012.

76. **K. Deng.** Tongji University, June 2012.
Invited Conference and Workshop Talks

4. **A. Ackleh**, 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)


22. **P. Ng**, Purely infinite corona algebras, extensions, and double commutant theorems, Research Center for Operator Algebras at the East China Normal University, Shanghai, China, June 3-7, 2017.

23. **P. Ng**, Purely infinite corona algebras, extensions and double commutant theorems, Summer School on Operator Algebras and Noncommutative Geometry, Hebei Normal University, June 26-July 1, 2017.

24. **P. Ng**, Purely infinite corona algebras extensions, and double commutant theorems, Mathematical Congress of the Americas at McGill University, Montreal, Quebec, Canada, July 24-28, 2017.

25. **P. Ng**, Purely infinite corona algebras, extensions, and double commutant theorems, Workshop Applications of Model Theory to Operator Algebras, University of Houston, Houston, TX, July 31-Aug 4, 2017.


32. **A.S. Vatsala**, Special Session Chair, AMS Joint Mathematics Meeting, Atlanta, GA, January 4-7, 2017. (Invited)


52. **A. Magidin.** Algebraic closure operators on infinite subgroup lattices, Zassenhaus Group Theory Conference, Adelphi University, Garden City, NY, May 2016.

53. **N. Pal.** 1st International Conference on Applied Mathematics in Engineering and Reliability (ICAMER 2016), Ton Duc Thang University, Ho Chi Minh City, Vietnam, May 4 - 6, 2016.


58. **N. Pal.** Bayesian Predictive Inference, Mahidol University, Bangkok, Thailand, December 20, 2016.


68. D. Davis. For G profinite and certain G-spectra: Comparing their discrete and profinite homotopy fixed points. Penn. State University, Altoona, Nov. 6, 2015.


74. C. Rogers. What do homotopy algebras form? Special Session on Cohomology of Algebras and Deformation Theory. AMS 2015 Fall Central Sectional Meeting, Chicago, IL, October 2015.


82. R. Chiquet. Chaos and Persistence in a Two Stage Ecological Model LA/MS Regional MAA Meeting, Louisiana State University March 2014.


87. **P. Ng**. Commutators in $C^*F_\infty$, Special Session on Progress in Noncommutative Analysis of the American Mathematical Society Sectional Meeting, at the University of New Mexico, Albuquerque, New Mexico, April 4-6, 2014.

88. **P. Ng**. Simple $C^*$-algebras with quasicontinuous scale. Conference on Classification, Structure; Amenability and Regularity, at the University of Glasgow, Glasgow, Scotland, United Kingdom, August 29-September 6, 2014.


97. **G.F. Birkenmeier**. When is a Sum of Annihilator Ideals an Annihilator Ideal? Southern Regional Algebra Conference, Southeastern Louisiana University, March 15-17, 2013.


100. **D. Davis**. Homotopy Fixed Points for Profinite Groups Emulate Concretely Those for Discrete Groups. Geometry & Topology Seminar, Tulane University, October 8, 2013.


114. A.S. Vatsala. Sub Hyperbolic Linear Partial Fractional Differential Equation in One Dimensional Space with Numerical Results. AMS Regional Meeting, Washington University, St, Louis, MO, October 18-20, 2013.


121. **M. Niebrzydowski.** Preordered Quandles. AMS Meeting, Lawrence, Kansas, March 30-April 1, 2012.


125. **A.S. Vatsala.** Representation Form One Dimensional Fractional Wave Equation and Comparison Results. AMS Regional Meeting, University of South Florida, Tampa, FL, March 10-12, 2012.


### Contributed Talks


128. **A. Magidin,** "When is the lattice of closure operators on a subgroup lattice again a subgroup lattice?", Groups St Andrews in Birmingham, Birmingham, UK, August 2017.

129. **P. Beaulieu,** “Strengthening Teacher Education with Mathematics & Science Scholars (STEMS²)”, LA/MS 2016 Section Meeting at LSU-Shreveport, LA, February 26, 2016


136. **R. Chiquet.** Washington, DC in April of 2015

137. **D. Davis.** For the Ausoni-Rognes conjecture at n=1, p>3: A strongly convergent descent spectral sequence. Lehigh University Geometry/Topology Conference, May 24, 2015.

139. J. Roy and C.S. Langley. Benefits and Obstacles in Teaching Online Math/Stat Undergraduate Courses. 2015 MAA (Mathematical Association of America) Louisiana/Mississippi Section Meeting at the University of Southern Mississippi Gulf Park Campus, Long Beach, Mississippi, February 28, 2015.


143. K. Lopez. LA/MS Section of MAA Meeting, A New Freshman Quantitative Reasoning Course at University of Louisiana, Lafayette, University of Southern Mississippi, Hattiesburg, MS, March 1, 2013.


148. J. Roy. Using Automatic Differentiation to Compute Directional Derivatives in Matlab. Louisiana/Mississippi Section Meeting of the Mathematical Association of America (MAA), University of Southern Mississippi, Hattiesburg, MS, March 2013.


150. F. Xue. New Developments of LOBPCG for Large-scale Nonlinear Eigenvalue Problems. 1st Texas Analysis and Mathematical Physics Symposium (TexAMP), Rice University, October 2013.


Journal Referees


- **D. Fisher**: The American Statistician, Teaching Statistics.
- **S. Kim**, Statistical Methodology.
- **H. Lee**: Mathematical Communications.
- **J. Lynd**, Mathematische Zeitschrift
Organized Special Sessions or Conferences

- **D. Davis**, member of the Organizing Committee for the International Conference “Homotopy Theory: Tools and Applications”, University of Illinois, Urbana-Champaign, IL, July 17-21, 2017.
- **D. Davis**, Organizer, Topology Seminar, University of Louisiana at Lafayette, Fall 2017.
- **A.S. Vatsala**, Organized Special Session at the AMS Joint Mathematics Meeting, Atlanta, GA, January 4-7, 2017
- **A.S. Ackleh**, 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.


• **A.S. Vatsala**, Arranged and Chaired the special session on “Analysis of Fractional Differential, Integral and Difference Equations with Applications”, World Congress: 11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences, LaRochelle, France, July 05-08, 2016.

• **X.-S. Wang**, Organizer of Special Session on Recent Advances in Orthogonal Polynomials and Special Functions, Joint Mathematics Meetings, Seattle, WA, January 6-9, 2016.


• **C.Y. Chan**: Organizer and Chair of the Special Session on Applicable Analysis and Applications for the 9th International Conference on Differential Equations and Dynamical Systems, Dallas, Texas, May 14-16, 2015.

• **D. Davis**: Organizing Committee for the NSF-sponsored Conference, Classification of C*-algebras, flow equivalence of shift spaces, and graph and Leavitt path algebras, University of Louisiana at Lafayette, May 11-15, 2015.

• **D. Davis**: Organizer, Math Department Topology Seminar, Spring 2015 University of Louisiana at Lafayette.

• **D. Davis**: Organizer, Math Department Topology Seminar, Fall 2015, University of Louisiana at Lafayette.

• **A. Magidin**: Co-organizer of Special Session on "What's New in Group Theory?" Annual Joint Meeting of the American Mathematical Society and the Mathematical Society of America, San Antonio, TX, January 2015.

• **A.S. Vatsala**: Special session on Fractional, Stochastic and Hybrid Dynamic Systems, at Joint Mathematics Meetings of AMS and MAA, San Antonio, TX, January 10-13, 2015.

• **A.S. Vatsala**: Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Systems and Applications, at the joint meeting of The Seventh International conference on Dynamic Systems and Applications and Fifth International Conference on Neural,

- **D. Davis**: Organizer of Topology Seminar, University of Louisiana, Lafayette, Fall 2013.
- **D. Davis and M. Niebrzydowski**: Lloyd Roeling Conference on Topology, University of Louisiana, Lafayette, Fall 2013.
- **C.Y. Chan**: Organizer and Chair of the special session on Recent Advances in the Theory and Applications of Differential Equations at the 8th International Conference on Differential Equations and Dynamical Systems, Waterloo, Ontario, Canada, August 1-4, 2012.

**Ph.D. Students Who Graduated (Chair/Co-Chair of Committee)**

*denotes students who have received support from external grants.

**2017**

- Tingting Tang, (Postdoc, University of Notre Dame), Advisor: **A.S. Ackleh**
- Vojislav Petrovic, (Instructor, University of Louisiana at Lafayette), Advisor: **D. Davis**
- Xiao Wang, (Assistant Professor, Mathematics and Statistics Department, Qingdao University), Advisor: **K. Krishnamoorthy**
2016
- *Xinyu Li, Advisor: A.S. Ackleh
- Jared Guilbeau, Advisor: R.B. Kearfott
- Tracy Robin, Advisor: P. Ng
- Bhuvaneswari Sambaandham, Advisor: A.S. Vatsala

2015
- *Vinodh Chellamuyhu, (Assistant Professor, Dixie State University, Utah), Advisor: A.S. Ackleh.
- Robert Miller, Advisor: A.S. Ackleh
- Yixiang Wu, Advisor: K. Deng
- Suntaree Unhapipat, Dissertation Advisor: N. Pal

2014
- Mark Delcambre, Advisor: A.S. Ackleh
- Richard Leblanc, Advisor: G.F. Birkenmeier
- Qian Wang, Advisor: K. Deng
- Sowmya Muniswamy, Advisor: A.S. Vatsala

2013
- Matthew J. Lennon, Advisor: G.F. Birkenmeier
- Christopher Ryan, (Instructor, University of Louisiana, Lafayette), Advisor: G.F. Birkenmeier
- Yi Wang, Advisor: K. Deng
- Haochun Zhang, Advisor: R.B. Kearfott
- *Dan Zhang, (Senior Statistician), Advisor: K. Krishnamoorthy

2012
- Zachary H. Denton, (Assistant Professor, North Carolina A&T State University), Advisor: A.S. Vatsala
- *Baoling Ma, (Lecturer, Louisiana Tech University, Ruston, Louisiana), Advisor: A.S. Ackleh
- Diego V. Ramirez, (Visiting Assistant Professor, Lamar University), Advisor: A.S. Vatsala
- *Zhao Xu, (STATA, software company), Advisor: K. Krishnamoorthy

Funding

External Funding

A. S. Ackleh
- Co-Principal Investigator, Gulf of Mexico Research Initiative Fund, Littoral Acoustic Demonstration Center: Gulf Ecological Monitoring and Modeling (LADC: GEMM).
2015-2017, $5,238,174. (additional continuation funding in the amount of $680,000 was approved for the year 2019).

- Principal Investigator, National Science Foundation, Nonautonomous Structured Population Models with Application to Amphibians and Associated Diseases. Grant number DMS-1312963. 2013-2016, $235,000.

P. Beaulieu

- Co-Principal Investigator, NSF, Strengthening Teacher Education through Mathematics & Science Teaching Scholars in Louisiana. September 2014-August 2019, $1,193,309.
- Co-Principal Investigator, National Science Foundation: Louisiana Mathematics Masters in the Middle (LaM3). September 15, 2012-August 31, 2017, $1,858,145.
- Co-Principal Investigator, NSF, Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Minorities in Mathematical Sciences: A Pilot Project. 2011-2014, $548,880.
- Co-Principal Investigator NSF Grant No. DUE-1136417, The Louisiana Noyce Teaching Fellows/Master Teaching Fellows Planning Project. 2011-2012, $127,449.

M. B. Borel

- Principal Investigator, Math Science Partnership in conjunction with Iberia Parish School Board, LA Department of Education Amount funded for UL Lafayette personnel 2 years. $51,432.00.

C. Browne

- Principal Investigator, conducted research on virus-immune response models and Ebola models, Paper recently accepted for Journal of Mathematical Biology, June 1 – July 31, 2016, $4,000.

R. Chiquet

- Co-PI on a STEP Grant, Laptop Computer for Mobile Classroom Projectors in the Department of Mathematics, 2016, $6150.
• Co-PI on a STEP Grant, Projectors for Enhanced Instruction in the Department of Mathematics. Fall 2015, $2400.
• Lead Research Scientist on an NSF grant proposal, Littoral Acoustic Demonstration Center: Gulf Ecological Monitoring and Modeling. November 2014, $5,238,174 over three years.

D. Davis
• Co-Principal Investigator, National Science Foundation conference grant, Homotopy Theory: Tools and Applications, University of Illinois at Urbana-Champaign, IL, July 2017 – June 2018, $45,000.

C. Eubanks-Turner
• Co-Principal Investigator, National Science Foundation: Louisiana Mathematics Masters in the Middle (LaM³). 2012-2017, $1,858,145.
• Principal Investigator, National Science Foundation, The Louisiana Noyce Teaching Fellows/Master Teaching Fellows Planning Project. 2011-2012, $127,449.

D. Fisher
• MAA travel grant for PREP Workshop. June 2013, $400.
• United States Conference on Teaching Statistics (USCOTS) Registration Grant Waiver. April 2013, $125.
• Louisiana Board of Regents Travel Grant for Emerging Faculty. August 2012, $1200.

H. Gulbudak
• ASU travel grant, October, 2017, $150

M. L. Jumonville
• Co-Principal Investigator, for Lafayette Parish Gear-Up Project for High School Mathematics Teachers and Students. 2013-2014, $42,591.
• Co-Principal Investigator, for Lafayette Parish Gear-Up Project for High School Mathematics Teachers and Students (HEAT). 2011-2012, $52,700.

K. Krishnamoorthy
• Co-Principal Investigator, National Institutes of Health, Statistical Methodology for Industrial Hygiene: Detection Limits, Reference Limits and Measurement Accuracy. 2010-2014, $1,394,064.

K. Lopez
• Co-Principal Investigator, National Science Foundation, Strengthening Teacher Education through Mathematics & Science Teaching Scholars in Louisiana. September 2014-August 2019 $1,193,309.
• Co-Principal Investigator, National Science Foundation, Louisiana Mathematics Masters in the Middle (LaM³). 2012-2017, $1,858,145.
• Co-Principal Investigator, National Science Foundation, The Louisiana Noyce Teaching Fellows/Master Teaching Fellows Capacity Building Project. 2011-2012, $127,449.
• Co-Principal Investigator, Louisiana Systemic Initiative Program/Board of Regents, A TEAM (Tactile Experiences with Algebraic Models) Approach to Improving Algebraic Proficiency in the Middle Grades. 2011-2012, $259,629.

P. Ng
• Principle Investigator, National Science Foundation grant, 15th ECOAS (East Coast Operator Algebras Symposium) Conference, University of Louisiana at Lafayette, October 7-8, 2017, $28,000.
• Principal Investigator, National Science Foundation. NSF-CBMS Regional Conference grant for an operator algebras conference at the University of Louisiana at Lafayette. November 2011-November 2012, $38,931.

N. Pal
• Principal Investigator, Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Minorities in Mathematical Sciences: A Pilot project, National Science Foundation. January 2011-December 2013, $548,880.

C. Rogers
• 2015 American Mathematical Society/Simons Foundation Travel Grant

P. Salceanu
• Principal Investigator, Board of Regents Science Funds, Title: Uniform Persistence in Discrete and Continuous Dynamical Systems with Applications to Epidemic Models. 2012-2014, $60,666.
• Louisiana Board of Regents Travel Grant for Emerging Faculty. July 1-5, 2012, $1,200.

K. Sutton

A. S. Vatsala
• Principal Investigator, Louisiana Board of Regents Support Fund, 2016 – 2017, $16,750.
• Co-Principal Investigator, Global Initiative of Academic Networks (GIAN), IIT, INDORE, December 2017, $8,544.00.
• Co-Principal Investigator, NSF Infrastructure Improvement Grant, Title: Smooth Transition for Advancement to Graduate Education STAGE. 2011-2014, $548,880.
• Co-Principal Investigator, US Army Research Office Grant, Title: Fractional Differential Inequalities with Applications. 2011-2014, $260,000.
F. Xue

- Principal Investigator, Fast algorithms for large-scale nonlinear algebraic eigenproblems. NSF DMS-1419100, 08/2014-07/2017, $180,000.
- Principal Investigator, Fast algorithms for large-scale nonlinear algebraic eigenproblems. EPSCoR Pilot Fund, Louisiana Board of Regents, 01/2014-09/2015, $10,000.

Awards/Honors

- C. Browne, American Mathematical Society/Simons Foundation Travel Grant, 2016
- C. Y. Chan, retired with Professor Emeritus, June 2016.
- X.-S. Wang, Research Travel Grant, 2016.
- R. Chiquet, Ray P. Authement College of Sciences Excellent Teacher, 2014.
- K. Deng, UL Lafayette Distinguished Professor, 2013.
- K. Lopez, Outstanding Faculty Advisor Award, 2013.
- C. Christov, Ray P. Authement College of Sciences Outstanding Professor, 2012.

Other Professional Activities

• D. Fisher. Member of Planning Committee for Electronic Conference on Teaching Statistics (ECOTS), 2014.
• R.B. Kearfott. Acting Chair of the IEEE (Institute of Electrical and Electronics Engineers) Standards Association P-1788, Working Group on Standardization of Interval Arithmetic.
• K. Lopez. Section Chair of LaMs Section of the Mathematical Association of America. 2013- present.
• K. Lopez. ULearn Certified Online Teacher. September 27, 2013.
• K. Lopez. Enrolled in mini-course on Voting and Clickers at the MathFest, Hartford, CT, August 1-2, 2013.
• K. Lopez. Attended Math Circle on the Road Conference in Washington, D.C. for Mathematics Teachers Circles. April 12-15, 2012 and volunteered to help plan and conduct hands-on station titled “To Park or Not to Park” in the Ripley Center at the Smithsonian Institution.
• **K. Lopez.** Participated in two training sessions on the new Common Core State Standards for University Mathematics Faculty sponsored by the La Department of Education. October 31 and November 1, 2012.

• **K. Lopez.** One of five faculty members representing the Department of Mathematics at the monthly meetings of the Acadiana Mathematics Teachers Circle, (A problem-solving group of Middle School Mathematics Teachers). Fall 2009 - present.

• **K. Lopez.** Conducted Workshops for In-Service Middle School Teachers through LaSIP Louisiana Systemic Initiative Program/Board of Regents projects.

• **N. Pal.** Presented a contributed paper at the Florida Chapter of the American Statistical Association Annual meeting. University of West Florida, February 8-9, 2013

• **N. Pal.** Departmental consultant for statistical projects, (provide service to local businesses, industries and law offices on statistical data analyses).

• **N. Pal.** Appeared before courts (both parish as well as federal) as an expert witness on several legal cases. Analyzed datasets to investigate various types of biases.

• **J. Roy.** Served as a judge for the American Statistical Association's National Statistics Project Competition (an annual project competition for students in grades 7-12). July 2013 and June 2014.

• **K. Sutton.** Adjunct faculty member, Mathematical Computational and Modeling Sciences Center, Arizona State University. July 2012-present.

• **K. Sutton.** Fellow of Computational and Visualization Enterprise (CAVE), University of Louisiana at Lafayette. September 2012 - present.

• **K. Sutton.** Invited Participant in “Open Problems in Mathematical Epidemiology”, hosted by the BC Centre for Disease Control and University of British Columbia, Vancouver, BC, Canada. December 5-6, 2012.

• **A.S. Vatsala.** Research Competitiveness Program at the American Association for the Advancement of Science (AAAS). Reviewed five research proposals.

• **A.S. Vatsala.** Gave a talk for upward bound students about the use and career opportunities in Mathematics, UL Lafayette Student Union. June 19, 2012.


### Offices Held and Professional Memberships

• **A.S. Vatsala,** Member/Mentor National Alliance for Doctoral Studies in the Mathematical Sciences.

• **A.S. Vatsala,** Member of the American Mathematical Society, World Congress of Nonlinear Analysts, Member of Mathematical Association of America, Member of the International Federation of Nonlinear Analysts.


• **A.S. Ackleh,** American Mathematical Society (AMS).

• **A.S. Ackleh,** Society of Mathematical Biology (SMB).

• **A.S. Ackleh,** Society of Industrial and Applied Mathematics (SIAM).

• **A.S. Ackleh,** International Society of Difference Equations (ISDE).

• **P. Beaulieu,** member National Council of Teachers of Mathematics , member/mentor National Alliance for Doctoral Studies in the Mathematical Sciences
• G. Birkenmeier, American Mathematical Society (AMS).
• C.Y. Chan, Editorial Committee Member for Proceedings of Dynamic Systems and Applications 6 (2012).
• K. Deng, American Mathematical Society.
• D. Fatheree, Mathematical Association of America.
• D. Fatheree, National Council of Teachers of Mathematics.
• D. Fatheree, Louisiana Association of Developmental Education.
• D. Fatheree, Louisiana Council of Teachers of Mathematics.
• D. Fatheree, Acadiana Council of Teachers of Mathematics.
• D. Fatheree, Louisiana Academic Advising Association.
• D. Fisher, International Association of Statistics Educators.
• D. Fisher, Mathematical Association of America.
• H. Gulbudak, Member of the Mathematical Association of America (MAA), American Mathematical Society (AMS), Society for Industrial and Applied Mathematics (SIAM).
• M. L. Jumonville, Member of National Council of Teachers of Mathematics.
• M. L. Jumonville, Member of Louisiana Association of Teachers of Mathematics.
• M. L. Jumonville, Member of Acadiana Council of Teachers of Mathematics.
• R.B. Kearfott, Vice Chair (and current acting chair) IEEE P-1788 working group for standardization of interval arithmetic.
• R. Koytcheff, Member of the American Mathematical Society, 2017.
• K. Krishnamoorthy, Member of the Institute of Mathematical Statistics.
• K. Krishnamoorthy, Louisiana Chapter of the American Statistical Association, Chapter Representative, 2013 – present.
• L. Li, Member of Society for Industrial and Applied Mathematics (SIAM).
• K. Lopez, Member of the UL Lafayette PARCC Campus Leadership Team (Partnership for Assessment of the Readiness for Colleges and Careers) - a consortium of 25 states working to development an assessment of the Common Core State Standards for Grades K-12. July 2011 - present.
• K. Lopez, UL Lafayette Committee on General Education, member, 2007 to present.
• K. Lopez, Member of MAA National Committee on Two-Year Colleges, 2012 - present.
• K. Lopez, Member: MAA, LA/MS Section of MAA, NCTM, LATM, LaMsMATYC.
• J. Lynd, Member of American Mathematical Society
• A. Magidin, Member of American Mathematical Society, Mathematical Association of America.
• C. Rogers, Member American Mathematical Society.
• J. Roy, Member of the Student Competition Committee for the Louisiana/Mississippi Section of the MAA.
• J. Roy, Member of the Mathematical Association of America (MAA), American Mathematical Society (AMA) and American Statistical Association (ASA).
• **K.L. Sutton**, Member of the Society of Mathematical Biology (SMB) and Society for Industrial and Applied Mathematics (SIAM).

• **P. Salceanu**, Chair for the 2016 Lloyd Roeling ULL Math Conference for Applied Math.