

Dr. Thomas R. Boucher

Mailing Address:

604 Aldridge St.
Commerce, TX
75428

Contact Information:

tboucher1@gmail.com
Cell: 903.422.2720

INTERESTS: Markov chains, applied probability and stochastic processes, applications in actuarial mathematics, machine learning, sports statistics, Bayesian statistics, ecological statistics/environmetrics, nonlinear time series, applied statistics/statistical consulting, online statistics education

PROFESSIONAL EXPERIENCE

Associate Professor , Department of Mathematics, Texas A&M University-Commerce	Fall 2018 – present
Assistant Professor , Department of Mathematics, Texas A&M University-Commerce	Fall 2012 – Spring 2018
Assistant/Associate Professor and Director, Statistical Consulting Center Department of Mathematics, Plymouth State University.	Fall 2005 – Spring 2012
Postdoctoral Fellow , Department of Statistics, Virginia Tech	Fall 2003 – Spring 2005
Teaching Assistant , Department of Statistics, Texas A&M University	Fall 1998 – Spring 2003
Statistical Consultant , USDA FSEP Program, Texas A&M University	Fall 1999 – Spring 2003
Biostatistics Intern , Quintiles, Kansas City	Summer 2001
Research Intern , IBM’s T.J. Watson Research Institute	Summer 2000
Teaching Assistant and Supplemental Instructor , University of Massachusetts- Lowell, Department of Mathematics	Fall 1995 – Spring 1998

EDUCATION

Ph.D. in Statistics Texas A&M University, College Station, TX. “V-Uniform ergodicity of threshold autoregressive nonlinear time series”.	December 2003
M.S., Mathematics (summa cum laude) University of Massachusetts-Lowell	June 1998
B.S., Mathematics (summa cum laude) June 1996, University of Massachusetts-Lowell	June 1996

PUBLICATIONS

Peer-Reviewed Journals/Conference Proceedings:

- **Boucher, T.R.**, Msabaeka, T. (2019). “Trained synthetic features in boosted decision trees with an application to Polish bankruptcy data”. *Advances in Intelligent Systems and Computing - Future of Information and Communications Conference (FICC) 2020 Proceedings*.
- Bolman, R., **Boucher, T.R.** (2019) “Data mining using Morlet wavelets for financial time series”. *Proceedings of the 8th International Conference on Data Science, Technology and Applications (DATA 2019)*, pages 74-83, ISBN: 978-989-758-377-3
- Ramberg-Pihl, N., Yurewicz, K., **Boucher, T.R.** (2018). “The Influence of Lake Attributes and Predatory Bass on the Distribution of Northern Crayfish (*Orconectes virilis*) in central New Hampshire”. *Canadian Journal of Zoology*, 96(2): 87-95.
- **Boucher, T.R.**, (2017). “Exponential geometric ergodicity for nonlinear time series”. *International Journal of Statistics: Advances in Theory and Applications*. Vol. 1, No. 1, 75-92, <http://www.jyotiacademicpress.org/jyotic/journalview/35/article/43/69>
- **Boucher, T.R.**, (2017). “Boosting, downsizing, and optimality of test functions of Markov chains”. *Brazilian Journal of Probability and Statistics*. Vol. 31, No. 3, 640-652. <http://imstat.org/bjps/papers/BJPS327.pdf>
- **Boucher, T.R.** (2016). “A note on martingale deviation bounds”. *Statistics & Probability Letters*. Vol. 111, 8–11.
- **Boucher, T.R.** (2016). “Long-memory and spurious breaks in ecological experiments”. *Open Journal of Statistics*. To appear.
- Walser, R. F., Meserve B., and **Boucher, T.R.** (2009).”The effectiveness of thoracic spine manipulation for the management of musculoskeletal conditions: a systematic review of randomized clinical trials”. *Journal of Manual and Manipulative Therapy*, 7(14), 237-246.
- **Boucher, T.R.** (2009). “A Hoeffding inequality for Markov chains using a generalized inverse”. *Statistics & Probability Letters*, **79**, Issue 8, No.15, 1105-1107
- Meserve, B., Cleland, J., and **Boucher, T.R.**, (2009). “Assessing superior labral anterior posterior lesions”. *The American Journal of Sports Medicine*, 37(11), 2252-8.
- **Boucher, T.R.**, and Cline, D.B.H. (2009), “Piggybacking threshold processes with a finite state Markov chain”. *Stochastics and Dynamics*, Vol. 9, No. 2, 187-204.
- Meserve, B., Cleland, J., and **Boucher, T.R.**, (2008). “A meta-analysis examining clinical test utilities for assessing meniscal injury”. *Journal of Clinical Rehabilitation* **22**, No.2, 143-161.
- **Boucher, T.R.**, and Cline D.B.H., (2007). “Stability of cyclic threshold and threshold-like autoregressive time series models”. *Statistica Sinica* **17**, No.1, 43-62.
- Spitzner, D.J., and **Boucher, T.R.**, (2007). “Asymptotic variance of functionals of discrete-time Markov chains via the Drazin inverse”. *Electronic Communications in Probability* **12**, 120-133.

Under Review:

- **Boucher, T.R.**, (2019). “A large deviation inequality for Markov chains using a cumulative drift condition”.
- **Boucher, T.R.**, (2019). “An information-theoretic analysis of Common Loon population counts”.

In Preparation:

- **Boucher, T.R.**, (2019). “Computational techniques for Markov chains using a generalized inverse”.
- **Boucher, T.R.**, (2019). “Zero-inflated Poisson model of claims frequencies using a maximum likelihood and a Bayesian approach with an objective Jeffrey's prior.”
- **Boucher, T.R.**, Wang, J. (2019). “Classification trees with synthetic features for multiclass problems.”

Conference Papers/Proceedings/Reports:

- Baumann, A., Kahl, J.S., **Boucher, T.R.**, and McGuire, K. (2012), “Changes in Surface Water Chemistry in Maine High Elevation Lakes in Response to the 1990 Clean Air Act Amendments”. *18th Annual Maine Water Conference*. Augusta, ME, 2012.
- Van Gyzen, V.M., Prunyn, M.L., Votta, K., and **Boucher, T.R.** (2012). “Factors other than temperature may influence northern hardwood tree phenology”. *Ecological Society of America Annual Meeting*, Portland, Oregon.
- Fuller, S., **Boucher, T.R.**, and Callahan, C., (2011). “Habitat modeling for New England Cottontails”. *Wildlife Management Institute*.
- Jacques, A., Koermer, J.P., and **Boucher, T.R.** (2011). “Comparison of the United States Precision Lightning Network™ (USPLN™) and the Cloud-to-Ground Lightning Surveillance System (CGLSS-II)”. *AMS 91st Annual Meeting*, Seattle, January 2011.
- Roache, D.R., Collins, J.M., and **Boucher, T.R.** (2010), “The Variability of Atlantic Tropical Cyclone Activity and Landfall Frequency during the ENSO Neutral Conditions”. *Annual Meeting of the Association of American Geographers*, Washington DC, April 2010
- Roache, D.R., J.M Collins and **Boucher, T.R.**, (2010). “The Impact of the El Niño - Southern Oscillation on Atlantic Landfalling Intense Hurricanes”. *Annual Meeting of the Florida Society of Geographers*, Tampa, Florida, January 2010
- McCue, M.H., Koermer, J.P., Roeder, W.P., and **Boucher, T.R.** (2010). “Validation and Development of Existing and New RAOB Based Warm-Season Convective Wind Forecasting Tools for Kennedy Space Center and Cape Canaveral Air Force Station”. *14th AMS Conference on Aviation, Range, and Aerospace Meteorology (ARAM)*. Atlanta, January 2010.
- Rennie, J.J., Koermer, J.P., Roeder, W.P., and **Boucher, T.R.** (2010). “Evaluation of WSR-88D Methods to Predict Warm Season Convective Wind Events at the Kennedy Space Center And Cape Canaveral Air Force Station”. *14th AMS Conference on Aviation, Range, and Aerospace Meteorology (ARAM)*. Atlanta, January 2010.
- Roache, D.R, Collins, J.M., and **Boucher, T.R.** (2009). “Seasonal Change in ENSO Region Sea Surface Temperature Anomalies and Atlantic Tropical Cyclone Activity”. *Annual Meeting of the southeastern Division of the Association of American Geographers (SEDAAG)*, Knoxville, Tennessee, November 2009
- Pingree, K.A., Doner, L.A., Morrill, C. and **Boucher, T.R.** (2009). “CCSM3’s Representation of the South Bipolar Seesaw during Heinrich Event 2”. *Center for the Environment*, Plymouth State University.
- **Boucher, T.R.**, (2008). “An analysis of the New Hampshire common loon population counts using information-theoretic criteria”. Technical report, *Loon Preservation Committee*.
- **Contributor** to Cooley, J., Taylor, K., and H. Vogel (2008). “Summary of Loon Preservation Committee Field Activities in New Hampshire in 2007” and Cooley, J., Taylor, K., and H. Vogel (2007). “Summary of Loon Preservation Committee Field Activities in New Hampshire in 2006”. Loon Preservation Committee, Moultonborough, NH.

T. Boucher - Curriculum Vitae

- Meserve, B., Cleland, J., and **Boucher, T.R.**, (2007). “Assessing meniscal injury: what works?”. *APTA-CSM 2007 Proceedings*.
- **Boucher, T.R.**, (2005). “Implications of exponentially boosting test functions of V- Uniformly ergodic Markov chains”. *Virginia Journal of Science VAS Proceedings*.
- **Boucher, T.R.**, (2004). “Stability of TAR models”. *JSM 2004 Proceedings*

Book Reviews:

- **Boucher, T.R.**, (2017). Review of “A course in mathematical statistics and large sample theory” by Bhattacharya, Rabi; Lin, Lizhen; Patrangenaru, Victor. *Mathematical Reviews*.
- **Boucher, T.R.**, (2012). Review of “Statistics for spatio-temporal data” by Noel Cressie and Christopher K. Wikle. *Mathematical Reviews*.
- **Boucher, T.R.**, (2011). Review of “Probabilistic Graphical Models” by Daphne Koller and Nir Friedman. *Mathematical Reviews*.
- **Boucher, T.R.**, (2007). Review of “Test Equating, Scaling, and Linking: Methods and Practices (2nd edition)” by Michael J. Kolen and Robert L. Brennan. *Journal of the American Statistical Association*, Vol. 102, No. 478, pp.762-763.

GRANT/CONTRACT CONSULTING ACTIVITY

- Funding awarded to attend 2012 Annual Meeting of the New Hampshire IDeA Network of Biomedical Research Excellence (NH-INBRE), August 1-2, 2012, Whitefield NH.
- “Refinement of a Habitat Model for New England Cottontails”. Funded for \$1400 by the Wildlife Management Institute. June 2011.
- Plymouth State University - Atmospheric Science and Chemistry. Funded for \$4000 through US DOC, Department of Commerce, NOAA grant to the New England Weather Technology and Research Initiative (NEWTRI). Purpose: to mentor summer research experiences of graduate students in meteorology. 6/1/11-9/1/11.
- "Identifying and Determining the Impact of Factors Affecting the Risk of Falling Among Middle-to-Older Adults ". Funded for \$643 through Provost's Faculty Research Funds, Plymouth State University, 7/1/11 – 6/30/12.
- Plymouth State University - Atmospheric Science and Chemistry. Funded for \$3750 through US DOC, Department of Commerce, NOAA grant to the New England Weather Technology and Research Initiative (NEWTRI). 6/1/2010-9/1/2010.
- “Development of a Habitat Model for New England Cottontails”. Funded for \$2500.00 by New Hampshire Fish & Game through federal grant to State Wildlife Program Cooperative Cottontail Management. 9/2009 – 6/2010.
- “Plymouth State University Department of Mathematics’ Statistical Consulting Center’s Environmetrics Initiative”. Funded for \$1000.00 by PSU Center for the Environment, 7/1/2006 – 7/1/2007.

PRESENTATIONS

- “Data mining using Morlet wavelets for financial time series”, Bolman, R., **Boucher, T.R.**. *DATA 2019*, July 26-28, 2019, Prague, Czech Republic.
- “An Introduction to Bayesian Statistical Analysis with an Application to Insurance Claims Data”, **Boucher, T.R.**. *TAMU-C Physics*, Commerce, TX, April 2018.

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- “Comparison of Large Deviation Inequalities for Markov Chains”. Rosenbaum, M, **Boucher, T.R.** *ARS 2017*. Commerce, TX, April 2017.
- “(Some) Machine Learning from a Statistical Perspective”. **Boucher, T.R.** Texas A&M – Commerce, Commerce TX, November 2013
- “Undergraduate Research – Evaluating Falls Risk in Elderly Subjects”. **Boucher, T.R.** and Jones, F.. Texas A&M – Commerce, Commerce TX, April 2013
- Baumann, A., Kahl, J.S., **Boucher, T.R.**, and McGuire, K. (2012), “Changes in Surface Water Chemistry in Maine High Elevation (HELM) Lakes in Response to the 1990 Clean Air Act Amendments”. *2012 Maine Water Conference*, Augusta Maine, March 2012.
- “A Two-Stage RAOB Based Warm-Season Convective Wind Forecasting Tool.” Anderson, B., Koermer, J.P., Roeder, W.P., and **Boucher, T.R.** *American Meteorological Society Annual Meeting*, New Orleans, January 2012.
- “Reliability of Translation of Center of Force Using Portable Pressure Mapping Device in Older Adults.” King, M.A., Trombulak, M.E., Eissler, W.L., Kempson, R.S., **Boucher, T. R.**, Boucher, J.P., *American College of Sports Medicine 59th Annual Meeting*, San Francisco, CA, May 2012
- “Spatial Data with R.” **Boucher, T.R.** *NH Arc Users Group*, April 2011.
- “Combining Falls-Risk Measures.” Kempson, R., **Boucher, T.R.**, King, M., and McCahan, B. *Plymouth State University Celebration of Excellence Day*, April 2011.
- “Modeling of New Hampshire Loon Population Counts.” Lasell, I. and **Boucher, T.R.** *Plymouth State University Celebration of Excellence Day*, April 2011. Also *2011 Annual Meeting of the New Hampshire IDeA Network of Biomedical Research Excellence (NH-INBRE)*, August 1-2, 2011, Whitefield NH.
- “Comparison of the United States Precision Lightning Network™ (USPLN™) and the Cloud-to-Ground Lightning Surveillance System (CGLSS).” Alexander Jacques, James. P. Koermer, William P. Roeder, and **Boucher, T.R.** *AMS 91st Annual Meeting*, Seattle, January 2011.
- “Validation and Development of Existing and New RAOB Based Warm-Season Convective Wind Forecasting Tools for Kennedy Space Center and Cape Canaveral Air Force Station.” Mitchell H. McCue, James. P. Koermer, William P. Roeder, and **Boucher, T.R.** *ARAM*, Atlanta, January 2010.
- “Evaluation of WSR-88D Methods to Predict Warm Season Convective Wind Events at the Kennedy Space Center And Cape Canaveral Air Force Station.” James J. Rennie, James. P. Koermer, **Boucher, T.R.**, and William P. Roeder, *ARAM*, Atlanta, January 2010.
- “Seasonal Change in ENSO Region Sea Surface Temperature Anomalies and Atlantic Tropical Cyclone Activity.” David Roache and **Boucher, T.R.** *SEDAAG*, Knoxville, TN, November 2009.
- “A Workshop on CART techniques within the R environment.” **Boucher, T.R.**, New Hampshire Fish & Game, Concord, NH, September 2009.
- “Analysis of the CCSM3’s Representation of Heinrich Event 2’s Southern Hemispheric Bipolar Seesaw.” Pingree, K., Doner, L., **Boucher, T.R.**, MOCA-09, Montreal, July 2009.
- “An Analysis of US Landfalling Hurricanes.” **Boucher, T.R.**, *PSU Meteorology Seminar*, Plymouth, NH, November 2008.
- “Observations on the New Hampshire Loon Population.” **Boucher, T.R.** *NELSWG*, Moultonborough, NH, April 2008
- “A Meta-Analysis Examining Clinical Test Utility for Assessing Meniscal Injury.” Meserve, B., Cleland, J., **Boucher, T.R.** *APTA-CSM 2007*. February 2007, Boston.
- “Beware False Trends.” **Boucher, T.R.** *PSU Mathematics Colloquium*, Plymouth, NH, December 2006.

SUPERVISED GRADUATE AND UNDERGRADUATE RESEARCH

- Shachar, Elisha (2019). “Three-tier artificial neural network image description generation with object detection for hazard notification”. MS Math, Texas A&M-Commerce.
- Bolman, Reginald (2019). “Motif based extraction and data mining of financial time series”. MS Math, Texas A&M-Commerce.
- Wang, Jenkin (2019). “Classification Trees with Synthetic Features for multiclass problems”. MS Math, Texas A&M-Commerce.
- Msabaeka, Tsitsi (2018), “Classification Trees with Synthetic Features”, MS Math, Texas A&M-Commerce.
- Painter, Bobby (2017), “Considerations for Designing an Online Introductory Statistics Course”, MS Math, Texas A&M-Commerce.
- Rosenbaum, Susan (2017). “Comparison of Large Deviation Inequalities for Markov Chains “, MS Math, Texas A&M-Commerce.
- Edeigba, Omonigho (2017). “An Application of Classification Trees to Polish Bankruptcy Data”, MS Math, Texas A&M-Commerce.
- Holt, Ginger, (2017). “Statistics in Educational Research”, MS Math, Texas A&M-Commerce.
- Ugochukwa, Ebinuwa (2016). “Determining Insurance Coverage and Prices”, MS Math, Texas A&M-Commerce.
- Yi, Xin (2016). “Implementing a Zero-Inflated Poisson Model for Claims Data Using Markov Chain Monte Carlo”, MS Math, Texas A&M-Commerce.
- Tyler, Jordan (2016). “Factors Influencing the Decision to Remove a Player from an NBA Game: a LeBron James Case Study”, Honors College thesis, Texas A&M-Commerce.
- Fort, Derek (2015). “Applications of Markov Chain Monte Carlo and Numerical Approximation of Drazin Inverse”, MS Thesis Math, Texas A&M-Commerce.
- Swindell, George (2015). MS Project Math, “The St. Petersburg Paradox”, Texas A&M-Commerce.
- Bookman, William (2015). “The Utility of Health Insurance for Young Adults”, Honors College thesis, Texas A&M-Commerce.
- Harris, Trey (2015). “R Simulation: Replicating March Madness”, Honors College thesis, Texas A&M-Commerce.
- Jacobs, Cassidi (2014). “Optimizing Medical Flexible Spending Accounts”. Master’s thesis, Department of Mathematics, Texas A&M-Commerce.
- Moses, Ethan (2014). “Interview Optimization using Bayesian Signaling and the Nash Equilibrium”. Honors College thesis, Texas A&M-Commerce.
- Crowell, Marguerite (2012). “A Climate of Change: The Need for Water Resource Education in Pakistan to Meet Current and Upcoming Challenges”. NH Water and Watershed Conference.
- Desrosiers, Andrew (Spring 2012). “Developing a Wind Damage Actuarial Model.”
- Lasell, Ian (Spring 2012). “Evaluating Imputation Schemes.”
- Jones, Felicia (Fall 2011 – Spring 2012). “Determining the Intraclass Correlations of MatScan Observations on Elderly Subjects.”
- Andersen, Bonnie (Summer/Fall 2011). “Applying Machine Learning Techniques to develop RAOB Based Warm-Season Convective Wind Forecasting Tools.”
- Jones, Felicia (Spring 2011). “Student Achievement in Mathematics Courses with an Eye Towards Retention.”
- Kempson, Ryan (Spring 2011). “Factor Analysis of MatScan Balance Measures.”
- Lasell, Ian (Spring 2011). “Viability Analysis of the New Hampshire Loon Population.”
- Pingree, Katherine (Spring 2008). “Analysis of the CCSM3’s Representation of Heinrich Event 2’s Southern Hemispheric Bipolar Seesaw.” Capstone project.

T. Boucher - Curriculum Vitae

- Reczko, Katie (Spring 2008), “Using the Parametric Bootstrap in Likelihood Ratio Tests of Nested Population Models.”
- Lassen, Stephanie (Spring 2007), “How are the Actuarial Exams Graded?”

CONSULTING/COMMITTEES – Faculty and Graduate Research

- Kline, T. (2020). “A comparative study of flipped and non-flipped calculus classes”. M.S. Math, Texas A&M-Commerce.
- Moon, Jennifer (2020). “Student achievement in a flipped classroom environment”. M.S. Math, Texas A&M-Commerce.
- Scarcelli, Nathan (2020). “Student mindset changes in a flipped class environment: a quasi-experimental study”. M.S. Math, Texas A&M-Commerce.
- Jehingde, Kehinde
- Abbott, Jackie (2019). “Homework vs. classwork: A case study about how homework and classwork affect student attitude and confidence towards mathematics”. M.S. Math, Texas A&M-Commerce.
- Astudillo, Natasha (2019). “Anomalous diffusion of cholera toxin on cell membranes investigated by fluorescence correlation spectroscopy”. M.S. Math, Texas A&M-Commerce.
- Martinez, Ana (2019). “Expert vs. novice strategy use during multiple integration problems.” M.S. Math, Texas A&M-Commerce.
- Quarshie, D. (2018). “Godsil-mckay switching“. M.S. Math, Texas A&M-Commerce.
- Foresee, J. (2018). “Combating the Pinterest epidemic: assisting instructors of mathematics – a meta-synthesis of practitioner journals”. M.S. Math, Texas A&M-Commerce.
- Parks, C. (2018). “Support Vector Machines. Binary and Multiclass: A Study and Experimentation”. M.S. Math, Texas A&M-Commerce.
- Mustafa, S. (2018). “The impacts of TI-Inspire CX graphing calculator uses in Algebra I class on struggling students' motivation: an action research project”. M.S. Math, Texas A&M-Commerce.
- Koomson, J. (2018). “Mathematical derivation of fluorescence recovery after photobleaching models”. M.S. Math, Texas A&M-Commerce.
- Beene, L. (2017). “STEM major mindset changes in their first undergraduate mathematics course”. M.S. Math, Texas A&M-Commerce.
- Beach, J. (2017). “Relating proof reasoning and revisions: a case study of a modified Moore method college geometry course”. M.S. Math, Texas A&M-Commerce.
- Ellis, K. (2014). Educational Leadership dissertation committee, Texas A&M-Commerce.
- Davenport, M. (2014). Educational Leadership dissertation committee, Texas A&M-Commerce.
- Chadwick, A. (2013). “Affective Barriers to Student Achievement in Developmental Mathematics Classes”. Educational Leadership dissertation committee, Texas A&M-Commerce.
- Conrod, C., and Reitsma, L. (2013) “Demographic responses of myomorph rodents to a pulsed mast production in a northern hardwood forest”. Acknowledged. Under review.
- Boissonneault, K.R., Henningsen, B.M, Bates, S.S., Robertson, D.L., Milton, S., Pelletier, J., Hogan, D.A., Housman, D.E. (2013) . “Gene Expression Studies for the Analysis of Domoic Acid Production in the Marine Diatom *Pseudo-nitzschia Multiseriata*”. Acknowledged. *BMC Molecular Biology*, **14**:25
- Bradury, C. (2013). “Impact of Compensation, Performance Measures and Organizational Characteristics on Physicians’ Acceptance of New Medicare and Medicaid Patients”. DBA dissertation, Anderson University.
- Christ, J. (2012). “Winter Climate Change and the Northern Hardwood Forest”. M.S. thesis, Biology, Plymouth State University.

T. Boucher - Curriculum Vitae

- Comeau, N. (2012), "Evaluation of Aversive Conditioning on Nuisance Activity Levels of Black Bear Using Low Cost GPS Telemetry Collars". MS thesis, Plymouth State University, College of Graduate Studies, Environmental Science and Policy.
- Crowell, M. (2012). M.S. thesis, Environmental Science & Policy, Plymouth State University.
- Davenport, M. (2014). "The Teaching of the Code of Ethics and Standard Practices". EdD dissertation, Texas A&M-Commerce.
- Fessenden, R. (2012). M.S. thesis, Applied Meteorology, Plymouth State University.
- Henningsen, B. (2012). M.S. thesis, Biology, Plymouth State University.
- Palmer, M. (2012). "Predicting cloud ceiling height for the Mount Washington Auto Road and Cog Railway". M.S. thesis, Applied Meteorology, Plymouth State University.
- Ramberg-Pihl, N. (2012). "Habitat preferences of northern crayfish". M.S. thesis, Biology, Plymouth State University.
- Van Gyzen, J. (2012). "How does climate affect the phenology of northern hardwood forests?". M.S. thesis, Environmental Science & Policy, Plymouth State University.
- Andersen, B. (2011). "Applying Machine Learning Techniques to develop RAOB Based Warm-Season Convective Wind Forecasting Tools". M.S. thesis, Applied Meteorology, Plymouth State University.
- Baumann, Adam (2011). "Assessing the effectiveness of federal acid rain policy using remote and high elevation lakes in northern New England". MS thesis, Plymouth State University, College of Graduate Studies, Environmental Science and Policy.
- Jacques, A. (2011). "Comparison of the United States Precision Lightning Network™ (USPLN™) and the Cloud-to-Ground Lightning Surveillance System (CGLSS)". M.S. thesis, Applied Meteorology, Plymouth State University.
- Terborg, A. (2011). "Forecasting Low-level Icing in Complex Terrain: A Non-model Approach". M.S. thesis, Applied Meteorology, Plymouth State University.
- Votta, K. (2011). "Establishing baseline phenology patterns for northern hardwood trees along an elevation gradient". MS thesis, Environmental Science and Policy, Plymouth State University.
- Bradbury, C. (2010). "The Prosper Credit Risk Rating System: Does it Improve Market Decision Making Efficacy?". International Atlantic Economics Society, Charleston SC.
- Callahan, K. (2010), "Estimating Fine-Scale Movement Patterns of Black Bear using GPS Telemetry". MS thesis, Plymouth State University, College of Graduate Studies, Environmental Science and Policy.
- Kelly, Regina (2010). "Brief Mindfulness Meditation and Its Effect on One's Happiness". Doctoral dissertation, San Diego University for Integrative Studies.
- McCue, M. (2010). "Validation and Development of Existing and New RAOB Based Warm-Season Convective Wind Forecasting Tools for Kennedy Space Center and Cape Canaveral Air Force Station", M.S. thesis, Applied Meteorology, Plymouth State University.
- Rennie, J. (2010). "Evaluation of WSR-88D Methods to Predict Warm Season Convective Wind Events at the Kennedy Space Center And Cape Canaveral Air Force Station". M.S. thesis, Applied Meteorology, Plymouth State University.
- Conrod, Chris (2008), "Rodent Population and Habitat Dynamics in a Northern Hardwood Forest". MS thesis, Plymouth State University, College of Graduate Studies, Biological Sciences.
- Conrod, Chris (2008), "Habitat selection of the woodland jumping mouse (*Napaeozapus insignis*) in a northern hardwood forest: cover density or water proximity?". In preparation.
- Roache, David (2008) "The Impact of Discrete Phases of ENSO Neutral Conditions on Atlantic Tropical Cyclone Activity". MS thesis, Plymouth State University, College of Graduate Studies, Meteorology.

T. Boucher - Curriculum Vitae

- Garner, Greg (2007), “New Hampshire air quality forecasting: the development and interpretation of classification and regression tree models”. MS thesis, Plymouth State University, College of Graduate Studies, Meteorology.
- Loconto, Andrew (2006), “Improvements of warm-season convective wind forecasts at the Kennedy Space Center and Cape Canaveral Air Force station”, MS thesis, Plymouth State University, College of Graduate Studies, Meteorology.

REVIEWING/REFEREEING

International Journal of Statistics: Advances in Theory and Applications
Journal of the American Statistical Association
Statistics and Probability Letters
Mathematical Reviews
Psychometrika
Communications in Statistics – Theory and Methods
Far East Journal of Mathematical Sciences
John Wiley & Sons, Inc
Nature Panel Reader 2010

SERVICE AND OUTREACH

Faculty Senate (member), Texas A&M-Commerce 2019-present
Curriculum Committee, Science, Engineering, and Agriculture, Texas A&M-Commerce 2013-2016
Statistics Committee (chair), Department of Mathematics, Texas A&M-Commerce 2013-2015
Curriculum Committee (chair), Department of Mathematics, Texas A&M-Commerce 2013-2016
Faculty Search Committee, Department of Mathematics, Texas A&M-Commerce 2013-2014, 2015-2016
Instructor Search Committee, Department of Mathematics, Texas A&M-Commerce 2012-2013
Director, PSU Statistical Consulting Center, 2005 - 2012
Associate, PSU Math NH Impact Center, 2010 - 2012
Reader Panel, *Nature*, 2010 – 2011
PSU Atmospheric Sciences Promotion and Tenure Committee 2010-2011
PSU Environmental Science and Policy Search Committee 2010-2011
PSU Math Promotion and Tenure Committee (Chair) 2009-2010, 2010-2011
PSU Math Search Committee 2010-2011
PSU Math Assessment Committee 2005-2012
PSU Math Strategic Planning 2009-2010
PSU Academic Integrity Committee 2008 – 2009
PSU Math Technological Advisory Committee 2006 - 2007
MathCounts 2006 and 2007 competition committees
PSU Math Department Review Committee 2005-2012
PSU Math Strategic Planning Committee 2005-2012
Loon Preservation Center Technical Committee 2007-2012

AWARDS AND HONORS

Edward and Marilyn Wixson Endowed Professor (2011 – 2012)
Nominee, Edward and Marilyn Wixson Endowed Professor (2007)

T. Boucher - Curriculum Vitae

Dean's Scholar, Texas A&M University
Merit Fellowship, Texas A&M University
Graduate Enhancement Fellowship, Texas A&M University
Mathematics Achievement Award, University of Massachusetts-Lowell

TECHNICAL SKILLS/CERTIFICATIONS/TRAINING

Quality Matters – Improve Your Online Course Workshop, 8/2016
Platforms: Windows, UNIX/Linux
Software: R, Minitab, StatCrunch, MATLAB, SAS, S+, SPSS, some familiarity with Weka, WinBUGS, ArcGIS
Languages: C, some familiarity with Python, C++, Perl, Fortran
Publishing: TeX, LaTeX, Word, Powerpoint, HTML
Learning Management Systems: Moodle 2, Moodle, Blackboard, WebCT, eCollege, MyMathLab

REFERENCES:

Nikolay Sirakov, Professor
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Texas A&M University-Commerce
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903.886.5945
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Pamela Webster, Associate Professor
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Rebecca Dibbs, Assistant Professor
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Rebecca.Dibbs@tamuc.edu