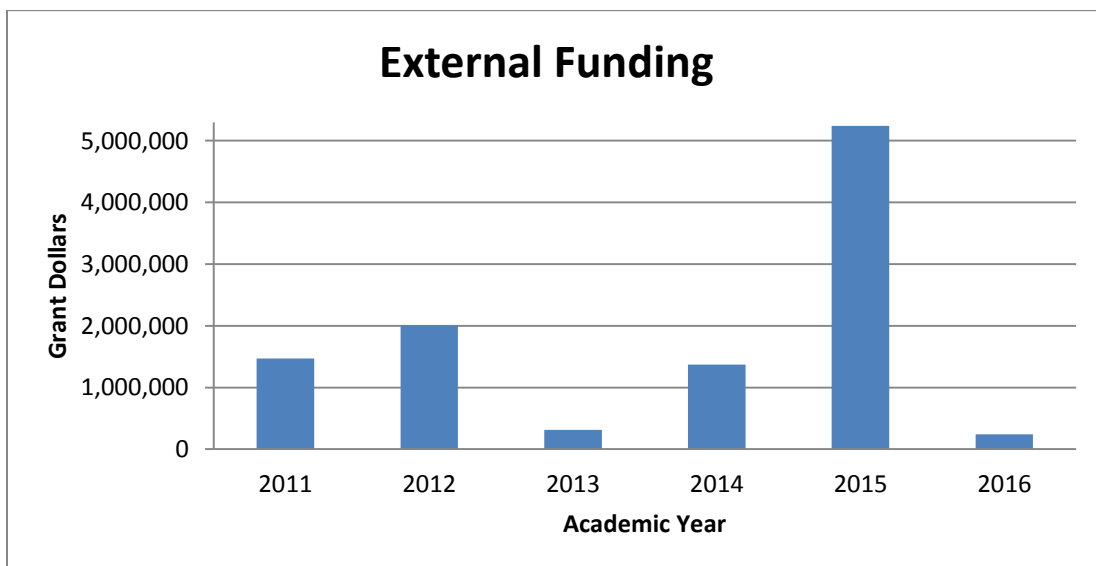
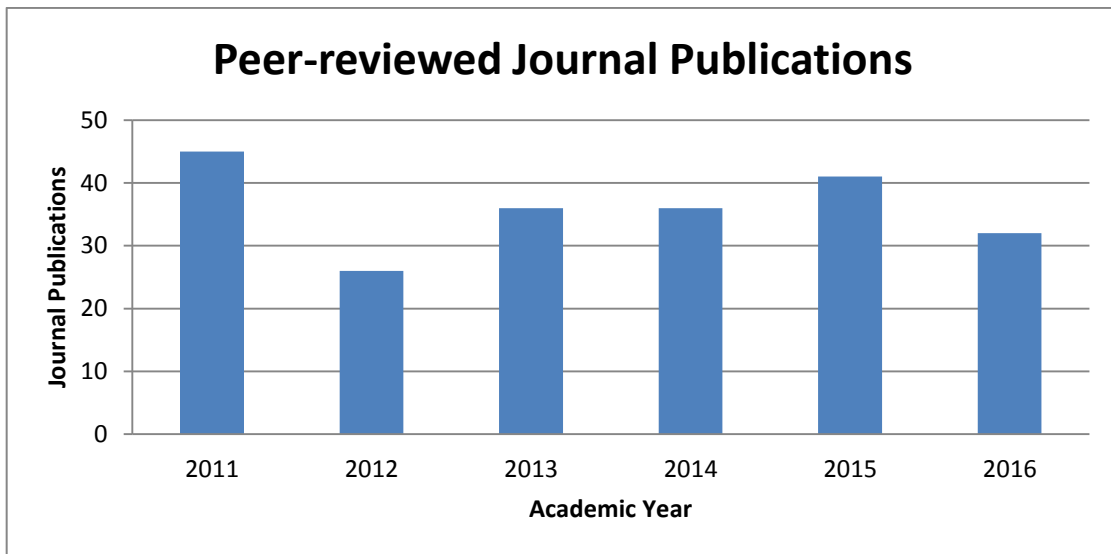
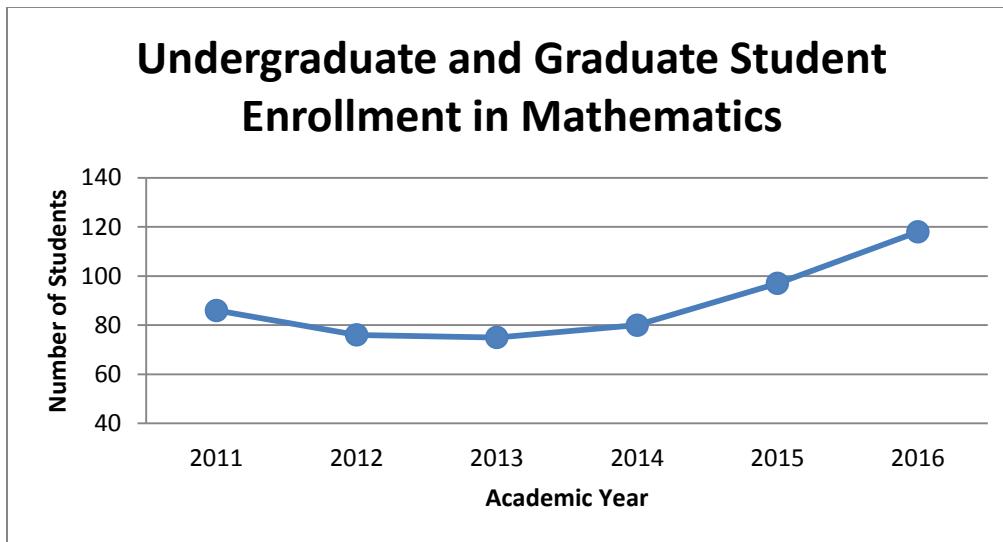


# **Department of Mathematics**

## 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 6 full professors, 6 associate professors, 7 assistant professors, and 11 instructors. In this report, we summarize the professional activities of the faculty from 2011 to present. Over this period, we produced 218 peer-reviewed journal publications, received external funding awards totaling \$10,648,511, and awarded 68 B.S. degrees, 45 M.S. degrees, and 27 Ph.D. degrees.





### Books Published

- **K. Krishnamoorthy**. *Handbook of Statistical Distributions with Applications*, 2<sup>nd</sup> edition. Chapman & Hall/CRC (2015).
- **G.F. Birkenmeier**, J.K. Park and S.T. Rizvi. *Extensions of Rings and Modules*. Birkhauser, (2013).
- V. Lakshmikantham, S. Leela and **A.S. Vatsala**. *Theory of Differential Equations in Cones*. Cambridge Scientific Publishers, (2011).

### Edited Volumes

- **A.S. Ackleh**, R.M. Colombo, S.C. Hille and A. Muntean. Special Issue Mathematical Biosciences and Engineering, **12 (2)** (2015).
- **A.S. Vatsala** and G. S. Ladde. Special issue in *Communications in Applied Analysis*. Tribute to Professor V. Lakshmikantham, **17 (3 & 4)** (2013).
- **C.I. Christov** and M. D. Todorov. *3<sup>rd</sup> International Conference on Applications of Mathematics in Technical and Natural Sciences*. American Institute of Physics Conference Proceedings, **1404** (2011).

### Editorship

- **A.S. Ackleh**, Associate Editor. *Journal of Mathematical Biosciences and Engineering*, 2009-present.
- **G.F. Birkenmeier**, Editorial Board. *Turkish Journal of Mathematics*, 2015.
- **G.F. Birkenmeier**, Editorial Board Member. *Ege University Journal of the Faculty of Science*, 2013-present.
- **G.F. Birkenmeier**, Associate Editor. *Hacettepe Journal of Mathematics and Statistics*, 2008 - present.
- **G.F. Birkenmeier**, Editorial Board member. *East-West Journal of Mathematics*, 2001-present.

- **C.Y. Chan**, Advisory Editor. *Thai Journal of Mathematics*, 2003-present.
- **C.Y. Chan**, Editorial Board member. *Dynamic Systems and Applications*, 1992-present.
- **C.Y. Chan**, Editorial Board member. *Neural, Parallel and Scientific Computations*, 1993-present.
- **C.Y. Chan**, Editorial Board member. *Communications in Applied Analysis*, 1997-present.
- **C.Y. Chan**, Editorial Board member. *Dynamics of Continuous, Discrete and Impulsive Systems*, 1994-present.
- **C.Y. Chan**, Editorial Board member. *Chamchuri Journal of Mathematics*, 2009-present.
- **D. Davis**, Editor. *Journal of Homotopy and Related Structures*, 2005- present.
- **K. Deng**, Associate Editor. *International Journal for Information & Systems Sciences*, 2006-present.
- **R.B. Kearfott**, Managing Editor. *Reliable Computing*, 2008-present.
- **R.B. Kearfott**, Editorial Board member, *Optimization Letters*, 2006-present.
- **K. Krishnamoorthy**, Associate Editor. *Communications in Statistics-Theory and Methods; Simulation and Computation*, 2008-present.
- **A. Magidin**, Editor. *International Electronic Journal of Algebra*, October 2011. <http://www.ieja.net>
- **N. Pal**, Co-Editor. *Sankhya - The Indian Journal of Statistics*, 2008-2011.
- **A.S. Vatsala**, Editorial Board member. *International Journal of Differential Equations*, Hindawi, 2012.
- **A.S. Vatsala**, Editorial Board member. *Malaya Journal of Matematik*, 2013.
- **A.S. Vatsala**, Editorial Board member. *Communications in Applied Analysis*, 1997-present.
- **A.S. Vatsala**, Editorial Board member. *Nonlinear Dynamics and Systems Theory*, 2003-present.
- **A.S. Vatsala**, Editorial Board member. *Nonlinear Analysis: Theory, Methods & Applications Series A*, 1999-2011.
- **A.S. Vatsala**, Editor. *Nonlinear Analysis: Hybrid Systems*, 2009-2011.
- **A.S. Vatsala**, Editorial Board member. *Fractional Dynamic Systems*, 2010-present.

## Journal Papers (Published)

### 2016

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2. **A.S. Ackleh**, J. Cleveland, and 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.
3. **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.

4. **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.
5. P.N. Anh, **G. Birkenmeier** and L. Van Wyk, Idempotents and the Structures of Rings, *Linear and Multilinear Algebra*, **64** (2016), 2002 - 2029.
6. **G. Birkenmeier** and Chris E. Ryan, Module Decompositions Using Pairwise Comaximal Ideas, *Communications in Algebra*, **44** (2016), 4200 - 4211.
7. **G. Birkenmeier,** A. Tercan and C.C. Yucel, Projection Invariant Extending Rings, *Journal of Algebra and Its Applications*, **15** (2016), 1650121.
8. **C. J. Browne** and S. S. Pilyugin, Minimizing  $R_0$  for In-Host Virus Model with Periodic Combination Antiviral Therapy, *Discrete and Continuous Dynamical Systems – B*, **21**(10) (2016), 3315-3330.
9. **C.J. Browne,** Immune Response In Virus Model Structured by Cell Infection – Age, *Mathematical Biosciences and Engineering*, **13** (5) (2016), 887-909.
10. **C.Y. Chan** and H.T. Liu, A maximum principle for fractional diffusion differential equations, *Quart. Appl. Math*, **74** (2016), 421-427.
11. **C.Y. Chan** and P. Tragoonsirisak Marion, Blow-up criteria for a parabolic problem due to a concentrated nonlinear source in  $\mathbb{R}^N$ , *Dynam Systems Appl.*, **25** (2016), 575-582.
12. **D. Davis** and G. Quick: Profinite and discrete G-spectra and iterated homotopy fixed points, *Algebraic & Geometric Topology*, **16** (4), 2016, 2257-2303.
13. J. R. Anderson, **K. Deng,** and Q. Wang, Global behavior of solutions to the fast diffusion equation with boundary flux governed by memory, *Mathematical Methods in Applied Sciences*, **39** (2016), 4451-4462.
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16. W. Hofschuster, **R. B. Kearfott,** and E. D. Popov, Bibliography of Prof. Walter Krämer, in Scientific Computing, Computer Arithmetic, and Validated Numerics (16th International Symposium, SCAN 2014, Würzburg, Germany, September 21-26, 2014, revised selected papers), M. Nehmeier, J. Wolff von Gudenberg, and W. Tucker, eds., pp. 281-290, 2016.
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18. **K. Krishnamoorthy** and X. Wang, Fiducial inference on gamma distribution: uncensored and censored cases, *Environmetrics*, **27** (2016), 479-493.
19. **K. Krishnamoorthy,** J. Peng, and D. Zhang, Modified large sample confidence intervals for Poisson distributions: Ratio, weighted average and product of means, *Communications in Statistics – Theory and Methods*, **45** (2016), 83-97.
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45. **K. Krishnamoorthy** and X. Lian. Closed-form approximate tolerance intervals for some general linear models and comparison studies. *Journal of Statistical Computation and Simulation*.
46. **K. Krishnamoorthy**, J. Peng and D. Zhang. Modified large sample confidence intervals for Poisson distributions: Ratio, weighted average and product of means. *Communications in Statistics - Theory and Methods*.
47. **K. Krishnamoorthy** and **L.G. León-Novelo**. Small sample inference for gamma distributions: One- and two-sample problems. *Environmetrics*.
48. **K. Krishnamoorthy** and Peng, J. Approximate One-Sided Tolerance Limits in Random Effects Model and in Some Mixed Models and Comparisons. *Journal of Statistical Simulation and Computation*.
49. **L.G. León-Novelo**, K. M. Kempainen, A. Ardisson, A. Davis-Richardson, J. Fagen, K. Gano, E. Triplett and Teddy Publications. Two applications of Permutation Tests in Biostastics. *Boletín de la Sociedad Matemática Mexicana in Celebration of The International Year of Statistics*.

50. **L.G. Leon-Novelo**, A. Womack and G. Casella. Inference from Intrinsic Bayes' Procedures Under Model Selection and Uncertainty. *JASA*.
51. **L.G. Leon-Novelo** and K. Krishnamoorthy. Small Sample Inference for Gamma Parameters: One- and Two-Sample problems. *Environmetrics*.
52. V. Kaftal, **P. Ng** and S. Zhang. Projection decomposition in multiplier algebras. *Mathematische Annalen*.
53. **P. Ng** and E. Ruiz. On the structure of the projective unitary group of the multiplier algebra of a simple stable nuclear C\*-algebra. *Journal of Operator Theory*.
54. V. Kaftal, **P. Ng** and S. Zhang. Finite sums of projections in purely infinite simple C\*-algebras with torsion  $K_0$ . *Proceedings of the American Mathematical Society*.
55. **M. Niebrzydowski**. On some ternary operations in knot theory. *Fundamenta Mathematicae*.
56. **L. Robert Gonzalez**. Nuclear dimension and sums of commutators. *Indiana University Mathematics Journal*.
57. H. T. Banks, K. Rehm, **K. Sutton**, C. Davis, L. Hail, A. Kuerbis and J. Morgenstern. Dynamic modeling of behavior change, *Quarterly of Applied Mathematics*.
58. K. M. Sooshalter, D. B. Szyld and **F. Xue**. Krylov subspace recycling for sequences of shifted linear systems. *Applied Numerical Mathematics*.
59. D. B. Szyld and **F. Xue**. Local convergence of Newton-like methods for degenerate eigenvalues of nonlinear eigenproblems, Part I, Classical Algorithms. *Numerische Mathematik*.
60. D. B. Szyld and **F. Xue**. Local convergence of Newton-like methods for degenerate eigenvalues of nonlinear eigenproblems, Part II, Accelerated Algorithms. *Numerische Mathematik*.
61. V. Dolgushev and **C. Rogers**. On an enhancement of the category of shifted L-infinity algebras. *Applied Categorical Structures*.
62. **A.S. Vatsala** and **B. Sambandham**. Laplace Transform Method for Sequential Caputo Fractional Differential Equations. Accepted, *Mathematics In Engineering, Science and Aerospace MESA* - [www.journalmesa.com](http://www.journalmesa.com).

## Book Chapters

1. **A.S. Ackleh** and **P.L. Salceanu**. (2014). 16 (Z. Alsharawi, J.M. Cushing, S. Elaydi, eds.), Springer Proceedings in Mathematics & Statistics, Volume 102, (pp. 3-21).
2. **K. Krishnamoorthy**. (2011). Statistical Distributions Overview, *International Encyclopedia of Statistics*, M. Lovric (ed.), Springer.
3. **C.Y. Chan** and P. Tragoonsirisak. (2009). The critical radius of a concentrated nonlinear source for a quenching problem in  $\mathbb{R}^N$ , *Advances in Nonlinear Analysis: Theory, Methods and Applications*. (S. Sivasundaram, J. Vasundhara Devi, Zahia Drici and Farzana Mcrae, eds.), Cambridge Scientific Publishers, (pp. 119-127).
4. H. T. Banks, M. Davidian and J. R. Samuels, Jr. and **K. Sutton**. (2009). An inverse problem statistical methodology summary, *Mathematical and Statistical Estimation Approaches in Epidemiology*. (G. Chowell, C. Castillo-Chavez, J. M. Hyman and L. Bettencourt eds.), Springer, Berlin, Heidelberg, New York, (pp. 249–302).

5. **A.S. Vatsala.** (2009). Invariant imbedding and generalized quasilinearization: A brief survey. *Advances in Theory, Methods and Applications in Dynamics and Control*, Volume 4, Chapter 29. Cambridge University Press, (pp. 323-327).
6. **A.S. Vatsala.** (2009). Generalized monotone method for fractional differential equations with applications. *Advances in Theory, Methods and Applications in Dynamics and Control*, Volume 3, Chapter 16. Cambridge University Press, (pp. 105-206).

### Conference Papers (Published)

#### 2014

1. A. Setia, Y. Liu and **A.S. Vatsala.** (2014). Solution of Linear fractional Fredholm integro-differential equation by using second kind Chebyshev Wavelet. *11th International Conference on Information Technology: New Generations*, 465-469, 978-1-4799-3187-3/14.
2. A. Setia, Y. Liu and **A.S. Vatsala.** (2014). The solution of the Bagley–Torvik equation by using second kind Chebyshev wavelet. *11th International Conference on Information Technology: New Generations*, 443 -467, 978-1-4799-3187-3/14.
3. T. G. Melton and **A.S. Vatsala.** (2014). Third order convergence for singular boundary value problems on unbounded domains. *AIP Conference Proceedings, 1631*, pp. 263-267.

#### 2012

4. E. Banks, **A.S. Ackleh** and J.D. Stark. (2012). 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, pp. 34-43.
5. **C.Y. Chan** and P. Tragoonsirisak. (2012). Effects of concentrated nonlinear sources on blow-up and quenching phenomena in  $\mathbb{R}^N$ . *Proceedings of Dynamic Systems and Applications*, 6, pp. 91-96.
6. **R.B. Kearfott**, R. Gottumukkala, J. Zachary and R. Kolluru. (2012). Real-time information driven decision support system for evacuation planning. *Cognitive Methods in Situation Awareness and Decision Support*, 2012 IEEE International Multi-Disciplinary Conference, pp. 206-209.
7. D. Stutson and **A.S. Vatsala.** (2012). A representative solution for the one dimensional Caputo Fractional Reaction Diffusion Equation. *Proceedings of Dynamic Systems and Applications*, 6, pp. 1-2.
8. T. Melton and **A.S. Vatsala.** (2012). Third order convergence for forced Duffing equations with three-point nonlinear boundary conditions. *Proceedings of the 38th International Conference Applications of Mathematics in Engineering and Economics. AIP Conference Proceedings, 1497*, pp. 239-246.

#### 2011

9. **A.S. Ackleh, K. Deng** and Q. Huang. (2011). Difference approximation for an amphibian juvenile-adult dispersal model. *Dynamical Systems Differential Equations, Discrete and Continuous Dynamical Systems Supplement. Proceedings of the 8th AIMS International Conf*, pp. 1-12.

10. J. Pontes, D. Walgraef and **C.I. Christov**. (2011). Numerical solution of the Walgraef-Aifantis model for simulation of dislocation dynamics in materials subjected to cyclic loading. T. Proulx (ed.), *Optical Measurements, Modeling and Metrology, Conference Proceedings of the Society for Experimental Mechanics*, **5**, pp. 97-107.
11. **C.I. Christov**, M.D. Todorov and M. A. Christou. (2011). Perturbation solution for the 2D shallow water waves, *AIP Conference Proceedings*, **1404**, pp. 49-66.
12. N. Kutev, N. Kolkovsa, M. Dimova and **C.I. Christov**. (2011). Theoretical and numerical aspects for global existence and blow up for the solutions to Boussinesq Paradigm equation. *AIP Conference Proceedings*, **1404**, pp. 68-76.
13. M.D. Todorov and **C.I. Christov**. (2011). Collision dynamics of polarized solitons in linearly coupled nonlinear Schrödinger equations. *AIP Conference Proceedings*, **1340** pp. 144-153.
14. **C.I. Christov**, N. Kolkovsa and D. Vasileva. (2011). On the numerical simulation of unsteady solutions for the 2D Boussinesq Paradigm equation. *Numerical Methods and Applications*, I. Dimov, S. Dimova and N. Kolkovska (eds.), **6046**, pp. 386-394.
15. **C.I. Christov**, A. Chertock and A. Kurganov. (2011). Central-Upwind schemes for Boussinesq Paradigm equations, *Computational Sci., & High performance Computing IV*, E. Krause, Y. Shokin, M. Resch, D. Kroner and N. Shokina (eds.), **113**, pp. 267-281.
16. V. Kaftal and **P. Ng** and S. Zhang. (2011). Positive combinations of projections in von Neumann algebras and purely infinite simple C\*-algebras. *Science China Mathematics*, **54**, no. 11, pp. 2383-2393.
17. T. Melton and **A.S. Vatsala**. (2011). Third order convergence for nonlinear impulsive differential equations with a nonlinear three-point boundary condition, *AIP Conference Proceedings*, **1404** pp. 257- 264.

### Plenary and Keynote Presentations

1. **A.S. Vatsala**. World Congress: 11<sup>th</sup> International Conference on Mathematical Problems in Engineering, Aerospace and Sciences. La Rochelle, France, July 05-08, 2016, (Keynote).
2. **C.Y. Chan**. 9th International Conference on Differential Equations and Dynamical Systems. Dallas, Texas, May 14-16, 2015, (Plenary).
3. **C.Y. Chan**. Seventh International Conference on Dynamic Systems and Applications. Atlanta, Georgia, May 27-30, 2015. (Plenary).
4. **A.S. Vatsala**. Riemann Liouville Versus Caputo Fractional Differential and Integral Equations, at the joint meeting of The Seventh International conference on Dynamic Systems and Applications and Fifth International Conference on Neural, Parallel and Scientific Computations. May 27-30, 2015, Morehouse College, Atlanta Georgia, (Plenary).
5. **G. Birkenmeier**. Idempotents and Structures of Rings. International Conference on Algebra and Number Theory. August 5-8, 2014, Samsun, Turkey, (Plenary).
6. **A.S. Ackleh**. Competitive Exclusion and Coexistence in Discrete Population Models, The 19th International Conference on Difference Equations and Applications. May 26 - 30, 2013, Muscat, Oman (Plenary).
7. **G.F. Birkenmeier**. Generalizations of the extending property. International Conference on Algebra. Balikesir, Turkey, August 12-15, 2013, (Plenary).

8. **K.L. Sutton.** Mathematical Modeling as an Interdisciplinary Tool. Honors Undergraduate Research Conference. UL, November 22, 2013, (Plenary).
9. **A.S. Ackleh.** A Continuous Structured Model for Amphibians: Numerical Approximation and Parameter Estimation. Third Palestinian Conference on Modern Trends in Mathematics and Physics. Hebron, Palestine, July 16-18, 2012, (Plenary).
10. **C.Y. Chan.** 8th International Conference on Differential Equations and Dynamical Systems. Waterloo, Ontario, Canada, August 1-4, 2012, (Plenary).
11. **K.L. Sutton.** Understanding Phase Locking Behavior in Models of GPCR-Mediated Calcium Oscillations. International Conference on Mathematical Methods and Models in Biosciences. Sofia, Bulgaria, June 16-21, 2012, (Keynote).
12. **A.S. Ackleh.** 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).
13. **A.S. Ackleh.** 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).
14. **C.Y. Chan.** Sixth International Conference on Dynamic Systems and Applications. Atlanta, Georgia, May 25-28, 2011, (Plenary).
15. **C. Christov.** 3rd Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences. Albena, Bulgaria, June 20-25, 2011, (Keynote).

### Colloquia and Seminar Talks

1. **A.S. Ackleh.** Department of Mathematics and Statistics, Sam Houston State University, Huntsville, Texas, April, 2016.
2. **G.F. Birkenmeier.** What binary operations can do for you, Undergraduate Math Majors, Loyola University, New Orleans, LA, March 17, 2016.
3. **C.J. Browne.** Immune Response in Virus Model Structured by Cell Infection-Age, SIAM SEAS Conference, University of Georgia, Athens, Georgia, March 2016.
4. **C.J. Browne.** Modeling the Ebola Outbreak: Contact Tracing and Infection-Age Structure, Mathematical Biology Seminar, Georgia State University, April 2016.
5. **C.J. Browne.** Virus-Immune Dynamics in Age-Structured HIV Model, Mathematical Biology and Ecology Seminar, Georgia Institute of Technology, April 2016.
6. **C.J. Browne.** Modeling Multi-Epitope HIV/CTL Immune Response Dynamics and Evolution, Mathematical Biology Seminar, Arizona State University, September 2016.
7. **C.J. Browne.** Modeling Multi-Epitope HIV/CTL Immune Response Dynamics and Evolution, Applied Mathematics Seminar, University of Louisiana at Lafayette, October 2016.
8. **D. Davis.** Comparing continuous and discrete homotopy fixed points, with an application to the Ausoni-Rognes conjecture, Topology Seminar, John Hopkins University, February 8, 2016.
9. **D. Davis.** Examples of discrete  $G$ -spectra and homotopy limits of  $G$ -spectra, Topology Seminar, University of Rochester, April 1, 2016.

10. **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.
11. **D. Davis.** UL Mathematics Department Topology Seminar, 7 talks in Spring 2016 and 8 talks in Fall 2016.
12. **K. Deng.** Competitive exclusion and coexistence in a two-strain pathogen model with diffusion, Indiana-Purdue University, April 18, 2016.
13. **H. Heatherly.** UL Algebra Seminar, 3 talks in 2016.
14. **H. Heatherly.** Department of Mathematics Colloquia, The Development of Transcendental Numbers: A Historical Overview, September 22, 2016.
15. **A. Magidin.** UL Algebra Seminar, 12 talks in Spring 2016 and Fall 2016.
16. **N. Pal.** Real rank zero for purely infinite corona algebra, Spring Operator Algebras Program, East China Normal University, Shanghai, China, May 2-19, 2016.
17. **N. Pal.** Closed Convex Hulls of Unitary Orbits of certain  $C^*$ -algebras, Fields Institute Workshop, University of Ottawa, Ontario, Canada, May 29 – June 13, 2016.
18. **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.
19. **N. Pal.** Closed convex hulls of unitary orbits of certain  $C^*$ -algebras, International Conference on structure of  $C^*$ -algebras and tracial approximation, Hebei Normal University, Shijiazhuang, Hebei, China, July 3-8, 2016.
20. **N. Pal.** Bio-Math Seminar Series, Clarkson University, Clarkson, NY, October 14, 2016.
21. **X.-S. Wang.** UL Applied Math Seminar, September 13, 2016.
22. **X.-S. Wang.** UL Analysis Seminar, December 1, 2016.
23. **X.-S. Wang.** Department Colloquium, Shanghai Maritime University, Dec.23, 2016.
24. **X.-S. Wang.** Department Colloquium, Tongji University, December 28, 2016.
25. **G. F. Birkenmeier.** UL Algebra Seminar. 10 talks in Spring 2015 and Fall 2015.
26. **D. Davis.** UL Topology Seminar. 4 talks in Spring 2015 and 6 talks in Fall 2015.
27. **K. Deng.** Blow-up for the heat equation with a general memory boundary condition. Huazhong University of Science & Technology, June 1, 2015.
28. **K. Deng.** Sensitivity analysis for a structured juvenile-adult model. Wuhan University of Technology, June 11, 2015.
29. **K. Deng.** Asymptotic behavior for a reaction-diffusion population model with delay. Renmin University, June 22, 2015.
30. **C. Rogers.** The Dold-Kan correspondence, Sullivan's realization, and the Maurer-Cartan functor. Topology Seminar, UL Lafayette, Fall 2015.
31. **C. Rogers.** From the Dold-Kan correspondence to Sullivan's realization functor. Topology Seminar, UL Lafayette, Fall 2015.
32. **C. Rogers.** Sullivan's Realization Functor and a Brief Overview of Rational Homotopy Theory. Topology Seminar, UL Lafayette, Fall 2015.
33. **C. Rogers.** Sullivan's realization functor and Sullivan models for spheres. Topology Seminar, UL Lafayette, Fall 2015.
34. **D. Davis.** UL Topology Seminar. 2 talks in Spring 2014 and 7 talks in Fall 2014.
35. **K. Deng.** Center for Applied Mathematics and Statistics at Indiana-Purdue University. April 23, 2014.



36. **P. Salceanu.** Applied and Computational Mathematics Seminar at University of Wisconsin, Milwaukee, October 16, 2014.
37. **K.L. Sutton.** Department of Physics Colloquium, February 5, 2014.
38. **K.L. Sutton.** Department of Mathematics Colloquium, April 3, 2014.
39. **G.F. Birkenmeier.** University of Louisiana at Lafayette, October 2013
40. **K.L. Sutton.** Applied Math Seminar, October 2013.
41. **K.L. Sutton.** Department of Biology Colloquium, September 2013.
42. **K.L. Sutton.** Applied Math Seminar, April 2013.
43. **K.L. Sutton.** Computational and Visualization Enterprise Seminar, February 2013
44. **F. Xue.** Southern Methodist University, November 2013.
45. **F. Xue.** University of Louisiana at Lafayette, May, 2013.
46. **G. Birkenmeier.** Clayton State University, March 2012.
47. **G. Birkenmeier.** Ohio State University, May 2012.
48. **K. Deng.** Wuhan University, June 2012.
49. **K. Deng.** Tongji University, June 2012.
50. **G. Birkenmeier.** Tulane University, October 2012.
51. **A.S. Ackleh.** University of Stirling, Scotland, August 2011.
52. **C.Y. Chan.** University of Houston, Texas, April 2011.
53. **D. Davis.** Tulane University, February 2011.
54. **D. Davis.** Hamburg, Germany, August 2011.
55. **C. Eubanks-Turner.** University of Nebraska, October 2011.

### Invited Conference and Workshop Talks

1. **G. Birkenmeier.** pi-Baer Rings, Southern Regional Algebra Conference, Auburn University, Auburn, AL, March 18-20, 2016.
2. **G. Birkenmeier.** pi-Baer Rings, 33<sup>rd</sup> Ohio State-Denison Mathematics Conference, Ohio State University, Columbus, OH, May 13-15, 2016.
3. **C. Browne.** Modeling Contact Tracing and Targeted Control in Outbreaks, ECMTB 2016, Nottingham, U.K., July 2016.
4. **C. Browne.** Modeling the Ebola outbreak and contact tracing, AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL, July 2016.
5. **C. Browne.** Virus-Immune Dynamics in Structured HIV Models, AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL, July 2016.
6. **C. Browne.** Stability and Persistence in Multi-Epitope HIV-Immune Response Network Models, Southeastern-Atlantic Regional Conference on Differential Equations, Ft. Myers, FL, November 2016.
7. **R. Chiquet.** Accessing the Impact of Environmental Disasters on Population Dynamics using Stochastic Matrix Models, LA/MS Regional MAA Meeting, LSU-Shreveport, LA, February 2016.
8. **R. Chiquet.** Accessing the Impact of Environmental Disasters on Population Dynamics Using Stochastic Matrix Models, Gulf of Mexico Oil Spill Conference, Tampa, FL, September 2016 (Invited).
9. **K. Deng.** Competitive exclusion and coexistence in a two-strain pathogen model with diffusion, 2016 NCTS International Workshop on Mathematical Biology, Hsinchu, Taiwan, May 21-23, 2016.

10. **R.B. Kearfott.** Interval Arithmetic: Fundamentals, History, and Semantics, BIRS Casa Oaxaca Seminar on Interval Analysis and Constructive Mathematics, Casa Oaxaca, Mexico, November 13, 2016.
11. **S. Kim.** The 2nd Pacific Rim International Conference on Production Engineering and Big Data Science, Seoul National University, Seoul, South Korea, Dec. 15-16, 2016.
12. **S. Kim.** Platinum Jubilee International Conference on Applications of Statistics, University of Calcutta, India, (Invited), Dec. 21-24, 2016.
13. **K. Krishnamoorthy.** Statistical Methods for Workplace Exposure/Pollution Assessment, Cameroon International Conference on Recent Development in Applied Statistics, Yaounde, Cameroon, March 14-18, 2016 (Invited).
14. **K. Krishnamoorthy.** A simple method for assessing occupational exposure via the one-way random effects model, Joint Statistical Meetings 2016, Chicago, IL, July 30- August 4, 2016.
15. **A. Magidin.** Algebraic closure operators on infinite subgroup lattices, Zassenhaus Group Theory Conference, Adelphi University, Garden City, NY, May 2016.
16. **N. Pal.** 1<sup>st</sup> International Conference on Applied Mathematics in Engineering and Reliability (ICAMER 2016), Ton Duc Thang University, Ho Chi Minh City, Vietnam, May 4 - 6, 2016.
17. **N. Pal.** Statistics in Engineering: Reliability & Life Testing, University of Technology, Ho Chi Minh City, Vietnam, June 13-17, 2016.
18. **N. Pal.** One Day Symposium on Interdisciplinary Statistical Research, Kolkata, India, June 28, 2016.
19. **N. Pal.** Application of Statistics in Geography, Lady Brabourne College, Kolkata, India, July 18-19, 2016.
20. **N. Pal.** International Conference on Applied Mathematics hosted by Mahidol University (ICMA-MU 2016), Bangkok, Thailand, December 17-19, 2016.
21. **N. Pal.** Bayesian Predictive Inference, Mahidol University, Bangkok, Thailand, December 20, 2016.
22. **P. Salceanu, J. Kong and H. Wang.** A Model for bacteria-grazers interactions in a chemostat, The 11<sup>th</sup> AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL, July 1-5, 2016.
23. **X.-S. Wang.** Joint Mathematics Meetings, Seattle, WA, January 6-9, 2016.
24. **X.-S. Wang,** International Conference on Applied Mathematics, City University of Hong Kong, May 30-June 2, 2016.
25. **X.-S. Wang.** Mathematical Modelling and Computation in Medicine/Biology, Yau Mathematical Sciences Center, December 12-16, 2016.
26. **A. Ackleh.** 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).
27. **A.S. Ackleh.** Understanding the Dynamics of Amphibians and Associated Diseases Using a Structured Modeling Approach. 27th IFIP TC7 Conference. Sophia Tech Campus, Sophia Antipolis France, June 29- July 3, 2015 (Invited).
28. **R. Chiquet.** Coexistence and Competitive Exclusion in a Discrete Juvenile-Adult Model. 9th International Conference on Differential Equations and Dynamical Systems for the special section Applicable Analysis and Applications, May 2015. (Invited)

29. **R. Chiquet.** Demographic Analysis Of Sperm Whales Using Deterministic And Stochastic Models. Seventh International Conference on Dynamic Systems and Applications & the Fifth International Conference on Neural, Parallel, and Scientific Computations, May 2015. (Invited).
30. **D. Davis.** For the Ausoni-Rognes conjecture at  $n=1$ ,  $p>3$ : A strongly convergent descent spectral sequence and some interrelated topics in the theory of discrete G-spectra: The spectrum  $X^{\text{dis}}_N$ , fibrancy, and homotopy fixed points. University of Chicago, June 2, 2015.
31. **D. Davis.** For G profinite and certain G-spectra: Comparing their discrete and profinite homotopy fixed points. Penn. State University, Altoona, Nov. 6, 2015.
32. **K. Deng.** Competitive exclusion and coexistence in a two-strain pathogen model with diffusion." AMS Southeastern Special Session on New Developments in Population Dynamics and Epidemiology. Huntsville, Alabama, March 27-29, 2015.
33. **R.B. Kearfott.** The Pending IEEE Standard on Interval Arithmetic: Implications for the Global Optimization Community, presented February 23, 2015 at the World Conference on Global Optimization 2015 (WCGO 2015), Gainesville, Florida.
34. **K. Krishnamoorthy.** Prediction intervals and tolerance intervals for binomial and Poisson distributions. International Conference on Statistics-2015: Theory to Practice. Jimma University, Jimma, Ethiopia. March 16-18, 2015.
35. **A. Magidin.** The lattice of closure operators on a subgroup lattice: The finite case and open questions. 2015 Zassenhaus Meeting, SUNY Binghamton, Binghamton NY, May 22-24 2015.
36. **P. Ng.** Purely infinite corona algebra. Canadian Mathematical Society Meeting, Charlottetown, Prince Edward Island, June 4-7, 2015.
37. **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.
38. **C. Rogers.** Equivariant cohomology and homotopy moment maps, Program on Higher Structures in String Theory and Quantum Field Theory. Erwin Schroedinger Institute for Mathematics and Physics, Vienna, Austria December 2015.
39. **K. Sutton.** Mathematics as an Interdisciplinary Tool in 2 Examples: (i) Dynamics of *Mycobacterium marinum* Infections, and (ii) Invasive Species Population Dynamics. Sciences Interdisciplinary Monthly Meeting, November 24, 2015
40. **A.S. Vatsala.** Some Basic Results of Caputo Fractional Differential Equations. Special session at Joint Mathematics Meetings of AMS and MAA, San Antonio, TX January 10-13, 2015.
41. **A.S. Ackleh.** 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.
42. **A.S. Ackleh.** 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.
43. **G. Birkenmeier.** Idempotents in Generalized Matrix Rings. Southern Regional Conference, Auburn University, Montgomery, AL, April 25-27, 2014.
44. **G. Birkenmeier.** Idempotents in Generalized Matrix Rings. 32<sup>nd</sup> Ohio State-Denison Mathematics Conference, Ohio State University, Columbus, OH, May 9-11, 2014.
45. **R. Chiquet.** Chaos and Persistence in a Two Stage Ecological Model LA/MS Regional MAA Meeting, Louisiana State University March 2014.

46. **D. Davis.** How Much Structure Does the Continuous Action of the Morava Stabilizer Group Possess? and Mini-Symposium on Topology and Dynamical Systems. 38<sup>th</sup> Annual SIAM Southeastern Atlantic Section Conference at Florida Institute of Technology, March 30<sup>th</sup> 2014.
47. **K. Deng.** Asymptotic behavior for a reaction-diffusion population model with delay. The Workshop on Mathematical Biology and Nonlinear Analysis, University of Miami, December 19-21, 2014.
48. **K. Krishnamoorthy.** Environmental Data Analysis Using Gamma Distribution. Dakar International Conference on Recent Developments in Applied Statistics, Dakar, Senegal, March 17-21, 2014.
49. **K. Krishnamoorthy.** Tolerance Intervals with Applications. Dakar International Conference on Recent Developments in Applied Statistics, Dakar, Senegal, March 17-21, 2014.
50. **P. Ng.** Commutators in  $C_r^*F_\infty$ , 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.
51. **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.
52. **L. Robert Gonzalez.** Dynamics and  $C^*$ -algebras: Amenability and soficity. Banff, Canada, October 20-24, 2014.
53. **P. Salceanu.** Competitive Exclusion and Coexistence in an n-Species Ricker Model. The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain, July 7-11, 2014.
54. **P. Salceanu.** On a Discrete Selection-Mutation Model: Competitive Exclusion and Uniform Persistence. The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain, July 7-11, 2014.
55. **K.L. Sutton.** Mechanism Elucidation in Intracellular Signaling Models via Sensitivity Functions. SIAM Life Sciences Annual Meeting, Charlotte, NC, August 2014.
56. **A.S. Vatsala.** Sub and Super hyperbolic linear partial fractional differential equations with numerical results. *The Joint Mathematics Meeting (AMS-MAA)*, Baltimore, MD, January 15-18, 2014.
57. **A.S. Ackleh.** 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.
58. **A.S. Ackleh.** Stability Analysis of Small Perturbations of Pure Selection Models on Measure Spaces. Modeling with Measure: From Structured Populations to Crowd Dynamics. Leiden, The Netherlands, August 26-30, 2013, (Open Problem Lecture).
59. **A.S. Ackleh.** Measure-Valued Solutions to Selection-Mutation and Structured Population Models, Leiden, The Netherlands, August 26-30, 2013, (Tutorial Lecture).
60. **G.F. Birkenmeier.** When is a Sum of Annihilator Ideals an Annihilator Ideal? Southern Regional Algebra Conference, Southeastern Louisiana University, March 15-17, 2013.
61. **R. Chiquet.** Chaos in a Two-stage Ecological Model, New Trends in Differential and Difference Equations. University of Tennessee at Chattanooga, March 2013.

62. **R. Chiquet.** Coexistence and Competitive Exclusion in a Discrete Juvenile-Adult Model. LA/MS Regional MAA Meeting, University of Southern Mississippi, March 2013.
63. **D. Davis.** Homotopy Fixed Points for Profinite Groups Emulate Concretely Those for Discrete Groups. Geometry & Topology Seminar, Tulane University, October 8, 2013.
64. **K. Deng.** Sensitivity Analysis for a Nonlinear Size-structured Population Model. The Fourth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Lubbock, Texas, October 4-6, 2013.
65. **K. Krishnamoorthy.** Modified Large Sample Methods with Applications. University at Buffalo, April 11, 2013.
66. **P. Ng.** The Corona Algebra of the Stabilized Jiang–Su algebra. University of Toronto, May 27–31, 2013.
67. **P. Ng.** C\*-algebras, structures and classification. Changchun, China, Jilin University, July 22-27, 2013.
68. **P. Ng.** Sums of projections in certain simple purely infinite C\*-algebras. University of Waterloo, Ontario, Canada, November 24–29, 2013.
69. **L. Leon-Novelo.** A Bayesian Analysis of Bioassay Experiments; The 2013 Annual Meeting of the WNAR/IMS, Los Angeles, CA, June 16-19, 2013.
70. **M. Niebrzydowski.** Knots with Binary Relations. AMS Meeting, Riverside, California, November 2-3, 2013.
71. **M. Niebrzydowski.** Knots with Binary Relations and Their Categorical Generalization. Geometry and Topology Seminar, Tulane University, November 19, 2013.
72. **P. Pal.** International Conference in Mathematics & Applications, Mahidol University, Thailand, January 19-21, 2013.
73. **P. Pal.** International Conference on Advanced Computing and Applications, Ho Chi Minh City, Vietnam, October 23-25, 2013.
74. **K.L. Sutton.** Structured Models for the Transmission Dynamics of Mycobacterium marinum. The Fourth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Texas Tech University, October, 2013.
75. **A.S. Vatsala.** R. Liouville and Caputo Fractional Differential and Integral Inequalities. New Trends in Differential and Difference Equations, Chattanooga, TN, March 15-16, 2013.
76. **A.S. Vatsala.** Numerical Methods for Fractional Differential Equations via Generalized Monotone Method. AMS Joint Mathematics Meeting, San Diego, CA, January 9-12, 2013.
77. **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.
78. **A.S. Ackleh.** 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.
79. **A. S. Ackleh.** A High Resolution Second-Order Computational Method for a Continuous Structured Erythropoiesis Model. BIOCAMP 2012 Mathematical Modeling and Computational Topics in Biosciences, Vietri sul Mare, Italy, June 4-8, 2012.
80. **K. Deng.** Blow-up for the Heat Equation with Boundary Governed by Nonlinear Memory. Partial Differential Equations Workshop, Tongji University, Shanghai, China, June 23-24, 2012.

81. **D. Fisher.** Addressing Lexical Ambiguity in the Classroom. Joint Statistical Meeting, San Diego, CA, July 25-August 1, 2012.
82. **P. Ng.** The Determinant Map on Certain Simple  $C^*$ -Algebra. Operator Algebras Program in the Research Center for Operator Algebras, East China Normal University, Shanghai, China, 2012.
83. **M. Niebrzydowski.** Tutte Magmas. AMS Meeting, Tampa, FL, March 10-11, 2012.
84. **M. Niebrzydowski.** Preordered Quandles. AMS Meeting, Lawrence, Kansas, March 30-April 1, 2012.
85. **M. Niebrzydowski.** Knots, Categories and Dynamics, Knots in Washington XXXV: Categorification of Knots, Algebras and Quandles: Geometric Aspects; Quantum Computing. Washington, D.C., December 7-9, 2012.
86. **P. Salceanu.** Robust Uniform Persistence and Competitive Exclusion in a Nonautonomous Multi-Strain SIR Epidemic Model with Disease-Induced Mortality. The 9th AIMS Conference, Orlando, FL, July 1-5, 2012.
87. **A.S. Vatsala.** Generalized Monotone Method and Gauss-Seidal Method for Caputo and Reimann Liouville Fractional Differential Systems. AMS Joint Mathematics Meeting, Boston, MA, January 4-7, 2012.
88. **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.
89. **A.S. Vatsala.** Generalized Monotone Method, Numerical Approach for Ordinary and Fractional Differential Equations. AMS Regional Meeting, Tulane University, New Orleans, LA, October 12-14, 2012.
90. **A.S. Ackleh.** A Stage-Structured Dispersal Model with Constant and Periodic Environments. Joint Mathematical Meeting, New Orleans, LA, January 6-9, 2011.
91. **A.S. Ackleh.** 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, LA, May 10-12, 2011.
92. **A.S. Ackleh.** Using Statistical Modeling and Acoustic Data to Assess the Gulf Oil Spill Impact on Sperm Whales. Istanbul Conference on Mathematical Methods and Modeling in Life Sciences and Biomedicine 2011, Istanbul, Turkey, August 15-19, 2011.
93. **G. Birkenmeier.** G-extending Rings and Modules. 22<sup>nd</sup> International Conference on Narrings, Nearfields and Related Topics. Southeastern Louisiana University, Hammond, LA, July 25-29, 2011.
94. **R. Chiquet.** Competitive Exclusion in a Discrete Juvenile-Adult Model. 3rd International Conference on Math Modeling & Analysis, San Antonio, TX, October 7-9, 2011.
95. **R. Chiquet.** Competitive Exclusion in a Discrete Juvenile-Adult Model. 6th International Conference on Dynamic Systems and Applications, Morehouse College, Atlanta, GA, May 25-28, 2011.
96. **R. Chiquet.** Competitive Exclusion in a Discrete Juvenile-Adult Model with Continuous and Seasonal Reproduction. AMS MAA Joint meetings in New Orleans, LA, January 6-9, 2011.
97. **C.I. Christov.** 7th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena. Athens, Georgia, April 4-7, 2011.

98. **K. Deng.** Joint Mathematics Meetings AMS Special Session on Analysis of Reaction-Diffusion Models. New Orleans, LA, January 6-9, 2011.
99. **C. Eubanks-Turner.** Error Detection and Correction. Center for Undergraduate Research in Mathematics Spring Research Conference. Brigham Young University, Provo, UT, March 2011.
100. **R.B. Kearfott.** A Review of Techniques for Handling Model Uncertainty in Interval-Based Global Optimization Procedures. Optimization Days 2011, Montreal Quebec, May, 2011.
101. **R.B. Kearfott.** Tutorial: Interval Computations Introduction and Significant Applications, Schloss Dagstuhl Seminar 11371. Uncertainty Modeling and Analysis with Intervals: Foundations, Tools and Applications, September, 2011.
102. **K. Krishnamoorthy.** Generalized and Fiducial Inference. ICSA-2011 Applied Statistics Symposium, New York, NY, June, 2011.
103. **K. Krishnamoorthy.** Construction of Tolerance Regions with Censored Samples. Midwest Biopharmaceutical Workshop, Muncie, IN, May, 2011.
104. **P. Ng.** Finite Sums of Projections in Simple Purely Infinite  $C^*$ -Algebras. Workshop on Dynamics and  $C^*$ -Algebras. Centre de Recerca Matematica, Barcelona, Spain, April 1-9, 2011.
105. **P. Ng.** Algebraic and Quasiequivalence of Type III Representations of Simple Nuclear  $C^*$ -Algebras. American Mathematical Society Sectional Meeting, University of Nebraska-Lincoln, Lincoln, Nebraska, October 14-16, 2011.
106. **P. Ng.** Commutators in the Jiang-Su Algebra. 2011 Winter Meeting of the Canadian Mathematical Society, Toronto, Ontario, Canada, December 9-12, 2011.
107. **P. Salceanu.** Uniform Persistence and Competitive Exclusion of Pathogens in a Nonautonomous SIR Epidemic Model with Variable Population Size. The 3rd International Conference On Mathematical Modeling and Analysis, San Antonio, TX, October, 2011.
108. **P. Salceanu.** Uniform Persistence in Discrete and Continuous Non-autonomous Dynamical Systems with Application to Epidemic Models. The Third Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Albena, Bulgaria, June, 2011.
109. **P. Salceanu.** Uniform Persistence in Discrete and Continuous Non-autonomous Dynamical Systems with Applications to Epidemic Models. Conference on Computational and Systems Biology, Gainesville, FL, March, 2011.
110. **P. Salceanu.** Uniform Persistence in Discrete and Continuous Non-autonomous Dynamical Systems with an Application to an Epidemic Model of an Amphibian Population. Joint Mathematics Meetings. New Orleans, LA, January, 2011.
111. **K.L. Sutton.** Parameter Estimation in Dynamical Systems with Delays. Conference on Mathematical Methods and Modeling in Life Sciences and Biomedicine. Yeditepe Universitesi, Sile, Turkey, August, 2011.
112. **K.L. Sutton.** Parameter Estimation in Dynamical Systems with Delays. Application of Mathematics in Technical and Natural Sciences. St. Constantine, Bulgaria, Jun 11-16, 2012.
113. **K.L. Sutton.** Behavior Change in Problem Drinkers: Part II - Dynamic Models, Mathematics and Biology: Young Investigators Workshop. Universite de Rouen, Rouen, France, April, 2011.

114. **A.S. Vatsala.** Existence of Coupled Extremal Solutions for Nonlinear Caputo Fractional Reaction Diffusion Equations. AMS Annual Meeting, New Orleans, LA, January, 10-13, 2011.
115. **A.S. Vatsal.** Recent Development of Fractional Dynamic Systems and Applications. Sixth International Conference on Dynamic Systems and Applications. Morehouse College, Atlanta, Georgia, May 25-28, 2011.

### Contributed Talks

116. **P. Beaulieu,** “Strengthening Teacher Education with Mathematics & Science Scholars (STEMS<sup>2</sup>)”, LA/MS 2016 Section Meeting at LSU-Shreveport, LA, February 26, 2016
117. **P. Beaulieu,** “Mathematics Masters in the Middle (LaM<sup>3</sup>): Mining for Hidden Potential”, Southeast Regional Robert Noyce Connections Conference, University of South Alabama CISSTEM, Mobile, AL, June 3, 2016.
118. **R.B. Kearfott,** Tools for Simplicial Branch and Bound in Global Optimization, SCAN 2016, Uppsala, Sweden, September 27, 2016.
119. **N. Pal,** On Improved Estimation under Weibull Model, Louisiana Chapter of the American Statistical Association Spring 2016 Meeting, LSU, Baton Rouge, LA, April 22, 2016.
120. **N. Pal,** A Revisit to Test the Equality of Variances of Several Populations, Louisiana Chapter of the American Statistical Association Fall 2016 Meeting, LSU-HSC, New Orleans, LA, November 18, 2016.
121. **J. Roy and M. Myers,** Projects in Elementary Statistics, 2016 LA/MS Regional MAA Meeting, LSU-Shreveport, Shreveport, LA, February 27, 2016.
122. **R. Chiquet.** Chaos in a Two-Stage Discrete Model with Periodic Birthrates (speaker). Joint Mathematics Meetings, San Antonio, Texas, January 2015.
123. **R. Chiquet.** Washington, DC in April of 2015
124. **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.
125. **C.S. Langley, J. Roy,** and A. Leonard. Achieving a Successful Online STEM Class University of Louisiana at Lafayette Engaged Student Learning Retention Summit, Lafayette, Louisiana, March 24, 2015.
126. **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.
127. **D. Fisher.** Communications in Statistics: Consideration of Lexical Ambiguity or “I Do Not Think This Word Thinks What You Think it Means. Presented in Lessons from Statistics Education: Improving the Impact of Statistical Consulting topic-contributed session at Joint Statistical Meetings, Boston, MA, August 7, 2014.
128. **L. Leon-Novelo.** A Bayesian Analysis of Bioassay Experiments. The 2013 Louisiana Chapter of the American Statistical Association, Lafayette, LA, April 26, 2013.
129. **K. Lopez.** Joint Mathematical Meetings. Elementary Mathematics Specialist Program at the University of Louisiana at Lafayette - Part I, MAA Contributed Paper Session, San Diego, CA, January 12, 2013.



130. **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.
131. **K. Lopez**. Acadiana Council of Teachers of Mathematics (ACTM) Annual Meeting. A New Freshman Quantitative Reasoning Course at UL Lafayette. University of Southern Mississippi, Hattiesburg, MS, March 1, 2013.
132. **A. Magidin**. Capability of groups of class two and prime exponent groups. St. Andrews 2013, University of St. Andrews, Scotland, UK, August 2013.
133. **A. Magidin**. A sufficient condition for capability of groups of class two and prime exponent. Zassenhaus Group Theory Meeting. Asheville, NC, May 2013.
134. **A. Magidin**. A sufficient condition for capability of groups of class two and exponent  $p$ . National Meeting of the AMS, San Diego, CA, January 2013.
135. **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.
136. **K.L. Sutton**. Computational Aspects of the Estimation of Distributed Delays. The Society for Mathematical Biology Annual Meeting and Conference. Arizona State University, June 2013.
137. **F. Xue**. New Developments of LOBPCG for Large-scale Nonlinear Eigenvalue Problems. 1st Texas Analysis and Mathematical Physics Symposium (TexAMP), Rice University, October 2013.
138. **R. Chiquet**. Demographic Analysis of Sperm Whales Using Matrix Population Models. LA/MS Regional MAA Meeting, Northwestern State University, Natchitoches, LA March 1-3, 2012.
139. **A. Magidin**. The Nonabelian Tensor Square of a Nilpotent Product of Cyclic Groups. AMS National Meeting, Boston, MA, January 6, 2012.
140. **A. Magidin**. Nonabelian Tensor Squares of Nilpotent Products of Cyclic Groups. Ohio State-Denison Mathematics Conference, Columbus, OH, May 27, 2012.
141. **D. Davis**. A Lyndon-Hochschild-Serre-type Spectral Sequence for Discrete  $G$ -spectra. Structured Ring Spectra TNG, Hamburg, Germany, August 4, 2011.
142. **D. Fisher**. Statistics: Not Just Another Math Class. Twelfth Annual LaMsMATYC Conference, Louisiana State University at Eunice, Eunice, LA, October 1, 2011.
143. **D. Fisher**. Statistics: Will I Ever Use This Again? EC<sup>2</sup> Institute, University of Louisiana at Lafayette, Lafayette, LA, May 18, 2011.
144. **K. Lopez**. The Brady Bunch Does Calculus. LA/MS Section of MAA, The University of Mississippi, Oxford, MS, February 26, 2011.
145. **K. Lopez**. Not Average But Normal. Louisiana Association of Teachers of Mathematics, Monroe, LA, October 20, 2011.
146. **K. Lopez**. Inverting Your World. LA/MS Mathematical Association for Two-Year Colleges Annual Meeting, LSU-Eunice, Eunice, LA, October 1, 2011.
147. **K. Lopez**. My Secret Function. EC<sup>2</sup> Institute, University of Louisiana at Lafayette, Lafayette, LA, May 18, 2011.
148. **A. Magidin**. Towards a Characterization of the Capable Groups of Class Two and Exponent  $p$ . Research Paper on Group Theory. 2011 Zassenhaus Meeting, Towson University, Towson, MD, May 28, 2011.
149. **A. Magidin**. Capability of P-Groups of Class Two and Exponent  $p$ . AMS National

Meeting, New Orleans, LA, January 9, 2011.

150. **P. Ng**, Finite Sums of Commutators in the Jiang-Su Algebra. Great Plains Operator Theory Symposium. Arizona State University, Tempe, AZ, May 17-21, 2011.

### Journal Referees

- **A.S. Ackleh**: SIAM Journal of Applied Mathematics, Journal of Mathematical Biology, Journal of Biological Dynamics, Journal of Difference Equations and Applications, Discrete and Continuous Dynamical Systems Series B, Mathematical Biosciences and Engineering, Computers and Mathematics with Applications, Journal of Theoretical Biology, Journal of Scientific Computing, Nonlinear Analysis: Real World Applications.
- **G. Birkenmeier**: Journal of Algebra, Journal of Pure and Applied Algebra, Journal of Algebra and Its Applications and Communications in Algebra.
- **C.Y. Chan**: Nonlinear Analysis: Theory, Methods & Applications, Journal of Mathematical Analysis and Applications, Nonlinear Analysis: Real World Applications, Pure and Applied Mathematics Quarterly, Applied Mathematics and Computation, Electronic Journal of Differential Equations, Quarterly of Applied Mathematics, Applied Mathematics Letters, Communications on Pure and Applied Analysis, Dynamic Systems and Applications, IMA Journal of Applied Mathematics, Zentrablatt für Mathematik.
- **R. Chiquet**: Journal of Mathematical Biology, Methods in Ecology and Evolution. Endangered Species Research, Bulletin of Mathematical Biology, Mathematical Biosciences and Engineering.
- **D. Davis**: Compositio Mathematica, Topology and its Applications, Turkish Journal of Mathematics, Homology, Homotopy and Applications, Zentralblatt, Journal of Homotopy and Related Structures.
- **K. Deng**: Abstract and Applied Analysis, Journal of Integral Equations and Applications, Computers and Mathematics with Applications, American Mathematical Society Mathematical Reviews, Advanced Nonlinear Studies, Applicable Analysis, Applied Mathematics - A Journal of Chinese Universities, Applied Mathematics Letters, Differential Equations and Applications, Discrete and Continuous Dynamical Systems, Series B, Journal of Biological Dynamics, Journal of Mathematical Analysis and Applications, Lecture Notes in Mathematics, Mathematical and Computer Modeling, Mathematical Reviews, Publicationes Mathematicae, Science in China.
- **D. Fisher**: The American Statistician, Teaching Statistics.
- **H. Heatherly**: Mathematical Reviews, American Mathematical Society, Houston Journal of Mathematics.
- **H. Lee**: Mathematical Communications.
- **A. Magidin**: Journal of Algebra and Applications, Israel Journal of Mathematics, Semigroup Forum, Journal of Group Theory, Communications in Algebra, Journal of Algebra, Malaysian Journal of Science, Studia Logica, Proceedings of the AMS, Glasgow Journal of Mathematics, Publ. Math. Debrecen, Forum Mathematicum, International Electronic Journal of Algebra, Journal Advanced Research in Pure Mathematics, Journal of the Australian Mathematical Society and Proceedings volumes, American Mathematical Society Mathematical Reviews, Journal of Advanced Research in Pure Mathematics.

- **P. Ng:** Bulletin of the Canadian Mathematical Society, Bulletin of the Malaysian Mathematical Sciences Society, Canadian Journal of Mathematics, Illinois Journal of Mathematics, Journal of Operator Theory, Missouri Journal of Mathematical Sciences.
- **M. Niebrzydowski:** Journal of Knot Theory, Fundamenta Mathematicae, Experimental Mathematics, Topology and Its Applications, AMS Contemporary Mathematics Series, American Mathematical Society Mathematical Reviews, Zentralblatt.
- **N. Pal:** Journal of Statistical Computation and Simulation, Computational Statistics & Data Analysis, Communications in Statistics, Sankhya - The Indian Journal of Statistics, The Annals of the Institute of Statistical Mathematics, The American Statistician, Statistical Papers, Statistics, Journal of Multivariate Analysis, The Annals of Statistics.
- **P. Salceanu:** Journal of Mathematical Biology, Mathematical Biosciences and Engineering, Journal of Biological Dynamics, International Journal of Biomathematics, American Mathematical Society Mathematical Reviews.
- **K. Sutton:** Journal of Inverse and Ill-posed Problems, Mathematical Biosciences and Engineering, Journal of Mathematical Biology, Numerical Mathematics, American Mathematical Society Mathematical Reviews, Mathematics and Computers in Simulation.
- **A.S. Vatsala:** Abstract and Applied Analysis-Hindawi, Applied Mathematical Modeling, Communications in Applied Analysis, Mathematical Reviews Nonlinear Analysis: Theory, Methods & Applications, Journal of Mathematical Analysis and Applications, Nonlinear Analysis: Real World Applications, Nonlinear Analysis: Hybrid Systems, Applied Mathematics Letters, Dynamic Systems and Applications, Computers and Mathematics with Applications, Advances in Difference Equations, Journal of Applied Analysis, Journal of Applied Mathematics and Computation, Korean Mathematical Society Journal.
- **F. Xue:** Numerische Mathematik, SIAM Journal on Matrix Analysis and Applications.

### Organized Special Sessions or Conferences

- **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.
- **R.B. Kearfott,** Member of Scientific Committee, SCAN 2016, Uppsala University, Uppsala, Sweden, Sept. 2016.
- **R.B. Kearfott,** Program Committee, BIRS Workshop on Interval Analysis and Constructive Mathematics, Oaxaca, Mexico, Nov. 2016.
- **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, Seattle, WA, January 2016.
- **A.S. Vatsala,** Arranged and Chaired the special session on “Analysis of Fractional Differential, Integral and Difference Equations with Applications”, World Congress: 11<sup>th</sup> 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.
- **X.-S. Wang**, Co-Organizer of Special Session on Differential Equations and Applications to Biological Models, The 11<sup>th</sup> AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL, July 1-5, 2016.
- **X.-S. Wang**, Co-Organizer of Lloyd Roeling Mathematics Conference, University of Louisiana at Lafayette, November 11-13, 2016.
- **G.F. Birkenmeier**: Co-organizer of NSF/CBMS Conference, Classification of  $C^*$ -Algebra, Flow Equivalence of Shift Spaces, Graph and Leavitt Path Algebras, May 11-15, 2015, University of Louisiana, Lafayette.
- **G.F. Birkenmeier**: Co-organizer of Southern Regional Algebra Conference (Lloyd Roeling Conference) March 13-15, 2015, University of Louisiana, Lafayette.
- **C.Y. Chan**: Organizer and Chair of the Workshop on Recent Advances in Applied Analysis and Applications for the Seventh International Conference on Dynamic Systems and Applications, Atlanta, Georgia, May 27-30, 2015.
- **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, Parallel and Scientific Computations, Morehouse College, Atlanta Georgia, May 27-30, 2015.
- **A.S. Vatsala**, Organizer of a special session at the AMS Joint Mathematics Meeting, Baltimore, MD January 15-18, 2014.
- **A.S. Ackleh**: 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.
- **A.S. Ackleh**: Co-organizer of the workshop Modeling with Measures: from Structured Populations to Crowd Dynamics, Lorentz Center, Leiden, The Netherlands, August 26-30, 2013.

- **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.
- **K.L. Sutton:** Co-Organizer of Population-level epidemiological modeling with an ecological perspective at The Fourth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Texas Tech University, October 2013.
- **K.L. Sutton:** Co-organizer of Addressing infectious disease using approaches across disciplines and scale at The Society for Mathematical Biology Annual Meeting and Conference, Arizona State University, June 2013.
- **A.S. Vatsala J. Graef, and G. S. Ladde:** Special session on Fractional, Hybrid and Stochastic Dynamic Systems with Applications, AMS Joint Mathematics, San Diego, CA, January 9-12, 2013.
- **G. Birkenmeier:** Co-organizer of the NSF/CBMS Conference in Mathematical Sciences: Topological and Algebraic Regularity Properties of Nuclear  $C^*$ -algebras, University of Louisiana at Lafayette, Lafayette, LA, May 11-15, 2012.
- **C.Y. Chan:** Organizer and Chair of the special session on Recent Advances in the Theory and Applications of Differential Equations at the 8<sup>th</sup> International Conference on Differential Equations and Dynamical Systems, Waterloo, Ontario, Canada, August 1-4, 2012.
- **A. Magidin, L-C Kappe and R. Solomon:** Co-organizer of Group Theory Session. Ohio State-Denison, Mathematics Conference, Columbus, OH, May 25-27, 2012.
- **K. Sutton, P. Salceanu, A.S. Ackleh, C.Y. Chan, K. Deng, R.B. Kearfott, A.S. Vatsala and F. Xue:** Lloyd Roeling/University of Louisiana at Lafayette Mathematics Conference, Lafayette, LA, November 2-4, 2012.
- **A.S. Ackleh and P. Salceanu:** Co-organizers of the special session on Modeling in Biology, Ecology and Epidemiology. Third Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences. Albena, Bulgaria, June 20-25, 2011.
- **C.Y. Chan:** Organizer of the Workshop on Recent Advances in Applied Analysis and Applications at the Sixth International Conference on Dynamic Systems and Applications. Atlanta, GA, May 25-28, 2011.
- **C. Christov:** Co-organized the series of conferences; Application of Mathematics in Technical and Natural Sciences, 2011.

#### **PhD Students Who Graduated (Chair/Co-Chair of Committee)**

**\*denotes students who have received support from external grants.**

#### **2016**

- \*Xinyu Li, Advisor: **A.S. Ackleh**
- Jared Guilbeau, Advisor: **R.B. Kearfott**
- Tracy Robin, Advisor: **P. Ng**
- Bhuvaneshwari 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**

## 2011

- Zhihua Dong, (Assistant Professor, Zhongnan University of Economics and Law), Advisor: **K. Deng**
- \*Qihua Huang, (Postdoctoral Fellow, University of Alberta), Advisors: **A.S. Ackleh** and **K. Deng**
- \*Xiaodong Lian, (Senior Statistician, Health Advocate), Advisor: **K. Krishnamoorthy**
- Anne Vakarietis, (Assistant Professor, Culinary Institute of Virginia), Advisor: **H. Heatherly**
- \*Xing Yang, (Assistant Professor, Jackson State University), Advisors: **K. Deng** and **N. Pal**
- \*Pei Zhang, (Assistant Professor, Wilkes University), Advisor: **A.S. Ackleh**

## **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.
- Principal Investigator, National Science Foundation, Nonautonomous Structured Population Models with Application to Amphibians and Associated Diseases. Grant number DMS-1312963. 2013-2016, \$235,000.
- Principal Investigator, U.S. Department of the Interior, Computer Simulation Model Upgrade for Hurricane, Sea-Level, and Wetland Ecosystem Application. 2013-2014, \$50,000.
- Principal Investigator, U.S. Department of the Interior, US Geological Survey, Modeling Population with Explicit Spatial Component. 2013-2014, \$26,500.
- 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. 2011-2014, \$169,486.
- 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. 2011-2013, \$150,000.
- 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 Marine Mammal Population Trends in the Vicinity of the Deepwater Horizon Oil Spill Using Passive Acoustic Monitoring Cues. 2010-2011, \$192,197.
- Principal Investigator, National Science Foundation, UBM: Training Undergraduate Students in Mathematics and Biology at UL Lafayette. 2005-2011, \$534,000.

#### **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 (LaM<sup>3</sup>). 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**

- Principal Investigator, Louisiana Board of Regents, Homotopy Fixed Points and Chromatic Homotopy Theory. 2008-2011, \$34,719.

### **C. Eubanks-Turner**

- Co-Principal Investigator, National Science Foundation: Louisiana Mathematics Masters in the Middle (LaM<sup>3</sup>). 2012-2017, \$1,858,145.
- MSRI Math Circles Seed Grant. October 2011, \$2,000.
- Principal Investigator, National Science Foundation, The Louisiana Noyce Teaching Fellows/Master Teaching Fellows Planning Project. 2011-2012, \$127,449.
- AWM Mentoring Travel Grant. August 2011, \$3,300.
- Co-Principal Investigator, Louisiana Systemic Initiatives Program, A TEAM (Tactile Experiences with Algebraic Models) Approach to Proficiency in the Middle Grades. April 2011, \$259,629.
- Co-Principal Investigator, NSF-DMS-1043223, Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Minorities in Mathematical Sciences: A Pilot Project. February 2011, \$548,880.
- CFA-Pugh Family Fund, Acadiana Math Teachers' Circle 2011 Summer Retreat. January 2011, \$12,000.

### **D. Fisher**

- Co-Principal Investigator, National Science Foundation, The HILT-LAS Project: High Impact, Little Time activities that address Lexical Ambiguity in Statistics, 2015-2017, \$215,371.
- 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.



**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.
- Co-Principal Investigator, for Lafayette Parish Gear-Up Project for High School Mathematics Teachers and Students (STEPS). 2010-2011, \$54,000.

**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 (LaM<sup>3</sup>). 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.
- Co-Principal Investigator, Louisiana Systemic Initiative Program/Board of Regents: Utilizing Student Responses as Catalysts for Improving Mathematics Teacher Knowledge. June 1, 2010-June 30, 2011, \$333,621.

**P. Ng**

- 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.

**M. Niebrzydowski**

- Principal Investigator, Quandle Homology and its Geometric Applications in Knot Theory, Research Competitiveness Grant, Louisiana Board of Regents, 2008-2011. \$51,222.

**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.
- Co-Principal Investigator, Modeling of Short-Term and Long-Term Marine Mammal Population Trends in the Vicinity of the Deepwater Horizon Oil Spill Using Passive Acoustic Monitoring Cues', National Science Foundation. Contract No. DMS - 1059753, September 2010-August 2011, \$192,197.

### **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**

- Principal Investigator, Aspects of Parameter Estimation in Dynamical Systems Involving Delays, Louisiana Board of Regents Research Competitiveness Subprogram. 2012-2015, \$89,157.

### **A. S. Vatsala**

- 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.
- Co-Principal Investigator, US Army Research Office Grant, Title: Fractional Differential Inequalities with Applications. 2010-2011, \$50,000.

### **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.
- Co-Principal Investigator, Eigenvalue Problems, Krylov Subspaces and Subspace Recycling. NSF DMS-1115200, August 2011- July 2014, \$280,000.

### **Awards/Honors**

- **G. Birkenmeier**, Jack & Gladys Theall/BORSF Endowed Professor in College of Sciences, 2016 – 2019.
- **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.
- **A. S. Vatsala**, UL Lafayette Distinguished Professor, 2014.
- **A. S. Vatsala**, Ray P. Authement College of Sciences Outstanding Professor, 2014.
- **K. Deng**, UL Lafayette Distinguished Professor, 2013.
- **K. Lopez**, Outstanding Faculty Advisor Award, 2013.
- **A. S. Vatsala**, Certificate of Appreciation from UL Lafayette (for service as a mentor for the LS-LAMP program, 2013).
- **G. Birkenmeier**, SLEMCO/BORSF Endowed Professor in Science II, 2008-2011.

- **C. Y. Chan**, Pennzoil Endowed Professor of Mathematics, 2008-2011, 2011-2014.
- **K. Deng**, Lafayette Coca-Cola/BORSF Professor in Mathematics, 2008-2011, 2011-2014.
- **A. S. Vatsala**, SLEMCO/BORSF Endowed Professor in Science II, 2011-2014.
- **C. Christov**, Ray P. Authement College of Sciences Outstanding Professor, 2012.
- **K. Deng**, Ray P. Authement College of Sciences Outstanding Professor, 2011.
- **K. Krishnamoorthy**, Elected Fellow of the American Statistical Association, 2011.
- **N. Pal**, Awarded Faculty Development Grants Office of Academic Planning and Faculty Development, University of Louisiana at Lafayette in 2011; \$500.

### Other Professional Activities

- **A.S. Ackleh**. Director of Computational and Visualization Enterprise (CAVE). University of Louisiana at Lafayette, 2010-present.
- **G. Birkenmeier**. State Speaker of Science (SOS) Program: Gave a presentation on Careers in Mathematics at the Kenilworth Science and Technology School. November 7, 2015, Baton Rouge, Louisiana.
- **G. Birkenmeier**. Visiting Professor, Hacettepe University, Turkey. Summers: 2011, 2012 and 2013.
- **G. Birkenmeier**. Solution to Problem 940: Identification of some Nonzero Rings. *The College Mathematics Journal*, 42 (5), (2011), 412.
- **C.Y. Chan**. Reviewer on the International Panel for Zentralblatt für Mathematik.
- **D. Fatheree**. Enhancing Content for Comprehension in Undergraduate Mathematics. Organizer and presenter, May 2011.
- **D. Fisher**. Member of Planning Committee for Electronic Conference on Teaching Statistics (ECOTS), 2014.
- **D. Fisher**. Invited participant in creating a Course Community in probability for the MAA Math Digital Library (MathDL) website. Spring 2012.
- **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.
- **R.B. Kearfott**. Managing Editor of the Open-Access Online Journal *Reliable Computing*, 2012.
- **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**. Sloan C Course: New to Online: The Essentials. July 12-19, 2013.
- **K. Lopez**. Sloan C Course: Successful Online Outcomes: ADA and Accommodation on the Web. August 16-23, 2013.
- **K. Lopez**. Sloan C Course: Enhancing Distance Learning with Audio and Video. September 20-27, 2013.
- **K. Lopez**. Attended AMS day-long workshop for Department Heads and Leaders, January 8, 2013. Enrolled in mini-course on Teaching Intro Stats at the JMM. January 9 and 11, 2013.

- **K. Lopez.** Enrolled in mini-course on Voting and Clickers at the MathFest, Hartford, CT, August 1-2, 2013.
- **K. Lopez.** Attended the MAA MathFest, Hartford, CT. July 3-August 3, 2013.
- **K. Lopez.** Attended the Joint Mathematical Meetings. San Diego, CA, January 9-12, 2013.
- **K. Lopez.** Conducted a MSP (Mathematic Science Partnership (MSP) Workshop on the 8th Grade Common Core State Standards for 15 in-service Vermilion Parish teachers. July 15-26, 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.** Sole Presenter of Ten Day Workshop Vermilion Parish MSP 2012, on the LA Fifth Grade Transitional Curriculum for 15 In-Service Teachers. July 5-18, 2012.
- **K. Lopez and C. Eubanks-Turner.** Louisiana Systemic Initiative Program/Board of Regents: *A TEAM (Tactile Experiences with Algebraic Models) Approach to Improving Algebraic Proficiency in the Middle Grades*. Presented a nine-day workshop for 35 middle school in-service teachers. May 29-June 15, 2012.
- **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.
- **K. Lopez.** *A TEAM (Tactile Experiences with Algebraic Models) Approach to Improving Algebraic Proficiency in the Middle Grades*. July 5-15, 2011, with C. Eubanks-Turner and P. Sheppard, (College of Education).
- **K. Lopez.** *Utilizing Student Responses as Catalysts for Improving Mathematics Teacher Knowledge*, Algebra Strand, May 31, 2011 - June 10, 2011, Co-P.I., (with P. Sheppard, College of Education and M. Jumonville, Mathematics).
- **P. Ng.** Attended the 2011 Canadian Operator Symposium (COSY). University of Victoria, B.C., Canada. May 22-28, 2011.
- **P. Ng.** Attended the Research Program on the Cuntz Semi-group and the Classification of  $C^*$ -algebras, at the CRM (Centre de Recerca Matematica) in Barcelona, Spain. June 1-30, 2011.
- **P. Ng.** Visited the Memorial University of Newfoundland in St. John's, Newfoundland, Canada. July 17-23, 2011.
- **P. Ng.** Visited the University of Cincinnati in Ohio. Collaborated with my coauthors Victor Kaftal and Shuang Zhang. July 9-16, 2011.
- **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.
- **K.L. Sutton,** Appointed to SIAM Diversity Advisory Committee for Jan 2017 – Dec. 2019.
- **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).
- **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,** American Statistical Association.
- **D. Fisher,** International Association of Statistics Educators.
- **D. Fisher,** Mathematical Association of America.
- **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.
- **H. Lee**, The Association of Christians in the Mathematical Sciences (ACMS).
- **R.B. Kearfott**, Vice Chair (and current acting chair) IEEE P-1788 working group for standardization of interval arithmetic.
- **K. Krishnamoorthy**, President, Louisiana Chapter of the American Statistical Association, 2011.
- **K. Krishnamoorthy**, Vice President, Louisiana Chapter of the American Statistical Association, 2010-2011.
- **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.
- **A. Magidin**, Member of American Mathematical Society, Mathematical Association of America.
- **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).