

Dr. Blair D. Sterba-Boatwright

Texas A&M University-Corpus Christi
Science & Engineering, Mathematics & Statistics
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blair.sterbaboatwright@tamucc.edu

Education

MS, Texas A&M University-College Station, 2007.

PhD, The University of Texas at Austin, 1987.

BA, Swarthmore College, 1980.

Professional Employment

Professor, Texas A&M University-Corpus Christi. (September 2012 - Present).

Associate Professor, Texas A&M University-Corpus Christi. (September 1994 - August 2012).

Assistant Professor, Texas A&M University-Corpus Christi. (September 1989 - August 1994).

Assistant Professor, St. Edward's University. (September 1987 - August 1989).

Administrative Appointments

Department

Department Chairperson (2018 - Present)

Department Chairperson (2006 - 2009)

Program Coordinator (1992 - 1996)

Did most administrative work for mathematics other than personnel evaluation.

College

Associate Dean (2019 - Present)

Associate Dean for academics, College of Science and Engineering

University

Faculty Senate Speaker (1999 - 2002)

Professional Memberships

American Statistical Association

TEACHING

Teaching Experience

CMSS 6590, ADVANCED TOPICS:Mixed Effects Models for Scientists
MARB 6590, SPECIAL TOPICS: Introduction to Bayesian Statistics
MATH 1442, STATISTICS FOR LIFE
MATH 3342, APPLIED PROBABILITY AND STATS
MATH 4696, Algebraic Structures
MATH 5310, TOPICS IN MATHEMATICS: Apply Probability and Statistics
MATH 5315, STATISTICAL MTHDS IN RSRCH I
MATH 5316, STATISTICAL MTHDS IN RSRCH II
MATH 5342, THE THEORY OF STATISTICS
MATH 5390, SPEC TOPIC IN MATH:"STATISTICAL PATTERN RECOGNITION"
MATH 5393, LITERATURE REVIEW AND RESEARCH
MATH 5394, RESEARCH METHODS IN MATH
MATH 5396, DIS: Intro to Bayesian Statistics
MATH 5994, PROPOSAL RESEARCH
MATH 5995, THESIS
MATH 6315, STATISTICAL METHODS IN RESEARC
MATH 6316, STATISTICAL METHODS RSRCH II
MATH 6317, MIXED EFFECTS MODELS SCIENTIST
MATH 6318, AN INTRO TO BAYESIAN STATISTIC

Teaching Awards and Honors

Outstanding Online Educator Award, ODELT. (2014).
Minnie Stevens Piper Award Nominee. (2010).
Teaching Excellence Award, Texas A&M University System. (2010).
Presidential Excellence Award, St. Edward's University. (1989).

SCHOLARLY AND CREATIVE ACTIVITIES

Publications

Refereed

Conference Proceedings

Warner, N. N., Sterba-Boatwright, B. D., Tissot, P., Jeffress, G. A. (2012). Estimated Increase in Inundation Probability with Confidence Intervals for Galveston, Texas. In Spaulding, M. L. (Ed.), *Estuarine and Coastal Modeling: Proceedings of the Twelfth International Conference, November 7-9, 2011, St. Augustine, Florida* (pp. 528-541). American Society of Civil Engineers.

Zimmer, B. G., Sadovski, A. L., Tissot, P., Sterba-Boatwright, B. D. (2008). In C. H. Dagli et. Al. (Ed.), *Monte Carlo Simulations and Factor Analysis to Optimize Neural Network Input Selections and Architectures* (vol. 18, pp. 501-508). New York, NY: Engineering Systems through Artificial Neural Networks / ASME Press.

Journal Articles

Couture, F., Sterba-Boatwright, B. D., Rocho-Levine, J., Harms, C. A., Miedler, S., Fahlman, A. (2019). Using Respiratory Sinus Arrhythmia to estimate inspired tidal volume in bottlenose dolphin (*Tursiops truncatus*). *Frontiers in Physiology*.

Rezek, R. J., Lebreton, B., Sterba-Boatwright, B. D., Pollack, J. (2017). Ecological structure and function in restored versus natural salt marsh habitats. *PLOSOne*, 12(12).

Wetz, M. S., Cira, E. K., Sterba-Boatwright, B. D., Montagna, P. A., Palmer, T., Hayes, K. (2017). Exceptionally high organic nitrogen concentrations in a semi-arid South Texas estuary susceptible to brown tide blooms. *Estuarine, Coastal and Shelf Science*, 188, 27-37.

Wang, H., Hu, X., Cai, W.-J., Sterba-Boatwright, B. D. (2017). Decadal fCO₂ trends in global ocean margins and adjacent boundary current-influenced areas. *Geophysical Research Letters*, 44(17), 8962-8970.

Fahlman, A., Crespo-Picazo, J. L., Sterba-Boatwright, B. D., Stacy, B. A., Garcia-Parraga, D. (2017). Defining risk variables causing gas embolism in loggerhead sea turtles (*Caretta caretta*) caught in trawls and gillnets. *Scientific Reports*. www.nature.com/srep/

Wetz, M. S., Hayes, K., Fisher, K., Price, L., Sterba-Boatwright, B. D. (2016). Water quality dynamics in an urbanizing subtropical estuary (Oso Bay, Texas). *Marine Pollution Bulletin*, 104, 44-53.

Palmer, G., Hogan, J. D., Sterba-Boatwright, B. D., Overath, D. (2016). Invasive lionfish (*Pterois volitans*) reduce the density but not the genetic diversity of a native reef fish. *Marine Ecology Progress Series*, 558, 223-234.

Hodanbosi, M. R., Sterba-Boatwright, B. D., Fahlman, A. (2016). Updating a current gas dynamics model using parameter estimates for California sea lions (*Zalophus californianus*). *Respiratory Physiology & Neurobiology*, 234, 1-8.

Wang, H., Sterba-Boatwright, B. D., Hu, X. (2016). A new statistical approach for interpreting oceanic fCO₂ record. *Marine Chemistry*, 183, 41-49.

Brewer, M., Rudershausen, P. J., Sterba-Boatwright, B. D., Merrill, J. H., Buckel, J. A. (2016). Survival, Tag Retention, and Growth of Spot and Mummichog following PIT Tag Implantation. *North American Journal of Fisheries Management*, 36, 639-651. <http://www.tandfonline.com/loi/ujfm20>

Marshall, C. D., Wang, J., Rocha, A., Godinez, C., Fisler, S., Narazaki, T., Sato, K., Sterba-Boatwright, B. D. (2014). Scaling of bite performance with head and carapace morphometrics in green turtles (*Chelonia mydas*). *Journal of Experimental Marine Biology and Ecology*, 451, 91-97.

Marshall, C. D., Guzman, A., Narazaki, T., Sato, K., Kane, E. A., Sterba-Boatwright, B. D. (2012). The ontogenetic scaling of bite force and head size in loggerhead sea turtles (*Caretta caretta*): implications for durophagy in neritic, benthic habitats. *Journal of Experimental Biology*, 215, 4166-4174.

Williamson, E. A., Strychar, K. B., Withers, K., Sterba-Boatwright, B. D. (2011). Effects of salinity and sedimentation on the Gorgonian Coral, *Leptogorgia virgulata* (Lamarck 1815). *Journal of Experimental Marine Biology and Ecology*, 409, 331-338. www.elsevier.com/locate/jembe

Gardner, M. N., Sterba-Boatwright, B. D., Jones, D. R. (2011). LIGATION OF THE LEFT AORTA IN ALLIGATORS AFFECTS ACID-BASE BALANCE: A ROLE FOR THE R→L SHUNT. *Respiratory Physiology & Neurobiology*, 178, 315-322. <http://www.sciencedirect.com/science/article/pii/S1569904811002448>

Froeschke, B. F., Sterba-Boatwright, B. D., Stunz, G. W. (2011). Assessing southern flounder (*Paralichthys lethostigma*) long-term population trends in the northern Gulf of Mexico using time series analysis. *Fisheries Research*, 108, 291-298.

Smith, A. K., Sterba-Boatwright, B. D., Mott, J. B. (2010). Novel application of Random Forests for bacteria source tracking analysis. *Water Research*, 44, 4067-4076.

Froeschke, J. T., Stunz, G. W., Sterba-Boatwright, B. D., Wildhaber, M. L. (2010). An empirical test of the "shark nursery area concept" in Texas bays using a long-term fisheries-independent dataset. *Aquatic Biology*, 11, 65-76.

Tarazaga, P., Sterba-Boatwright, B. D., Wijewardena, K. (2007). Euclidean Distance Matrices: Special Subsets, Systems of Coordinates and Multibalanced Matrices. *Computational and Applied Mathematics*, 26, 415-438.

Heinz, K., Sterba-Boatwright, B. D. (2007). The When and Why of Using Proportions. *Mathematics Teacher*, 101, 528-533.

Zimmer, B. G., Sadvoski, A. L., Tissot, P., Sterba-Boatwright, B. D. (2007). Monte Carlo Simulations and Factor Analysis to Optimize Neural Network Input Selections and Architectures. *Intelligent Engineering Systems through Artificial Neural Networks*, 18, 501-508.

Sadvoski, A. L., Zimmer, B. G., Sterba-Boatwright, B. D., Tissot, P., Bachnak, R. (2006). Analysis of the Gulf of Mexico Coastal and Estuarine Water Levels as Random Signals. *WSEAS Transactions on Mathematics*, 5(11), pp.1234-1241.

Sadvoski, A. L., Zimmer, B. G., Sterba-Boatwright, B. D., Tissot, P., Bachnak, R. (2006). Analysis of the Gulf of Mexico Water Levels as random Signals. *WSEAS Transactions on Mathematics*, 5(11), 1234-1241.

Peer-reviewed published abstract

Smith, A. K., Sterba-Boatwright, B. D., Mott, J. B. (2009). *The use of a statistical toolbox approach to determine sources of fecal contamination in Cedar Lakes, Texas*. Washington, D.C.: Book of Abstracts/American Society for Microbiology.

Non-Refereed

Conference Proceedings

Warner, N. N., Sterba-Boatwright, B. D., Tissot, P., Jeffress, G. A. (2012). Estimated increase in inundation probability with confidence intervals for Pensacola, Florida and Key West, Florida. *Oceans, 2012* (pp. 1-10). IEEE.

Ball, R., Zimmer, B. G., Adams, J., Sterba-Boatwright, B. D. (2007). *ANN predictive water temperature modeling of cold water events in a shallow lagoon* (pp. 7 pages). Proceedings of 87th American Meteorological Society Annual Meeting, Fifth Conference on Artificial Intelligence Applications to Environmental Science.

Presentations

Sterba-Boatwright, B. D., "Using Bayesian Clustering Algorithms to Discover Population Genetic Structure," American Fisheries Society, Student Chapters, AFS. (January 10, 2018).

Bugica, K., Sterba-Boatwright, B. D., Wetz, M. S., "Long-term water quality trends in Texas estuaries: relationships with climatic variability and watershed land use change," ASLO Aquatic Sciences Meeting, Honolulu, HI. (2017).

Bugica, K., Sterba-Boatwright, B. D., Wetz, M. S., "Long-term water quality trends in Texas estuaries: relationships with climatic variability and watershed land use change," Texas Bays & Estuaries Meeting, Port Aransas, TX. (2017).

Hogan, J. D. (Author & Presenter), Palmer, G. (Author), Sterba-Boatwright, B. D. (Author), Overath, R. D. (Author), "Invasive lionfish (*Pterois volitans*) reduce the abundance but not the genetic diversity of a native reef fish," Joint Meeting of Ichthyologists and Herpetologists, ASIH, Austin, Texas. (July 14, 2017).

Cai, X. (Author & Presenter), Sadovski, A. L., Sterba-Boatwright, B. D. (Author), James, S. (Author), "Presence-only species distribution model for king mackerel and its 31 prey species in the Gulf of Mexico," Ocean Sciences Meeting 2016, New Orleans. (February 2016).

Wang, H. (Author & Presenter), Sterba-Boatwright, B. D. (Author), Hu, X. (Author), "A new statistical approach for interpreting ocean fCO₂ record," Gordon Research Conference on Chemical Oceanography, Gordon Research Conferences, Holderness, NH. (July 26, 2015).

Cai, X., Simons, J., Carollo, C., Sterba-Boatwright, B. D., Sadovski, A. L., "Predicting 3 major shrimp species distribution and abundance across the Gulf of Mexico through different modeling techniques," Texas Bays and Estuaries Meeting, UT-MSI. (April 8, 2015).

Tissot, P. (Author), Rizzo, J. (Author), Williams, D. (Author), "Nearshore Wave and Current Measurements in the Coastal Bend," 2015 Meeting of the Texas Section of the American Shore and Beach Preservation (ASBPA), Texas Section of the American Shore and Beach Preservation (ASBPA), Corpus Christi, Texas. (March 20, 2015).

Warner, N. (Author), Tissot, P. (Author), Sterba-Boatwright, B. D. (Author), "Predicted Inundation Frequencies Due to Relative Sea-Level Rise: Comparison between Texas and Other Gulf of Mexico Locations," 2015 Meeting of the Texas Section of the American Shore and Beach Preservation (ASBPA), Texas Section of the American Shore and Beach Preservation (ASBPA), Corpus Christi, Texas. (March 20, 2015).

Warner, N. N. (Author & Presenter), Tissot, P. (Other), Sterba-Boatwright, B. D. (Other), Jeffress, G. A. (Other), "Storms, Sea Level Rise and Estimated Increase in Inundation Probability with Confidence Intervals for Texas and Florida stations," 93rd AMS Annual Meeting, Austin, Texas. (January 10, 2013).

Warner, N. N. (Author & Presenter), Sterba-Boatwright, B. D. (Other), Tissot, P. (Other), Jeffress, G. A., "Storms, Sea Level Rise and Estimated Increase in Inundation Probability with Confidence Intervals for Pensacola, Florida and Key West, Florida," Oceans '12 IEEE/MTS, Hampton Roads, Virginia. (October 14, 2012).

Sterba-Boatwright, B. D., "Presentation on Web Conferencing and Video Recording Software," Math Department Seminar. (September 2012).

Warner, N. N. (Author & Presenter), Sterba-Boatwright, B. D. (Author), Tissot, P. (Author), Jeffress, G. A. (Author), "Storms, Sea Level Rise and Estimated Increase in Inundation Probability with Confidence Intervals for Galveston, Texas," Twelfth International Conference on Estuarine & Coastal Modeling, St. Augustine, Florida. (November 7, 2011).

Cammarata, K. (Author & Presenter), Sweatman, J. (Author), Sterba-Boatwright, B. D. (Author), "Fluorescence Characterization and Nutrient Dose Dependence of Epiphyte Accumulation on *Halodule wrightii*," Seagrass Working Group Quarterly Meeting, Seagrass Monitoring Working Group, TPWD, Corpus Christi, TX. (April 2011).

Sterba-Boatwright, B. D., "Markov Chain Monte Carlo Methods," Math Department Seminar, Dept. of Math and Statistics, TAMU-CC, Campus. (April 13, 2011).

Sterba-Boatwright, B. D., "Goodness of Fit for Extreme Value Distributions," Department Seminar, Dept. of Math and Statistics, TAMU-CC. (November 19, 2010).

Cammarata, K. (Author & Presenter), Sweatman, J. (Author), Sterba-Boatwright, B. D. (Author), "FLUORESCENCE CHARACTERIZATION AND NUTRIENT DOSE DEPENDENCE OF EPIPHYTE ACCUMULATION ON HALODULE WRIGHTII," 2010 Gulf Estuarine Research Society Meeting, The University of Texas Marine Science Institute, Port Aransas, TX. (November 3, 2010).

Warner, N. N. (Author & Presenter), Tissot, P., Sterba-Boatwright, B. D., Jeffress, G. A., "Comparison of Extreme Value Statistical Distributions and Implications for Galveston Pier 21," Sea Level Rise 2010 Conference, Harte Research Institute, Corpus Christi, TX. (March 1, 2010).

Smith, A. K. (Author & Presenter), Mott, J. B. (Author), Sterba-Boatwright, B. D. (Author), "The use of a statistical toolbox approach to determine sources of fecal contamination in Cedar Lakes, Texas," American Society for Microbiology General Meeting, American Society for Microbiology, Philadelphia, PA. (May 2009).

Ball, R. (Author & Presenter), Tissot, P., Zimmer, B. G., Sterba-Boatwright, B. D., "Comparison of random forest, artificial neural network, and multi-linear regression: a water temperature prediction case," Seventh Conference on Artificial Intelligence and its Applications to the Environmental Sciences, American Meteorological Society, Phoenix, Arizona. (January 2009).

Ball, R. (Author & Presenter), Tissot, P., Zimmer, B. G., Adams, J., Sterba-Boatwright, B. D., "ANN predictive water temperature modeling of cold water events in a shallow lagoon.," Fifth Conference on Artificial Intelligence Applications to Environmental Science, American Meteorological Society. (January 2007).

Logsdon, S. L. (Panelist), Sterba-Boatwright, B. D. (Panelist), Meyer, P. (Panelist), Jackson, R. S. (Panelist), Blalock, G. (Leader), "Writing Across the Curriculum and First-Year Learning Communities," National Writing Across the Curriculum Conference, Rice University, Houston, TX. (2002).

Meyer, P., Guzman-Hayes, V., Jackson, R. S., Logsdon, S. L., Sterba-Boatwright, B. D., Wooster, R. A., "The Freshman Experience: The Learning Community as the Foundation of Core Curriculum at Texas A&M University-Corpus Christi," Annual Conference of the Washington Center for Improving the Quality of Undergraduate Education and the FIPSE Learning Communities Dissemination Project, Sea Tac, Washington, United States. (May 1999).

Benibo, B. R., Meyer, P., Sterba-Boatwright, B. D., "Voluntary Transethnic Interaction on College Campuses: A Pilot Study of Anglo and Mexican American Studies," National Conference for Hispanic and Latino Studies, Houston, TX, United States. (February 1999).

Logsdon, S. L. (Panelist), Sterba-Boatwright, B. D. (Panelist), Jackson, R. S. (Panelist), Spencer, M. (Leader), Meyer, P. (Panelist), National Learning Communities Dissemination Project, Washington Center for Improving the Quality of Undergraduate Education, Evergreen State College, Olympia, WA. (1996).

Logsdon, S. L. (Leader), Jackson, R. S. (Panelist), Sterba-Boatwright, B. D. (Panelist), "Off the Shelf or Off the Wall?," Annual Conference, Association for General and Liberal Studies, Memphis, TN. (1985).

Contracts, Grants and Sponsored Research

Grant

Wetz, Michael S (Co-Principal), Sterba-Boatwright, Blair David (Other), Lipp, Erin (Principal), Landing, William (Co-Principal), "Collaborative Research: Heterotrophic microbial community response to dust deposition events," Sponsored by National Science Foundation Biological Oceanography, Federal, \$220,758.00. (April 2014 - March 2019).

Sterba-Boatwright, Blair David (Co-Principal), Wetz, Michael S (Principal), Hayes, Kenneth (Supporting), "Long-term water quality trends in central-south Texas estuaries: relationships with climatic variability and land use change," Sponsored by Texas General Land Office, State, \$52,545.00. (October 2016 - April 2018).

SERVICE

Department

Committee Chair, Online Course Approval Committee. (October 2014 - March 2018).
Committee Chair, Graduate Committee. (September 2017 - March 2018).
Committee Member, Steering Committee. (September 2017 - March 2018).
Committee Chair, Dept of Math & Stat Promotion & Tenure Committee. (September 2014 - March 2018).
Committee Member, Search Committee, MATH & COSC Visiting Professor. (August 2017).
Committee Chair, Math Ed Search Committee. (November 2016 - April 2017).
(Not really a committee), TA Observations. (November 2014).
Attendee, Meeting, Graduate Open House. (February 2014).
Committee Member, Statistics Search. (September 2012 - May 2013).
Committee Chair, Undergraduate Program Review. (September 2012 - May 2013).
Committee Chair, Assessment. (September 2010 - October 2012).
Attendee, Meeting, Graduate Open House. (March 2012).
Committee Chair, Math Instructor Search Committee. (March 2011 - May 2011).
Represented Department at Graduate Open House. (February 2011).
Volunteer, Graduate Fair, Fall, 2010. (October 2010).

College

Committee Member, S&E Promotion and Tenure Committee. (September 2015 - March 2018).
Committee Member, S&E Continuity of Learning Committee. (June 2015 - December 2015).
Volunteer, not called, S&E Grade Appeals Committee. (September 2014 - November 2014).
Organizer, Bayesian Interest Group. (June 2014 - October 2014).
Committee Member, Life Sciences Chair Search Committee. (April 2011 - December 2011).

University

Committee Member, Instructional Technology and Distance Education Committee. (September 2017 - March 2018).
Committee Member, University P&T Committee. (September 2012 - August 2015).
Committee Member, Faculty Core Curriculum Committee. (December 2013 - August 2014).
Committee Member, Emerging Research Institution Task Force. (October 2011 - December 2012).
Guest Speaker, TAMU-CC Faculty Symposium. (September 2011).
University Senate Service, Faculty Senate. (September 1998 - August 2002).

Public

Guest Speaker, Mu Alpha Theta, Veterans Memorial High School. (December 2018).
Guest Speaker, Museum of Science and Technology. (January 2015).
Discussant, TAMU-CC Chemistry Club. (April 2014).
Unpaid consultant, SeaCity Crossfit Gym. (January 2014 - March 2014).
Guest Speaker, KEDT. (February 2014).
Assisted reporter with probability calculations for a story, Corpus Christi Caller Times. (August 2011).
Guest Speaker, Baker Middle School Honor Students. (February 2011 - March 2011).