RESUME Karunarathna B. (KB) Kulasekera

PERSONAL DATA

Chair and Professor
Department of Bioinformatics & Biostatistics
University of Louisville
Louisville, Kentucky 40202
Telephone: 502-852-1827/6422
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Web: http://louisville.edu/sphis/departments/bioinformatics-biostatistics

EDUCATION

Ph.D., University of Nebraska-Lincoln, 1988, Statistics
M.A., University of New Brunswick, Canada, 1984, Statistics
Postgraduate Diploma, University of Sri Lanka, 1982, Mathematics
B.Sc., University of Sri Lanka, 1980, Mathematics and Statistics

PROFESSIONAL EXPERIENCE

University of Louisville, 2012- , Chair and Professor of Bioinformatics & Biostatistics
Clemson University, 1999-2012, Professor of Statistics
Clemson University, 1994-1999, Associate Professor of Mathematical Sciences
Clemson University, 1988-1994, Assistant Professor of Mathematical Sciences

HONORS

Fellow, American Statistical Association
Elected Member, International Statistical Institute

MEMBERSHIPS

Member, Institute of Mathematical Statistics

ADMINISTRATIVE EXPERIENCE

1. **Associate Dean for Research (Int.), School of Public Health and Information Sciences, University of Louisville** (7/1/2023-)
   Administrative responsibilities: All administrative aspects of reserach activities within the school

2. **Assistant Dean for Academic Affairs, School of Public Health and Information Sciences, University of Louisville** (7/1/2017-6/30/2022)
   Administrative responsibilities include various aspects of academic and professional degree programs, joint degree programs, academic partnerships and certificate programs

3. **Chair, Department of Bioinformatics & Biostatistics, University of Louisville**, (7/1/2012-).
   Administrative and Educational Head of the Department. Responsibilities include

   - Oversee and manage all educational programs
   - Faculty, staff and student mentoring
   - Recruitment (Faculty and Students)
   - Fiscal management
   - Tenure & Promotion Assessments/Recommendations
   - Collaborative research co-ordination
   - Main liaison to the school on industrial collaborations/initiatives
   - Main liaison to interdisciplinary doctoral degree programs of the university
   - Coordinator of dual degree programs
   - Personnel management
   - Main liaison to the school on all academic and personnel matters
   - School executive committee
   - Oversee service activities

4. **Faculty Fellow, Graduate School, University of Louisville** (2021-)

   Participate in various activities related to academic administration, bench-marking and data related informational items in the graduate school including optimal GRA slot allocation.

5. **Co-Director, Center for Health Data Analytics (2021-)**

   Secure and manage research and consulting projects in health data.

6. **Lead Team Member, Strategic Planning Work-group, School of Interdisciplinary and Graduate Studies, University of Louisville**, (2017-19).

   Develop a strategic plan for graduate education and research based on university goals and future needs.

7. **Co-Chair, Bioinformatics Initiative Group (BIG), University of Louisville**, (2012-2013).

   Initialize and direct novel research and service efforts in informatics, Recommendations on optimal resource allocation, Coordinate research projects for large health care data sets.

8. **Educational Program Development**

(a) Undergraduate Minor in Applied Statistics and Data Science (Fall 2019).

(b) Online version of the MS program in Biostatistics (Fall 2018)

(c) Certificate in Biostatistics (2018); Online version (2019).

(d) Coordinator for developing the biostatistics curriculum for the new School of Public Health in Lahore, Pakistan (August 2013-2015).

(e) Revised the PhD program Biostatistics (2014)

(f) Revised the dual degree program with the Department of Mathematics at the University of Louisville (2013)

(g) Completely revised the MS degree curriculum in Biostatistics (2012-2013)

9. **Educational Collaborations/Joint Programs**:

   Domestic:

   Established inter-college 4-1 MS programs with the Department of Mathematics at Kentucky State University (http://uoflnews.com/releases/degree-collaborative/) and the Department of Mathematics at Murray State University. Similar programs are being planned with Georgetown College, Midway University, Tennessee State University and Morehead State University.

   International:

   - Established a collaborative for global online short-course programs with Edureka! Corporation-India (2018)
   - Collaborative Degree Program (MS and PhD) with Manipal University (India) and Cairo University (Egypt) —curriculum design in progress
   - Established a joint MS program with the School of Mathematics, Statistics and Computer Science at the University of KwaZulu-Natal, South Africa (2015)
   - Exchange program for MS and PhD students with the University of Philippines, University of Colombo (Sri Lanka), and Chiang Mai University (Thailand)— Discussions in progress

10. **Coordinator of Fellowships and Awards, Graduate School, Clemson University**, (2007-2009).

    - Coordination of university graduate fellowships and graduate student awards
    - Creation of guidelines and nomination procedures
    - Optimal allocation strategy development based on follow up data
    - Coordination of foundation and board of visitor graduate awards

- Clemson University Graduate Council (graduate school representative)
- Supervision of database creation & management
- Input for application software and web based procedures

11. **Director of the Graduate Program, Department of Mathematical Sciences, College of Engineering and Sciences, Clemson University**, (2005 -2012). Manage all aspects of the graduate program of the department (*over 100 students; 80 faculty members*).

    - Recruitment, evaluation, assistantship decisions and advising of graduate students
    - Management of personnel issues related to the graduate program
    - Responsible for all graduate curriculum issues
    - With a colleague created the exchange program with the University of Bremen, Germany (2009).
    - Refurbished and expanded the exchange program with the University of Kaiserslautern, Germany (2006).
    - Started the "Bridge to Graduate Studies" program for entering domestic graduate students (2006–).
    - Started the "Mathematical Sciences Open House" program for recruiting domestic students with funding from the Graduate School (program size increased from 68 in 2004 to 125 in 2011).
    - Student Nominations: 2 best university RA awards; 5 best College (2 best university) TA awards.

12. Department of Mathematical Sciences (Clemson University) Administration (2005-2012).

    - Chair, Tenure and Promotion Committee (2010-11)
    - Graduate course offering decisions and instructor selection decisions
    - Assisting in staff evaluations
    - Responsible for departmental SACS accreditation process: development & analysis of outcome measures for graduate (1999-2012) and undergraduate (1999-2002) programs.

13. Liaison between Department of Mathematical Sciences and Department of Health Sciences at Clemson University (2006-2009): Joint development of a certificate program; Consulting center initiative with the Greenville Hospital System; Student/faculty collaboration coordination.

14. Liaison between Department of Mathematical Sciences, Clemson University and the National Dropout Prevention Center (2010-2012): Development of early warning systems; Coordinate collaborative research; Sought joint funding.

PUBLICATIONS

Books

Applied Nonparametric Statistics in Reliability (2011) by Gamiz, M.L., Kulasekera, K.B., Limnios, N., and Lindqvist, B.H., Springer Series in Reliability Engineering.

Journal Publications

1. K.B. Kulasekera and Dong Ho Park, 1987, "The Class of Better Mean Residual Life at Age t_0," *Microelectronics and Reliability,* 27(4), pp. 725-735.

2. Z. Feng and K.B. Kulasekera, 1991, "Nonparametric Estimation of the Percentile Residual Life Function," *Communications in Statistics-Theory and Methods,* 20(1), pp. 87-105.

3. K.B. Kulasekera, 1991, "Smooth Nonparametric Estimation of Mean Residual Life," *Microelectronics and Reliability,* 31(1), pp. 97-108.

4. K.B. Kulasekera and K.M. Lal Saxena, 1991, "Estimation of Change Point in Failure Rate Models," *Journal of Statistical Planning and Inference,* 29, pp. 111-124.

5. K.B. Kulasekera and David W. Tonkyn, 1992, "A New Discrete Distribution with Applications to Survival, Dispersal and Dispersion," *Communications in Statistics-Simulation and Computation,* 21(2), pp. 499-518.

6. K. Alam and K.B. Kulasekera, 1992, "Truncation Error in the Expansion of the Distribution of a Quadratic Form", *Sankhya (B),* 54(1), pp. 13-23.

7. K. Alam and K.B. Kulasekera, 1993, "A Nonparametric Sequential Selection Procedure," *Sequential Analysis,* 12(3 & 4), pp. 271-288.

8. K. Alam and K.B. Kulasekera, 1993, "Estimation of the Quantile Function of Residual Life Time Distribution," *Journal of Statistical Planning and Inference,* 37(3), pp. 327-338.

9. K.B. Kulasekera, 1994, "Approximate MLE's of the Parameters of a Discrete Weibull Distribution," *Microelectronics and Reliability,* 34, pp. 1185-1188.

10. K. Alam and K.B. Kulasekera, 1994, "On the Error Term in Bahadur's Representation of an Order Statistic," *Communications in Statistics-Theory and Methods,* 23(12), pp. 3361- 3372.

11. K.B. Kulasekera, 1994, "A Bound on the $\mathcal{L}_1$-Error in a Nonparametric Density Estimator with Censored Data," *Statistics & Probability Letters,* 23, pp. 233-238.

12. K.B. Kulasekera and Peter R. Nelson, 1995, "Choosing a Model from Among Four Families of Distributions," (1995). Special Invited Paper for *Recent Advances in Life-Testing and Reliability,* Ed. N. Balakrishnan. pp. 491-504.

13. K.B. Kulasekera, 1995, "Comparison of Regression Curves using Quasi Residuals", *Journal of the American Statistical Association,* 90, pp. 1085-1094.

14. K.B. Kulasekera and W.H. White, 1996, "Estimation of The Survival Function from Censored Data: A Method Based on Total Time on Test," *Communications in Statistics-Simulation and Computation*, 25, pp.189-200.

15. K.B. Kulasekera and J. Wang, 1997, "Smoothing Parameter Selection for Power Optimality in Testing of Regression Curves," *Journal of the American Statistical Association,* 92, pp 500-511.

16. K.B. Kulasekera and J. Wang, 1998, "Bandwidth Selection for Power Optimality in a Test of Equality of Regression Curves," *Statistics & Probability Letters*, 37, pp 287-293.

17. K.B. Kulasekera, 1999, "Crossing Points of Failure Rates," *Communications in Statistics-Theory and Methods*, 28, pp 87-104.

18. K.B. Kulasekera, 1999, "Nonparametric Tests of Equality of Two Regression Curves," *Encyclopedia of Statistical Sciences,* pp 541-546.

19. K.B. Kulasekera, 1999, "Pseudo Residuals and Quasi Residuals," *Encyclopedia of Statistical Sciences,* pp 615-616 & 629-630.

20. J. Wang, J. and K.B. Kulasekera, 1999,"Uniform Convergence Rates of Regression Estimators", Technical Report #670, Department of Mathematical Sciences, Clemson University.

21. K.B. Kulasekera, Calvin L. Williams and Amitha Manatunga, 2001, " Smooth Estimation of the Reliability Function," *Lifetime Data Analysis*, pp 415-433.

22. K.B. Kulasekera and J. Wang, 2001, "A Test of Equality of Regression Curves using Gâteaux Scores," *Australian and New Zealand Journal of Statistics*, pp 89-99.

23. K.B. Kulasekera, 2001, "Variable Selection by Stepwise Slicing in Nonparametric Regression," *Statistics & Probability Letters*, pp 327-336.

24. K.B. Kulasekera and Peter R. Nelson, 2001, "Graphical Methods of Estimation in a Three Parameter Weibull Distribution", Special Invited Paper, *Advances in Reliability*, pp 749-773.

25. K.B. Kulasekera and Colin Gallagher, 2002, "Variance Estimation in Nonparametric Regression", *Communications in Statistics, Theory and Methods*, pp 1373-1383.

26. K.B. Kulasekera and Colin Gallagher, 2003, "Testing the Equality of Two and Three Dimensional Regression Surfaces ", International Mathematical Journal, 76-100.

27. K.B. Kulasekera, C. Park, 2003, "Analysis of Incomplete Data in Competing Risks Among Several Groups", *IEEE Transactions on Reliability*, pp 11-20.

28. K.B. Kulasekera and J. Olaya, 2004, "Variable Selection in Nonparametric Regression Model," *Int. Journal of Reliability, Quality and Safety Engineering*, pp 141-161.

29. John Foulk, D. McAliste and K.B. Kulasekera, 2004, "Trash identification in mill laydown. Proceedings of the Beltwide Cotton Conferences", *National Cotton Council*, Memphis, TN, January 5-9, 2004, San Antonio, Texas. pp. 2402-2410. *www.cotton.org/beltwide/proceedings.cfm.*

30. K.B. Kulasekera, C. Park, 2004, " Robust Nonparametric Regression", *Journal of Statistical Theory and Applications*, pp 125-133.

31. K.B. Kulasekera, C. Park and Ram Tiwari, 2005, "Comparing Multiple Cause Specific Hazard Rates Among Several Groups", Special Invited Paper for *Journal of Statistical Planning and Inference*, pp. 1718-1745.

32. K.B. Kulasekera and Zhao, Meng , 2006, "Consistent Model Selection", *Statistics & Probability Letters*, pp 520-530.

33. K.B. Kulasekera and W.J. Padgett, 2006, "Bayes Bandwidth Selection in Kernel Density Estimation with Censoring", *Journal of Nonparametric Statistics*, pp 123-149.

34. John Foulk, D. McAliste and K.B. Kulasekera, 2006,"Detecting the Cotton Trash Particle Size distributions", *Journal of Textile and Apparel Technology and Management*, Vol 5, pp 1-11.

35. Lin, Wei and K.B. Kulasekera, 2007, "Uniqueness of a Single Index Model ", *Biometrika*, Vol 94, pp 496-501.

36. K.B. Kulasekera and Meng Zhao, 2008, "A Pointwise Bayes Type Estimator of The Survival Probability with Censored Data", *Statistics & Probability Letters*, Vol 78, pp 2597-2063.

37. K.B. Kulasekera and Meng Zhao, 2009, "Minimax Risk of Linear Functionals under L_2 Loss", *Journal of Statistical Planning and Inference*, Vol 139, pp 3160-3176.

38. K.B. Kulasekera and Lin Wei , 2010, "Variance Estimation in Single Index Models", *Australian and New Zealand Journal of Statistics*, Vol 52, pp 201-219.

39. K.B. Kulasekera, Colin Gallagher and Qi Zheng, 2010, "Local Adaptive Smoothing in Kernel Regression Estimation", *Statistics & Probability Letters*, Vol 10, pp 540-547.

40. K.B. Kulasekera and Lin Wei , 2010, "Testing the Equality of Two Single Index Models", *The Journal of Multivariate Analysis* , Vol 101 , pp 1156-1167.

41. Kuruwita, C.N., Kulasekera, K.B. and, Padgett, W.J. , 2010, "On Boundary Bias and Bandwidth Selection in Density Estimation with Censored Data", *The Journal of Statistical Planning and Inference*, Vol 140, pp 1765-1774.

42. C. Kuruwita, K.B. Kulasekera and Colin Gallagher, 2011, "Varying Coefficient Model with Unknown Link", *Biometrika*, Vol 98, pp 701-710.

43. Dewei Wang and K.B. Kulasekera, 2012, "Component Selection in the Varying Coefficient Model", *The Journal of Multivariate Analysis*, Vol 112, pp 117-129

44. Dewei Wang, Haiming Zhou and K.B. Kulasekera, 2013, "Local Likelihood Estimation for Group Testing Data", *The Journal of Nonparametric Statistics*. pp 209-221

45. June Luo and K.B. Kulasekera, 2013, "Error covariance matrix estimation using ridge estimator", *Statistics & Probability Letters*, 257-264.

46. Qi Zheng, Colin Gallagher and K.B. Kulasekera, 2013 "The growth rate of significant regressors for high dimensional data", *Statistics & Probability Letters*, pp 1969-1972.

47. Qi Zheng, K.B. Kulasekera and Colin Gallagher, 2013, "Adaptive penalized quantile regression for high dimensional data", *Journal of Statistical Planning and Inference*, pp 1029-1038 *One of the top 5 most downloaded articles in first six months of 2013*

48. Qi Zheng, K.B. Kulasekera and Colin Gallagher, 2013, "Adaptively weighted kernel regression", *The Journal of Nonparametric Statistics* , pp 855-872.

49. C. Kuruwita, K.B. Kulasekera and Colin Gallagher, 2014, "Testing Equality of Nonparametric Quantile Regression Functions", *International Journal of Statistics and Probability*, pp 55-66.

50. Dewei Wang, Colin Gallagher, Chris McMahan, and K.B. Kulasekera, 2014, "Single Index Group Testing Models", *Biometrika*, pp. 587-598.

51. Qi Zheng, K.B. Kulasekera and Colin Gallagher, 2017, "Robust adaptive Lasso for variable selection", *Communications in Statistics*, 46(9), pp. 4642 - 4659.

52. Younathan Abdia, K.B. Kulasekera, Somnath Datta, Maxwell Boakye and Maiying Kong, 2017, "Propensity scores based methods for estimating average treatment effect and average treatment effect among treated: A comparative review", *Biometrical Journal*, 59(5), pp. 967-985.

53. Chathura Siriwardhana, K.B Kulasekera and Somnath Datta, 2018, "Semi-parametric Regression of State Occupational Probability in a Multi-state Model with Right-censored Data", *Lifetime Data Analysis*, 24, pp. 464-491.

54. C. Siriwardhana, Somnath Datta, Meng Zhao and K.B. Kulasekera, 2017, "A probability based method for selecting the optimal personalized treatment from multiple treatments", *Statistical Methods in Medical Research*, Jan 1:962280217735701. Epub 2017 Jan 1 .

55. Nichola C. Garbett, Jonathan B. Chaires, Chongkham S, Mekmaysy, Kathy L. Moser, Wael Jarjour, Brad Rovin, K.B. Kulasekera, Guy N. Brock, 2017, "Characterization and classification of lupus patients based on plasma thermograms", To appear in PLOS ONE.

56. Yan, Xiaofang, Abdia, Younathan, Datta, Somnath, Kulasekera, KB, Ugiliweneza, Beatrice, Boakye, Maxwell, and Kong, Maiying (2019) "Estimation of Average Treatment Effects Among Multiple Treatment Groups by Using an Ensemble Approach", *Statistics in Medicine,* Online version April 2019.

57. C. Siriwardhana, Somnath Datta, and K.B. Kulasekera, 2020 , "Selection of the Optimal Personalized Treatment from Multiple Treatments with Multivariate Outcome Measures", To Appear in *Journal of Biopharmaceutical Statistics.* On-line: 11/2019.

58. K.B. Kulasekera, Somnath Datta and C. Siriwardhana, 2020, "Personalized treatment selection with data from crossover designs for multiple treatments with carry over effects", To Appear in *Statistics in Medicine.* On-line: 11/2019.

59. K.B. Kulasekera and C. Siriwardhana, 2020, "Multi-response based personalized treatment selection with data from crossover designs for multiple treatments", *Communications in Statistics - Simulation and Computation*, 2019, doi.org/10.1080/03610918.2019. 1656739.

60. Chathura Siriwardhana and K.B Kulasekera (2020), "Mahalanobis type Distance based Personalized Treatment Plans with Multivariate Outcome Measures", *Biometrical Journal*, 2020; 1973-1985. doi.org/10.1002/bimj.201800072.

61. Chathura Siriwardhana and K.B Kulasekera (2021),"Optimal Personalized Treatment Selection with Multivariate Outcome Measures", To appear in *Communications in Statistics - Simulation and Computation.*

62. Chathura Siriwardhana, K.B Kulasekera and Somnath Datta, (2021), "Personalized Treatment Plans with Survival Outcomes", To appear in *The Journal of Applied Statistics.*

63. K.B Kulasekera and Chathura Siriwardhana (2022), " Composite Quantile Indexes for Personalized Treatment Selection with Multivariate Outcome Measures", To Appear in *Statistics in Medicine.*

64. Sudaraka Tholkage, Maiying Kong and K.B. Kulasekera, (2022), "Personalized Treatment Selection using Observational Data", To Appear in *The Journal of Applied Statistics.*

65. Yuchen Han, Haojing Huang, Riten Mitra, Huirong Hu, Subhadip Pal, Craig McClain, K.B. Kulasekera1, Maiying Kong (2022), "Prevalence and Treatment Utilization for Alcohol Use Disorders (AUD) Based on Kentucky Medicaid 2012-2019 Datasets", *Journal of Drug and Alcohol Dependence Reports*,

66. Yuchen Han, Haojing Huang, Riten Mitra, Huirong Hu, Subhadip Pal, Craig McClain, K.B. Kulasekera, Maiying Kong (2022), "Prevalence and Treatment Utilization of Patients Diagnosed with Depression and Anxiety Disorders Based on Kentucky Medicaid 2012-2019 Datasets", *Journal of Depression and Anxiety*, Open Access.

67. Sudaraka Tholkage, Qi Zheng and K.B. Kulasekera, (2022), "Conditional Kaplan–Meier Estimator with Functional Covariates for Time-to-Event Data", *Stats*, 1113-1129 *Cover Page Article in December 2022 Issue*

In preparation

1. Sudaraka Tholkage, Qi Zheng, Maiying Kong and K.B. Kulasekera, "Personalized Treatment Selection using Interactions", In preparation

2. K.B. Kulasekera, Guy Brock and Nichola Garbett, "Functional data methods for Lupus detection", In preparation

3. Meng Zhao and K.B. Kulasekera, "Local Linear Estimation with Doubly Censored Data", In preparation.

SPONSORED RESEARCH

Funded/Pending

1. Different services for patients diagnosed with alcohol use disorder: telehealth, certified peer support services, and targeted case management, State-University Partnership; Kentucky Medicaid Services, Co-I, $800,000; July 01, 2024-June 30, 2026.

2. Different services for patients diagnosed with alcohol use disorder: telehealth, certified peer support services, and targeted case management, State-University Partnership; Kentucky Medicaid Services, Co-I, $156,973; July 01, 2023-June 30, 2024.

3. MRI/NSF Acquisition of a high-performance big data platform (HPBDP), co-PI, 2022, NSF ($1.2 million)

4. Alcohol Use Disorder: Its Risk Factors, Comorbidity, and Long-term Care Cost, State-University Partnership; Kentucky Medicaid Services, Co-PI, $243,197; July 01, 2020-June 30, 2022.

5. Acquisition of a High Performance Big Data Analysis Platform, Co-I, 2018, NSF # 1828521 ($478,727)

6. Oral Health Promotion Strategies, Co-I (10% effort) (2016-2020), NIH

7. Risk Assessment for Dropouts, National Center for Dropout Prevention, Investigator, (2011-2012), $21000 (per year).

8. "Acquisition of Large-Memory, Many-Core Compute Node for Mathematical Science Research", NSF, Co-PI $127,196 (Total) (2010-2011).

9. "Enabling TV meteorologists to provide viewers with climate change-related science education based on informal science education", NSF, Consultant, $8000, (2011-2012)

10. "Acquisition of Parallel Computing Cluster for Large-Scale Computational Problems in the Mathematical Sciences", NSF, Co-PI $140,570 (Total) (2006-2007)

11. "Nonparametric Multiple Regression Techniques," National Cancer Institute, National Institutes of Health, Principal Investigator, Responsible for $241,000 (2002-2006).

12. "Optical Imaging of Breast Cancer", National Institutes of Health, Investigator, (PI: H. Jiang, Dept. of Physics, Clemson University), Responsible for $8000 (2005-2006)

13. "Centron Reliability," SchlumbergerSema-Utilities, Investigator, Responsible for $2000 (PI: William R. Harrell, Department of ECE, Clemson University) (Summer 2003)

14. "Issues in Multidimensional Nonparametric Regression," National Institutes of Health, Principal Investigator, Responsible for $94,268, (1998-2001)

15. "Nonparametric Smoothing Methods in Affordability Studies," Office of Naval Research, Investigator, Responsible for $85,000, (1997-1999)

16. "Nonparametric Tests for Equality of Regression Curves," National Institutes of Health, Principal Investigator, Responsible for $136,193, (1994-1997)

Other Grants/Contracts/Partnerships

1. Statistical Collaborations in Cancer Research, Norton Health Care System, Louisville, KY (2017-), $20,000/year.

2. Program in Metagenomics and Health, University of Louisville. Research support in Bioinformatics and Biostatistics (2016-2019), $20,000/year

3. Recurring contract for statistical services as GRAs for the Department of Pediatrics, University of Louisville ($60,000/year)

4. Recurring contract for statistical services for the Department of Obstetrics and Gynecology, University of Louisville ($21,000/year)

5. Recurring contract for statistical services for the School of Dentistry, University of Louisville ($25,000/year)

6. Recurring contract for teaching in the Clinical Sciences Investigation Program, Schools of Public Health and Information Sciences and School of Medicine, University of Louisville ($23,000/year)

7. Recurring contract for statistical services for doctoral students in the School of Medicine ($22,000/year)-Pending

8. Industrial Athlete Project (2013-14), GE Appliance Park-Louisville, KY ($68000)

Recent Applications -Unfunded

- A Patient-Centered Chronic Disease Management Program Featuring a Novel Informatics System, Co-PI, $13000, 8/1/15-7/30/16, NIH
- Optimal Planning of Personalized Treatments, PI, $417,000, 7/1/2014-6/30/2016, NIH.
- Center for Population Health Research, Co-PI, $884,000, 8/1/2014-7/31/2018, KentuckyOne Health.
- *Know Your Colors* Intervention for Chronically-ill Patients, Co-PI, $594,340, 1/1/2014-12/31/2017, Center for Medicare an Medicaid Services
- Global biomarker profiling for diagnosis and prognosis of lupus nephritis, Co-I, $55,000, NIH, 5/1/2014-4/30/2017
- Image-Directed Analyses of Pulmonary Infections in Ferret, Investigator, $18000, 4/1/2014-3/31/2015, NIH.

GRADUATE STUDENT SUPERVISION

Doctoral Students

1. Sudaraka Tholkage (Co–Advisor), "Personalized Treatment Plans with Observational Data", Current.

2. Younathan Abdia (Co-Advisor), "Propensity Score Based Estimation Methods", August 2016.

3. Chatura Siriwardene (Co-Advisor), "Personalized Treatment Plans", May 2016.

4. Dewei Wang (Co-Advisor), "Group Testing," May 2014.

5. Qi Zheng (Co-Advisor),"Robust Adaptive LASSO," May 2013.

6. C. Kuruwita (Co-Advisor), "Varying Coefficient Models," May 2011.
7. Meng Zhao, "Model Selection in Regression," December 2007.
8. Wei Lin, "Analysis of Single Index Models", May 2006.
9. Olaya, Javier, "Variable Selection in Nonparametric Regression," August 2000.
10. Wang, Jian, "Issues in Nonparametric Regression Testing," December, 1997.

Masters Students

1. Z. Feng, (MS) "A Study of a Smooth Nonparametric Estimator of Quantile Residual Life Function,", 1989.
2. A. Arora, (MS) "Sequential Selection Procedure Based on Pairwise Ranking," 1989.
3. Ernest A. Walker, (MS) "Estimating a Distribution Function Based on Nomination Samples," 1991.
4. William H. White, (MS) "Estimation of the Survival Function from Censored Data: A Method based on Total Time on Test,",1993.
5. Brian Schulte, (MS) "Change Points in Regression," 1994.
6. Aaron A. Sumner, (MS) "Detection of Change Points in Regression," 1996.
7. David Hitchcock, (MS) "A New Discrete Distribution", May 1999.
8. Wei Lin,(MS) "Analysis of Single Index Models," May 2002.
9. Wei Zhang, (MS) "Variable Selection", May 2003.
10. Thomas Fisher, (MS) "Single Index Models and Linear Models", May 2006.
11. Han Xiang, (MS) "Inference for ROC Curves", May 2006.
12. C. Kuruwita (MS) "Density Estimation with Censored Data", December 2006.
13. Jonathan Sauls (MS) "Data Based Penalty Selection", December 2006.
14. Lei Zhao (MS) "Penalty selection in Linear Models", August 2007.
15. Yicong Liu (MS) "Selection of SCAD penalty factors", August 2008.
16. Qi Zheng (MS) "Local Adaptive Smoothing in Kernel Regression Estimation", August 2009.

17. Jingjing Yang (MS) " Local Likelihood Estimation in Proportional Mean Residual Life", August 2009.

18. Yifang Li (MS) "Adaptive LASSO for measurement error models" , August 2010.

19. Dewei Wang (MS) "Varying Coefficient Models", December 2010.

20. Yang Ni (MS) "Local Linear Estimation of the MRL", May 2011.

21. Haiming Zhou, "Adaptive Testing", August 2011.

22. Jingshu Zhao, "Sure Screening Methods", May 2012.

Doctoral and Masters Committees
At Clemson:
16 Doctoral committees in Mathematical Sciences
Over 30 MS committees
5 external (MS and PhD) committees

At Louisville:

1. Khalid Awad Alahmary, 2014, "Quality of Primary Care From The Patient Perspective in Saudi Arabia"

2. Yubin Wang, 2014, "Penalized regressions for variable selection model, single index model and survival prediction model"

3. Joseph Bible, 2015, "Regression Methods for Clustered Temporal and High Dimensional Data Under Informative Cluster and Sub-cluster Sizes"

4. Dake Yang, 2016 ,"Integrated Analysis of MIRNA/MRNA Expression Data using Sparse Cannonical Correlation Analysis"

5. Sandipan Dutta, 2016, "Clustered Data Analysis with Informative Cluster Sizes"

6. Steve Zimmerman, 2016, "Examination of the Affordable Care Act's Premium Stabilization Rule – specifically the Commercial Risk Adjustment program impact to drive Affordable and Accessible Health Care in the United States"

7. Sarah Kendrick, 2017 "Functional Data Models"

8. Soutik Goshal, 2018, "Propensity Scores methods in Observational Studies"

9. Xiaofang Yang, 2019, "Causal Inference"

10. Micheal Sekula, May 2020, "Topics in Bioinformatics"

11. Mary Gregg, August 2020, "Methods and Software for Marginal Estimation and Inference of Clustered Data with Informative Cluster Size and Informative Within-Cluster Group Size"

FACULTY/POSTDOC/STAFF MENTORING

At Louisville:
Drs. Riten Mitra, Jeremy Gaskins, Qi Zheng, Doug Lorenz, and Subhadip Pal
(Tenure track Assistant Professors)
Drs. Maiying Kong and Dongfeng Wu
(Associate Professors)
Drs. Bakee Gunarathnam, Rebekah Musselwhite and Mike Sekula
(Term track Assistant Professors)
Alex Cambon, Savi Appna, Christina Pinkston, Bikash Bhandari and Mike Daniels
(Staff Statisticians)

At Clemson:
Drs. Chanseok Park, Collin Gallagher, Xiaoqian Sun, Elena Dimitrova
All have been tenured and promoted

FEW SELECTED PRESENTATIONS

1. Fourth Biennial International Conference on Statistics, Probability and Related Areas (2002). Title: Variable Selection in Nonparametric Regression by Covariate Slicing.

2. International Conference on Reliability and Survival Analysis (2003). Title: Variable Selection in the Nonparametric Accelerated Lifetime Model.

3. Current and Future Trends in Nonparametrics (2007). Title: Comparison of Single Index Models.

4. Invited Speaker, Department of Statistics, Michigan State University (September, 2008).

5. Invited Speaker, Department of Epidemiology and Biostatistics , Florida International University (March, 2009)

6. Nonparametric Estimation and Testing JSM 2009.

7. Varying Coefficient Models with Unknown Link Functions, JSM 2010.

8. Invited Speaker, Department of Biostatistics, University of Louisville (June, 2011).

9. International Statistical Conference, Sri Lanka (2011), Session Organizer and Invited Speaker.
10. Invited Speaker, Biometrics-2013, Chicago, IL (June 2013).
11. A Semi-Local Likelihood Regression Method for Group Testing Data (Finalist, Student Paper Competition- Nonparametrics Section), JSM 2013.
12. A New Semiparametric Framework for Modeling Group Testing Data. JSM 2013.
13. International Statistical Conference, Sri Lanka (2014), Scientific Program Committee Chair and Invited Speaker.
14. Invited Speaker (2015), School of Mathematics and Statistics, University of Sydney, Sydney, Australia.
15. Session chair JSM 2015; Contributed poster JSM 2015
16. Invited Speaker and Session Organizer (2015), International Chinese Statistical Association Annual Meeting, Shanghai, China.
17. Invited Speaker and Session Organizer (2015), International Conference on Statistics for Twenty-first Century, India.
18. Session Chair (June 25-27, 2016), 4th IMS-APRM Conference, Hong Kong
19. Invited Speaker, Department of Biostatistics, Emory University (December 2017)
20. JSM Contributed (2017)
21. Invited Session Speaker, JSM (August 2018).
22. JSM Contributed (2019)
23. JSM Virtual/Contributed (2020)
24. JSM Virtual/Contributed (2021)
25. Conditional Kaplan-Meier Estimator with Functional Covariates for Time-to-event Data, ENAR 2022 (joint with Q. Zheng & S.Tholkage)

TEACHING

Courses Taught at Clemson (**Beginning Fall 1988**)

1. MTHSC 101, Finite Probability, SU 91, SU 97
2. MTHSC 106, Calculus I, SU 08

3. MTHSC 203, Elementary Statistical Inference, SU 93
4. MTHSC 208, Differential Equations, SU 92
5. MTHSC 301, Statistical Theory and Methods I, F-90,91,93,98 SP-93,94,97
6. MTHSC 302, Statistics for Engineers and Scientists, F-03, SP-04,05
7. MTHSC 400, Theory of Probability, F-92,95,96 SP-97
8. MTHSC 403, Introduction to Statistical Theory, F 02,SP 92,98
9. MTHSC 405, Statistical Theory and Methods II, F-96,97 SP-96
10. MTHSC 453, Advanced Calculus, SU 07,10
11. MTHSC 800, Probability Theory, SU 06,08
12. MTHSC 801, Linear Models, F-93,02,04,05,06
13. MTHSC 804, Basic Statistical Inference, F-02,07,08,10
14. MTHSC 806, Nonparametric Statistics, F-91,97,99,02,10
15. MTHSC 807, Applied Multivariate Analysis, F-92
16. MTHSC 808, Reliability and Life Testing,SS I 93, F-94,98 SP 01,03,09,11
17. MTHSC 881, Mathematical Statistics, F-90, SP-93,94,95,98,00,02,04,05,06,07,08
18. MTHSC 981, Analysis of Categorical Data, SU 92
19. MTHSC 981, Advanced Statistical Theory, SP-93,F-03,09
20. MTHSC 981, Smoothing Methods, F-95,00,02

Courses Taught at Louisville

1. PHST 780 Advanced Nonparametrics (Spring 2013)
2. PHST 781 Advanced Linear Models (Fall 2014, 15)
3. PHST 682 Applied Multivariate Analysis (Fall 2018, Fall 19, 20 online and f2f)
4. PHST 564 Math Tools -IV (Linear Algebra) (Summer 2020)

New Course Development

At Louisville

1. Coordinated the creation of a new graduate biostatistics topics course for doctoral students in public health sciences (2016)
2. Developed an undergraduate biostatistics course for the Bachelors degree in public health (2012)
3. Revised and developed two biostatistics service courses for the MPH program with a colleague (2013)
4. Developed an on-line version of a MS level Multivariate Statistics course (2018)
5. Coordinated the creation of a new Cardinal Core course in Quantitative Reasoning (2019)
6. Developed an online Linear Algebra (one credit hour) course for entering MS students (2020)

At Clemson

1. Developed and taught a Probability and Statistics (301) course specially for Computer Science majors at request from Department of Computer Science-1990 Spring.
2. Developed the course MTHSC 981, Analysis of Categorical Data, as an advanced graduate level course for senior graduate students in 1992. This had a mixture of theory and applications. SAS was used in various data analysis projects. The text was supplemented by: Discrete Multivariate Analysis by Bishop, Fineberg and Holland.
3. Developed the Bussiness Statistics (MTHSC 309) course jointly with colleagues from the department of Management-1995 Spring.
4. MTHSC 981, Advanced Statistical Theory: Designed for students who are preparing for the fourth departmental examination. Texts: Lehmann and Casella (TPE) and Lehmann (TSH)
5. Reading course MTHSC 981, Smoothing Methods: Designed for a few students who are working on doctoral degrees. A collection of the latest papers and a few chapters from Eubank(1988,1998) were covered.
6. Developed a breadth course in statistics (MTHSC 804) for the graduate students in Mathematical Sciences with two colleagues.
7. Developed a graduate service course in statistics (MTHSC 884) for the graduate students in Engineering and Sciences with two colleagues from the department of Industrial Engineering.

UNIVERSITY AND PROFESSIONAL SERVICE

Consulting

1. Department liaison for a CTSA proposal from the university to NIH (mentor for biostatistics and informatics cores)
2. Coordinator for consulting services to Ob/Gyn faculty and fellows, University of Louisville
3. Steering committee leader for Neurological Surgery PCOR/CER biostatistics educational and training module (pending)
4. Statistical expert help for Kentuckiana Health Collaborative in designing a reliability and physician profile study
5. Project liaison for the Industrial Athlete Program, General Electric Company Appliance Park, Louisville
6. Supervision of the Statistical Consulting Center as the department chair of Biostatistics and Bioinformatics
7. University of Louisville research integrity office (statistical support in a research misconduct investigation)
8. Louisville Metro Health Department (expert statistical support for a BRFSS study)
9. National dropout prevention center-Clemson University (statistical support for risk analyses)
10. Cotton research facility-Clemson University (Data management and analysis support)
11. Department of Health Sciences-Clemson University (Supervision of my PhD student #4 on various projects)
12. Department of Biological Sciences-Clemson University (Statistical help for ecological data analysis-resulted in paper #5)

Conference/Meeting Organization

1. Local Program Committee Advisor, 2019 Summer Research Conference, Southern Regional Council on Statistics (ASA, NISS sponsored).
2. Program Committee, International Indian Statistical Association annual conference -2018
3. Program Committee, International Conference on Intelligent Biology and Medicine, 2013-2017.
4. Chair, International Program Committee, International Conference -2014, Institute of Applied Statistics, Sri Lanka (ASA sponsored).
5. ASA KY chapter meeting coordinator 2013

6. Local Program Committee Chair, 2013 Summer Research Conference, Southern Regional Council on Statistics (ASA, NISS sponsored).
7. Session Organizer, 2011 Summer Research Conference, Southern Regional Council on Statistics (ASA, NISS, NSF sponsored).

Editorial Work

1. Associate Editor, Journal of Statistical Computation and Simulation, 2004-
2. Board of Editors, Involve, 2008-
3. Associate Editor, Journal of the Applied Statistical Association of Sri Lanka, 2011-
4. Associate Editor, Annals of Biometrics & Biostatistics, 2013-
5. Member, International Editorial Advisory Board of the Journal of the National Science Foundation-Sri Lanka (2018-2019)

Committees and Groups

University of Louisville

1. Academic Technology Committee
2. Provost Search Committee
3. Diversity Committee
4. Executive Committee
5. MPH advisory committee
6. Alumni Relations Group
7. CEPH Accreditation Steering Committee
8. Academic Affairs Committee
9. Research Committee
10. Lead member, University-wide statistics instruction committee (August 2013-)
11. Council of Chairs
12. Dean Transition Team

13. Curriculum Committee
14. School of Public Health Global Initiatives Group (Chair)
15. Academics Strategic Planning Subcommittee
16. Big Data/Population Health Analytics Committee

Clemson University

1. College of Engineering and Sciences Tenure and Promotion Committee (2010-2011)
2. Chair, Departmental Tenure and Promotion Committee (2010-2011) & Member (2000-2012) [The department had about 48 T/TR faculty]
3. Clemson University Athletic Council, 2003 - 2012
4. Athletic Fiscal Integrity Committee (2006-2010)
5. Athletic Community Relations Committee (2011-2012)
6. Search committee for university-wide bioinformatics positions in Genetics/Biochemistry, 2005-06.
7. College of Engineering and Sciences Faculty Awards committee (2011, 2006)
8. Mathematical Sciences Council, 2002 - 2012
9. Search committee for department chair position: 2002
10. Search committee for the bioinformatics position in Mathematical Sciences, 2005-06.
11. Chair, Search committee for statistics position: 1998,2000,2002
12. Co-Adviser of new Statistics Graduate Students:1992-1993, 1996-2001
13. Adviser of all new Statistics graduate students:1993-1995,2003.
14. Local arrangements coordinator for ASA chapter activities: 1993-1994
15. Chairman of the Departmental Research Committee: 1992,1993
16. Representative to Departmental Graduate Affairs committee: 1995,1996,1998,2000,2001.
17. Representative to Departmental Research committee: 1992,1993
18. Committee on Statistics courses for undergraduate Math majors: 1994

19. Committee on Graduate Courses in Statistics: 1995
20. Preliminary Examination Committee: 1989-2011
21. Management Science Comprehensive Examination Committee: 1990-1998
22. Coordinator, Annual joint colloquium series with the University of Georgia: 1993,1994

MISCELLANEOUS

Book Reviews

1. "Reliability Improvement with Design of Experiments", 1995, *Journal of the American Statistical Association*, pg. 397.

Refereeing

Refereed research papers for

1. Annals of Statistics
2. Journal of the American Statistical Association
3. Technometrics
4. IEEE Transactions in Reliability
5. Journal of Quality Technology
6. Sri Lankan Journal of Statistics
7. Sankhya-The Indian Journal of Statistics
8. Journal of Statistical Computation and Simulation
9. Journal of Nonparametric Statistics
10. Journal of Multivariate Analysis
11. Institute of Statistical Mathematics
12. Statistics and Probability Letters
13. Communications in Statistics-Theory and Methods
14. Electronics and Telecommunications Research Institute
15. Annals of the Institute of Statistical Mathematics

16. Journal of Nonparametriic Statistics
17. Metrika
18. Journal of Statistical Planning and Inference
19. Statistica Sinica
20. Biometrika

Tenure and Promotion Reviews (External) 2012-2020

Tenure and Promotion to Associate Professor case reviewer for 10 applicants
Promotion to Full Professor case reviewer for 8 applicants

Review Panels

1. Program Reviewer- Graduate Program in Statistics at Sam Houston State University (February 2017)
2. Member, Review Panel to Evaluate a proposed doctoral program in Mathematics, Texas State University-San Marcos, September 2007.
3. Invited Member of the Review Panel for Statistics, National Institutes of Health, 1998.
4. "Multi-predictor Function Estimation," 1997, National Science Foundation.
5. "Computer Simulation and Analysis of System Availability and Effectiveness," 1995, Louisiana Board of Regents and NSF.

Community Involvements

- Volunteer Soccer coach for Clemson Area Soccer Club, Clemson YMCA, City of Clemson Recreation Department and D.W. Daniel High School JV Team.
- Vice President, Clemson Area Soccer Club (1997-99)

References

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