Curriculum Vitae
(February 5, 2023)

Name: Solomon W. Harrar

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EDUCATION

Ph. D., August 2004 -- Statistics (Specializing in Multivariate Analysis), Department of Mathematics and Statistics, Bowling Green State University, Bowling Green, OH 43403

M.Sc., July 1999 -- Statistics, Addis Ababa University, Ethiopia

B.Sc., July 1990 -- Statistics (minor in Computer Science), Addis Ababa University, Ethiopia

POSITIONS HELD

July 2019 – Now, **Professor**, Department of Statistics, University of Kentucky, Lexington, KY 40536, USA

October 2022 – December 2022, **Visiting Scientist**, Department of Management and Engineering, University of Padova, Padova, Italy.

August 2022 – October 2022, **Guest Scientist**, Institute for Biometry and Clinical Epidemiology, Charité University of Medicine, Berlin, Germany.

August 2012 – Now, **Adjunct Professor**, Department of Statistics, Addis Ababa University, Addis Ababa, Ethiopia.

August 2013 – August 2019, **Adjunct Research Professor**, Department of Mathematical Sciences, University of Montana, Missoula, MT 59812, USA.

August 2013 – June 2019, **Associate Professor**, Department of Statistics, University of Kentucky, Lexington, KY 40536, USA

March 2016 – June 2016, **Fulbright Professor**, Salzburg University, Salzburg A-5020, Austria.

April 2014 – July 2014, **Gastprofessor**, Salzburg University, Salzburg A-5020, Austria

January 2014 -- March 2014, **Visiting Professor**, East China Normal University, Shanghai 200241, China

January 7, 2011 – July 30, 2011, **Visiting Professor**, Department of Statistics, East China Normal University, Shanghai, China.

August 2010 – January 6, 2011, **Visiting Professor**, Department of Statistics and School of Public Health, Addis Ababa University, Addis Ababa, Ethiopia.

August 2008 – August 2013, **Associate Professor**, Department of Mathematical Sciences, University of Montana, Missoula, MT 59812, USA

August 2006-August 2008, **Assistant Professor**, Department of Mathematical Sciences, University of Montana, Missoula, MT 59812, USA

August 2004-August 2006, **Assistant Professor**, Department of Mathematics and Statistics, South Dakota State University, Brookings, SD 57007, USA

August 2000-August 2004, **Graduate Assistant**, Department of Mathematics and Statistics, Bowling Green State University, Bowling Green, OH 43402, USA

August 1996-August 2000, **Lecturer**, Department of Statistic, Addis Ababa University, Addis Ababa, Ethiopia

RESEARCH

Areas of Current Research

High-Dimensional Inference, Nonparametric Methods, Rank-Based Methods for Clustered Data, Multivariate Finite Mixture for Contaminated Data, Matrix-variate (Tensor) Data, Applications in Public Health

Bibliometric Indicators:

Citations 1252, h-index 19, i10-index 30 (Source: Google Scholar accessed on June 9th, 2022)

Manuscripts under Preparation

1. **Harrar, S.W.**, Kong, X.* and Villasante-Tezanos, A.* Composite Tests for Multi-Sample High Dimensional Data.

2. Cui, Y.* and **Harrar, S.W.** npclust: R Package for Nonparametric Analysis of Cluster Data.

3. **Harrar, S.W.,** Mersha, T., Beyene, J. and Ye, Z.* Resolving Clinical Phenotypes to Distinct Endotypes Using Transcriptome Signature.

4. **Harrar, S.W.,** Mekuria, Z. H., Mitra, S.* and Li, L. Timeliness and Quality of SARS-CoV-2 Genomic Data in Africa: Challenges and Opportunities.

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* PhD Advisee

5. Xu, Y.* and **Harrar, S. W.,** Nonparametric Test for Covariate Effect in Factorial Design.

6. **Harrar, S. W.,** Belina, M.*, Bathke, A. C. and Wencheko, E., Nonparametric Analysis of Partially Complete Repeated Measures Data.

Manuscripts under Review

1. **Harrar, S.W.** and Ye, Z.* Analysis of Multiple Outcomes in Contaminated Trials Reinforced with Validation Data. *International Journal of Biostatistics*. (Submitted)

2. Liu, C.* and **Harrar, S.W.** Wilcoxon-Mann-Whitney Effects for Clustered Data: Informative Cluster Size. *Biometrical Journal*. (Submitted)

3. Cui, Y.* and **Harrar, S. W.** Nonparametric Methods for Incomplete Multivariate Data: Applications to Quality-of-Life Outcomes. *Canadian Journal of Statistics*. (Submitted)

4. Ye, Z.* and **Harrar, S. W**., Nonparametric Finite Mixture: Applications in Contaminated Trials. *Journal of the American Statistical Association*. (Submitted)

5. Brown, B., Harris, K., Heil, D., Holman, C., Fontaine, J., and **Harrar, S. W.,** Assessing the feasibility of an after-school and home-based childhood obesity prevention program, *The Journal of Primary Prevention*. (Submitted)

Refereed Publications

1. Zeng, T.* and **Harrar, S. W.**, Robust Tests for Trials with Multiple Endpoints. Journal of Applied Statistics. (Accepted)

2. **Harrar, S. W.** and Cui, Y.*. Nonparametric Methods for Clustered Data in Pre-Post Intervention Design. *Journal of Statistical Planning and Inference* **222**, 1--21.

3. Kong, X.*, Villasante-Tezanos, A.**Error! Bookmark not defined.** and **Harrar, S. W.** (2022), Generalized Nonparametric Composite Tests for High-Dimensional Data. *Symmetry* **14***(6),* Article 1153.

4. **Harrar, S. W.** and Xu, Y.* (2022), Nonparametric Tests for Multivariate Association. *Symmetry* **14***(6),* Article 1112.

5. Ye, Z.* and **Harrar, S. W.** (2022)**,** Estimation of Multivariate Treatment Effects in Contaminated Randomized Trials, *Pharmaceutical Statistics* **21***(3)*, 535--565.

6. **Harrar, S. W.** and Kong, X.* (2022), Recent Developments in High-dimensional Inference for Multivariate Data: Parametric, Semiparametric and Nonparametric Approaches, *Journal of Multivariate Analysis* **188**, Article 104855.

7. Ronchi, F.**, **Harrar, S.W.** and Salmaso, L. (2022), Multivariate Nonparametric Methods in Two-Way Designs: Performances and Limitations in Small Samples. *Journal of Applied Statistics* **49***(7),*1714--1741.

8. Beyene, J., **Harrar, S. W.**, Altaye, M., Astatkie, T, Awoke, T. Shkedy, Z. and Mersha, T. B. (2021), A Roadmap for Building Data Science Capacity for Health Discovery and Innovation in Africa, *Frontiers in Public Health* **9**, Article 710961.

9. Kong, X.* and **Harrar, S. W**. (2021), High-Dimensional Inference Under Non-normality, *Statistics: A Journal of Applied and Theoretical Statistics* **55***(2),* 321--349.

10. Cui, Y.*, Konietschke, F. and **Harrar, S.W**. (2021), The nonparametric Behrens–Fisher problem in partially complete clustered data, *Biometrical Journal* **63***(1)*, 148--167.

11. Kong, X.* and **Harrar, S. W.** (2020)**,** High-Dimensional Rank-Based Inference, *Journal of Nonparametric Statistics* **37***(2)*, 294--322.

12. **Harrar, S. W.,** Feyasa, M. B.*, and Wencheko, E. (2020), Nonparametric Procedures for Partially Paired Data in Two Groups, *Computational Statistics and Data Analysis* **144**, 1--26.

13. Kong, X.* and **Harrar, S. W**. (2019), Accurate Inference for Repeated Measures in High Dimensions, *Electronic Journal of Statistics* **13,** 4916--4944.

14. Roy, A., **Harrar, S. W.** and Konietschke, F. (2019), The nonparametric Behrens-Fisher Problem with Dependent Replicates, *Statistics in Medicine* **38**, 4939--4962.

15. **Harrar, S. W.,** Ronchi, F.** and Salmaso, L. (2019), A comparison of recent nonparametric methods for testing effects in two-by-two factorial designs, *Journal of Applied Statistics* **46** *(9),* 1649--1670.

16. Happ, M.**, **Harrar, S.W.** and Bathke, A. C. (2018). HRM: An R Package for Analyzing High-dimensional Multi-factor Repeated Measures, *The R Journal* **10** *(1)*, 534--548.

17. Happ, M.**, **Harrar, S. W.** and Bathke, A. C (2017). Inference for High-dimensional Repeated Measures in Factorial Designs, *Journal of Statistical Theory and Practice* **11***(3)*, 468--477.

18. Noonan, C. W., Semmens, E. O., **Harrar, S. W.,** Smith, P., Montrose, L, Weiler, E., McNamara, M and Ward, T. J. (2017). Interventions in Wood Stove Homes to Improve Childhood Asthma, *Environmental Health Perspectives* **125***(9)*. (Online)

** Graduate Mentee

19. Fadardi, M. S., Abel, L. A., **Harrar, S. W.** and Bathke, A. C. (2017), Task-induced Changes in Idiopathic Infantile Nystagmus Vary with Gaze, *Optometry and Vision Science* **94***(5),* 606--615.

20. Ellis, A., Burch, W., **Harrar, S. W.** and Bathke (2017), A. Nonparametric Inference for Multivariate Data: The R Package npmv, *Journal of Statistical Software* **76***(4).* (Online)

21. Ward, T. J., Semmens, E. O., Weiler, E., **Harrar, S. W.** and Noonan, C. W. (2017), Efficacy of Interventions Targeting Household Air Pollution from Residential Wood Stoves, *Journal of Exposure Science and Environmental Epidemiology* **27***,* 64--71.

22. **Harrar, S. W.,** Amatya, A. and Kalachev, L. (2016), Assessing Treatment Efficacy in the Presence of Diagnostic Errors, *Statistics in Medicine* **35**(29), 5338--5355.

23. **Harrar, S. W.** and Hossler, J. Z.* (2016), Methods for High-Dimensional Multivariate Repeated Measures Data under General Conditions. *Statistics: A Journal of Theoretical and Applied Statistics* **50**(5), 1056--1074.

24. **Harrar, S. W.** and Xu, J. (2016), Confidence Regions for Level Differences in Growth Curve Models, *Journal of Statistical Planning and Inference* **175**, 11--24.

25. Happ, M.**, **Harrar, S. W.** and Bathke, A. C. (2016), Inference for Low- and High-Dimensional Multi-Group Repeated Measures Designs with Unequal Covariance Matrices, *Biometrical Journal* **58**(4), 81--830.

26. **Harrar, S. W.** and Kong X.**Error! Bookmark not defined.** (2016), High-Dimensional Repeated Measures Analysis with Unequal Covariance Matrices, *Journal of Multivariate Analysis* **145**(1), 1--21.

27. Bathke, A. C and **Harrar, S. W.** (2016), Rank-Based Inference for Multivariate Data in Factorial Designs, *In Robust Rank-Based and Nonparametric Methods*, edited by Regina Liu and Joseph McKean, Springer.

28. Brown, B., Harris, K. J., Heil, D., Holman, C. and **Harrar, S.** (2015), Developing and Piloting a Nutrition and Exercise After-School Program That Includes Families, *Annals of Behavioural Medicine* **49**, S10--S019.

29. Konietschke, F., Bathke, A. C., **Harrar, S. W.** and Pauly, M. (2015), Parametric and Nonparametric Bootstrap Methods for General MANOVA. Journal of Multivariate Analysis **140**(1), 291-301.

30. Jacobson, J.D., Catley D., Lee H.S., **Harrar, S.W**., & Harris, K.J. (2014). Health risk perceptions predict smoking-related outcomes in Greek college students. *Psychology of Addictive Behaviours* **28**(3), 743--751.

31. **Harrar, S. W.** and J. Xu (2014). Analysing Mean Profiles of Non-normal Populations, *Communications in Statistics--Theory and Methods* **43**, 3553--3573.

32. Xu, J. and **S. W. Harrar** (2012). Accurate Mean Comparisons for Paired Samples with Missing Data: An Application to a Smoking-Cessation Trial, *Biometrical Journal* **54**, 281--295.

33. Schleicher, H. E., K. J. Harris, D. G. Campbell and **S. W. Harrar** (2012). Mood Management Intervention for College Smokers with Elevated Depression Symptoms: A Pilot Study, *Journal of American College Health* **60***, 37--45.*

34. Leppi, J., T. H. DeLuca, **S. W. Harrar** and S. W. Running (2012). Impacts of Climate Change on August Stream Discharge in the Central Rocky Mountains, *Climatic Change* **112***, 997--1014.*

35. Konietschke, F., **S. W. Harrar**, K. Lange and E. Brunner (2012). A New Nonparametric Approach for Confidence Intervals for Relative Effects in Matched Pairs with Missing Data, *Computational Statistics and Data Analysis* **56**, 1090--1112.

36. **Harrar, S. W.** and A. C. Bathke (2012). A Modified Robust Two-Factor Multivariate Analysis of Variance: Asymptotics and Small Sample Approximations. *Annals of the Institute of Statistical Mathematics* **64**, 135--165.

37. Liu, C., A. C. Bathke and **S. W. Harrar** (2011). A Nonparametric Version of Wilks' Lambda -- Asymptotic Results and Small Sample Approximations, *Statistics and Probability Letters* **81**, 1502--1586.

38. Cronk, N. J., K. J. Harris, **S. W. Harrar**, K. Conway, D. Catley and G. E. Goods (2011). Analysis of Smoking Patterns and Contexts among College Student Smokers, Substance Use and Misuse 46, 1015--1022.

39. Zhang, K., H. Wang, A. C. Bathke, **S. W. Harrar**, H. P. Piepho and Youping Deng (2011). Gene Set Analysis for Longitudinal Gene Expression Data, *BMC Bioinformatics* **12**, Online.

40. Harris, K. J., D. Catley, G. E. Good, N. J. Cronk, **S. W. Harrar** and K. B. Williams (2010), Motivational interviewing for smoking cessation in college students: A group-randomized controlled trial, *Preventive Medicine* **51**, 387--393.

41. Davidson, M. M. , N. J. Cronk, K. J. Harris, **S. W. Harrar**, D. Catley and G. E. Good (2010). Strategies to Recruit and Retain College Smokers in Cessation Trials, *Research in Nursing & Health* **33**, 144--155.

42. Bathke, A. C., **S. W. Harrar**, H. Wang, K. Zhang and H. P. Piepho (2010), Series of Randomized Complete Block Experiments with Non-normal Data, *Computational Statistics and Data Analysis* **54**, 1840--1857.

43. Harris K. J., J. N. Stearns, R. G. Kovach and **S. W. Harrar** (2009). Enforcing an outdoor smoking ban on a college campus: Effects of a multi-component approach. *Journal of American College Health* **58**, 121--126.

44. **Harrar, S. W.** (2009), Asymptotics for Tests on Mean Profiles, Additional Information and Dimensionality under Non-normality, *Journal of Statistical Planning and Inference* **139**, 2685 – 2705.

45. Bathke, A. C., **S. W. Harrar** and M. R. Ahmad (2009). Some Contributions to the Analysis of Multivariate Data. *Biometrical Journal* **51**, 285–303.

46. **Harrar, S. W.** and A. C. Bathke (2008). A Nonparametric Version of the Bartlett-Nanda-Pillai Multivariate Test, Asymptotics, Approximations and Applications. *American Journal of Management and Mathematical Sciences* **28**, *309--335*.

47. **Harrar, S. W.** and Bathke, A. C. (2008). Nonparametric Methods for Unbalanced Multivariate Data and Many Factor Levels. *Journal of Multivariate Analysis* **99**, 1635–1664.

48. Bathke, A. C., **S. W. Harrar**, and L. V. Madden (2008). How to Compare Small Multivariate Samples Using Nonparametric Tests. *Computational Statistics and Data Analysis* **52**, 4951–4965.

49. Schleicher, H. E., K. J. Harris, D. Catley, D., **S. W. Harrar** & A. L. Golbeck, A.L. (2008). Examination of a Brief Smoking Consequences Questionnaire for College Students. *Nicotine and Tobacco Research* **10**, 1503–1509.

50. Gupta, A. K., **S. W. Harrar** and Y. Fujikoshi (2008). MANOVA for Large Hypothesis Degrees of Freedom under Non-normality. *Test* **17**, 120-137.

51. Bathke, A. C. and **S. W. Harrar** (2008). Nonparametric Methods in Multivariate Factorial Designs for Large Number of Factor Levels. *Journal of Statistical Planning and Inference* **138**, 588–610.

52. **Harrar, S.W.** and A. K. Gupta (2008). On Matrix Variate Skew Normal Distributions. *Statistics* **42**, 179-194.

53. Gupta, A. K., **S. W. Harrar** and L. Pardo (2007), On Testing Homogeneity of Variance for Non-normal Models Using Entropy, Statistical Methods and Applications **16**, 245-261.

54. **Harrar, S. W.** and A. K. Gupta (2007). Asymptotic Expansion for the Null Distribution of the F-Statistic in One-Way ANOVA under Non-normality. *Annals of the Institute of Statistical Mathematics* **59**, 531-556.

55. Gupta, A. K., **S. W. Harrar** and Y. Fujikoshi (2006). Asymptotics for Testing Hypothesis in Some Variance Components Model under Non-normality. *Journal of Multivariate Analysis* **97**, 148-178.

56. **Harrar, S.W.**, E. Seneta and A. K. Gupta (2006). Duality between Matrix Variate T and Matrix Variate V. G. Distributions. *Journal of Multivariate Analysis* **97**, 1467-1475.

57. **Harrar, S.W.** and A. K. Gupta (2005). On the Distribution of the LBI criterion in MANOVA under Non-normality. Statistics 39, 405-414.

Other Non-Refereed Publication

1. Chunxu Liu, Arne C. Bathke and **Solomon W. Harrar** (2008), A Nonparametric Version of Wilks' Lambda – Asymptotic Results and Small Sample Approximations, In: Proceedings of the 2008 Joint Statistical Meetings, Alexandria, VA. American Statistical Association, pp. 3244-3252.

2. Arne C. Bathke and **Solomon W. Harrar** (2006), Testing Treatment Effects in Multivariate Factorial Designs with Many Factor Levels, In: Proceedings of the 2006 Joint Statistical Meetings, Alexandria, VA. American Statistical Association, pp.1664-1667.

3. **Solomon W. Harrar**, Linear Model under Non-normality, Unpublished PhD Thesis, Bowling Green State University, Bowling Green, OH, August 2004.

4. **Solomon W. Harrar**, Two New Methods for Low Dose Risk Extrapolation, Unpublished MS Thesis, Addis Ababa University, Addis Ababa, Ethiopia, May 1999.

5. **Solomon W. Harrar**, Production Function for Meta Abo Brewery, Unpublished BS Project, Addis Ababa University, Addis Ababa, Ethiopia, May 1990.

Colloquia, Seminar, Symposia and Conference Presentations

1. Nonparametric Finite Mixture: Applications to Contaminated Trials, 15th International Conference of the ERCIM WG on Computational and Methodological Statistics, King's College London, 17-19 December 2022, London, United Kingdom. December 19, 2022. **(Invited Talk, Virtual Presentation)**

2. Nonparametric Finite Mixture: Applications for Contaminated Groups, 2022 IMS International Conference on Statistics and Data Science (ICSDS), December 13–16, 2022, Florence, Italy. December 14, 2022. **(Invited Talk)**

3. Nonparametric Inference for Nonmetric Data, Statistics Seminar, Department of Management and Engineering, University of Padova, Italy. December 5, 2022. **(Invited Seminar)**

4. Nonparametric Finite Mixture: Applications to Contaminated Trials, Department of Statistics, University of Padua, Italy. November 11, 2022. **(Invited Seminar)**

5. Nonparametric Finite Mixture: Applications to Contaminated Trials, Department of Mathematics, Division of Applied Mathematics, Liköping University, Sweden. October 11, 2022. **(Invited Seminar)**

6. Weak Dependence Conditions for High-Dimensional Inference: Applications to Group Comparisons, , Institute of Biometry and Clinical Epidemiology, Charité University of Medicine, Berlin, Germany. October 6, 2022. **(Invited Seminar)**

7. Nonparametric Finite Mixture: Applications to Contaminated Trials, Institute of Biometry and Clinical Epidemiology, Charité University of Medicine, Berlin, Germany. September 29, 2022. **(Invited Seminar)**

8. Dr Yin's Shining Careerer at the University of Kentucky and Beyond, Xiangrong Yin Memorial Session, Joint Statistical Meeting, August 9, 2021. **(Invited Panel, Virtual Presentation)**

9. Exploratory multivariate analyses (focus: PCA), Summer School Bressanone, Italy. July 8-12, 2019. **(Instructor)**

10. Descriptive statistics, hypothesis testing (including CIs), Summer School Bressanone, Italy. July 8-12, 2019. **(Instructor)**

11. High-Dimensional Rank-Based Inference, 2019 International Chinese Statistical Association (ICSA) Applied Statistics Symposium, Raleigh, North Carolina. June 9 -- 12, 2019. **(Invited Talk)**

12. Weak Dependence Conditions for High-Dimensional Inference: Applications to Group Comparisons, African International Conference, Adama, Ethiopia. May 27 -- 30, 2019. **(Keynote Speech)**

13. Clustered Data Analysis: Applications in Diagnostic Medicine, Bahir Dar University, Bahir Dar, Ethiopia. May 23, 2019. **(Public Lecture)**

14. Weak Dependence Conditions for High-Dimensional Inference: Applications to Group Comparisons, Department of Mathematics and Statistics, University of Illinois – Chicago, Chicago, Illinois. May 1, 2019. **(Colloquium)**

15. Nonparametric Multivariate Inference in High Dimensions, Novartis Pharmaceuticals, Shanghai, China. July 11, 2018. **(Invited Talk)**

16. Multivariate Tests in High Dimensions: Applications to EEG Experiment, International Biostatistics Workshop, School of Statistics and Finance, East China Normal University, Shanghai, China. July 9, 2018. **(Invited Talk)**

17. Nonparametric Multivariate Inference in High Dimensions, 2018 ICSA China Conference with Focus on Data Science, International Chinese Statistical Association, Qingdao, China. July 2 – 5, 2018. **(Invited Talk)**

18. Nonparametric Methods for Partially Paired Clustered Data, New York University – Shanghai, Shanghai, China. June 18, 2018. **(Seminar)**

19. Multivariate Test in High Dimensions and Unstructured Dependence, 2nd International Conference on Econometrics and Statistics (EcoSta 2018), Hong Kong, China, June 19--21, 2018. **(Invited Talk)**

20. High-Dimensional Multivariate Analysis: Applications to EEG Experiment, Colloquium, Department of Statistics, Addis Ababa University, Addis Ababa, Ethiopia. March 22, 2018. **(Colloquium)**

21. Nonparametric Methods for Partially Paired Clustered Data, Department of Statistics, Kansas State University, Manhattan, Kansas. November 16, 2017. **(Colloquium)**

22. Inference for Related Sample When Some Information Is Missing, IMS/ASA Spring Research Conference, Rutgers University, New Jersey, May 17-19, 2017. **(Invited Talk)**

23. Confidence Region for Level Differences in Growth Curve Models: Low- and High-Dimensional under Non-Normality, 10th International Conference on Computational and Financial Econometrics (CFE 2016) and 9th International Conference of the ERCIM (European Research Consortium for Informatics and Mathematics) Working Group on Computational and Methodological Statistics (CMStatistics 2016), Multivariate data when dimensions are large, but samples are not, December 9-11, Sevilla, Spain. **(Invited Talk)**

24. High-dimensional inference for repeated measures data, International Statistics Festival Salzburg 2016, High Dimensions or Small Samples (invited session), July 13—15, Salzburg, Austria. **(Invited Talk)**

25. Assessing Treatment Efficacy When Some Information is Missing, Symposium entitled "The physiology that unites exercise and cognition", April 28, 2016, University of Eastern Finland, Kuopio, Finland. **(Invited Talk)**

26. High-Dimensional Multivariate Repeated Measures Analysis with Unequal Covariance Matrices, Salzburg Mathematics Colloquium, May 12, 2016, Department of Mathematics, Salzburg University, Salzburg, Austria. **(Colloquium)**

27. Confidence Regions for Level Differences in Growth Curve Models: Low- and High-Dimensional Under Non-Normality, 2015 Joint Statistical Meeting, Session in Nonparametric Methods for Big Data, Empirical Likelihood, and Additive Model, Seattle, WA, August 2015. **(Contributed Talk)**

28. Handling Missing Data in Multivariate Analysis: Intention-to-Treat (ITT) Approach International Conference on Statistics-2015: Theory to Practice, March 16-18, 2015, Jimma University, Jimma, Ethiopia. **(Invited Talk)**

29. Nonparametric Inference for Related Samples with Missing Data: Application to a Smoking Cessation Trial, Biostatistics Seminar, Department of Public Health Sciences, Medical University of South Carolina, January 26, 2015. **(Invited Seminar)**

30. Nonparametric Inference for Related Samples with Missing Data: Application to a Smoking Cessation Trial, Mountain West Clinical and Translational Research Idea Network (MW CTR-IN), November 21, 2014. **(Invited Talk)**

31. High-Dimensional Multivariate Repeated Measures Analysis with Unequal Covariance Matrices, Department of Mathematics and Statistics, University of Maryland -Baltimore County, Baltimore, Maryland, November 7, 2014. **(Colloquium)**

32. An Overview of Multivariate Analysis, Department of Psychology, Salzburg University, Salzburg, Austria, June 30, 2014. **(Seminar)**

33. How to Make Efficient Inference on Means in Paired Samples when Information is Missing the Annual Meeting of Austrian Statistical Society, Salzburg, Austria, June 18, 2014. **(Keynote Speech)**

34. Accurate Mean Comparisons for Paired Samples with Missing Data: An Application to a Smoking Cessation Trial, 23rd Annual Meeting of the Ethiopian Statistical Association, Addis Ababa, Ethiopia, April 26, 2013. **(Invited Talk)**

35. Analysis of High-Dimensional Repeated Measures Data under Non-normality, Department of Statistics Seminar, Addis Ababa University, April 23, 2014. **(Colloquium)**

36. Analysis of High-Dimensional Repeated Measures Data under Non-normality, Department of Statistics Seminar, University of Kentucky, November 22, 2013. **(Colloquium)**

37. Estimating Accuracy of Diagnostic Tests in the Absence of a Perfect Reference, Applied Mathematics and Statistics Seminar, University of Montana, May 7, 2013. **(Seminar)**

38. Adjusting Linear Models for Current Needs: Randomization in a Smoking Cessation Trial, Applied Mathematics and Statistics Seminar, Department of Mathematical Sciences, The University of Montana, October 23, 2012. **(Seminar)**

39. Motivational Interviewing for Smoking Cessation in College Students: A Group Randomized Trial, Math Club Seminar, Department of Mathematical Sciences, The University of Montana, September 25, 2012. **(Seminar)**

40. Nonparametric Inference for Related Samples with Missing Data, Applied Mathematics and Statistics Seminar, Department of Mathematical Sciences, The University of Montana, January 31, 2012. **(Seminar)**

41. The Ethiopia, China and UM Triangle: Research Potentials and Opportunities for Collaboration, International Brown Bag Lecture Series, Sponsored by International Programs, The University of Montana, October 20, 2011. **(Public Lecture)**

42. Accurate Mean Comparisons for Paired Samples with Missing Data: An Application to a Smoking Cessation Trial, Annual Meeting of the Montana Chapter of the American Statistical Association, Bozeman, MT, September 13, 2011. **(Invited Talk)**

43. Motivational Interviewing for Smoking Cessation in College Students: A Group Randomized Trial, Graduate Seminar, School of Public Health, Addis Ababa University, July 1, 2011. **(Seminar)**

44. Overview Lecture on Repeated Measure and Longitudinal Data Analysis, PhD Seminar, School of Public Health, Addis Ababa University, May 13, 2011. **(Seminar)**

45. Time Series Methods for Assessing and Predicting Pneumonia and Influenza Epidemics: The Case of USA, School of Public Health, Addis Ababa University, May 6, 2011. **(Seminar)**

46. Data Analysis in R. PhD Seminar, School of Public Health, Addis Ababa University, May 6, 2011. **(Seminar)**

47. Structural Equation Modelling in R--Part I. Institute of Psychology, Addis Ababa University, June 28, 2010. **(Seminar)**

48. Structural Equation Modelling in R--Part II. Institute of Psychology, Addis Ababa University, July 5, 2010. **(Seminar)**

49. Tests in Repeated Measures under General Conditions: Asymptotic Expansions and Applications, Department of Statistics, Kansas State University, Manhattan, KS, October 2009. **(Colloquium)**

50. Modified Rank-Based MANOVA: Asymptotics and Small Sample Approximations, 2009 Joint Statistical Meeting, Contributed Session in Nonparametric Statistics, Washington, DC, August 2009. **(Contributed Talk)**

51. Modified Rank-Based MANOVA: Asymptotics and Small Sample Approximations, Nonparametric Statistics, Refined, Redefined, and Renewed (Workshop), Invited Session: Multivariate and Repeated Measurements Designs, Arlington, TX, April 2009. **(Invited Talk)**

52. Ethiopia Today: Ancient Traditions and New Challenges, Sponsored by International Program, The University of Montana, March 2009. **(Panel Discussion)**

53. Asymptotic Expansions for Multivariate Statistics under General Conditions: Applications to the Profile Analysis, Department of Statistics, Addis Ababa University, Addis Ababa, Ethiopia, July 2008. **(Colloquium)**

54. Asymptotic Expansion of the Null Distributions of Test Statistics for Profile Analysis under General Conditions. 2008 Joint Statistical Meeting, Contributed Session in Statistical Testing, Denver, CO, August 2008. **(Contributed Talk)**

55. On the Null and Non-null Distributions in Profile Analysis under Non-normality. International Conference on Multivariate Statistical Modelling and High Dimensional Data Mining, Invited Session on Multivariate Estimation and Testing, June 19-23, Kayseri, Turkey. **(Invited Talk)**

56. Testing Homogeneity of Variances for Non-normal Models Using Entropy, 2007 Joint Statistical Meeting, Salt Lake City, Utah, August 2007. **(Contributed Talk)**

57. Robustness Study for Tests on Mean Vectors, Eastern China Normal University, Shanghai, China, June 1, 2007. **(Colloquium)**

58. Robustness Study of MANOVA Statistics for Profile Analysis and Tests of Dimensionality, Session on Matrices and Statistics, The 15th International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematical & Statistical Techniques, Shanghai, China, May 23, 2007. **(Invited Talk)**

59. Testing Homogeneity of Variance for Non-normal Models Using Entropy, Annual Meeting of the Montana Chapter of the American Statistical Association, Butte, Montana, September 2006. **(Invited Talk)**

60. Duality between Matrix Variate t and Matrix Variate V.G. Distributions, Annual Meeting of the Institute of Mathematical Statistics, Rio de Janeiro, Brazil, August 2006. **(Contributed Talk)**

61. Nonparametric Methods in Multivariate Factorial Designs when the Number of Factor Levels is Large. Universität Hannover, Hanover, Germany, June 2006. **(Invited Talk)**

62. Duality between Matrix Variate t and Matrix Variate V.G. Distributions, The fifteenth International Workshop on Matrices and Statistics, Uppsala, Sweden, June 2006. **(Invited Talk)**

63. Multivariate Factorial Designs when The Number of Factor Levels is Large, Department of Mathematical Sciences, University of Montana, Missoula, Montana, April 2006. **(Colloquium)**

64. Asymptotic Expansion for ANOVA and MANOVA under Non-normality, Department of Mathematics and Statistics, South Dakota State University, Brookings, South Dakota, March 2006. **(Colloquium)**

65. Asymptotic Expansion for ANOVA and MANOVA under Non-normality, Colloquium, Department of Mathematics and Statistics, Western Illinois University, Macomb, Illinois, March 2006. **(Colloquium)**

66. Multivariate Factorial Designs for Large Number of Factor Levels, Department of Mathematics and Statistics, Texas tech University, Lubbock, Texas, February 2006. **(Colloquium)**

67. Asymptotic Expansion for Analysis of Variance under Non-normality, University of Kentucky, Lexington, Kentucky, October 2005. **(Invited Talk)**

68. Asymptotics for Multivariate Mixed Models under Non-normality, Conference on Applied Statistics in Agriculture, Kansas State University, Manhattan, Kansas, April 2005. **(Invited Talk)**

69. Asymptotic Expansion for the Null distribution of the ANOVA F-Statistic under Non-normality, 2005 Joint Statistical Meeting, Minneapolis, Minnesota, August 2005. **(Contributed Talk)**

70. Matrix Variate Skew Normal Distributions, Eastern North America Regional Meeting, International Biometric Society, Austin, Texas, March 2005.

71. Asymptotics for Testing Hypothesis in Some Variance Components Model under Nonnormality, Justus F. Seely Memorial Conference, Oregon State University, Corvallis, Oregon, USA, August 2003. **(Poster)**

72. MANOVA under Nonnormality. 10th Spring Research Conference on Statistics in Industry And Technology, Institute of Mathematical Statistics, Dayton University, Dayton, Ohio, June 2003. **(Contributed Talk)**

73. The Problems of Low Dose Extrapolation, Annual Conference of the Ethiopian Statistical Association, Addis Ababa University, Addis Ababa, Ethiopia, January 1998. **(Invited Talk)**

Other Conferences and Workshops Participation without Presenting

1.   Joint Statistical Meeting, Denver, Colorado. July 27 – August 1, 2019.

2.   University of Salzburg Summer School 2019, Missing Values and Estimands, Strobl am Wolfgangsee, Austria. July 3 -- 6, 2019.

3.   Joint Statistical Meeting, Vancouver, Canada. July 28 – August 2, 2018.

4.   Joint Statistical Meeting, Baltimore, MD. July 29 – August 3, 2017.

5.   Short Course on Higher-Order Asymptotic Methods in Statistics and Econometrics, by Prof. Elvezio Ronchetti (University of Geneva, Switzerland.), 10th International Conference on Computational and Financial Econometrics (CFE 2016) and 9th International Conference of the ERCIM, December 8, 2016 (9:00-1:30PM), Seville, Spain.

6.   Short Course on C(α) tests in statistics and econometrics: nuisance parameters, plug-ins and invariance, by Prof. Jean-Marie Dufour (McGill University, Canada), 10th International Conference on Computational and Financial Econometrics (CFE 2016) and 9th International Conference of the ERCIM, December 8, 2016 (3:00PM-7:30PM), Seville, Spain.

7.   Joint Statistical Meeting 2014, Boston, MA. August 2-7, 2014.

8.   Annual Meeting of the Mountain West CTR-IN, University of Nevada-Las Vegas, Las Vegas, Nevada, June 23rd – 25th, 2014.

9.   Joint Statistical Meeting 2012, San Diego, CA. July 28-August 2, 2012.

10.   The sixth Graduate Student and Faculty Research Conference, The University of Montana, Missoula, Montana, April 2009.

11.   Annual Meeting of the Montana Chapter of the American Statistical Association. Butte, MT. September 16, 2008.

12.   Annual Meeting the Montana Chapter of the American Statistical Association. Butte, MT. September 16, 2008.

13.   The sixth Graduate Student and Faculty Research Conference, The University of Montana, Missoula, Montana, April 2008.

14.   MT INBRE Faculty Networking Forum, Salish Kootenai College, Pablo, MT. September 18-19, 2008.

15.   Second Annual Northern Rocky Mountain Conference on Infectious Disease and Environmental Health Conference. Big Sky, MT, September 27-29, 2007.

16.   The sixth Graduate Student and Faculty Research Conference, The University of Montana, Missoula, Montana, April 2007.

17. Eastern North America Regional Meeting, International Biometric Society, Atlanta, Georgia, March 2007.

18. Short Courses on Design and Analysis of Microarray Experiments and Modern Population Genetics Data, Third Seattle Symposium in Biostatistics: Statistical Genetics and Genomics, November 2005.

19. Third Seattle Symposium in Biostatistics: Statistical Genetics and Genomics, November 2005.

20. Gene Expression Data Analysis Workshop, Johns Hopkins University, June 2005.

21. International Workshop on Information Technology and Ethiopic Computing, UNECA, Addis Ababa, Ethiopia, August 1997.

22. Annual Conferences of the Ethiopian Statistical Association, Addis Ababa University, Ethiopia, 1990 – 1999.

HONORS, GRANTS AND AWARDS

1. Principal Investigator, Carnegie African Diaspora Fellowship Program, Carnegie Corporation of New York. $15,000. May 15, 2021 – August 15, 2021.

2. Fulbright Award (March 1--June 30, 2016), Visiting Professor, Department of Mathematics, Faculty of Natural Science, Salzburg University, Salzburg, Austria.

3. Co-Investigator, Wood Stove Interventions and Child Respiratory Infections in Rural Communities, NIH/NIEHS (Noonan, Ward, MPIs) 06/19/14 – 03/31/19.

4. Principal Investigator, Sample size requirements and power in randomized clinical study with screening misclassification, Clinical and Translational Research-IDeA Network (CTR-IN), Biostatistics Pilot Project (sub-award from NIH/NIGMS 5U54GM104944-02), $22,000, May 1- June 30, 2015.

5. Principal Investigator, American Indian--Alaskan Native Clinical and Translational Research Center (AI-AN CTRC), PI for the Clinical Research Design, Epidemiology and Biostatistics Core, University of Montana Subcontract, NIH-NIGMS, $300,086, July 2015-June 2020. (Role terminated in August 2015 when the Tenure track position in MT ended.)

6. Clinical and Translational Research Infrastructure Network IDeA-CTR, PI for the sub-award of NIH 1U54GM104944-01A1, Sub-award No: 3RN79, $174,370, July 2013 – June 2018. (Role terminated in August 2015 when the Tenure track position in MT ended.)

7. Faculty International Exchange Award (plus $3,500 for travel), January 2010. To spend fall 2010 semester at East China Normal University, China and spring 2011 semester at Addis Ababa University, Ethiopia. Office of International Programs, The University of Montana.

8. Pace Visiting Scholar / Mentor Award, March 2010, To support the visit of scholar Dr. Haiyan Wang from Kansas State University ($2,105).

9. Principal Investigator, Flexible Statistical Methods for Analyzing Quality of Life Outcomes, University of Kentucky and the CCTST collaborative pilot grant. Letter of Intent (2018); $50,000. (unsuccessful).

10. Principal Investigator, Compatible Nonparametric Inference with Multivariate Data: High Dimensions and Small Samples, National Science Foundation DMS (2016); $344,648. (unsuccessful)

11. Principal Investigator, Nonparametric Multiple Contrast Tests and Simultaneous Confidence Intervals for Factorial Multivariate Designs, National Science Foundation DMS (2015). (unsuccessful)

12. Principal Investigator, Robust inferential methods for repeated measures with missing data. National Health Institute R01 (2015), $804,996.00. (unsuccessful)

13. Principal Investigator. National Science Foundation ($269,144). Nonparametric Methods for High-dimensional and Clustered Multivariate Data. Submitted in November 2008. (unsuccessful)

14. Estimation Problems for Assessing the Accuracy (Effectiveness) of Diagnostic Tests ($50,000), Mountain West Clinical and Translational Research – Infrastructure Network Pilot Grant. (2014) (unsuccessful)

15. Addis Ababa University-The University of Montana Partnership Collaboration: Public Executive Management Training Center ($15,000), Embassy of the United State of America, Ethiopia. Submitted in March 2011. (unsuccessful)

16. National Institute of Statistical Sciences and the American Statistical Association ($450). Travel Award to attend a writing workshop and the 2008 Joint Statistical Meeting in Denver, CO. August 3-7, 2008.

17. Pace External Mentor Award ($2,716). Spring 2008. To support visit of the scholar Dr. Karen Williams from University of Missouri-Kansas City.

18. Principal Investigator. University Research Grant Program ($3,600). May 2008-August 2009 "A New Multivariate Statistical Method for Detecting Gene Differential Expression Using Oligonucleotide Microarrays", May 1, 2008-August 31, 2009.

19. Co-investigator, R01 CA107191– National Cancer Institute ($1,906,267). June 2005 – May 2010. "Smoking Cessation in College Fraternities and Sororities", (Kari J. Harris, PI).

20. NIH Career Development Grant ($249,439).   To support career transition with the emphasis of acquiring expertise in the application of statistics to Biomedical Sciences, submitted November 2007. (unsuccessful)

21. Distinguished Dissertation Award for 2006, Graduate College, Bowling Green State University, Bowling Green, Ohio. (carried $500 Cash Award)

22. Dr. Sherwood and Elizabeth Berg Faculty Award, April 2006, South Dakota State University, For faculty who is in the first five years of their academic career, and who has "demonstrated commitment and encouraging potential to carry out the land grant philosophy of integrating teaching, research and outreach" (carried $4000).

23. Travel Award, August 2006, NSF through Cornell University, $1250 award to travel to the Annual Institute of Mathematical Statistics Meeting in Rio de Janeiro, Brazil.

24. Laha Travel Award for 2006, Institute of Mathematical Statistics, $500 award to travel to the Annual Institute of Mathematical Statistics Meeting in Rio de Janeiro, Brazil.

25. Mathematics and Statistics Graduate Assistant Excellence in Teaching Award for 2003-2004, Department of Mathematics and Statistics, Bowling Green State University, Bowling Green, OH 43403.

26. Travel Award, August 2003, Department of Statistics, Corvallas, Oregon, $500 award to travel to the Justus F. Seely Memorial Conference on Linear Models, Oregon State University, Corvallis, Oregon.

27. Eugene and Elizabeth Lukacs Memorial Scholarship, Bowling Green State University, Bowling Green, Ohio, USA, May 2001.

28. DAAD In-country Scholarship, German Academic Exchange Service, Academic and Cultural Department of the German Embassy, Addis Ababa, Ethiopia, September 1997-August 1999

29. Annual Best Students Award for 1990, Addis Ababa University, Addis Ababa, Ethiopia.

GRADUATE WORK DIRECTION

1. <u>PhD Completed</u>
a) John Z. Hossler, "Inference for High-Dimensional Doubly Multivariate Data under General Conditions", **PhD Dissertation in Mathematical Sciences**, University of Montana, May 2012. (Assistant Professor, Seattle Pacific University)

b) Xiaoli Kong, **PhD in Statistics**, University of Kentucky, Summer 2018. (Assistant Professor, Loyola University -- Chicago)

c) Merga Belina Feyasa, **PhD in Statistics**, Addis Ababa University, Addis Ababa University (Ethiopia), May 2019. (Assistant Professor, Addis Ababa University, Ethiopia)

d) Alejandro T. Villasante, **PhD in Statistics**, University of Kentucky, December 2019. (Assistant Professor of Biostatistics, The University of Texas Medical Branch)

e) Yue Cui, **PhD in Statistics**, University of Kentucky, Summer 2020. (Assistant Professor, Missouri State University)

f) Yan Xu, **PhD in Statistics**, University of Kentucky, Fall 2020. (Senior Biostatistician at Merck, Philadelphia)

g) Ting Zeng, **PhD in Statistics**, University of Kentucky, Summer 2021.

h) Zi Ye, **PhD in Statistics**, University of Kentucky, Summer 2021. (Assistant Professor, Lehigh University)

2. <u>PhD Current</u>

a) Changrui Liu, **PhD in Statistics**, University of Kentucky, Expected December 2022.

b) Swetalina Maity, PhD in Statistics, University of Kentucky, Expected May 2023.

c) Shuryya Mitra, PhD in Statistics, University of Kentucky, Expected May 2023.

3. <u>Masters Completed</u>

a) Martin Happ, **MSc in Mathematics with Statistics Emphasis**, Salzburg University (Austria), May 2016. (Co-advisor)

b) Martha Ellis, "Estimating Survival and Transitions out of Dormancy using Mark-Recapture Methods", **MS in Mathematical Sciences**, University of Montana, Fall 2011.

c) Andrew McDonald, "Logistic Regression and Zero-Inflated Poisson Models for Smoking Cessation Trials", **MS in Mathematical Sciences**, University of Montana, Fall 2010.

d) Jordan Purdy, "A Comparison of Analytical Methods for DNA Microarrays", **MS in Mathematical Sciences**, University of Montana, Spring 2008.

e) John Z. Hossler, "Examining the Skew-Normal Distribution", **MS in Mathematical Sciences**, University of Montana, Spring 2008.

GRADUATE COMMITTEE MEMBERSHIP (with degree semester)

1. Joe Christensen, MS in Mathematics, South Dakota State University, Spring 2005.

2. Jonathan Spronk, MS in Animal Science, South Dakota State University, Spring 2005.

3. Howard Wey, MS in Mathematics, South Dakota State University, Spring 2006.

4. Nicholas Wang, MS in Mathematics (Statistics Emphasis), South Dakota State University, Spring 2006.

5. Jake Mohrmann, MS in Geosciences, University of Montana, Spring 2007.

6. Martha Ellis, PhD in Wildlife Biology, University of Montana, Spring 2007-2010.

7. John Chandler, PhD in Mathematical Sciences (Statistics Emphasis), University of Montana, Spring 2010.

8. Kathryn Makarowski, MS in Environmental Studies, University of Montana, Summer 2009.

9. Joran Elias, PhD in Mathematical Science (Statistics Emphasis), University of Montana, Spring 2009.

10. Liam Rafferty, PhD in Mathematical Sciences, University of Montana, Spring 2011.

11. Jordan Purdy, PhD in Mathematical Sciences (Statistics Emphasis), University of Montana, Spring 2012.

12. James Furland, MSc in Forestry, University of Montana, Spring 2012.

13. Yelebe Berhanu, PhD in Geosciences, University of Montana, Spring 2015.

14. Leslie Croot, PhD in Clinical Psychology, University of Montana, Fall 2015.

15. Daniel Dewey, PhD in Clinical Psychology, University of Montana, Spring 2015.

16. Rebecca Crouch, PhD in Statistics, University of Kentucky, Fall 2016.

17. Qingcong Yuan, PhD in Statistics, University of Kentucky, Spring 2017.

18. Sarah Janse, PhD in Statistics, University of Kentucky, Fall 2017.

19. I-Chen Chen, PhD in Biostatistics, University of Kentucky, Spring 2018.

20. Carissa Truman, MS in Animal and Food Science, University of Kentucky, Fall 2018.

21. Ye Li, PhD in Statistics, University of Kentucky, Fall 2018.

22. Jin Xie, PhD in Statistics, University of Kentucky, Fall 2018.

23. Jared Antrobus, PhD In Mathematics, University of KY, Summer 2019

24. Chenlu Ke, PhD in Statistics, University of Kentucky, Spring 2019.

25. Jiaying Weng, PhD in Statistics, University of Kentucky, Spring 2019.

26. Tefjol Pllaha, PhD in Mathematics, University of Kentucky, Spring 2019.

27. William F. Trok, PhD in Mathematics, University of Kentucky, Spring 2020.

28. Anna Pavy, MAS in Applied Statistics, University of Kentucky, Spring 2020.

29. Lile Taylor, MAS in Applied Statistics, University of Kentucky, Spring 2020.

30. Weihang Ren, PhD in Statistics, University of Kentucky, Spring 2020.

31. Yixuan Zou, PhD in Statistics, University of Kentucky, Spring 2020.

32. Kedai Cheng, PhD in Statistics, University of Kentucky, Spring 2020.

33. Jay White, PhD in Mathematics, University of Kentucky, Spring 2021.

34. Hunter Lehmann, PhD in Mathematics, University of Kentucky, Summer 2021.

35. Pie Wang, PhD in Statistics, University of Kentucky, Spring 2021.

36. Xiao Shi, PhD in Statistics, University of Kentucky, Spring 2021.

37. Eric Kaper, PhD in Mathematics, University of Kentucky, Current.

38. Benjamin Jani, PhD in Mathematics, University of Kentucky, Current.

39. Azita Varziri, PhD in Agricultural Economics, University of Kentucky, Current.

40. Lei Fang, PhD in Statistics, University of Kentucky, Current.

41. Yafan Gao, PhD in Statistics, University of Kentucky, Current.

42. Xitong Zhou, PhD in Statistics, University of Kentucky, Current.

43. Percy Yeh, PhD in Statistics, University of Kentucky, Current.

44. Jiacheng Xu, PhD in Statistics, University of Kentucky, Current.

MENTORING FACULTY AND INTERNATIONAL DOCTORAL STUDENTS

1. **Faculty Mentor**, To Associate Professor Derek Young, Department of Statistics, University of Kentucky, Fall 2020 – Now.

2. **Faculty Mentor,** To Assistant Professor Chenglong Ye, Department of Statistics, University of Kentucky, Fall 2019 – Spring 2020.

3. **Faculty Mentor,** To Assistant Professor Ya Su, Department of Statistics, University of Kentucky, Fall 2018 –Spring 2020.

4. **Fabrizio Ronchi,** PhD Student in Managerial Engineering, University of Padua, Italy. (July 1 – Dec 21, 2017 and April 1 – June 27, 2018)

5. **Nicole Winterberg**, PhD Student in Mathematics, Salzburg University, Austria, Spring 2014.

6. Martin Happ, PhD Student in Mathematics, Salzburg University, Austria. Spring 2016.

7. **Frank Konietschke**, PhD Student in Medical Statistics, Gottingen University, Germany. (March 1 – 30, 2009)

EXTERNAL EXAMINER

1. **Kyle E. Helfrich,** PhD Dissertation in Mathematics, University of Kentucky. **(External Examiner)**

2. **Precious Mdlongwa,** PhD Dissertation in Statistics, Botswana International University of Science and Technology, Botswana. August 2019. **(Viva Voce Examiner)**

3. **Precious Mdlongwa,** PhD Dissertation in Statistics, Botswana International University of Science and Technology, Botswana. February 2018. **(Thesis External Reviewer)**

4. **Baleegh Sood Abdulra Alobaid,** PhD Dissertation in Material Science and Engineering, University of Kentucky. **(External Examiner)**

5. **IN Mathebula**, MS Research Dissertation in Statistics, University of Limpopo, South Africa. July 2016. **(Thesis External Assessor)**

6. **Tigist Mideksa,** MS Thesis in Statistics, Addis Ababa University. June 2011. **(Thesis Oral Examiner)**

7. **Seifu Neda,** MS Thesis in Statistics, Addis Ababa University. June 2011. **(Thesis Oral Examiner)**

8. **Yibeltal Arega,** MS Thesis in Statistics, Addis Ababa University. June 2011. **(Thesis Oral Examiner)**

TEACHING

Courses Developed

University of Kentucky

a. STA 695 -- Missing Data Analysis (topics)
b. STA 650 -- Applied Multivariate Analysis (online)

University of Montana

a. Stat 491 -- Biostatistics
b. Stat 542 -- Linear Mixed Effects Models
c. Stat 543-- Applied Multivariate Analysis
d. Stat 544-- Time Series Analysis

South Dakota State University

a. Stat 685-- Statistical Inference I
b. Stat 785-- Statistical Inference II
c. Stat 792--Time Series Analysis

Courses Taught

University of Kentucky

a. STA 701-- Advanced Statistical Inference I, Textbooks: (1) Theory of Point Estimation, E. Lehmann and G. Casella, 2nd Edition and (2) Mathematical Statistics, Jun Shao, 2nd Edition. (Fall 2018, 2019, 2020)
b. STA 603--Applied Linear Models, Textbook: Applied Linear Statistical Models, Kutner et al., Fifth Edition (Spring 2017)
c. Advanced Mathematical Statistics (block format), Textbook: None, Salzburg University, Salzburg, Austria, (March 2016)
d. STA 695--Statistical Analysis of Missing Data, Textbook: Statistical Analysis of Missing Data, Little and Rubin, Wiley 2002.
e. STA 623 – Theory of Probability, Textbook: G. Casella and R. L. Burger, Statistical Inference, 2nd edition (Fall 2014, 2015, 2016, 2017)
f. STA 606 – Theory of Inference I, Textbook: G. Casella and R. L. Burger, Statistical Inference, 2nd edition (Spring 2015, Spring 2019, Spring 2021)
g. STA 607 – Theory of Inference II, Textbook: G. Casella and R. L. Burger, Statistical Inference, 2nd edition (Fall 2013, 2014)
h. STA 650 – Applied Multivariate Statistics, Textbook: R. A. Johnson and D. W. Wichern, Applied Multivariate Statistical Analysis, Sixth Edition -- ONLINE (Fall 2017, 2018, 2019)
i. STA 661 – Multivariate Analysis I, Textbook: R. A. Johnson and D. W. Wichern, Applied Multivariate Statistical Analysis, Sixth Edition (Fall 2013, 2015; Spring 2017, 2018, 2020, 2021)
j. Multivariate Statistics, Salzburg University, Salzburg, Austria. (April – June 2014).
k. Multivariate Statistics, East China Normal University, Shanghai, China (January -- March 2014)

University of Montana

a. M 103 -- Numbers as News (1 Time), Textbook: D. S. Moore, Statistics: Concepts and Controversies, 5th Edition (Spring 2010)
b. Math 442-- Mathematical Statistics II, Textbook: R. V. Hogg, J. W. McKean and A. T. Craig, Introduction to Mathematical Statistics, 6th Edition (Spring 2007, 2009)
c. Math 441-- Mathematical Statistics I, Textbook: R. V. Hogg, J. W. McKean and A. T. Craig, Introduction to Mathematical Statistics, 6th Edition (Fall 2006, 2008)
d. Math 544 -- Applied Time Series, Textbook: R. H. Shumway and D. S. Stoffer, Time Series Analysis and Its Applications with R Examples, 2nd Edition (Fall 2006)
e. Math 444 -- Statistical Methods I, Textbook: R. L. Ott and M. Longnecker, An Introduction to Statistical Methods and Data Analysis, 5th Edition (Fall 2007)
f. Math 447 -- Computer Data Analysis I (1 Time), Textbook: None (Fall 2007)
g. Math 445 -- Statistical Methods II, Textbook: R. L. Ott and M. Longnecker, 5th Edition (Spring 2008)
h. Math 448 -- Computer Data Analysis II, Textbook: None (Spring 2008)
i. Stat 544 -- Applied Time Series, Textbook: R. H. Shmway and D. S. Stoffer, Time Series Analysis and Its Applications with R Examples (Fall 2009, 2001)
j. Stat 542 -- Linear Mixed Effects Models (Fall 2009)
k. Stat 491—Biostatistics. Textbook: B. Rosner, Fundamentals of Biostatistics, 6th Edition (Fall 2011, 2012)
l. Stat 543--Applied Multivariate Analysis, Textbook: R. A. Johnson and D. W. Wichern, Applied Multivariate Statistical Analysis, Sixth Edition (Spring 2010, 2012)
m. Stat 341 – Introduction to Probability and Statistics, Textbook: R. Durrette Elementary Probability for Applications (Spring 2012)
n. Stat 421 -- Probability Theory, M. H. DeGroot and M. J. Schervish, Probability and Statistics, 4th Edition (Fall 2012)
o. Stat 422 -- Mathematical Statistics, A.M. Mood, F.A. Graybill and D. C. Boes, An Introduction to the Theory of Statistics, 3rd Edition (Spring 2013)

South Dakota State University

a. Stat 281- Introductory Statistics, Textbook: J. C. McClave and T. Sinsich, Statistics, 9th edition (Fall 2004, 2005)
b. Stat 545- Nonparametric Statistics, Textbook: W. J. Conover, Practical Nonparametric Statistics, 3rd edition (Fall 2004, 2005)
c. Stat 792- Tp-Multivariate Analysis, Textbook: None (Fall, 2004)
d. Stat 541- Statistical Methods II, Textbook: R. J. Freund and W. J. Wilson, Statistical Methods, 2nd edition (Spring 2005, 2006)
e. Stat 792- Tp-Time Series Analysis, P. J. Brockwell and R. A. Davis, Introduction to Time Series and Forecasting, 2nd edition (Spring 2005, 2006)
f. Stat 685- Statistical Inference I, G. Casella and R. L. Burger, Statistical Inference, 2nd edition (Fall 2005)
g. Stat 785- Statistical Inference II, G. Casella and R. L. Burger, Statistical Inference, 2nd edition (Spring 2006)

Bowling Green State University

a. Math 115- Introductory Statistics, Textbook: N. A. Weiss., Elementary Statistics, 5th edition. (Fall 2000, 2001; Spring 2001, 2002; Summer 2002, 2004; Total of 10 Sections)
b. Math 126- Basic Calculus, Textbook: G. C. Berresford and A. M. Rockett, Applied Calculus, 3rd edition, (Fall 2002, 2003; Spring 2003, Summer 2003)

Addis Ababa University

a. Stat 375- Sample Survey Methods, Textbook: W. G. Cochran, Sampling Techniques, 3rd edition, (Spring 2000)
b. Stat 477- Operations Research, Textbook: Operations Research: An Intrroduction, H. Taha, 5th Edition (Fall 1999)
c. Stat 271- Statistical Methods I, Textbook: Statistical Methods, G. W. Snedecor and W. G. Cochran (Fall 1999)
d. Stat 272- Statistical Methods II, Textbook: Statistical Methods, Seventh edition, G. W. Snedecor and W. G. Cochran (Spring 2000)
e. Stat 275- Probability and Statistics, Textbook: Introductory Probability and Statistical Applications, P. L. Meyer (Fall 1999)

PROFESSIONAL SERVICES

1. **Offices:**
   - **Guest Editor**, Symmetry, Special Issue on "Nonparametric Statistics and Biostatistics Methods", Forthcoming 2023.

   - **Associate Editor**, Biometrical journal, September 2022 – Now.

   - **Associate Editor**, Journal of Multivariate Analysis, January 2019 -- Now.

   - **Associate Editor**, Journal of Applied Statistics, October 2018 – Now.

   - **President**, Kentucky Chapter of the American Statistical Association, October 2016 – October 2018.

   - **President**, Statistical Society of Ethiopians in North America, August 2013 -- July 2014.

   - **President-Elect,** Statistical Society of Ethiopians in North America, August 2012- July 2013.

   - **President**, Statistical Society of Ethiopians in North America, September 2008 – August 2009.

   - **President**, Montana Chapter of the American Statistical Association, November 2007 – October 2008.

   - **President-Elect,** Statistical Society of Ethiopians in North America, September 2007 – August 2008.

- **Vice President,** Montana Chapter of the American Statistical Association, November 2006-October 2007.

- **Associate Editor,** Journal of the Ethiopian Statistical Association, July 2009 – present.

- **Advisory Board Member,** Statistics and Data Science Doctorate Program, Salzburg University, Austria, August 2016 – Now.

- **Advisory Board Member,** Ethiopian Journal of Science and Technology, November 2013 – Now.

2. **Organizing Conference, Chairing Sessions and Hosting Speakers:** (PARTIAL LIST)

- **Host,** Prof. Jin Xu, School of Statistics, East China Normal University, China, Fall 2020

- **Host,** Prof. Tesfaye Mersha, Cincinnati Children Hospital & University of Cincinnati, Spring 2022

- **Host,** Prof. Mengang Yu, University of Wisconsin-Maddison, Spring 2022

- **Host,** Prof. Yulia Gel, NSF and University of Texas-Dallas, USA, Spring 2022

- **International Organizing Committee Member,** The 6th African International Conference, May 27 – 30, 2019, Arsi University, Asella, Ethiopia.

- **Host,** Prof. Demissie Alemayehu, Vice President of Pfizer Pharmaceutical Inc. and Director of MS program at Columbia University, New York, Spring 2019.

- **Host,** Prof. Ping-Shou Zhong, Department of Mathematics, Statistics and Computer Science, University of Illinois – Chicago, Fall 2018.

- **Organizer**, Bi-annual Meeting of the Kentucky Chapter of the American Statistical Association, University of Kentucky, Fall 2018. (Short Course on Data Mining)

- **Organizer and Program Chair**, Bi-annual Meeting of the Kentucky Chapter of the American Statistical Association, University of Louisville, Spring 2018. (Overview Lecture on Quantitative Biology and Parallel Student Sessions)

- **Organizer and Program Chair**, Bi-annual Meeting of the Kentucky Chapter of the American Statistical Association, University of Kentucky, Spring 2017. (Invited Talks by NSF DMS Program Officer and Professor at Clemson, Berry Consultants and US Census Bureau)

- **Organizer and Program Chair**, Bi-annual Meeting of the Kentucky Chapter of the American Statistical Association, University of Louisville, Spring 2017. (Panel Discussion on Career Tips and Parallel Student Presentation Sessions)

- **Organizer and Chair,** Joint Statistical Meeting (JSM) 2017, Nonparametric Multiple Comparison in High Dimensions with Model Uncertainty, Topic Contributed Session.

- **Host,** Prof. Asheber Abebe, Department of Mathematics and Statistics, Auburn University, Spring 2018.

- **Host,** Prof. Kiros Berhane, Keck School of Medicine, University of Southern California, Fall 2017.

- **Host,** Prof. Luigi Salmaso, Padova University, Italy, Summer 2017.

- **Host,** Prof. Haiyan Wang, Department of Statistics, Kansas State University, Fall 2016.

- **Session Chair,** Rank-Based Methods, International Statistics Festival Salzburg 2016, July 13—15, Salzburg University, Salzburg, Austria.

- **International Organizing Committee,** "International Conference on Statistics-2015: Theory to Practice", March 17--20, Jimma University, Jimma, Ethiopia.

- **Host,** Prof. Jin Xu (East China Normal University, Shanghai, China), Department of Statistics, University of Kentucky, July 20-- August 3, 2015.

- **Host,** Prof. Levi Waldron (Fulbright-Italy grantee stationed at University of Trento), Department of Mathematics, Spring 2016, Salzburg University, Austria.

- **Host,** Prof. Leonid Kalachev, Department of mathematical Sciences, University of Montana, Spring 2014.

- **Organizer and Chair,** Annual Meeting of the Montana Chapter ASA, September 2007.

3. **Community Outreach Service:**

- Chair and Organizer: The Visions and Causes of African Renaissance TV Service (ARTs TV)**,** by Mekdes Assefa (CEO), Public Lecture, MLK Center, University of Kentucky; October 22, 2018

- Statistician Consultant, Project: Encouraging Early Screening and Diagnosis of Mild TBI/Concussion in Two At-Risk Montana Populations: A Community-Based Approach to Identify Barriers and Culturally Effective Interventions, Neural Injury Center, University of Montana. Chief Operating Officer: Cindi Laukes. June 2017.

- Statistician Consultant, Project: Measurement of Self-Efficacy, Predisposition for Collaboration, and Project Scores in Architectural Design Studio, College of Design, University of Kentucky. Investigator: Gregory Luhan. Summer, 2016.

- Provided statistical consultancy to students, faculty and other researchers, University of Montana, August 2006 -- August 2013.

- Volunteer Statistician, Election Auditing Bill compiled by the League of Women Voters of Montana and the Montana Secretary of State's Election Division and introduced in the 2009 Montana Legislature. August 18, 2008 – November 18, 2008.

- Provided statistical consultancy to students, faculty and other researchers, South Dakota State University, August 2004 -- August 2016.

- Statistical Consultant, Two Rivers Ranch, Elm Spring, SD 57791, Tel: (605) 798-5599, Ref.: Mr. Ron Ragsdale.

- Statistical Consultant, Rural Technologies, Inc. Research Laboratory, 1008 32nd Ave, Brookings, SD 57007, Tel: (605)692-6953, Ref. Dr. Christopher Mateo. (http://www.ruraltechinc.com/).

4. **University Service:** (years are cited in academic years)
    a) University Level
        i. **Provost's Academic Area Advisory Committee**, Physical and Engineering Sciences, Office of the Provost, University of Kentucky, July 2020 – Now.

        ii. **Session Chair and Judge**, The Ninth Graduate Student and Faculty Research Conference, University of Montana, Missoula, Montana, April 2008.

        iii. **Member**, Academic Standards and Curriculum Review Science and Math Subcommittee, University of Montana, 2009.

        iv. **Leader**, The University of Montana and Addis Ababa University Partnership Formation, University of Montana, 2009.

        v. **Session Chair and Judge**, The Eighth Graduate Student and Faculty Research Conference, University of Montana, Missoula, Montana, April 2008.

        vi. **Faculty Advisor**, African Students Association, University of Montana, August 2006 – August 2013.

        vii. **Session Chair and Judge**, The Seventh Graduate Student and Faculty Research Conference, University of Montana, Missoula, Montana, April 2007.

    b) College Level
        i. **College of Engineering Computer Committee**, 2005--2006. South Dakota State University, Brookings, SD 57006.

        ii. **Executive Committee**, College of Arts and Sciences, University of Kentucky, 2017 – 2020. (Member, 2017 -- 2018 and 2018 -- 2019; Chair, 2019 -- 2020)

    c) Department Level
        i.   Executive Committee, 2019 -- present

ii.   Diversity, Equity and Inclusivity (DSI) Committee, 2020 -- present (Chair: 2020, 2021)

iii. Chair Search Committee, Department of Statistics, University of Kentucky, Spring 2019.

iv.   PhD Prelim Exam Committee, Advanced Inference, 2019--2022 (Chair: 2020, 2021, 2022).

v.   Member, MS comprehensive Exam Committee, Probability Theory and Mathematical Statistics, 2015—2019, 2021. (Chair: 2016, 2017, 2019)

vi.   Member, MS Comprehensive Exam Committee, Applied Statistics, 2018 and 2019.

vii. Graduate Committee, Department of Statistics, University of Kentucky, 2014 -- 2019.

viii. Recruitment Committee, Department of Statistics, University of Kentucky, 2018 -- Now.

ix.   Chair, Mathematics Lecturer Search, University on Montana, 2010.

x.   Computer Committee, University on Montana, 2009.

xi.   Faculty Evaluation Committee Steering Committee, University on Montana, 2009.

xii.   Undergraduate Committee, University on Montana, 2009.

xiii. Colloquium Committee, University on Montana, 2008.

xiv. Chair, Statistics MS Comprehensive and PhD Prelim Exam Committee, Department of Mathematical Sciences, University on Montana, 2009.

xv.   Statistics MS Comprehensive and PhD Prelim Exam Committee, University on Montana, 2007-- 2009. (Chair 2009)

xvi.   Undergraduate Committee, University on Montana, 2007.

xvii. Coordinator of Statistical Consulting Center. My major duty was to discuss the request with the client and forward the request to one of the five statisticians within and outside the department based on the area of the expertise of the statistician. South Dakota State University, 2006.

xviii. Scholarship Committee, South Dakota State University, 2006.

xix. Biostatistics/Bioinformatics Search Committee, South Dakota State University, 2005.

5. **Referee for the Journals.** (PARTIAL LIST)
   Communications in Statistics - Simulation and Computation, International Statistical Review, Computational Statistics and Data Analysis, The American Statistician, Journal of Applied Statistics, Statistics and Probability Letters, Scandinavian Journal of Statistics, Journal of Nonparametric Statistics, Statistica Sinica, Journal of the Ethiopian Statistical Association, Biometrics, Statistical Methodology, Metrika, Journal of Statistical Planning and Inference, Journal of Multivariate Analysis**,** Ethiopian Journal of Science (SINET), Test, Communication in Statistics: Theory and Methods, Technometrics, Electronic Journal of Statistics, Journal of Biopharmaceutical Statistics, Sankhya Series A, The Canadian Journal of Statistics, Statistics in Medicine, Applied Computers and Mathematics with Applications, Mathematical and Computer Modelling, Applied Mathematics Letters, Journal of Water Resources Management, International Journal of Mathematics and Mathematical Sciences, Journal of System Science and Complexity, Statistical Methods in Medical Research, Journal of Applied Statistics, Journal of Statistical Theory and Practice, Computational Statistics and Data Analysis, Annals of the Institute of Statistical Mathematics, Mathematical Reviews, Journal of the American Statistical Association, Journal of the Royal Statistical Society: Statistical Methodology Series B, Scientific Reports, Open Statistics, Electronic Journal of Applied Statistical Analysis,.

6. **Book Reviews:** Addison-Wesley (2009), Springer (2007, 2009), Wiley (2007), Brooks/Cole Publishing (2007), Chapman & Hall (2012 two times)

7. **Grant Proposal Reviewer,** Mountain Plains Consortium (MPC), Upper Great Plains Transportation Institute (2014).

8. **Review Panel Member**, Multi-site Pilot Projects Funding Mechanism, Mountain West (MW) Clinical and Translational Research Infrastructure Network (CTR-IN), Spring 2019. MW CTR-IN is funded by a grant from the National Institute of General Medical Sciences of the National Institutes of Health: Grant #: 1U54GM104944.

9. **Book Proposal and Prospectus Reviews:** Elsevier (2006), Wiley (2006, 2016), Wiley (2012 two times)

10. **Promotion to Full**, Reviewer of Promotion to Full Professor Case for a Faculty at City University of New York (CUNY), August 2022.

11. **Tenure and Promotion,** Reviewer of Tenure and Promotion Case for a Faculty at University of Tennessee -- Knoxville, October 2019.

12. **Tenure and Promotion,** Reviewer of Tenure and Promotion Case for a Faculty at South Dakota State University, November 2012.

13. **NSF SBE--SES Grant Proposal Reviewer**, Spring 2020.

14. **NSF DMS Review Panel**, Spring 2022.

15. **Review Panel Member**, Community-Engaged Research Pilot Projects Funding Mechanism, Mountain West (MW) Clinical and Translational Research Infrastructure Network (CTR-IN), Spring 2022. MW CTR-IN is funded by a grant from the National Institute of General Medical Sciences, National Institutes of Health under grant number **U54 GM104944**

16. **Board of Directors Member,** People to People Ethiopia, Inc. People to People (P2P) is a non-governmental, non-profit organization dedicated to improving health care and reducing the spread of diseases, particularly in Ethiopia and in diaspora communities. August 2019 – Now.

17. **Member,** Institute of Mathematical Statistics, December 2004-December 2013.

18. **Member**, American Mathematical Society, January 2002- Now.

19. **Member**, American Statistical Association, January 2001 – January 2002, January 2013 – Now.

20. **Member**, Statistical Society of Ethiopians in North America, August 2002-Now.

21. **Member**, Ethiopian Statistical Association, January 1990-Now

MATHEMATICAL AND STATISTICAL SOFTWARES

Maple, Matlab, R, SAS and SPSS