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ANANDA BANDULASIRI MANAGE

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Department of Mathematics & Statistics
Sam Houston State University

Education:

Ph.D. in Mathematics (Concentration in Statistics)
Department of Mathematics and Statistics, Texas Tech University
Dissertation Title: Statistical Shape Analysis in Medical Imaging

Master of Science in Mathematics
Department of Mathematics and Statistics, Texas Tech University

Master of Science in Statistics
Department of Mathematics and Statistics, Sam Houston State University, 2001

Bachelor of Science in Mathematics (special)
Department of Mathematics, University of Kelaniya, Sri Lanka

Research Interests:

Sports Statistics, Statistical Shape Analysis, Statistics of Medical Imaging, Biostatistics, Statistics Education.

Professional Experience:

Professor of Statistics, Department of Mathematics and Statistics, Sam Houston State University, August 2018 – Present

Associate Professor of Statistics, Department of Mathematics and Statistics, Sam Houston State University, August 2012 – August 2018

Assistant Professor of Statistics, Department of Mathematics and Statistics, Sam Houston State University, August 2006 – August 2012

Graduate Part Time Teaching Instructor, Department of Mathematics and Statistics, Texas Tech University, January 2002 – August 2006

Research Assistant, Department of Mathematics and Statistics, Sam Houston State University, 2000 – 2001

Assistant Manager, Vanik Incorporation Ltd., Sri Lanka, 1998 – 1999

Honors and Awards:

Excellence in Faculty Teaching-College of Science & Engineering Technology, SUSU- 2020

Member – Grade appeal Committee - College of Science & Engineering Technology, SUSU- 2020

Chair - STAT339 Textbook Search Committee, Department of Mathematics and Statistics, SUSU- 2020

Nominated for University Excellence in Teaching - 2017/2018

Excellence in Faculty Service-College of Science & Engineering Technology, SUSU- 2017

Graduate Advisor of the year 2014/2015

Nominated for COS service Award 2016

Nominated for University Excellence in Teaching (semifinalist)- 2015/2016

Nominated for University Excellence in Teaching (semifinalist)- 2014/2015

Nominated for COS service Award 2015

Nominated for University Excellence in Teaching (semifinalist)- 2013/2014

Nominated for COS service Award 2013

Best poster award in the Statistics in Sports Section at the Joint Statistical Meeting, Washington DC, Aug. 2009

Outstanding Doctoral Teaching Assistant of the Year, Department of Mathematics and Statistics, Texas Tech University, 2005

An Outstanding Doctoral Teaching Assistant of the Year, College of Arts and Sciences, Texas Tech University, 2005

First place (Sciences ii), 5h Annual Graduate Poster Competition, Texas Tech University, 2006

Selected Service Activities:

Coordinator, BS Data Science degree proposal – August 2021 – Present

Grade Appeal Committee, College of Science and Engineering Technology – 2021.

Award Committee, College of Science and Engineering Technology – 2021.

Chair - Self-study committee- MS Statistics program review 2016/2017

Chair - Graduate committee - Statistics 2012 - present

TACS (Teaching Assistant Certification Series) Steering Committee – 2017 -

Internal Reviewer - Administrative Process Review of Office of international programs - 2017

Science Fair Judge – CB & I Junior High Science Fair, Conroe, TX

COS Curriculum Committee- Spring 2016.

International Programs Advisory Committee – Sam Houston State University, 2015

International Students Strategic Enrollment Management Committee, Sam Houston State University, 2015.

Graduate International Student Advisory Board – Sam Houston State University, 2014/2015.

Committee Member: Statistics Faculty Search Committee, Department of Mathematics & Statistics 2013/2014.

COS graduate special scholarship committee. College of Sciences – 2013 and 2014

Graduate Advisor for MS Statistics, Department of Mathematics & Statistics, Sam Houston State University August 2012 – December 2020.

Faculty Advisor Sri Lankan Student's Association at SHSU, Sam Houston State University August 2012 – present.

Faculty Advisor STAT-CLUB, Department of Mathematics & Statistics, Sam Houston State University 2006 – August 2012.

Course Coordinator - STAT/MATH 1369 – 2015/2016

Committee member of the Hiring Committee – Director of International Programs, Sam Houston State University, 2010.

Committee member of the Hiring Committee International Student Recruiter, Sam Houston State University, 2010.

Committee member - Workload Committee, Department of Mathematics & Statistics, Sam Houston State University, 2010.

Committee member - Textbook committee, STA 379, Sam Houston State University, Spring 2010.

Co-organizer (with Dr. Melinda Holt) Conference of Texas Statisticians (COTS), Sam Houston State University March 27-28, 2009.

Committee member of the Hiring Committee – Scholar in Residence, Department of Mathematics and Statistics, Sam Houston State University, 2007/2008.

Committee member, Textbook committee, STA 379, Sam Houston State University.

Committee member of the "MTH 032 Teaching Evaluation Committee", Department of Mathematics and Statistics, Sam Houston State University, Sep 2006.

One of the five members of the Graduate Students Advisory Committee, Department of Mathematics and Statistics, Texas Tech University, 2004-2005

One of the student members of the Graduate Students Grade Appeal Committee, College of Arts and Sciences, Texas Tech University, 2005-2006

One of the mentors of the Graduate Students Mentoring Program, Department of Mathematics and Statistics, Texas Tech University, 2004-2006

Presentations:

Applications of Statistics in Cricket, University of Ruhuna, Sri Lanka, June 2016

Classification of All-Rounders in Limited-Over Cricket, Joint Statistical Meeting (JSM), Chicago, Aug 2016

Comparison of Several Multivariate Tests, Joint Statistical Meeting (JSM), Chicago, Aug 2016 (presented by the coauthor)

Modeling Economy Rate in Cricket: An Application of Negative Binomial Regression, Joint Mathematics Meeting (JMM), San Antonio TX, Jan 2015

Analysis of Bowling Effectiveness in Twenti20 Cricket, Joint Statistical Meeting (JSM), Seattle WA, Aug 2015

Ranking Cricket Players Using the Covariance Structure of the Factors, MAA-Texas, April 2014.

Opportunities for Graduate Studies in the United States, University of Kelaniya Sri Lanka, Dec 2014.

Ranking Twenty20 Cricket Players Using the Covariance Structure of the Factors, Statistics and Society in the New Information Age: Challenges and Opportunities- organized by the Institute of Applied Statistics Sri Lanka (IASSL) and Department of Bioinformatics and Biostatistics, University of Louisville, USA], Colombo, Sri Lanka, Dec 28-30, 2014 (Invited).

Applications of Statistics in Cricket, Department of Mathematics & Statistics Colloquium, Sam Houston State University, Nov 19, 2014.

Applications of Quantile Regression in Cricket- Joint Statistical Meetings, San Diego California, Aug 2012.

Receiver Operating Characteristic Curves to Measure the Quality of Decisions in Cricket, International Conference: Statistical Concepts and Methods for the Modern World, Colombo, Sri Lanka, December 2011 (Invited).

Petrikovics, I., Manage, A.B.W., Budai, M., Rockwood, G.A., Way, J.L. Nano-intercalated Rhodanese Coupled with Sulfur Donors as Cyanide Antidotal Systems. 3rd International Conference on Nanotoxicology, June 2-4, 2010, Edinburg, UK. (*Presented by the coauthor)*

Home-Field Advantage and Winning the Toss in Limited-Over Cricket, Joint Statistical Meeting, Miami Beach, Florida, Aug. 2011.

Student Misconceptions Regarding Probabilistic Independence Vs. Mutually Exclusivity, MAA Texas Section, Abilene, TX, April 2010.

A Brief Review of Statistical Applications for Cricket Data, Joint Statistical Meeting, Washington DC , Aug. 2009.

ROC Curves to Measure the Quality of the Decisions in Cricket, The 2009 New England Symposium on Statistics in Sports, Harvard University, Cambridge, MA, Sep. 2009.

ROC Curves to Measure the Quality of the Decisions in Cricket MAA-Texas Tarleton State University, TX, April 2008.

Receiver Operating Characteristic (ROC) curves, Texas Undergraduate Mathematics Conference, Sam Houston State University, Huntsville, TX, Oct 2007.

Statistical Analysis of One Day International Cricket, Joint Statistical Meeting, Salt Lake City, Utah, Aug 2007.

Shape Analysis with Applications in Medical Imaging, MAA-Texas, University of Pan American, Edinburg, TX, April 2007.

Statistics for Glaucoma Detection, Texas Tech University Summer Mathematics Academy, June 2006.

Nonparametric Methods in Glaucoma Detection, 5h Annual Graduate Poster Competition, Texas Tech University, 2006

Statistical Shape Analysis, Sam Houston State University, December 2005

Multivariate Circular Data Analysis in Glaucoma Detection from Tomographic Images (Co-Authored with Dr. Victor Patrangenaru and Dr. Hilary Thompson)
American Institute of Mathematics, Palo Alto, California (May – 2005)

Statistical Shape Analysis in Medical Imaging, Stephen F. Austin State University, Texas, December 2005

Algorithms for Nonparametric Inference on Shape Manifolds, Joint Statistical Meeting, Minneapolis, MN, (August 2005) (Co-Authored with Dr. Victor Patrangenaru), (August, 9 – 2005)

Multivariate Angular Data Analysis in Glaucoma Detection using Tomographic Images
LSU Eye Center, New Orleans (July – 2005)

A Statistical Index for Glaucoma Detection from Tomographic Images
AMS Sectional Meeting, Texas Tech University (April – 2005)

Statistical Method for Detecting Glaucoma, an Angular Approach
3rd Annual Student Research Day sponsored by the Texas Tech Chapter of SIAM (March – 2005)

Detection of Glaucoma Using Tomographic Images
Statistics Seminar, Texas Tech University (November - 2004)

Optimality Consideration in Testing Massive Numbers of Hypotheses
Second Lehmann Symposium, Rice University (Co-Authored with Dr. Peter Westfall), (May – 2004).

Impacts of Model Misspecifications in the Restricted General Linear Model (Co-Authored with Dr. Cecil Hallum)
American Statistical Association Conference, Atlanta, Georgia (August – 2001)

Nonparametric Bootstrap Estimation of Location Extrema in Exponential Mixture Models (Co-Authored with Dr. Jaimie Hebert)
Meetings of the American Statistical Association, Atlanta, Georgia (August - 2001)

Publications:

Sulalitha M.B. Bowala, Ananda B.W. Manage, and Stephen M. Scariano (2021), Modeling T20I Cricket Bowling Effectiveness: A Quantile Regression Approach with a Bayesian Extension, *Journal of Sports Analytics*, 7, 197-221.

Hasika K.W. Senevirathne and Ananda B. W. Manage (2021), Predicting the Winning Percentage of Limited-Overs Cricket using the Pythagorean Formula, *Journal of Sports Analytics*, 7, 169-183.

Ananda B. W. Manage, Ram C. Kafle, & Danush K. Wijekularathna,(2020), "Classification of All-rounders in Limited Over Cricket – A Machine Learning Approach", Journal of Sports Analytics, 6(4), 295-306.

Danush K. Wijekularathna, **Ananda B. W. Manage** & Stephen M. Scariano (2019), Power analysis of several normality tests: A Monte Carlo simulation study, *Communications in Statistics - Simulation and Computation*, ISSN: 0361-0918 (Print) 1532-4141

Ilona Petrikovics, Lóránd Kiss, Ching-En Chou, Afshin Ebrahimpour, Kristóf Kovács, Márton Kiss, Brian Logue, Adriano Chan, **Ananda B. W. Manage**, Marianna Budai, Gerry R. Boss & Gary A. Rockwood (2019), Antidotal efficacies of the cyanide antidote candidate dimethyl trisulfide alone and in combination with cobinamide derivatives, *Toxicology Mechanisms and Methods*, 29:6, 438-444,

Zientek, L. R., Albert, J., **Manage, A**. Li, X., & Sechelski, A. (2018), A state-mandated policy: Enrollment at one university. *Journal of Developmental Education*, 41(3), 10-17.

Albert, J., Zientek, L. R., & **Manage, A**. (2018), Attendance: A case-study in developmental mathematics classrooms. *Journal of College Reading and Learning*, 43(3), 175-188.

Kalanka P. Jayalath, Hon Keung Tony Ng, **Ananda B. Manage**, and Kent E. Riggs, (2016), "Improved tests for homogeneity of variances", *Communications in Statistics*, 1-24.

Jeanette M. Carlson, Embriette R. Hyde, Joseph F. Petrosino, **Ananda B.W. Manage**, Todd P. Primma, (2015), "The host effects of Gambusia affinis with an antibiotic-disrupted microbiome", *Comparative Biochemistry and Physiology*, Part C 178(2015) 163-168.

Manage, A.B. W., Silva, R. M., and Swartz, T., (2015), "A study of the Powerpaly in One-Day Cricket", *European Journal of Operational Research*, 1-8.

Annie B. Leonard, Jeanette M. Carlson, Dayna E Bishoff1, Sarah. Sendelbach1, Sonja B. Yung1, Sonya Ramzanali, **Ananda B. W. Manage**, Embriette R. Hyde, Joseph F. Petrosino, and Todd P. Primm (2014) "The Skin Microbiome of Gambusia affinis is Defined and Selective", *Advances in Microbiology*, 4, 335-343.

Manage, A., Scariano, S. and Hallum, C. (2013), "Performance Analysis of T-20-World Cup Cricket 2012", *Srilankan Journal of Applied Statistics*, 14(1), 1-12.

Manage, A.B.W., and Scariano, S. (2013), "An Introductory Application of Principal Components to Cricket Data", Journal of Statistics Education, 21(3).

Fernando, M., **Manage, A.B.W.,** and Scariano, S. (2013), "Is the Home-Field Advantage in Limited Overs One-Day International Cricket Only for Day Matches?", *South African Statistics Journal*, 47, 1-13.

Manage, A.B.W., and Pertikovics, I. (2013), "A Confidence Limit alculation Method for Antidotal Potency Ratios (APR) Derived from two LD50 Values Determined by the Dixon Up-and-Down Method", *World Journal of Methodology*, 3(1), 7-10.

Lauren Mondin, Courtney Weber, Scott Clark, Jessica Winborn, Melinda Holt and **Ananda Manage.** (2013), "Statistical analysis of diagnostic accuracy with applications to cricket", *Involve*, 5(3), 349-359.

Manage, Ananda B. W.; Mallawaarachchi, Kumudu; and Wijekularathna, Kanchana (2010) "Receiver Operating Characteristic (ROC) Curves for Measuring the Quality of Decisions in Cricket", Journal of Quantitative Analysis in Sports: 6(2), Article 8.

Petrikovics, I., Baskin, S.I., Beigel, K.M., Schapiro, B.J., Rockwood, G.A., **Manage, A.B.W**., Budai, M., and Szilasi M. (2010) "Nano-intercalated Rhodanese in Cyanide Antagonism". *Nanotoxicology*, 4(1-4), 247-254.

Manage, **A**. and Scariano, S. (2010), "A Classroom Note on: Student Misconceptions Regarding Probabilistic Independence Vs. Mutually Exclusivity", *Journal of Mathematics and Computer Education*, 44(1), 14-20.

Amaradasa, Sajeewa, Robert A. Lane, and **Ananda Manage**, (2010) "Vertical migration of *Haemonchus contortus* infective larvae on *Cynodon dactylo*n and *Paspalum notatum* pastures in response to climatic conditions," *Journal of Veterinary Parasitology*, 170, 78-87.

Bandulasiri A., Bhattacharya, R., and Patrangenaru, V., (2009), "Nonparametric Inference on Shape Manifolds with Applications in Medical Imaging", Journal of Multivariate Analysis, 100, 1867-1882.

Bandulasiri, A., Gunathilaka, A., Patrangenaru, V., Ruymgaart, F. and Thompson, H. (2009), "Nonparametric Shape Analysis Methods in Glaucoma Detection", International Journal of Statistical Sciences, 9, 135-149.

Bandulasiri, A. and Scariano, S., (2009), "The Robustness of the Three-Way Chart to Non-Normality", *Communications in Statistics*, 38, 1-13.

Butar F. and **Bandulasiri, A.** (2009), "Comparison of the Power of the Paired Samples Using Permutation Tests", *Journal of Mathematical Sciences and Mathematics Education*, 4(2), 19-31.

Butar F. and **Bandulasiri, A.** (2009), "Permutation Tests for Paired Samples: Power Comparison", Proceedings of the Joint Meetings of the American Statistical Association Conference, Washington D.C.

Bandulasiri, A., (2008), "Predicting the Winner in One Day International Cricket", *Journal of Mathematical Sciences and Mathematics Education*, 3(1), 6-17.

Bandulasiri, A., Patrangenaru, V., Su, J., and Zhang, J., (2008) "Applications of Nonparametric Statistics on Reflection Shape Manifolds and Reflection Size-and-Shape manifolds in Medical Imaging and Proteomics", Proceedings of the Joint Meetings of the American Statistical Association Conference, Denver, CO.

Bandulasiri, A. and Butar, F. (2007), Statistical Analysis of One Day International Cricket," Proceedings of the Joint Meetings of the American Statistical Association Conference, Salt Lake City, Utah, Aug 2007.

Butar, F., **Bandulasiri, A**., Holt, M., and Hallum, C. (2007) "Matrix Plots in Support of Visualization of Matrix Characteristics", Proceedings of the Joint Meetings of the American Statistical Association Conference, Salt Lake City, Utah, Aug 2007.

Bandulasiri, W. A. and **Patrangenaru**, V. (2005), Algorithms for Nonparametric Inference on Planar Shape Spaces, *Proceedings of Joint Statistical Meeting, Minneapolis*, 1617-1622.

Hallum, C.R. and Bandulasiri, A., (2002), "Impacts of Model Misspecifications in the Restricted General Linear Model" Proceedings of the American Statistical Association Conference, Atlanta, Georgia, August 2001.

Hebert, J. L. and **Bandulasiri, A.** (2002) "Nonparametric Bootstrap Estimation of Location Extrema in Exponential Mixture Models" Proceedings of the Joint Meetings of the American Statistical Association Conference, Atlanta, Georgia, August 2001.

Courses Taught:

Undergraduate Courses (At SHSU)

STAT1369 Elementary Statistics

STAT3379 Statistical Methods

STAT3380 Design and Analysis of Experiments

STAT3381 Elementary Sampling

STAT4371 Introduction to Probability and Statistics I

STAT4372 Introduction to Probability and Statistics II

STAT4373 Nonparametric Statistics

STAT4375 Statistical Quality Control

STAT4374 Regression Analysis

BIOL4374 Biostatistics

MATH1420 Calculus 1

MATH1332 College Mathematics

Graduate Courses (At SHSU)

STAT5361 Mathematical Statistics 1

STAT5362 Mathematical Statistics II

STAT 5368 Regression Modeling and Analysis

STAT 5364 Applied Multivariate Statistical Analysis

STAT 5333 Design and Analysis of Experiments

STAT 5370 Nonparametric Statistics

STAT 5375 Statistics for Agricultural Sciences

STAT 6375 Biostatistics

Independent Study Courses (At SHSU)

STA 470 – Categorical Data Analysis

STA 470 – Logistics Regression

MTH 470 – Categorical Data Analysis Applications in Sports Data

STAT 5360- Advanced Regression Models

Courses Taught at Texas Tech University as a Graduate Part Time Instructor (Jan 2002- Aug 2006).

Statistical Methods

Calculus III

Calculus II

Calculus I

College Algebra

Intermediate Algebra

Professional Affiliations:

Member of the American Statistical Association (ASA)
Member of the Section of Statistics in Sports of ASA