Office of the Dean

Publications, Presentations, Editorships, and Talks

Edited Volumes

- **Ackleh, A.S.**, Colombo, R.M., Hille, S.C., & Muntean, A. (eds). (2015). *Modeling with Measures*, [Special Issue] *Mathematical Biosciences and Engineering*, **12**(2).
- Nagamalai, D., **Kumar, A.**, & Annamalai, A. (eds). (2013). *Advances in Computational Science, Engineering and Information Technology: Proceedings of the Third International Conference on Computational Science, Engineering and Information Technology, Turkey.*

Editorships

- **Ackleh, A.S.** Associate Editor, *Journal of Mathematical Biosciences and Engineering*, 2009-Present.
- **Kumar, A.** Editor-in-Chief, *International Journal of Embedded Systems and Applications* (IJESA), Vol. 3, Numbers 1-3, 2013.
- **Kumar, A.** Editor-in-Chief. *International Journal of Embedded Systems and Applications* (IJESA), 2012-Present.
- **Kumar, A.** Associate Editor, *International Journal of Software Engineering & Applications*, 2012-Present.

Journal Papers (Published)

1. **Ackleh, A.S.** & Miller, R.L. (2018). A model for the interaction of phytoplankton aggregates and the environment: approximation and parameter estimation. *Inverse Problems in Science and Engineering,* **26**(2), 152-182. doi:10.1080/17415977.2017.1310856
2. Veprauskas, A., **Ackleh, A.S.**, & Tang, T. (2018). Examining the effect of reoccurring disturbances on population persistence with application to marine mammals. *Journal of Theoretical Biology*, **455**, 109-117. doi:10.1016/j.jtbi.2018.07.011
3. **Ackleh, A.S.**, Sutton, K.L., Tang, T., & Zhao, L. (2018). A second order finite difference scheme for a variable infection-structured model of *mycobacterium marinum* dynamics in aquatic animals. *Journal of Nonlinear and Variational Analysis*, **2**, 177-202. doi:10.23952/jnva.2.2018.2.06
4. **Ackleh, A.S.**, Caswell, H., Chiquet, R.A., Tang, T., & Veprauskas, A. (2018). Sensitivity analysis of the recovery time for a population under the impact of an environmental disturbance. *Natural Resource Modeling*, **32**, 1, e12166. doi:10.1111/nrm.12166
5. Veprauskas, A., **Ackleh, A.S.**, Banks, J.E., Stark, J.D. (2018). The evolution of toxicant resistance in daphniids and its role on surrogate species. *Theoretical Population Biology*, **119**, 15-25. doi:10.1016/j.tpb.2017.11.002
6. Huber, B., Hobbs, R., Bogus, K., & the Expedition 369 Scientists (including **Richter, C**.), (2018). Australia Cretaceous Climate and Tectonics. *IODP Preliminary Reports*, 369. doi:10.2204/iodp.pr.321.2009
7. Grunert, P., Balestra, B., **Richter, C.**, Flores, J.A., Auer, G., Gallardo, A, and Piller, W., (2018). Revised and refined age model for the upper Pliocene of IODP Site U1389

(IODP Expedition 339, Gulf of Cádiz). *Newsletters on Stratigraphy*, **51**(3), 261-283. doi:10.1127/nos/2017/0396

8. **Ackleh, A.S.** & Sutton, K.L. (2017). Disparate disease outcomes in chronic infection: The role of intra-host variability. *International Journal of Pure and Applied Mathematics*, **116**, 343-352.
9. Banks, J.E., Vargas, R.I., **Ackleh, A.S.**, & Stark, J.D. (2017). Sublethal Effects in Pest Management: A Surrogate Species Perspective on Fruit Fly Control. *Insects*, **8**(3), 78. doi:10.3390/insects8030078
10. **Ackleh, A.S.**, Ma, B., & Tang, T. (2017). A high-resolution finite difference method for a model of structured susceptible-infected populations coupled with the environment. *Numerical Methods for Partial Differential Equations*, **33**, 1420-1458. doi:10.1002/num.22139
11. **Ackleh, A.S.**, Chiquet, R.A., Ma, B., Tang, T., Caswell, H., Veprauskas, A., & Sidorovskaia, N. (2017). Analysis of lethal and sublethal impacts of environmental disasters on sperm whales using stochastic modeling. *Ecotoxicology*, **26**, 820-830. doi:10.1007/s10646-017-1813-4
12. **Ackleh, A.S.**, Ma, B., & Miller, R.L. (2016). A general nonlinear model for the interaction of a size-structured population and its environment: Well-posedness and approximation. *Quarterly of Applied Mathematics*, **74**, 671-704. doi:10.1090/qam/1439
13. **Ackleh, A.S.**, Cleveland, J., & Thieme, H.R. (2016). Population dynamics under selection and mutation: Long-time behavior for differential equations in measure spaces. *Journal of Differential Equations*, **261**, 1472-1505. doi:10.1016/j.jde.2016.04.008
14. **Ackleh, A.S.**, Carter, J., Chellamuthu, V.K., & Ma, B. (2016). 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**, 158-169. doi:10.1016/j.ecolmodel.2015.09.015
15. **Ackleh, A.S.**, Deng, K., & Wu, Y. (2016). Competitive exclusion and coexistence in a two-strain pathogen model with diffusion. *Mathematical Biosciences and Engineering*, **13**, 1-18. doi:10.3934/mbe.2016.13.1
16. Tang, P.C., Smith, K.M., & **Watson, G.M.** (2016). Repair of traumatized mammalian hair cells via sea anemone repair proteins. *Journal of Experimental Biology*, **219**, 2265-2270. doi:10.1242/jeb.135459
17. **Ackleh, A.S.** & Salceanu, P. (2015). Competitive exclusion and coexistence in an *n*-species Ricker model. *Journal of Biological Dynamics*, **9**(Sup1), 321-331. doi:10.1080/17513758.2015.1020576
18. **Ackleh, A.S.**, Delcambre, M.L., & Sutton, K.L. (2015). A Second Order High Resolution Finite Difference Scheme for a Size-structured Model for the Spread of *Mycobacterium marinum*. *Journal of Biological Dynamics*, **9**(Sup1), 156-187. doi:10.1080/17513758.2014.962998
19. **Ackleh, A.S.**, Farkas, J.Z., Li, X., & Ma, B. (2015). Finite difference approximations for a size-structured population model with distributed states in the recruitment. *Journal of Biological Dynamics*, **9**(Sup1), 2-31. doi:10.1080/17513758.2014.923117

20. Tang, P.C. & **Watson, G.M**. (2015). Proteomic identification of hair cell repair proteins in the model sea anemone *Nematostella vectensis*. *Hearing Research*, **327**, 245-256. doi:10.1016/j.heares.2015.07.005
21. **Ackleh, A.S.**, Delcambre, M., Sutton, K.L., & Ennis, D. (2014). Structured Models for the Spread of *Mycobacterium marinum*: Foundations for a Numerical Approximation Scheme. *Mathematical Biosciences and Engineering*, **11**, 679-721. doi:10.3934/mbe.2014.11.679
22. **Ackleh, A.S.**, Sutton, K.L., Ennis, D., Mallick, A., & Mutoji, K.N. (2014). A Structured Model for the Transmission Dynamics of *Mycobacterium marinum* between Aquatic Animals. *Journal of Biological Systems*, **22**, 29-60. doi:10.1142/S0218339014500028
23. **Ackleh, A.S.**, Sacker, R.J., & Salceanu, P. (2014). On a discrete selection-mutation model. *Journal of Difference Equations and Applications*, **20**, 1383-1403. doi:10.1080/10236198.2014.933819
24. Banks, J.E., Stark, J., Vargas, R.I. & **Ackleh, A.S.** (2014). Deconstructing the surrogate species concept: a life history approach to the protection of ecosystem services. *Ecological Applications*, **24**, 770-778. doi:10.1890/13-0937.1
25. **Ackleh, A.S.** & Salceanu, P. (2014). Robust uniform persistence and competitive exclusion in a nonautonomous multi-strain SIR epidemic model with disease-induced mortality. *Journal of Mathematical Biology*, **68**, 453-475. doi:10.1007/s00285-012-0636-4
26. Tang, P.C. & **Watson, G.M**. (2014). Cadherin-23 May be Dynamic in Hair Bundles of the Model Sea Anemone *Nematostella vectensis*. *PLOS ONE*, **9**, e86084. doi:10.1371/journal.pone.0086084
27. **Ackleh, A.S.**, Ma, B., & Thibodeaux, J. (2013). A second-order high resolution finite difference scheme for a structured erythropoiesis model subject to malaria infection. *Mathematical Biosciences*, **245**, 2-11. doi:10.1016/j.mbs.2013.03.007
28. **Ackleh, A.S.** & Thibodeaux, J. (2013). A second-order finite difference approximation for a mathematical model of erythropoiesis. *Numerical Methods for Partial Differential Equations*, **29**, 1821-1836. doi:10.1002/num.21778
29. **Ackleh, A.S.** & Farkas, J.Z. (2013). On the net reproduction rate of continuous structured populations with distributed states at birth. *Computers and Mathematics with Applications*, **66**, 1685-1694. doi:10.1016/j.camwa.2013.04.010
30. **Ackleh, A.S.** & Ma, B. (2013). A Second Order High-Resolution Scheme for a Juvenile-Adult Model of Amphibians. *Numerical Functional Analysis and Optimization*, **34**, 365-403. doi:10.1080/01630563.2012.730595
31. Cleveland, J. & **Ackleh, A.S**. (2013). Evolutionary game theory on measure spaces: Well-posedness. *Nonlinear Analysis: Real World Applications*, **14**, 785-797. doi:10.1016/j.nonrwa.2012.08.002
32. Chiquet, R., Ma, B., **Ackleh, A.S.**, Pal, N., & Sidorovskaia, N. (2013). Demographic analysis of sperm whales using matrix population models. *Ecological Modeling*, **248**, 71-79. doi:10.1016/j.ecolmodel.2012.09.023
33. **Totaro, M.W.** & Guidry, B.N. (2013). The advanced database course and the information systems 2010 model curriculum: an experiential approach to learning. *International Journal of Information and Operations Management Education*, **5**, 115-129. doi:10.1504/ijiome.2013.054295

34. Allaire, K.M. & **Watson, G.M.** (2013). Rho participates in chemoreceptor-induced changes in morphology to hair bundle mechanoreceptors of the sea anemone, *Nematostella vectensis*. *Journal of Comparative Biochemistry and Physiology*, *Part A: Molecular & Integrative Physiology,* **165**, 139-148. doi:10.1016/j.cbpa.2013.03.003
35. Spears, R., Rivet, C., Killingsworth, S., **Kumar, A.**, & Etheredge, J. (2013). Designing and Creating a Game Engine for Use in the Classroom. *Computer Game Development and Education: An International Journal*, **1**, 1-20.
36. Guidry, B.N. & **Totaro, M.W.** (2013). MIS Students and the Systems Analysis and Design Course Project: A Proposed Experiential Approach. *International Journal of Innovation and Learning*, **13**, 121-139. doi:10.1504/ijil.2013.052283

Book Chapters

- **Ackleh, A.S.**, Ma, B., Li, X. (2017). Parameter Estimation in a Size-Structured Population Model with Distributed States-at-Birth. In: Bociu, L., Désidéri, J.A., Habbal, A. (eds). *System Modeling and Optimization: CSMO 2015, IFIP Advances in Information and Communication Technology,* **494**, 43-57. Cham, Switzerland: Springer. doi:10.1007/978-3-319-55795-3_3
- **Ackleh, A.S.** & Salceanu, P.L. (2014). Competitive Exclusion Through Discrete Time Models. In: AlSharawi, Z., Cushing, J.M., Elaydi, S., (eds). *Theory and Applications of Difference Equations and Discrete Dynamical Systems: ICDEA Muscat, Oman, May 26-30, 2013. Springer Proceedings in Mathematics & Statistics*, **102**, 3-21. Heidelberg, Germany: Springer, Berlin. doi:10.1007/978-3-662-44140-4_1

Conference Papers (Published)

- Sammoud, A., **Kumar, A.**, Bayoumi, M., Elarabi, T. (2017). Real-Time Streaming Challenges in Internet of Video Things (IoVT). In: *2017 IEEE International Symposium on Circuits and Systems (ISCAS),* 1-4. doi:10.1109/ISCAS.2017.8050815
- Fowler, M., Bolding, T., Hebert, K., Ducrest, F., & **Kumar, A.** (2016). Design of a Cost-Effective Autonomous Underwater Vehicle. In: *2016 Annual IEEE Systems Conference (SysCon),* 1-6. doi:10.1109/syscon.2016.7490543
- Sidorovskaia, N.A., **Ackleh, A.S.**, Tiemann, C. O., Ma, B., Ioup, J.W., Ioup, G.E. (2016). Passive Acoustic Monitoring of the Environmental Impact of Oil Exploration on Marine Mammals in the Gulf of Mexico. In: Popper, A., Hawkins, A. (eds). *The Effects of Noise on Aquatic Life II, Advances in Experimental Medicine and Biology*, **875**, 1007-1014. New York, NY: Springer. doi:10.1007/978-1-4939-2981-8_125
- **Kumar, A.**, Kumar, P., Shelar, A., & Naidu, V. (2013). Multi-Agent Based Intelligent System for Image Fusion. In: Nagamalai, D., Kumar, A., Annamalai, A. (eds). *Advances in Computational Science, Engineering and Information Technology. Advances in Intelligent Systems and Computing,* **225**, 101-110. Heidelberg, Germany: Springer. doi:10.1007/978-3-319-00951-3_10

Plenary and Keynote Presentations

- **Ackleh, A.S.** *Population Models with Discrete or Continuous Trait Spaces: Competitive Exclusion or Coexistence?* Keynote. 7th Annual Conference of the

Lebanese Society for the Mathematical Sciences (LSMS). Balamand, Lebanon, April 20-21, 2017.

- **Ackleh, A.S.** *Competitive Exclusion and Coexistence in Discrete Population Models,* Plenary. The 19th International Conference on Difference Equations and Applications. Muscat, Oman, May 26-30, 2013.

Colloquia and Seminar Talks

- **Ackleh, A.S.** Department of Mathematics, Trinity University. San Antonio, TX, October 3, 2018.
- **Richter, C.** Southwest Louisiana Geophysical Society, Lafayette, LA, October 9, 2018.
- **Ackleh, A.S.** Department of Physics, University of New Orleans. New Orleans, LA, April 2017.
- **Ackleh, A.S.** Dr. Karen A. Ames Series on Applied Mathematics. Department of Mathematical Sciences, University of Alabama in Huntsville. Huntsville, AL, March 2017.
- **Ackleh, A.S.** Department of Mathematics and Statistics, Sam Houston State University. Huntsville, TX, April 2016.
- **Watson, G.M.** The Whitney Marine Laboratory. St. Augustine, FL, June 2015.

Invited and Other Selected Conference and Workshop Talks

1. **Ackleh, A.** *Changes in Population Outcomes Resulting from Evolutionary Responses to a Disturbance,* Invited. Joint Mathematical Meeting. San Diego, CA, January 9-14, 2018.
2. **Ackleh, A.** *Examining the Effect of Evolution in Response to a Disturbance on Population Dynamics,* Invited. Nashville, TN, April 14-15, 2018.
3. **Ackleh, A.** *Changes in Population Dynamics Resulting from Evolutionary Response to an Environmental Disturbance,* Invited. Frontiers of Mathematical Biology: Modeling, Computation and Analysis. Orlando, FL, May 2-4, 2018.
4. **Ackleh, A.** *A Second Order Finite Difference Scheme for a Variable Infection-Structured Model of* Mycobacterium Marinum *Dynamics in Aquatic Animals,* Invited, Main Speaker. Sixth Palestinian Conference on Modern Trends in Mathematics and Physics (PCMTMP-VI), Palestine Technical University - Kadoorie. Tulkarm, August 5-8, 2018.
5. **Ackleh, A.** *The Effect of Toxicant Resistance Evolution in the Prey Population on the Dynamics of a Predator-Prey System,* Invited. AMS Meeting #1144, San Francisco, CA, October 27-28, 2018.
6. **Ackleh, A.** *A Model for Structured Population Dynamics with Indefinite Growth Rates Coupled with the Environment, Mathematical Methods and Modeling in Engineering and Life Sciences,* Invited. Buenos Aires, Argentina, November 7-9, 2018.
7. **Ackleh, A.S.** *A Model for the Interaction of Phytoplankton Aggregates and the Environment: Approximation and Parameter Estimation*. Joint Mathematics Meeting. Atlanta, GA, January 4-7, 2017.

8. **Ackleh, A.S.** *Analysis of Lethal and Sublethal Impacts of Environmental Disasters on Sperm Whales Using Stochastic Modeling*. Gulf of Mexico Oil Spill and Ecosystem Science Conference. New Orleans, LA, February 6-9, 2017.
9. **Ackleh, A.S.** *Combining Acoustic Data and Statistical Modeling to Understand Marine Mammal Population Dynamics and Abundance* (Invited). The 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). New Orleans, LA, March 5-9, 2017.
10. Krayesky-Self, S., **Watson, G.M.** *Sea Anemones Employ Hair Bundle Mechanoreceptors to Target Spirocyst Discharge to Swimming Appendages of Prey.* Society for Integrative & Comparative Biology Annual Meeting. New Orleans, LA, January 4-8, 2017.
11. Menard, S.S., **Watson, G.M.** *Sea Anemone Hair Bundles are Resilient to Multiple Types of Trauma.* Society for Integrative & Comparative Biology Annual Meeting. New Orleans, LA, January 4-8, 2017.
12. Gundlach, K.A., **Watson, G.M.** *Interspecific Anemone Mucus Enhances Cnida Discharge in the Anemone* Haliplanella luciae. Society for Integrative & Comparative Biology Annual Meeting. New Orleans, LA, January 4-8, 2017.
13. Rogers, D.J., Hendrick, M., **Watson, G.M.**, Smith, K.M. *Calcium Signaling in in GABAergic-Cortical Astrocyte Co-Culture is Influenced by Fibroblast Growth Factor Receptor 1 (FGFR1)*. Society for Integrative & Comparative Biology Annual Meeting. New Orleans, LA, January 4-8, 2017.
14. **Ackleh, A.S.** *Competitive Exclusion and Coexistence in Discrete-Time Population Models* (Invited). IV International Conference on Applied Mathematics, Design and Control. Universidad Nacional de San Martín. Buenos Aires, Argentina, November 4-6, 2015.
15. **Ackleh, A.S.** *Understanding the Dynamics of Amphibians and Associated Diseases Using a Structured Modeling Approach* (Invited). 27th IFIP TC7 Conference. SophiaTech Campus. Sophia Antipolis, France, June 29-July 3, 2015.
16. **Ackleh, A.S.** *Competitive Exclusion and Coexistence in Population Models* (N.A. Court Lecture, Invited). MAA 77th Annual Meeting of the Oklahoma-Arkansas Section. Tulsa, OK, April 10-11, 2015.
17. **Ackleh, A.S.** *A General Structured Population Model with Application to Amphibians and Associated Diseases,* Invited. Joint Mathematics Meeting. San Antonio, TX, January 10-13, 2015.
18. Rogers, D.J., Jackson, M., Torres, H., Foret, B., **Watson, G.M.**, Smith, K.M. *Calcium Imaging of Co-Cultured GABAnergic Interneurons with FGFR1 Knockout Astrocytes*. Society for Neuroscience Meeting. Chicago, IL, October 19, 2015.
19. Tang, P.C., **Watson, G.M.** *Repair of Mammalian Hair Cells via Sea Anemone Repair Proteins.* Association Research Otolaryngology 38th Annual MidWinter Meeting. Baltimore, MD, February 21-25, 2015.
20. **Ackleh, A.S.** *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.
21. **Ackleh, A.S.** *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.

22. Rogers, D.J., Achi, P., Collette, J., **Watson, G.M.**, Smith, K.M. *Imaging Intracellular Calcium Waves in Astrocytes of FGFR1 Knockout Mice*. Society Neuroscience Annual Meeting, Washington, D.C., November 15-19, 2014.
23. **Totaro, M.W.** *Insights into IT,* Presenter. South Louisiana Community College IT Club. South Louisiana Community College, Ardoin Building, Lafayette, LA, February 6, 2013.
24. **Ackleh, A.S.** *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, TX, October 4-6, 2013.
25. **Ackleh, A.S.** *Stability Analysis of Small Perturbations of Pure Selection Models on Measure Space* (Open Problem Lecture). Modeling with Measure: From Structured Populations to Crowd Dynamics. Lorentz Center, Leiden, Netherlands, August 26-30, 2013.
26. **Ackleh, A.S.** *Measure-Valued Solutions to Selection-Mutation and Structured Population Models* (Tutorial Lecture). Lorentz Center, Leiden, Netherlands, August 26-30, 2013.
27. Tang, P.C., **Watson, G.M.** *The Dynamic Nature of Cadherin 23 in Hair Bundles of the Model Sea Anemone* Nematostella vectensis. ASCB Annual Meeting, New Orleans, LA, December 14-18, 2013.

Journal Referees

Ackleh, A.S.

SIAM Journal of Applied Mathematics • Journal of Mathematical Biology • Journal of Analysis and Applications • Natural Resource Modeling • Mathematical Biosciences • Dynamics of Discrete, Continuous and Impulsive Systems • Nonlinear Analysis, Theory Meothods and Applications • Dynamic Systems and Applications • Journal of Computational and Applied Mathematics • International Journal of Mathematics and Mathematical Sciences • Computers & Mathematics with Applications • Kybernetica • Applied Mathematics Letters • Applicable Analysis • Journal of Biological Systems • Discrete and Continuous Dynamical Systems, Series B • Journal of Difference Equations and Applications • Rocky Mountain Journal of Mathematics • Applied Numerical Mathematics • Journal of Biological Dynamics • Journal of Scientific Computing • International Journal of Numerical Analysis and Modeling • Journal of Theoretical Biology • Applied Mathematics and Computation • Computers and Mathematics with Applications • Inverse Problems in Science and Engineering • Mathematical Biosciences and Engineering.

Totaro, M.W.

Communications of the Association for Computing Machinery (CACM) • Systems Research and Behavioral Science (SRBS) • Journal of Computer Information Systems.

Richter, C.

Marine Geology • Annals of Geophysics • Geological Society of London • Paleoceanography • Earth and Planetary Science Letters • Paleo-3 • Physics of the Earth and Planetary Interiors

Organized Special Sessions or Conferences

- **Ackleh, A.S**. 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 Conference, Tampa, FL, February 1-4, 2016.
- **Ackleh, A.S**. 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.
- **Ackleh, A.S**. Co-organizer of the Workshop Modeling with Measures: from Structured Populations to Crowd Dynamics. Lorentz Center, Leiden, Netherlands, August 26-30, 2013.

Graduate Student Production

2018:

Sean Jensen (M.S.), Advisor: **Richter, C.**
Morgan Canezaro (M.S.), Advisor: **Richter, C.**

2017:

Tingting Tang (Ph.D.), Advisor: **Ackleh, A.S.**

2016:

Xinyu Li (Ph.D.), Advisor: **Ackleh, A.S.**

2015:

Robert Miller (Ph.D.), Advisor: **Ackleh, A.S.**
Vinodh Chellamuthu (Ph.D.), Advisor: **Ackleh, A.S.**
Pei-Ciao Tang (Ph.D.), Advisor: **G.M. Watson**

2014:

Mark Delcambre (Ph.D.), Advisor: **Ackleh, A.S.**
Warnesha Calais (M.S.), Advisor: **G.M. Watson**

Funding

External Funding

Ackleh, A.S.

- Co-Principal Investigator. Gulf of Mexico Research Initiative Fund. *Littoral Acoustic Demonstration Center-Gulf Ecological Monitoring and Modeling (LADC-GEMM)*, 2015-2019, $5,918,725. (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.
- Principal Investigator. U.S. Department of the Interior. *Computer Simulation Model Upgrade for Hurricane, Sea-Level, and Wetland Ecosystem Application*. Grant number G13AC00373. 2013-2016, $176,794.
- Principal Investigator. U.S. Department of the Interior, US Geological Survey. *Modeling Population with Explicit Spatial Component*. Grant number G13AC00333. 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*. Grant Number G11AC 2013 9. 2011-2016, $194,145.

Kumar, A.

- Principal Investigator. Louisiana Board of Regents, RCS Award. Design and Development of Coordination and Control Mechanisms for Sensor-enabled Software Systems. 2009-2014, $113,424.
- Co-Principal Investigator with Jim Etheredge. Louisiana Board of Regents, Enhancement Grant. Laboratory for Research and Curriculum Development Projects in Video Game Design and Development. 2012-2013, $47,702.
- Co-Principal Investigator with Suren Dwivedi (PI). National Science Foundation. Collaborative Research: MCTech - STEM Careers in Shipbuilding and Marine Industry. Award number DUE-0903314. 2009-2013, $72,588.

Richter, C.

- $456,593 NSF-MRI: Autonomous real-time monitoring of Gulf ecology with SeaGliders: advancing interdisciplinary research and education through modern technology (Senior Personnel) Dates: August 1, 2018-July 31, 2020.
- $14,895 U.S. Science Support Program: Revised Magnetostratigraphy and Rock Magnetic Analysis of Cores from IODP Expedition 369 Dates: March 1, 2018-February 29, 2020 Role: PI.
- $58,473 Columbia University/National Science Foundation: Research Subaward, Participation on IODP Expedition 369 Dates: October 1, 2017-February 29, 2020 (Role: PI).

Totaro, M.W.

- Yuan An, **M.W. Totaro**, C. Chen, T. Hu, W. Ke, J. Li, X. Lin, M. Rogers, V. Raghavan, I-Y Song, Xu, W. Center for Visual and Decision Informatics (CVDI): An NSF Industry/University Collaborative Research Center. University of Louisiana at Lafayette, Drexel University. *Multi-Industry Semantic Discovery Tool Sets for Data Integration, Data Warehousing, and E-Science*. July 2012-June 2013, $132,200. Funded Project.

Other

Awards/Honors

- **Ackleh, A.S.** was awarded the Rollie Lamberson Research Award Medal by the Research Modeling Association in 2019.
- **Totaro**, **M.W. received** UL Lafayette Award for Excellence in Academic Advising, 2012 Academic Year. (Received 2013)

Other Professional Activities

- **Ackleh, A.S**. Director of Computational and Visualization Enterprise (CAVE) University of Louisiana at Lafayette, 2010-2013

Offices Held and Professional Memberships

Ackleh, A.S.

American Mathematical Society (AMS) • Society of Mathematical Biology (SMB) • Society of Industrial and Applied Mathematics (SIAM) • International Society of Difference Equations (ISDE)

Richter, C.

American Geophysical Union • Geological Society of America • Lafayette Geological Society • Deutsche Geologische Gesellschaft • President, Southwest Louisiana Geophysical Society (2014 - Present)

Totaro, M.W.

Professional Member, Association of Computing Machinery (ACM)