

Madhuri S. Mulekar Professor of Statistics

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Student Research Directed: (* indicates an undergraduate student)

1. Project 'A necessary condition for estimating overlap of two distributions', Nelita Pereira De Andrade, **Funded by NSF**, 2008-09. Presented at USA research forum, April 2009.
2. Project 'Analysis of DTR at Bay Minette and Mt Vernon, Alabama', Whitney Jackson, **Funded by NSF**, 2008-09.
3. Project 'Tracing historical development of measures of similarity', Lindsey Norton, **Funded by NSF**, 2008-09.
4. Project 'Computing variance of Gini coefficient of inequality', Jeremy Baker*, **Funded by NSF**, 2008-09.
5. Project 'Do these waters meet ADEM requirements of water quality?' Chip Curtis*, **Funded by NSF**, 2008-09.
6. Honors Thesis 'Analysis of water quality of Dog river watershed', Stephen Richardson*, 2007-08. Presented at MAA Florida Chapter Meeting, Pensacola, FL, Nov. 2007.
7. Project 'Improving approximations to mean and variance of index of dissimilarity', Andrew Garcia*, 2007 **Funded by NSF**.
8. Project 'Category 5 Hurricanes: Similarities and Differences', Carrie Broussard*, **Funded by NSF**, Presented at USA/USM Mini-conference in Undergraduate Research, Hattiesburg, MS, April 2007.
9. Project 'Hurricane Katrina' Adam Duncan*, Summer 2006.
10. Project 'Which track is advantageous for my car?', Joshua Wheeler*, Presented at USA/USM Mini-conference in Undergraduate Research, Hattiesburg, MS, April 2007.
11. Project 'Is there a weekend effect in diurnal temperature range?' Jeffery Boone*, **Funded by NSF**, Presented at USA/USM Mini-conference in Undergraduate Research, Hattiesburg, MS, April 2007.
12. Project 'Estimating sampling distributions of exponential overlap coefficients', Jeffrey Boone*, **Funded by NSF**, 2005-2007, Presentation at
 - a. USA/USM mini-conference in Undergraduate Research, 2006, Mobile, AL
 - b. Poster presentation at Sigma Xi annual meeting, Detroit, MI, Nov, 2006. Received second-place award.
13. Project 'Estimating sampling distributions of coefficients of similarity for normally distributed populations', Jeffrey Boone*, **Funded by UCUR**, Summer 2006, Presentation at
 - a. USA/USM mini-conference in Undergraduate Research, 2006, Mobile, AL
 - b. Poster presentation at UCUR Research week, 2006, Mobile, AL
14. Project 'Biased moments of the index of dissimilarity', John Knutson, **Funded by NSF**, 2004-2006. Presentation at USA/USM Mini-conference on Undergraduate Research, 2006, Mobile, AL.
15. Project 'Comparison of relaxation time of crude oil samples from different sources', Leslie McDonald*, **Funded by NSF**, 2005-06.
16. Project 'Accuracy of prediction of path of Hurricane Dennis', Jessica Guidry*, **Funded by NSF**, 2005-06.

17. Project 'Ranking states using Gini measure of inequality', B. Nicole Sims*, **Funded by NSF** 2005-06.
18. Project 'Analysis of quality of waters on 303(d) list', Steven Richardson*, Honor's thesis, 2006-present.
19. Project 'Bootstrap estimation of bias when using geometric mean to estimate mean of the lognormal distribution', with Ronald Nolte, presented at USA Research Council's 12th Annual research Forum, April 2005.
20. Project 'Effects of expansions on stream health', Gaye Hadley*, **Funded by NSF and MAA**, 2005,
 - a. Troy MathFest 2005, Troy State University, AL, February 2005.
 - b. USA Research Council's 12th Annual research Forum, April 2005.
21. Project 'Cultural Similarities and Differences in Response to Postpartum Depression', Kasita McCloud* and Rachel Swartz, **Funded by NSF and MAA**, 2005, Presented at
 - a. Troy MathFest 2005, Troy State University, AL, February 2005.
 - b. USA Research Council's 12th Annual research Forum, April 2005.
22. Project 'Approximating combinations', Jarred Cunningham*, **Funded by NSF**, Presented at the 14th Annual USA/USM Mini-Conference on Undergraduate Research in Mathematical Sciences, Hattiesburg, April 2005.
23. Project 'Estimating index of income dissimilarity', John Knutson*, **Funded by NSF**, 2005-07. Presented at
 - a. The 14th Annual USA/USM Mini-Conference on Undergraduate Research in Mathematical Sciences, Hattiesburg, April 2005.
 - b. Troy MathFest, 2006, Troy State University, AL, February 2006
24. Project 'Adaptive Anti-Spam E-mail Filtering using Huffman Coding and Logistic Regression', Nerellapalli, P and Zhou, Y., 2005, Reviewed and Accepted for publication by *International Journal on Artificial Intelligence*.
25. 'Ranking Doctoral Institutions.' Kasita McCloud*, Presented at 13th Annual USA/USM Mini-Conference on Undergraduate Research in Science and Mathematics, 2004.
26. Project 'Approximations to an SPRT for hypergeometric sampling', Jonathan Brito*, **Funded by NSF**, 2004.
27. Paper presentation 'Assessing the institutional effectiveness of a Sickle-Cell Disease Educational Program for school children'. Thomas Clark*, **Funded by NSF**, Presented at 13th Annual USA/USM Mini-Conference on Undergraduate Research in Science and Mathematics, Mobile 2004.
28. Project 'Estimating animal population size', Thomas Clark*, **Funded by NSF**, 2002-03.
29. Paper presentation 'Is counseling helpful in educating SCD patients and their relatives?' Kasita McCloud* **Funded by NSF & NIH**. Presented at the 12th annual USA/USM Mini-Conference on Undergraduate Research in Mathematical Sciences, Hattiesburg, 2003
30. Project 'Assessing the effect of educational program on the school children's general knowledge about the Sickle Cell disease' Cedric Jones, **Funded by NSF** 2003.
31. Paper presentation 'Binomial sequential sampling for density estimation.' Thomas Clark*, **Funded by NSF**. Presented at 12th annual USA/USM Mini-Conference on Undergraduate Research in Mathematical Sciences, Hattiesburg, 2003
32. Project 'Assessment of quality of life for patients with sickle cell disease' James Dixon* **Funded by UCUR**, 2002-03.

33. Project 'Estimating the probability of congestive heart failure as a function of Echocardiographic/ Doppler variables with multicollinearity', Billie Sue Mallone, **Funded by NSF**, 2002.
34. 'Geographical Mapping of Cancer Death Rate in Alabama' Michael Weak*, **Funded ASSDA**, 2000 (with Fearn).
 - a. Poster presentation: The Annual Research forum of USARC and Sigma Xi, Mobile, 2001
 - b. Paper presentation: USA/USM Mini-conference on Undergraduate Research in Mathematical Sciences, Hattiesburg, MS, April 2001
35. 'Estimation and inference for the overlap of two exponential distributions', Subhash Aryal*, **Funded by UCUR & NASA**
 - a. Poster presentation: The Annual Research forum of USARC and Sigma Xi, Mobile, 2001.
 - b. Paper presentation: USA/USM Mini-conference on Undergraduate Research in Mathematical Sciences, Hattiesburg, MS 2001.
36. Paper Presentation 'Citation Analysis of Finance Research', Adraine Jordan*, Winner of Exxon Education Foundation award for Outstanding Presentation at the MAA's MathFest, Atlanta, GA, 1997, **Funded by NSF**.
37. Project 'Improved Approximation to Bias and Variance of Overlap Coefficients and Their Distributions', Lou Sherfese*, **Funded by NSF**.
38. Poster Presentation 'Renal Dysfunction in Sickle Cell Patients -- Unchanged with Current Therapy', John Grogan* (1) 23rd Annual Medical Student Research Day, Mobile, AL, 1996, (2) Amer. Fed. Clinical Research Regional Meeting, New Orleans, LA, 1997 (with Shah and Hoff), **Funded by NSF**.
39. Paper presentation 'Approximations to an SPRT for hypergeometric sampling', Christine Powell*, Joint MAA/AMS Summer Meeting, Seattle, WA, August 1996, **Funded by NSF**.
40. Paper presentation 'Sampling distribution of overlap of two heteroscedastic normal populations', Eric Erdman*, MAA's MathFest, Atlanta, GA, 1997 (with Mishra), **Funded by NSF**.
41. Project 'Robustness of unknown k in sequential testing procedure for the mean of negative binomial population', Nikki Long*, **Funded by NSF**.
42. Project 'Citation analysis of Tax Research', Elizabeth Howard* Presented at USA/USM Mini-conference on Undergraduate Research in Mathematical Sciences, Feb. 1997 (with Segal), **Funded by NSF**.
43. Paper presentation 'Does pre-operative Aspirin ingestion increase post-operative blood loss in coronary artery bypass surgery patients?', Bae-yong Cheng*, USA/USM Mini-conference on Undergraduate Research in Mathematical Sciences, Mobile, AL Feb, 1996, **Funded by NSF**.
44. Paper presentation 'Sampling distribution for overlap of two exponential populations', Sherry Gonzales*, USA/USM Mini-conference on Undergraduate Research in Mathematical Sciences, Mobile, AL Feb, 1996, **Funded by NSF**.
45. Poster presentation 'Citation analysis of accounting research', Bae-yong Cheng*, 3rd annual Research Forum of USARC and Sigma Xi, May 1996 (with Segal), **Funded by NSF**.

46. Poster presentation 'Impact of Accountant liability upon the profession of accounting', Richard Coarsey*, 3rd annual Research Forum of USARC and Sigma Xi, May 1996 (with Segal), **Funded by NSF and USARC.**
47. Paper presentation 'The best and worst cities of U.S.', Sherry Gonzales & Bae-yong Cheng*, Winona State University, Winona, MN, April 1996, **Funded by NSF.**
48. Poster presentation 'Behavioral and environmental assessment of childhood migraineurs', Yashika N. Forrester NSF National conference on Diversity in the Scientific and Technological Workforce, Washington D.C., Sept. 1995, **Funded by NSF.**
49. Poster presentation 'College education in the southeastern region', Richard Coarsey* & Lou Sherfese, IV*, Joint Statistical Meetings, Orlando, FL, Aug. 1995, **Funded by NSF.**
50. Paper presentation 'Is short term heart rate variability associated with sudden cardiac death?', Bae-Yong Cheng*, Joint MAA-PME Student Conference, Burlington, VT, Aug. 1995, **Funded by NSF.**
51. Paper presentation 'Comparison of one-sided tolerance limits when the variance is unknown', Lizabell Mont*, Joint MAA-PME Student Conference, Burlington, VT, Aug. 1995 (with Mishra), **Funded by NSF.**
52. Project 'A study of Shrimp fishermen along the Gulf Coast', Sherry Gonzales, Summer 1995 (with Thomas), **Funded by NSF.**
53. Paper presentation 'Prediction of demands for housing units authorized by local building permits', Jason C. Steininger* & Leh Ong Wong*, USA/USM Mini-conference on Undergraduate Research in the Physical & Mathematical Sciences, Hattiesburg, MS, 1994.
54. Paper presentation 'Estimation of Bias for the measures of overlap for the Pareto distributions', Takeshi Fukasawa*, Joint Mathematics Meetings, San Francisco, Jan 1995, **Funded by NSF.**
55. 'Predictors of coronary artery disease', Bae-yong Cheng*, (with Bikkina, M.D.), 1995, **Funded by NSF.**
56. 'A study of proper time to discontinue daily Aspirin prior to cardiac surgery', Bae-yong Cheng*, (with Bikkina, M.D.), 1995, **Funded by NSF.**
57. Poster presentation 'Comparison of Sequential Testing Procedures', Shirley Butts*, Presented at the undergraduate research poster session, the Annual Meeting of Sigma Xi, the scientific research society, Atlanta, 1994.
58. Paper presentation 'Sequential Sampling Plans for Life Testing', Shirley Butts*, USA/USM Mini-conference on Undergraduate Research in the Mathematical Sciences, Mobile, 1994.
59. Paper presentation 'Statistical Measures of Similarity', Takeshi Fukasawa*, USA/USM Mini-conference on Undergraduate Research in the Mathematical Sciences, Mobile, 1994, **Funded by NSF.**
60. Paper presentation 'A time Series Analysis of the Mobile Press Register Circulation', Connie Williams*, USA/USM Mini-conference on Undergraduate Research in the Mathematical Sciences, Mobile, 1994.
61. 'Effects of the medical model on nursing perceptions', Shirley Butts*, 1993-94.
62. 'Overlap of survival functions and inference', Vicki Bishop*, 1992 **Funded by NSF.**