# CARL M.-S. LEE

# Professor, Department of Statistics, Actuarial and Data Sciences,

# **Central Michigan University**

# e-mail: carl.lee@cmich.edu , Phone #: (989) 774-3555

# Personal Web site: http://people.se.cmich.edu/lee1c/carllee/

	TABLE OF CONTENTS	PAGE
I.	EDUCATION AND PROFESSIONAL EXPERIENCE	1-4
	I-1: Education	1
	I-2: Professional/Administrative Experience	1
	I-3: Honors, Awards and Distinctions	2
	I-4: Leadership Experiences	3
II.	CREATIVE AND SCHOLARHLY ACTIVITIES	4-15
	II-1: Refereed Journal Articles, Book Chapters	4
	Research Articles Published in Refereed Proceedings	9
	Published Research Reports and Manuscripts from Research Projects	12
	II-2: Non-refereed Proceeding Publications in Conferences	13
	II-3: Research Work quoted by Jury/Media	15
III.	CONTRIBUTIONS IN STATISTICAL CONSULTATION	15-17
	III-1: Consulting work for Industry and Organizations	15
	III-2: Academic Statistical Consulting Work	16
IV.	PRESENTATIONS/WORKSHOPS ACTIVITIES	17-28
	IV-1: Workshops Conducted and Session Organized at Professional Conferences	17
	IV-2: Invited/Featured Talks and Presentations	18
	IV-3: Contributed Conference Article Presentations	23
V.	FUNDED/PENDING EXTERNAL GRANTS AND CONTRACTS	28
VI.	<b>CURRICULUM DEVELOPMENTS AND STUDENTS SUPERVISIONS</b>	30-39
	VI-1: Curriculum Developments	30
	VI-2: Advising (Co-Advising) of Ph.D. Dissertation and Master's Theses/Plan B	32
	VI-3: Served as a Committee Member for PhD Dissertations/Master's Theses	33
	VI-4: Supervised Student Research Projects since 2008 – presented at CMU Annual Research	36
	Exhibition (SCREE)	
	VI-5: Supervised Student Research Projects -did not present at the CMU's SCREE	40
VII	. <u>SERVICES</u>	42-48
	VII-1: At Departmental Level	42
	VII-2: At University/College Level	42
	VII-3: At Professional Level	43
	VII-4: External Reviewer for Program/Tenure/Promotion Applications	43
	VII-5: List of Referee Works for Professional Journals (2012-2021)	44
VII	I. <u>CURRENT MEMBERSHIPS OF PROFESSIONAL ORGANIZATIONS</u>	48

# I. EDUCATION AND PROFESSIONAL EXPERIENCE

# I-1: Education:

1979-1984	Ph.D. in Statistics, Department of Statistics, Iowa State University.
1978-1979	MA in Mathematics, Department of Mathematics, University of West Florida.
1972-1976	B.S. in Agronomy, Department of Agronomy, National Taiwan University, Taiwan.

# I-2: Professional/Administrative Experience:

2019 - 2022	Founding Chairperson, Department of Statistics, Actuarial and Data Sciences, Central Michigan University
1992 – present	Professor, Department of Mathematics (1992-2019), Professor, Department of Statistics, Actuarial and Data Sciences (2019-present), Central Michigan University
2019 - present	Internship Coordinator, Department of Statistics, Actuarial and Data Sciences, CMU
2016 - 2019	Internship Coordinator, Department of Mathematics, Central Michigan University.
2014 - 2019	Director, Data Mining/Analytics Program, Department of Mathematics, Central Michigan University.
2014 - 2016	Graduate Coordinator, Department of Mathematics, Central Michigan University.
2007 - 2014	Director, Graduate Certificate Program in Data Mining, College of Science & Technology, Central Michigan University.
1999-2004, 200	06-2008,2010-2014: Area Coordinator, Statistics and Actuarial Science, Department of Mathematics, Central Michigan University
2002 - 2016	Senior Research Fellow, Research Institute of Health & Business Insight (previously known as Center of Applied Research), Central Michigan University.
1992 - 2019	Professor, Department of Mathematics, Central Michigan University.
1999 – 2001	University Student Learning Outcomes Assessment Coordinator, Central Michigan University. Oversee all aspects of the university student learning outcomes assessment activities.
1985-90,94-98:	Director, Statistical Consulting Service at Central Michigan University.
1990 – 1991	Visiting Associate Professor, Graduate Institute of Statistics, National Central University, Taiwan.
1988 - 1992	Associate Professor, Department of Mathematics, Central Michigan University.
1984 - 1988	Assistant Professor, Department of Mathematics, Central Michigan University.
1983 - 1984	Teaching Assistant, Department of Statistics, Iowa State University.
1979 – 1984	Statistical Consultant, Department of Statistics, Iowa State University.

- 1978 1979 Statistical Consulting Assistant, Department of Mathematics and Statistics, University of West Florida
- 1976 1978 Computer Programmer, Computer Center, National Taiwan University

#### I-3 Honors, Awards and Distinctions

- 2022: Recipient of the Year 2022 Michigan Distinguished Professor award, the Michigan Association of State University. The Michigan Distinguished Professor of the Year award recognizes *the outstanding contributions and dedication exhibited by the faculty from Michigan's 15 public universities to the education of undergraduate students*. Each university was invited to nominate a faculty member who has had a significant impact on undergraduate student learning through various activities, particularly classroom instruction, applied research, experiential learning, innovation and mentoring. See <u>https://www.masu.org/sites/default/files/documents/2022-</u> 04/statewide%20DPOY%202022%20FINAL.pdf for the 2022 award citation of the three recipients.
- 2019: Recipient of the 2019 Deborah and Franklin Tepper Haimo Distinguished Teaching of Mathematics Award, Mathematical Association of America. This award is to honor "college or university teachers who have been widely recognized as extraordinarily successful and whose teaching effectiveness has been shown to have had influence beyond their own institutions." Each year at most three individuals are honored with this award in the North America. The Award Citation can be found at 2019 MAA Award Booklet (p. 7).
- 2017: Distinguished Teaching Award, Michigan Section of the Mathematical Association of America. The Citation can be found in the 2017 Newsletter, Michigan Section, MAA (p. 21).
- 2016: Outstanding Service Award, College of Science and Engineering, Central Michigan University.
- 2016: University Distinguish Service Award, Central Michigan University.
- 2014: Outstanding Research Award, College of Science & Technology, Central Michigan University.
- 2014: Central Michigan University Nominee for the U.S. Professors of the Year award sponsored by CASE and the Carnegie Foundation for the Advancement of Teaching to recognize excellence in undergraduate teaching and mentoring.
- 2014: Central Michigan University Nominee for the 2014 Distinguished Professor of the Year Award, Michigan Association of State Universities.
- 2009: Outstanding Teaching Award, College of Science & Technology.
- 2008: Fellow, American Statistical Association (ASA). The designation of ASA Fellow is to recognize statistical educators *who have an established reputation and have made outstanding contributions to statistical science*. Each year, at most one-third of one percent of the members may be elected.
- 2007: The First Place of Education Team Excellence Competition organized by the American Society of Quality.
- 2006: President Research Award for Outstanding Research Accomplishment, Central Michigan University.
- 2006: Dow Chemical Certified Six Sigma Black Belt.

- 2001: Outstanding Service and Leadership Award, the American Statistical Association.
- 1998: Elected member of the International Statistical Institute.

#### **I-4: Leadership Experience**

2019- present: In charge of creating a university-wide interdisciplinary Data Science programs involving nine departments in four different colleges, Central Michigan University. 2019 - 2020: Led the complete redesign of assessment plans of all programs in the STAD Department using curriculum mapping methodology. Co-chair the 3<sup>rd</sup> International Conference on Statistical Distributions and Applications held 2018 - 2019: at Eberhard Conference, Grand Rapids, USA, October 10-12, 2019. http://people.cst.cmich.edu/lee1c/icosda2019/ 2017 - 2019: In charge of developing new department: Department of Statistics, Actuarial and Data Sciences, Central Michigan University. In charge of creating Ph.D. in Statistics and Analytics program. 2017 - 2019: Co-chair the 2<sup>nd</sup> International Conference on Statistical Distributions and Applications held 2015 - 2016: at Niagara Falls, Canada, October 15-16, 2016. http://people.cst.cmich.edu/lee1c/icosda2016/ 2014 – 2016: Chaired the PhD program revision in the Department of Mathematics. 2014 - 2015: Led the development of the Master's program in Applied Statistics and Analytics. 2014 - 2015: Chaired the University Committee on Excellent Teaching Awards Selection. 2013 - 2014: In charge and developed the student learning outcomes assessment plan for the proposed MS program in Applied Statistics and Analytics. 2013 - 2014: Chaired the program review for Statistics Major. 2012 - 2013: Co-founder and co-Chair: 1st International Conference on Statistical Distributions and Application, to be held October 10 - 12, 2013, Mt. Pleasant, MI 48858. http://people.cst.cmich.edu/lee1c/icosda/ 2006 - 2013: Founder and Committee Chair of the National Undergraduate Statistics Project Competition (USPROC) sponsored by the Consortium for the Advancement on Undergraduate Statistics Education (CAUSE). Now is so-sponsored by the CAUSE and ASA (https://www.causeweb.org/usproc/) 2006 - 2007: Led the development of the Graduate Certificate Program in Data Mining. 2003 - 2004: One of the founding members for the Consortium on the Advancement of Undergraduate Statistics Education (CAUSE). 1999 - 2004, 2006 - 2008, 2010 - 2015: Executive Committee Member, Department of Mathematics. To assist the departmental chair managing the departmental operations.

1999 – 2004: President, Mid-Michigan Chapter, American Statistical Association.

#### **II. CREATIVE AND SCHOLARLY ACTIVITIES**

#### **II-1: Refereed Journal Articles, Book Chapters**

- Gyasi, E., Famoye, F., Lee, C., Roe, R. (2024). A Study of Enrollment Projections for USA Higher Education Institutions. *International Journal of Institutional Research and Management*, Vol. 8, #1, IJIRM825.
- **2.** Hsu, Y.-F., Lee, C. and Famoye, F. (2023). New Methods for Imbalanced Data Classification. Accepted with revision in *the International Journal of Data Science & Analytics*. [Area: Data Science]
- Budhathoki N., Bhandari R., Bashyal S., Lee C. (2023) Predicting asthma using imbalanced data modeling techniques: Evidence from 2019 Michigan BRFSS data. *PLoS ONE 18(12): e0295427*. <u>https://doi.org/10.1371/journal.pone.0295427</u> [Area: Data Science]
- 4. Warahena-Liyanage, G., Famoye, F. and Lee, C. (2023). A generalization of LASSO modeling via Bayesian Interpretation. *Austrian Journal of Statistics*, July 2023, Volume 52, 15–45. <u>http://www.ajs.or.at/</u> doi:10.17713/ajs.v52i4.1455 [Area: Data Science]
- Alzaatreh, A., Famoye, F. and Lee, C. (2022). Multivariate count data regression models and their applications. "Innovations in multivariate statistical modelling: navigating theoretical and multidisciplinary domains." Research Monograph (Edited by Bekker, A., Ferreira, J.T., Arachi, M. and Chen, D.-G.), Spring Pub., PP. 241-263. [Area: modeling]
- Islam, Md D., Li, Bin, Lee, C. and Wang, X. (2021). Incorporating Spatial Information in Machine Learning: the Moran Eigenvector Spatial Filter Approach. *Transactions in GIS*, DOI: 10.1111/tgis.12894 [Data Science]
- Lee, C., Famoye, F. and Akinsete, A. (2021). Generalized count data regression models and their applications to health care data. *Annuals of Data Science*, 8(2),367-386. <u>https://doi.org/10.1007/s40745-019-00221-8</u>. [Modeling]
- Alzaatreh, A., Aljarrah, M. A., Smithson, M., Shahbaz, S.H., Shahbaz, M.Q., Famoye, F., and Lee, C. (2021). Truncated family of distributions with applications to time and cost to start a business. *Methodology and Computing in Applied Probability*, 2021, 23:5–27, https://doi.org/10.1007/s11009-020-09801-1. [Area: Distribution]
- 9. Aljarrah, M.A., Famoye, F. and Lee, C. (2020). Generalized logistic distribution and its regression model. *Journal of Statistical Distributions and Applications*, volume 7, Article number: 7, <u>https://doi.org/10.1186/s40488-020-00107-8</u>. [Area: distribution & modeling]
- **10.** Famoye, F. and Lee, C. (2020). Generalized Poisson Distribution. *Wiley StatsRef: Statistics Reference Online*, <u>https://doi.org/10.1002/9781118445112.stat08261</u>. [Area: Distribution]
- 11. Aldeni, M., Lee, C. and Famoye, F. (2020). A Generalized Family of Lifetime Distributions and Survival Models. *Journal of Modern Applied Statistical Methods*, Vol 18(2), eP2944. doi: 10.22237/jmasm/1604190060 [Area: Distribution]

- **12.** Famoye, F. and Lee, C. (2019). Review of univariate and bivariate exponentiated exponential-geometric distributions. *WIREs Computational Statistics*, <u>https://doi.org/10.1002/wics.1481.[Area</u>: Distribution]
- **13.** Aljarrah, M.A., Famoye, F. and Lee, C. (2019). A new generalized normal distribution: Properties and applications. *Communications in Statistics, Theory and Methods*, 48:18, 4474-4491. [Area: Distribution]
- **14.** Hamed, D., Famoye, F. and Lee, C. (2018). *T*-Pareto family of distributions: Properties and applications. *Journal of Data Science*, 377-396, DOI: 10.6339/JDS.201804\_16(2).0008. [Area: Distribution]
- **15.** Aldeni, M., Lee, C. and Famoye, F. (2017). Families of distributions arising from the quantile of generalized lambda distribution. *Journal of Statistical Distributions and Applications*, Vol 4, [online]. [Area: Distribution]
- Famoye, F. and Lee, C. (2017). Exponentiated-exponential geometric regression model. Published Online Dec, 2016, *Journal of Applied Statistics*, <u>http://dx.doi.org/10.1080/02664763.2016.1267117</u>. [Area: Modeling]
- **17.** Alzaatreh, A, Lee, C., Famoye, F., and Ghosh, I. (2016). The generalized Cauchy family of distributions with applications. *Journal of Statistical Distributions and Applications* (2016) 3:12. DOI 10.1186/s40488-016-0050-3. [Area: Distribution]
- Alzaatreh, A., Lee, C., and Famoye, F. (2016). Family of generalized gamma distributions: Properties and applications. *Hacettepe Journal of Mathematics and Statistics*, 45(3), 1-18. Doi: 10.15672/HJMS.20156610980 [Area: Distribution]
- **19.** AlMheidat, M., Lee, C. and Famoye, F. (2016). A generalization of the Weibull distribution with applications. *Journal of Modern Applied Statistical Methods* Vol. 15(2). [Area: Distribution]
- 20. Aljarrah, M.A., Famoye, F. and Lee, C. (2015). A new Weibull-Pareto distribution. *Communications in Statistics, Theory & Methods,* Vol. 44: 4077–4095. DOI: 10.1080/03610926.2014.999092. [Area: Distribution]
- **21.** AlMheidat, M., Famoye, F. and Lee, C. (2015). Some generalized families of Weibull distribution: Properties and applications. *International Journal of Statistics & Probability*, Vol 4(3), 18-35. [Area: Distribution]
- **22.** Lee, C. (2015). The Effects of the State of Union Address of USA Presidents to Their Performance Ratings. *International Journal of Software Innovation*, Vol 3(2), p. 1-12. [Area: Data Science]
- **23.** Al-Aqtach, R., Famoye, F. and Lee, C. (2015). On generating a new family of distributions using the logit function. *Journal of Probability and Statistical Science*, 13(1), 135-152. [Area: Distribution]
- **24.** Akinsete A., Famoye, F. and Lee, C. (2014). The Kumaraswamy-Geometric Distribution. *Journal of Statistical Distributions and Applications*, Vol.1, #17. [Area: Distribution]
- **25.** Alzaatreh, A., Lee, C. and Famoye, F. (2014). T-normal family of distributions: A new approach to generalize the normal distribution. *Journal of Statistical Distributions and Applications*, 2014, 1:16 (July, 2014). [Area: Distribution]
- **26.** Gautam, Y., Lee, C., Cheng, C.-I. and Langefeld, C. (2014). An evaluation of the MiDCoP method for imputing allele frequency in genome wide association studies. Software Engineering, Artificial Intelligence,

Networking and Parallel/Distributed Computing, Studies in Computational Intelligence Book Series# 569 (Ed. Lee, R.), p. 57-67, Springer, Publishing. [Area: GWAS study]

- 27. Al-Aqtach, R., Lee, C. and Famoye, F. (2014). Gumbel-Weibull distribution: Properties and Applications. , *Journal of Modern Applied Statistical Methods, Vol.13(2), 201-225.* [Area: Distribution]
- **28.** Aljarrah, M.A., Lee, C. and Famoye, F. (2014). On generating T-X family of distributions using quantile functions. *Journal of Statistical Distributions and Applications*, 2014, 1:2 (June, 2014). [Area: Distribution]
- **29.** Alzaatreh, A., Famoye, F. & Lee, C. (2014). The gamma-normal distribution: Properties and applications. *Journal of Computational Statistics and Data Analysis*, 69(1), 67–80. [Area: Distribution]
- **30.** Alzaghal, A., Lee, C. & Famoye, F. (2013). Exponentiated Weibull-Exponential Distribution: Properties and Applications. *Journal of Applied Statistical Science, Vol.21(1), 113-134*. [Area: Distribution]
- 31. Lee, C., Soshnikov, S. and Vladimirov, S. (2013). Are socio-economic, health infrastructure and demographic factors associated with Infant mortality in Russia? *International Journal of Software Innovation*, 1(4), 56-72. [Area: Data Science]
- **32.** Alshawarbeh, E., Famoye, F. and Lee, C. (2013). Beta-Cauchy distribution: Some Properties and Applications. *Journal of Statistical Theory and Applications*, Vol. 12(4), 378-391. [Area: Distribution]
- **33.** Alzaghal, A., Famoye, F. & Lee, C. (2013). Exponentiated *T-X* family of distributions with some applications. *International Journal of Statistics and Probability*, Vol. 2(3), 32-49. [Area: Distribution]
- 34. Lee, C., Famoye, F. and Alzaatreh, A. (2013). Methods for generating families of univariate continuous distributions in the recent decades. *WIREs Computational Statistics* 2013 5, 219-238. doi: 10.1002/wics.1255. [Area: Generalized continuous distribution]
- **35.** Alzaatreh, A., Lee, C. and Famoye, F. (2013). A new method for generating families of continuous distributions *Metron*, 71(1):63-79. DOI 10.1007/s40300-013-0007-y. [Generalized continuous distribution]
- **36.** Alzaatreh, A., Famoye, F. & Lee, C. (2013). Weibull-Pareto distribution and its applications. *Communications in Statistics: Theory & Methods*, 42:1673-1691. [Area: Generalized continuous distribution]
- **37.** Alzaatreh, A., Lee, C. and Famoye, F. (2012). On the discrete analogues of continuous distributions. *Journal of Statistical Methodology*, 9, 589-603. [Area: Generalized discrete distribution]
- **38.** Alzaatreh, A., Famoye, F. and Lee, C. (2012). Gamma-Pareto distribution and its applications. *Journal of Modern Applied Statistical Methods*, 11, 78-94. [Area: Generalized continuous distribution]
- **39.** Alshawarbeh, E., Lee, C. and Famoye, F. (2012). Beta-Cauchy distribution. *Journal of Probability and Statistical Science*, 10, 41-58. [Area : Generalized continuous distribution]
- 40. Li, S., Yang, F., Famoye, F., Lee, C., and Black, D. (2011). Quasi-negative binomial distribution: Properties and applications. Vol.55 (7), *Journal of Computational Statistics and Data Analysis*, 2363-2371. [Area: Generalized Discrete Distribution]

- **41.** Meletiou-Mavrotheris, M., and Lee, C. (2010). Investigating College-Level Introductory Statistics Students' Prior Knowledge of Graphing. *Canadian Journal of Science, Mathematics and Technology Education*, *10(4)*, 339-355 [Area: Statistics Education]
- **42.** Pararaim M., Famoye, F. and Lee, C. (2010). Generalized Poisson-Poisson Mixture Model for Misreported Counts with an Application to Smoking Data. *Journal of Data Science* 8, 607-617. [Area: Measurement Error Modeling for Counts]
- **43.** Li, S., Famoye, F., Lee, C. (2010). On the generalized Lagrangian probability distributions. *Journal of Probability and Statistical Science*, 8(1), 113-123. [Area: Generalized Discrete Distribution]
- **44.** Li, S., Black, D., Lee, C. & Famoye, F. (2009). Dependence models arising from the Lagrangian probability distribution. *Communications in Statistics Theory & Methods*, 39: 1729-1742. [Area: Generalized Discrete Distribution]
- **45.** Sharaf El Din, G., Lee, C., Fattah, M. (2009). *What Make Democracy Possible: a Predictive Modeling Approach*. Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing, Studies in Computational Intelligence Book Series (Ed. Lee, R.), Springer, Pub. pp. 145-156. [Area: Data Science]
- **46.** Akinsete, A., Famoye, F. & Lee, C. (2008). The Beta Pareto distribution. *Journal of Statistics*, March, 1-17. [Area: Generalized Beta-class Distribution]
- **47.** Li, S., Famoye, F., Lee, C. (2008) On Certain Mixture Distributions Based on Lagrangian Probability Models. the *Journal of Probability and Statistical Science*, *6*(1), 91-100. [Area: Generalized Discrete Distribution]
- 48. Meletiou-Mavrotheris, M. and Lee, C. (2007) Effects of technological tools on introductory statistics students' understanding of sampling distribution and statistical inference. Book Chapter in "Learning and teaching of Research Methods at University" [Ed. Murtonen M, Rautopuro, J. & Vaisanen, P.] Published by Suomen Kasvatustieteellinen Seurary, Research in Educational Sciences Series. pp.,95-118. [Area: Statistics Education]
- **49.** Lingji, K., Lee, C. & Sepanski, J. (2007). On the properties of beta-Gamma distribution. *Journal of Modern Applied Statistical Methods, Vol* 6(1) 187-211 [Area: Generalized Beta-class distribution]
- **50.** Lee, C., Famoye, F. & Olumolade, O. (2007). Beta-Weibull distribution: Some properties and applications to censored data. *Journal of Modern Applied Statistical Methods*, *Vol 6(1)* 173-186. [Area: Generalized Beta-class distribution]
- **51.** Meletiou-Mavrotheris, M., Lee, C., and Fouladi, R. (2007). Introductory Statistics, College Student Attitudes and Knowledge A Qualitative Analysis of the Impact of Technology-Based Instruction. *International Journal of Mathematics Education in Science and Technology, Vol 38(1)*, 65-83. [Area: Statistics Education]
- **52.** Pararai, M., Famoye, F. & Lee, C. (2006). Generalized Poisson Regression Model for Underreported Counts. *Journal of Advances and Applications in Statistics vol 6(3)*, 305-322. [Area: Measurement Error in discrete distribution]
- **53.** Li, S., Famoye, F. & Lee, C. (2006). On some extension of the Lagrangian probability distribution. *The Far East Journal of Statistical Theory*, 18(1), 25-41. [Area: Discrete distribution]

- **54.** Wang, P.C. and Lee, C. (2006). Strategies for Semi-Folding Fractional Factorial Designs. *Quality & Reliability Engineering International*, 22: 265-273 [Area: Design of Experiment]
- 55. Meletiou-Mavrotheris, M., and Lee, C. (2006). Introductory Statistics Students' Conceptual Development of Variation in Data Distributions. *Mediterranean Journal for Research in Mathematics Education*, 5(1), 29-48. [Area: Statistics Education]
- **56.** Lee, C. (2005). *Use PACE Strategy to Teach Statistics The PACE Approach*. MAA Notes #65: Innovations in Teaching Statistics (Garfield, Ed.). Published by the Mathematical Association of America, Chapter 3, pp. 13-21. [Area: Statistical Education]
- **57.** Famoye, F., Lee, C. & Olugbenga Olumolade (2005). The Beta-Weibull distribution. *Journal of Statistical Theory and Applications*, 121-138. [Area: Generalized Beta-class distribution]
- **58.** Lee, C. and Lu, Xioamin (2005). Choice between Partial Least Square and Neural Network Models. *International Journal of Computer & Information Science*, Vol. 6, # 1, 31-37. [Area: Data Science]
- 59. Famoye, F., Lee, C. & Eugene, N. (2004). Beta-Normal Distribution: Bimodality Properties and Applications. *Journal of Modern Applied Statistical Methods*, Vol. 3(1), 85-103. [Area: Generalized Betaclass distribution]
- **60.** Meletiou-Mavrotheris, M. & Lee, C. (2002). Teaching students the stochastic nature of statistical concepts in an introductory statistics course. *Statistical Education Journal*, 1(2), 22-37. *http://fehps.une.edu.au/serj.* [Area: Statistics Education]
- **61.** Eugene, N., Lee, C. & Famoye, F. (2002). A class of Beta-Normal Distributions Properties and Applications. *Communications in Statistics, Theory & Methods*, 31(4) 497-512. [Area: Generalized Beta-class distribution]
- **62.** Lee, C. (1999). A computer-assisted approach for teaching statistical concepts. *Journal of Computer at Schools*, pp. 193-208. [Area: Statistics Education]
- **63.** Lee, C. & Matzo, G.(1998). An evaluation of the process capability for the fuel injector process using *monte carlo simulation*. Chapter 19, Academia/Industry Collaboration Case Study Handbook (Refereed) Published by SIAM, p. 251-269. [Area: Quality Control]
- **64.** Wood, J. & Lee, C. (1998). Perceptions of job description: Interior decorator, interior designer and architect. *Journal of Perceptual and Motor Skills*, 1443-1452. [Area: Statistical Application]
- **65.** Lee, C. & Famoye, F.(1996). A comparison of generalized Poisson model for chromosome aberrations. *Biometrical Journal* 38, 299-313. [Area: Discrete distribution]
- **66.** Wright, J., Wood, J & Lee, C. (1996). Perceptions of job title: Interior decorator, interior designer and building designer or architect. *Perceptual and Motor Skills*, 83, 503-507. [Area: Statistical application]
- **67.** Lee, C. (1994). Discussion paper on Constrained optimal experimental designs by Cook & Federov. *Journal of Statistics*, 26, 165-168. [Area: Design of Experiment]
- **68.** Hoffman, C., Lee, C. and Rasche, (1993). A comparison of the total cholesterol and full lipid panels in identifying at-risk individuals in a community screening program. *The American J. of Health Promotion*, 260-262. [Area: Statistical application]

- **69.** Lee, C. (1992). On the computation of central and noncentral Beta probabilities. *J. of Computational Statistics & Simulation*, 1-10. [Area: Statistical computing]
- **70.** Famoye, F. & Lee, C. (1992). Estimation of generalized Poisson distribution. *Communication in Statistics Series B*, 21(1): 173-188. [Area: Discrete distribution]
- **71.** Aron, R., Earher, Y. & Lee, C. (1992). The distribution of the most favorable temperatures for the induction of citrus flowers in Israel. *International Journal of Biometeorology*, 36: 108-112. [Statistical application]
- **72.** Angelos, J., Lee, Carl & Singh, K.P., (1991). B-spline approximation for the baseline hazard function. *J. of Environmetrics*.2(3): 323-339. [Area: Survival analysis]
- **73.** Lee, C. (1990). On the characterization of Pitman measure of nearness. *Journal of Statistics & Probability Letters*, Vol. 8, 41-46. [Area: Estimation ]
- **74.** Aron, R., Aron, I.-M. & Lee, C. (1990). A comparison of revenues and expenditures and Michigan school districts educational background, median family income, racial makeup and the drop out rate. *Journal of Educational Research Quarterly*, 14, 22-31. [Area: Statistical application]
- **75.** Lee, C. (1988). Constrained optimal designs. *Journal of Statistical Planning and Inference*. 18, 377-389. [Area: Design of Experiment]
- **76.** Lee, Carl & Singh, K.P. (1988). On the t-cumulative probabilities. *Communications in Statistics, Simulation &. Computation.* 17, 129-135. [Area: Statistical computing]
- 77. Lee, C., Aron, R. & Aron, I.-M. (1988). An analysis of Michigan educational assessment program (MEAP) score and school districts revenues and expenditures. *Journal of American Educational Finance*. 13, 496-511. [Area: Statistical application]
- **78.** Lee, C. (1988). On the computation of F-cumulative probabilities. *Communications in Statistics, Series B*. 17, 1191-1201. [Area: Statistical computing]
- **79.** Lee, C. (1988). D-optimal Designs for polynomial regression when lower degree parameters are more important. *Utilitas Mathematica*, 34, 53-63. [Area: Design of Experiment]
- **80.** Singh, K.P., Lee, Carl & George, E.O. (1988). On the generalized Log-Logistic models for survival data. *Biometrical Journal*, 30, 843-850. [Area: Survival analysis]
- **81.** Lee, C. (1987). Constrained Optimal Designs for Regression Models. *Communications in Statistics Theory & Method*, Vol.16(3), 765-783. [Area: Design of Experiment]
- **82.** Lee, Carl and Peddada, D.S. (1987). Comparison of some common ratio estimators using Pitman measure of nearness. *Communication in Statistics Theory & Method*, Vol. 16(7) 2017-2027. [Area: Estimation]

#### **Research Articles Published in Refereed Proceedings:**

**83.** Zeleke, A. and Lee, C. (2018). A study of students' attitudes change and performance improvement in a flipped class. *Proceedings (refereed), 10<sup>th</sup> International Conference on Teaching Statistics,* July 8 to 13, 2018, Kyoto, Japan. {Statistics Education]

- 84. Emma Gunu, Wilson Gyasi, Carl Lee and Robert Roe (2017). Modern Predictive Models for Modeling the College Graduation Rates. *Proceedings (refereed), 15<sup>th</sup> ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2017)*, June 7-9, 2017, London, United Kingdom. [Data Science]
- **85.** Gautam, Y., Lee, C., Cheng, C.-I. and Langefeld, C. (2015). MiDCoP Approach of Allele Frequency Estimation of Untyped SNP Using the Allele Frequencies of Neighboring SNPs. *Proceedings (Refereed) of the 2<sup>nd</sup> International Conference on Computational Science and Intelligence 2015*, Okayama, Japan, July 12-16, 2015. [Area: GWAS study]
- 86. Lee, C., Cheng, C.-I. and Zeleke, A. (2014). Can Text Mining Technique be used as an Alternative Tool for Qualitative Research in Education? *Proceedings (Refereed), 15<sup>th</sup> IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2014)*. June 30 July 3<sup>rd</sup>, 2014, Las Vegas, USA. [Area: Statistics Education]
- 87. Soshnikov, S., Lee, C. and Vladimirov, S. (2013). A Modeling approach to identify factors associated with Infant mortality in Russia. *Proceedings (refereed), 12<sup>th</sup> IEEE/ACIS International Conference on Computer and Information Science (ICIS 2013),* p. 185-190. June 16 -20, 2013, Toki Messe, Niigata Japan. [Area: Data Science]
- 88. Soshnikov, S., Lee, C., Vlassov, V., Gaidar, M. and Vladimirov, S. (2013). A comparison of some predictive modeling techniques for modeling abortion rates in Russia. *Proceedings (Refereed)*, 14<sup>th</sup> IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2013), p. 115-120. July 1<sup>st</sup> July 3<sup>rd</sup>, 2013, Honolulu, Hawaii, USA. [Area: Data Science]
- 89. Crockett, S. and Lee, C. (2012). Does it Matter What They Said? A Text Mining Analysis of the State of the Union Address of USA Presidents. (*Refereed*) Proceeding, 13<sup>th</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing (SNPD 2012) August, Kyoto, Japan. [Area: Data Science]
- **90.** Robertson, k., Beregulko, A., Lee, C. (2011). Risk Factors Associated with Methamphetamine Production: A Spatial Predictive Modeling Approach. (*Refereed*) *Proceeding, International Conference on Computers, Networks, Systems, and Industrial Engineering (CNSI 2011),* Jeju, South Korea, May 23-25, 2011.[Area: Data Science].
- **91.** Zeleke, A. and Lee, C. (2010). Teaching Introductory Statistics Using Student Generated Data in a Large Class. *Proceedings [Refereed], International Conference on Teaching Statistics, Ljubljana, Slovenia, 11-16, July 2010. [Area: Statistics Education]*
- **92.** Lee, C. (2010). On issues of Data Production in Teaching Statistics. *Proceedings [Refereed], International Conference on Teaching Statistics*, Ljubljana, Slovenia, 11-16, July 2010. [Area: Statistics Education]
- 93. Lee, C., Daniels, J. and Famoye, F. (2007). A Real-Time web-based system to facilitate meaningful learning in Statistics. (*Refereed*) Proceedings of ED-MEDIA 2007, World Conference on Educational Multimedia. Hypermedia & Telecommunications [Ed. Craig Montgomerie, Jane Seale], June 25-29, 2007, Vancouver, BC, Canada, pp.3619-3627. [Area: Statistics Education]

- **94.** Meletiou-Mavrotheris, M. and Lee, C. (2007). A cross-national comparison of introductory statistics students' prior knowledge of graphs. *(Refereed) Proceedings publication in the 5<sup>th</sup> Congress of the European Society for Research in Mathematics Education*. Larnaca, Cyprus. [Area: Statistics Education]
- 95. Lee, C. (2007). How well can hand size predict height? A set of refereed instructional material in the 'Cooperative Learning Module' in the National Pedagogic Resource Library for statistics educators organized by the <u>CAUSE</u> and <u>SERC</u>. [http://serc.carleton.edu/sp/cause/cooperative/examples/18172.html]. [Area: Statistics Education].
- **96.** Lee, C., Rey, T. Tabolina, O, Mentele, J. & Pletcher, T. (2006). Modeling the network of loyalty-profit chain in chemical industry. *IEEE/ICIS06 Refereed Proceedings, 5th IEEE/ACIS International Conference on Computer and Information Science*, Hawaii, 7/10-7/12/06, p. 492-499. [Area: Data Science]
- **97.** Lee, C. and Famoye, F. (2006). Teaching Statistics Using A Real Time Online Database Created By Students. In A. Rossman & B. Chance (Eds). *Refereed Proceedings, International Conference on Teaching Statistics[CD-ROM]*, Salvador, Brazil, July, 2006. [Area: Statistics Education]
- **98.** Zeleke, A., Lee, C. and Daniels, J. (2006). Developing Projects Based Students' Own Data In Introductory Statistics. In A. Rossman & B. Chance (Eds). *Refereed Proceedings, International Conference on Teaching Statistics [CD-ROM]*, Salvador, Brazil, July, 2006. [Area: Statistics Education]
- **99.** Meletiou-Mavrotheris, M. and Lee, C. (2005). Exploring Introductory Statistics Students' Understanding of Variation in Histograms. *(refereed) Proceedings pub. in the 4<sup>th</sup> Congress of the European Society for Research in Math. Education*, Sant Feliu de Guíxols, Spain. [Area: Stat. Education]
- **100.** Lee, C., Rey, T. and Mentele, J. (2005). Structural Neural Network Models for Modeling Loyalty and Profitability. *Refereed Proceeding, SUGI30*, Philadelphia, Maryland, USA, April 2005. [Area: Data Science]
- **101.** Meletiou-Mavrotheris, M and Lee, C. (2005). Effects of technological tools on introductory statistics students' understanding of sampling distribution. *Refereed proceeding in the 11<sup>th</sup> Biennial Conference*, 2005, at Cyprus, the European Association for Research on Learning and Instruction, 2005. [Area: Statistics Education]
- 102. Lee, C. and Lu, Xiaomin (2004). A Comparison of Partial Least Square Model and Neural Network Model. *Refereed Proceedings*, 5<sup>th</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing, June 2004, Beijing, China. [Area: Data Education]
- 103. Wang, D. Lee, C., Mehta, R.H., Kaiser, J. & Bott, M. (2004). An Image Retrieval System Based on Patient Data and Image Content. *Refereed Proceedings*, 5<sup>th</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing, June 2004, Beijing, China. [Area: Data Science]
- 104. Meletiou, M. & Lee, C. (2003). Investigating college-level introductory statistics students' thinking on variability: Insights gained from two studies. (*Refereed*) Proceeding, the 3<sup>rd</sup> International Research Forum on Statistical Reasoning, Thinking and Literacy, [edited: Lee, C.], Lincoln, Nebraska, July 23-28, 2003. [Area: Statistics Education]

- **105.** Lee, C., Zeleke, A. & Wachtel, H. (2002). Where do students get lost: the concept of variation. *Refereed Proceeding, the 6th International Conference of Teaching Statistics*, Cape Town, South Africa, July, 2002. [Area: Statistics Education]
- **106.** Meletiou, M. Lee, C. (2002). Student understanding of histograms: A stumbling stone to the develop of intuitions about variation. *Refereed Proceeding, the 6<sup>th</sup> International Conference of Teaching Statistics,* Cape Town, South Africa, July, 2002. [Area: Statistics Education]
- **107.** Lee, C., Meletiou, M., Wachtel, H. & Zeleke, A. (2002). The issue of motivation and expectation in the introductory statistics obstacles and opportunities. *Refereed Proceeding, the 6th International Conference of Teaching Statistics,* Durban, South Africa, July, 2002. [Area: Statistics Education]
- 108. Lee, C. (2000). A paradigm shift in the technology era in higher education. Refereed Proceedings, ED-MEDIA 2000: (Refereed) The World Conference on Educational Multimedia, Hypermedia & Telecommunications. Montreal, Canada. July, 2000. [Area: Statistics Education]
- **109.** Lee, C. (1999). A comparison of students' beliefs and attitudes towards statistics between technology-rich environment and the traditional lecture. *Refereed Proceedings, the International Conference on Mathematics/Science Education & Technology* at San Antonio, pp. 133-138. [Area: Statistics Education]
- **110.** Meletiou, M., Myers, M., Lee, C. (1999). The role of technology in the introductory statistics classroom: Reality and Potential. *Refereed Proceedings, the 1999 International Conference on Mathematics/Science Education & Technology*, pp. 292-297. [Area: Statistics Education]
- **111.** Lee, C. (1998). An assessment of the PACE strategy for an introductory statistics course. *Refereed Proceedings, The 5<sup>th</sup> International Conference on Teaching Statistics*, p. 1215-1221. [Area: Statistics Education]
- **112.** Lee, C. & St. John, D. (1998). On the use of technology for mathematics at secondary schools. *Refereed Proceedings of the SITE 1998 Annual Conference, Association for the Advancement of Computing in Education*, p. 618-621. [Area: Statistics Education]
- **113.** Lee, C. (1997). Promoting active learning in an introductory statistic using the PACE strategy. *Refereed Proceeding, 6th International Symposium on Mathematics Education* at Mexico City, p. 199-206. [Area: Statistics Education]

#### **Published Research Reports and Manuscripts:**

- **114.** Lee, C. (2003). *A Final Report on the Evaluation of the Effectiveness of Violence Prevention and Drug-Free School Project Conducted by the Regional Educational School District* (Funded by Department of Education, 1999-2002). This over 500 page report studies the effectiveness of research-based programs implemented in eleven middle schools in the Mid-Michigan area for preventing violence and drug-free schools. In addition to evaluating the effectiveness of the programs implemented, an integral part, equally important, of the study was to identify significant factors associated with risk behaviors of violence and substance usages at schools. The report is available on CD copy righted by the RESD.
- **115.** Lee, C. (2000). *Quantitative Methods for Measuring and Assessing Uncertainties in Testing Process and Outcomes*. Manuscript prepared for an invited 60 hours workshop from July 30 to August 15, 2001 at the National Bureau of Standards & Metrology and Inspection, Taiwan, and published by the National Bureau

of Standards & Metrology and Inspection, Taiwan). An online version can be viewed at <u>http://www.cst.cmich.edu/users/lee1c/workshop/</u>.

- **116.** Lee, C. and Famoye, F. (1999). Online *workshop in SPSS at <u>http://calcnet.cst.cmich.edu/org/spss/</u>. We develop a set of movie clips, each is about 5 to 10 minutes to introduce SPSS and data analysis. Using any search engine to search for 'SPSS Training', this site is usually in the top three sites.*
- **117.** Grabinski, R., Lee, C. & Chamberlain, M. (1999). On the study of opinions and realities from parents, teachers and students points of view for charter schools : A Report on Charter School Profiles :1997-1998 School Year.
- **118.** Grabinski, R., Lee, C. & Chamberlain, M. (1998). On the study of opinions and realities from parents, teacher and students points of view for charter schools: Chatter School Profiles: 1996 1997 School Year.
- **119.** Lee, C. (1997). A Survey Study of Student and Faculty Opinions on Current and Future Technology Implementation at Central Michigan University, supported by the Information Technology Office.
- 120. Clemmer, R., Hill, J., Lee, C. Littlefield, A. & Pape, G. (1996). *A Final Report to the Stakeholders of the Saginaw Chippewa Tribe Gaming Expansion Evaluation Project Adjustment of Progress Report, Crime impact, Health care impact, Law enforcement and court resources impact, Economic development impact, Quality of life, Hotel and convention center impact, Income transfer impact.* Central Michigan University Press, July, 96.
- 121. Clemmer, R., Hill, J., Lee, C. Littlefield, A. & Pape, G. (1996). A Progress Report to the Stakeholders of the Saginaw Chippewa Tribe Gaming Expansion Evaluation Project. Labor pool, Housing impact, Road needs, School impact, Wage impact, Population increase, Zoning, Day care impact. Central Michigan University Press, April, 96.
- **122.** Aron, R., Lee, Carl & Aron, I.-M. (1987). Some Factors Associated With Student Performance on Michigan Educational Assessment Program (MEAP) Tests. Central Michigan University Press.

#### **II-2: Non-refereed Proceeding Publications:**

- **123.** Abayomi, O., Lee, C. and Famoye, F. (2023). Generalized regression models when responses follow family of flexible distributions. *Proceedings, 2023 Joint Statistical Meeting*, August 5-10, 2023, Toronto, Canada.
- 124. Lee, C. and Zeleke, A. (2018). Dunning-Kruger effect for students taking statistics courses. Proceedings, 10<sup>th</sup> International Conference on Teaching Statistics, July 8 to 13, 2018, Kyoto, Japan. [Statistics Education]
- 125. Lee, C., Famoye, F. and Akinsete A. (2017). A generalized regression model for zero-inflated count data. In JSM Proceedings, Statistical Programmers and Analysis Section. American Statistical Association. August 1-7, Baltimore, Maryland, USA. [modeling]
- 126. Lee, C. (2016). Some observations of students' performance and attitudes towards a flipped classroom for introductory statistics. In *Proceedings, Statistical Education Section, Joint Statistical Meetings,* 114-120, Chicago, USA, July 31 – August 4, 2016. [Statistics Education]

- 127. Alzaatreh, A., Lee, C. & Famoye, F. (2015). Generalized family of Cauchy distribution. In JSM Proceedings, Statistical Programmers and Analysis Section. American Statistical Association. 114-120, August 8-13, 2015, Seattle, Washington, USA. [Distribution]
- **128.** Famoye, F and Lee, C. (2015). Exponentiated-exponential geometric regression model. Proceedings of the 60<sup>th</sup> World Statistics Congress, July 26-31, 2015, Rio de Janeiro, Brazil. [Modeling]
- **129.** Zeleke, A., <u>Lee, C.</u>, Cheng, C.-I., Daniels, J., and Divi, K. A. (2014). Comparison of attitudes between traditional and hands-on classes in an introductory statistics course. Proceedings, International Conference on Teaching Statistics, July 13 18, 2014, Flagstaff, AZ USA. [Statistics Education]
- **130.** Famoye, F., Lee, C. and Alzaatreh, A. (2013). Some recent developments in probability distributions. Proceedings of the 59<sup>th</sup> World Statistics Congress, August 25-30, 2013, Hong Kong. [Distribution]
- 131. Lee, C., Mocko, M., Moreno, J., Rogness, N. (2008). An Overview of K 16 Poster and Project Competitions. Proceedings, Statistics Education Section, Joint Statistical Meetings, August 6th, 2008, Denver, CO. [Statistics Education]
- **132.** Famoye, F. and Lee, C. (2006). Evaluation of students' learning in real-time online activities environment. Proceedings, Statistics Education Section, Joint Statistical Meetings, August 9<sup>th</sup>, 2006, Seattle, WA, pp. 2272-2278. [Statistics Education]
- **133.** Famoye, F. and Lee, C. (2005). Beta-weibull distribution. *Proceedings, Joint Statistical Meetings*, Minneapolis, MN., August, 2005. [Distribution]
- **134.** Lee, C. and Famoye, F. (2005). Active Learning Using Real-Time Online Hands-on Activities. *Proceedings, Statistics Education Section, Joint Statistical Meetings, Minneapolis, MN.*, August, 2005. [Statistics Education]
- **135.** Lee, C. (2004). Distance Learning The experience of Teaching an Online Introductory Statistics. *Proceedings, Joint Statistical Meetings*, Toronto, Canada, August 10, 2004, 2740-2744. [Statistics Education]
- **136.** Lee, C. & Meletiou, M. (2003). A missing link toward understanding variability: The unexpected difficulty of histograms. *Proceedings, the Joint Statistical Conference, American Statistical Association,* San Francisco, CA, August 3<sup>rd</sup> 8<sup>th</sup>, 2003. [Statistics Education]
- 137. Lee, C., Zeleke, A. & Meletiou, M. (2003). On the issue of noncongnitive factors in developing an active learning environment for introductory statistics. *Proceedings, Hawaii International Conference on Statistics and Related Fields, Honolulu*, HI, June 5<sup>th</sup> June 10<sup>th</sup>, 2003. [Statistics Education]
- 138. Zeleke, A., & Lee, C. (2003). On students' conceptual understanding of variation in introductory statistics. Proceedings, Hawaii International Conference on Statistics and Related Fields, Honolulu, HI, June 5<sup>th</sup> – June 10<sup>th</sup>, 2003. [Statistics Education]
- **139.** Wang, D. & Lee, C. (2002). The effect of baseline selection in Hotelling's T<sup>2</sup> two sample test for shape data. *The Proceedings [CD-ROM], Stat Computing Section of American Statistical Assoc*, 2002, New York. [Statistics Method]
- **140.** Famoye, F., Lee, C., & Eugene, N. (2002). Bimodality properties and applications for Beta-Normal distribution. *The Proceedings [CD-ROM], American Statistical Assoc*, 2002, New York. [Distribution]

- **141.** Lee, C. (2001). Classroom experience in using the net for teaching. *Proceedings the 2001 International Statistical Institute Conference*, Seoul, South Korea. [Statistics Education]
- **142.** Lee, C. (2000). Developing a student-centered environment in the technology-the case of introductory statistics. *Proceedings, American Statistical Association, 2000 Annual Meetings at Indianapolis*, IN, August, 2000. pp. 35-43. [Statistics Education]
- 143. Lee, C. (1999). Students' perspective on learning introductory statistics Attitudes, Pedagogy and Contents. *Proceedings, American Statistics Association, 1999 Annual Meetings at Baltimore*, August, 1999. pp. 219-224. [Statistics Education]
- **144.** Lee, C. & Hill, James, P. (1997). Crime Impact Study for a Native American casino in rural area. *1997 American Statistical Association Proceedings Section* : Social Study, p. 281-285. [Statistical application]
- 145. Lee, C. & VanderKolk, K. (1996). Statistical models for maximum daily ozone concentrations in Detroit Metropolitan Area. *ASA Proceedings Section Environmental Stat.*, 49-53. [Modeling]
- **146.** Lee, C. & Pauken, D. (1995). Statistics and probability at secondary schools. *Proceedings of ASA meetings Sec. Statistics Education*, 273-278. [Statistics Education]
- 147. Lee, C. (with Hogarth, B., Chiesa, T. and Siems, K.) (1993). A case study of causes associated with nobore stamp V8 engines at a GM plant. *Proceedings of ASA Section-Quality & Productivity*, 77-82. [Statistical application]
- **148.** Lee, C. (1992). Efficiency comparison of methods computing incomplete beta integral. *Proceedings of the American Statistical Assoc. 1992 Joint Meeting Sec. Statistical Computing*, 108-112. [Statistical Computing]
- **149.** Lee, C. Hoffman, C. & Rasche, R. (1991). An analysis of lipid components associated with coronary heart disease. *Proceedings of the 1991 National Annual Statist. Conference in Taiwan*, 306-313. [Statistical Application]
- **150.** Famoye, F. & Lee, C. (1990). Estimation of generalized Poisson distribution using weighted discrepancies method. *Proceedings of the 22nd Symposium on INTERFACE*, 332-335. [Estimation]
- **151.** Lee, C. (1990). An efficient method for noncentral beta probabilities when parameters are small or moderate. *Proceedings of the 22nd Symposium on INTERFACE*, 430-433.[Computing]
- **152.** Lee, C. (1988). A new algorithm for Computing F-probability. *Proceedings of American Statistical Association-Section of Statistical Computing*, 1988. [Computing]
- **153.** Lee, C. (1986). D-optimal Designs for regression models when some parameters are more important. *Proceeding of the First International Statist. Symposium, Taiwan*, 471-503. Optimal Design]
- **154.** Lee, C. (1986). Estimation of Instructor's Performance. *Proceedings of the American Statistical Association Statistical Education*, Vol. 5, 111-114. [Statistics Education]
- **155.** Lee, C. (1986). Constrained optimal designs for polynomial regression. *Proceedings of the American Statist. Assoc. Section on Survey Research Methods*, 280-285. [Optimal Design]

#### II-3: Jury/Media Articles:

- Over 20 media/Newspaper articles quoted the Casino Impact Study between March and August, 1996. Many invited presentations with regards to the casino impact were given at local community meetings, city and county commissioner meetings.
- Over 15 media/Newspaper articles quoted the study "Some Factors Associated with Student Performance on Michigan Educational Assessment Program (MEAP) Tests".
- The Casino Impact Study was selected the top five event in Isabella County, Michigan in 1996 by the area newspaper Morning Sun on 12/31/96.

## **III. CONTRUBTIONS IN STATISTICAL CONSULTATION**

#### **III-1: Consulting work for Industry and Organizations:**

- 2002 2016: Senior faculty research fellow at the Institute of Health & Business Insights, College of Health Professions, CMU (previously known as Center of Applied Research in Technology, Central Michigan University Research Corporation). Working as a senior statistician expert for data mining and business intelligence projects contracted with private companies. I was involved with applied research projects for Dow Chemical, Dow Corning, EDS, International Papers, Ely-Lily, Henry Ford Hospital System, Soaring Eagle Casino & Resort, General Motor, and others. A team of two to three researchers and two research associates is formed for each project. Projects include marketing strategies, loyalty modeling, Bank of Knowledge analysis, spatial and temporal pattern predictions, and text mining. My role is to provide problem solving strategies and technical expertise on the use of data mining and statistical techniques for the projects (see the External Funded Grant Section for details).
- 2006- 2007: Serve as the expert statistician for an international team project involving Roberson Technology Non-profit Organization, National Health Bureau of India and National Institute of Medicine in India and Central Michigan University to evaluate an expert disease diagnosis system.
- 1996 2006: Serve as a statistical consultant for RESD (Regional Education School District at St. Louis, MI) on projects related to institutional research, assessment and planning.
  - (a) The school climate study is annually since 1996.
  - (b) The assessment of student learning and evaluation of charter schools was annually from 1996 to 1999.
  - (c) The project on school violence prevention and drug-free was a three years project from 2001-2003.
- 2002 Serve as a statistical consultant and the supervisor of student intern for a quality control project at a local manufacturing company. The project involves with the applications of statistical quality control techniques to investigate factors associated with defective parts produced from several chemical processes.
- 1990 Present: Expert statistician of the TELTECH Expert Knowledge Network -- Clients, who are from industry, go through TELTECH network to locate an expert to provide consultation on quality control, experimental design, sampling, modeling, etc.. Recent projects included a dose-response modeling for a chemical company and a quality control project.
- 1999-2001: Served as an expert statistician to investigate the effect of aloe versa on cancer patients contracted by the Mid-Michigan Hospital.

- 1998 1999: Served as an expert statistician (with Felix Famoye) to investigate the adequacy of the pole survey methodology for the joint poles estimation contracted by Consumer Energy and Ameritech. The project was to determine and modify a sampling methodology for estimating the total number of poles in the entire state of Michigan shared between Consumer Energy and Ameritech to resolve a conflict of several million dollars between these two companies.
- 1995 1996: Industry/Academia cooperative case study project with FORD (supported by NSF/ASA) The performance of capability indices under nonnormal. (with Gus Matzo, senior technical specialist at FORD, Dearborn, MI). The study was published as a chapter in a case study book published by the SIAM Society (Ed. By Roxy Peck).
- 1993 1994: Statistical consultant at the Dow Corning Research Center to develop statistical models for a chemical process.
- 1991 1992: Statistical consultant for the GM Powertrain V8 engine plant at Flint. Helped the company to study the factors associated with the V8 engine production process.

#### **III-2: Academic Statistical Consulting Work:**

- 2005 Serve as a statistical consultant and data analyst for an NIH funded project on Chemical lab safety training program funded to Central Michigan University Research Corporation.
- 2004 Serve as the project evaluator for the NSF/CCLI project on Activities for Introductory Statistics funded to Iowa State University, Department of Statistics.
- 2003-Serve as the project consultant on the research project "The impact of long term use of handheld graphing technology and trained teachers on student performance" by Burrill, G. at Michigan State University.

1985 - 1991, 1994 - August, 1998:

In charge of the statistical consulting service at Central Michigan University. To provide statistical consulting services to faculty, staff and graduate students for designing questionnaires and experiments, analyzing data, and interpreting results. On average, there are about 80 consulting projects per year.

August, 1979 - July, 1984 (Graduate Assistant):

Statistical consultant at the Department of Statistics, Iowa State University. To provide statistical consulting for the biological, agricultural and food sciences, and for the School of Veterinary.

July, 1976 - June, 1978 (full time):

Computer programmer and statistical consultant at Computer Center, National Taiwan University. To develop a statistical package and provide statistical consulting for the university.

#### **IV. PRESENTATIONS/WORKSHOPS ACTIVITIES**

#### **IV-1: Workshops Conducted and Sessions Organized at Professional Conferences:**

1. Co-Invited Session Organizer (with Famoye): Session Title "Interface Between Statistical Distributions and Data Analytics" at the International Conference on Statistical Distributions and Applications at Huntington, WV, 10/13-10/15, 2022.

- 2. Conference Co-chair: organizing the second International Conference on Statistical Distributions and Applications at Eberhard Conference Center, Grand Rapids, USA. October 10 12, 2019.
- 3. Conference Co-chair: organizing the second International Conference on Statistical Distributions and Applications at Niagara Falls, Canada from October 15 16, 2016.
- 4. Session Organizer and Chair: Organize on 'Statistical Literacy Beyond Classroom at the International Conference on Teaching Statistics, Flagstaff, AZ, USA, July 13 18, 2014.
- 5. Conference Co-chair: organized the first International Conference on Statistical Distributions and Applications at Mt. Pleasant, MI, USA from October 10 12, 2013.
- 6. Organizing Committee member for the Annual International SAS Shootout Project Competition for the Annual SAS Analytics Conference. The committee is responsible for designing the research project and conducting the judging work to select the winning teams, 2010 2016.
- 7. Organizer and Chair of a Special Contributed Session on "Fostering Active Learning in Introductory Statistics". American Statistical Association, Stat. Edu. Section, Seattle, WA, August, 2006.
- Workshop on Teaching Basic Statistics Using Real-time Hands-on Activities at the 57<sup>th</sup> Annual Conference, Michigan Council of Teachers of Mathematics, 8/8-8/11, 2006 at Holt, Michigan. (with Felix Famoye).
- 9. Workshop on the use of real-time database for teaching statistics. American Mathematical Association for Two-Year Colleges, San Diego, November, 2005 (with Sue Lenker).
- 10. Workshop student learning outcomes assessment for introductory statistics. Beyond Formula Conference, July, Rochester, NY, 2004.
- Was invited to give a sixty-hours workshop on how to measure and assess uncertainties in proficiency tests by the National Bureau of Standards & Metrology and Inspection, Taiwan, July 30 to August 15, 2001.
- 12. Gave workshops on how to conduct student learning outcomes assessment and simple tools for classroom assessment regularly from college to college at CMU during my tenure of Assessment Coordinator, 1999-2001.
- 13. Organizer and Leader of the Luncheon Roundtable on the effect of technology on student attitudes/beliefs. At the Annual Joint Statistical meetings at Baltimore, 1999.
- Organizer and speaker of a two hours theme talk on Teaching and Learning Introductory Statistics at the 1998 International Conference of Research on Undergraduate Mathematics Education at South Bend, IN.
- 15. Organizer and chair of a special contributed session at 1997 Joint Statistical Meetings on Innovative Programs Using Technology for Introductory Statistics.
- 16. Gave a workshop on "Computer Graphical Presentations" at the 1996 Science/Math Workshop for middle/elementary School students organized by the Regional Educational Schools District.
- 17. Initiated and organized the First Teaching Mathematics with Technology Institute for high school Math teachers on Algebra and Statistics hosted by Central Michigan University, 1995.

 Gave a workshop on "How Well Can You Measure Without a Ruler?" at the 1995 Science/Math Workshop for middle/elementary school students organized by the Regional Educational Schools District.

#### **IV-2:** Invited/Featured Talks and Presentations:

- <u>Lee, C., Hsu, Y.-F., Budhathoki, N. (2024)</u>. An Overview of Techniques for Modeling Imbalanced Data with Applications. 8<sup>th</sup> Stochastic Modeling Techniques and Data Analysis International Conference and Demographics 2024 Workshop, Chania, Greece, June 4-7, 2024.
- 20. <u>Lee, C.</u> (2022). An Overview of Generalized Asymmetric Distributions and Modeling. Plenary Speaker, *International Conference on Statistical Distributions and Applications*, Huntington, WV, October 15, 2022.
- 21. <u>Warahena Liyanage, G.</u>, Famoye, F. and Lee, C. (2022). A Generalization of LASSO Modeling vis Bayesian Interpretation of LASO. *International Conference on Statistical Distributions and Applications*, Huntington, WV, October 14, 2022.
- 22. <u>Hsu, Y.-F.</u>, Lee, C. and Famoye, F. (2022). Combining Propensity Score method with SMOTE for Modeling Imbalanced Data. *International Conference on Statistical Distributions and Applications*, Huntington, WV, October 14, 2022.
- 23. Alzaatreh, A., <u>Famoye, F.</u>, Lee, C. (2022). Multivariate Count Data Regression Models. *International Conference on Statistical Distributions and Applications*, Huntington, WV, October 14, 2022.
- 24. <u>Aljarrah, M</u>., Lee, C and Famoye (2022). A generalized family of symmetric distributions: Properties and Applications. *International Conference on Statistical Distributions and Applications*, Huntington, WV, October 14, 2022.
- 25. Lee, C. Unique Features of Data Science. Invited speaker in the 1<sup>st</sup> International Virtual Conference in Statistics, University of AL-Qadisiyah Statistics department, Iraq, May 12, 2020.
- Lee, C. Data Science Overview: Unique features and case studies. Invited Workshop Speaker in 2<sup>nd</sup> Data Science Conference, College of Business Administration, Central Michigan University, Feb. 28, 2020.
- 27. Lee, C. Generalized asymmetric distributions and modeling. Keynote speaker, Advanced Research Initiative (ARI), Department of Mathematics and College of Science, Marshall University, March 2020.
- 28. Lee, C. Data Science: Past, Present and Future. Keynote speaker, Advanced Research Initiative (ARI), Department of Mathematics and College of Science, Marshall University, March, 2020.
- 29. Lee, C. An Overview of Data Science. Colloquium, Department of Mathematics, Alma College, October 29, 2019, Alma, Michigan.
- Lee, C., Aljarrah, M., and Famoye, F. Applications of a generalized normal distribution for fitting financial and economic data. Presented at the 3<sup>rd</sup> International Conference on Econometrics and Statistics (EcoSta 2019), June 25-27, 2019, Taichung, Taiwan.

- Lee, C. Recent development of methods for generating univariate continuous distributions. Department Colloquium, Department of Mathematics and Statistics, University of Michigan, Dearborn, MI. March 24, 2019.
- Lee, C. Teaching Statistics using Hands-on Real-time Activities. Invited presentation as a Haimo Award winner presentation. Presented at the 2019 Joint Mathematical Meetings, January 16-19, 2019, Baltimore, USA.
- 33. Zeleke, A. and <u>Lee, C.</u> A study of student's attitudes change and performance improvement in a flip class. Presented at the *10<sup>th</sup> International Conference on Teaching Statistics*. July 8 to 12, 2018, Kyoto, Japan.
- 34. Alzaatreh, A., Aljarrah, M. A., Shahbaz, M. Q., Shahbaz, S. H., Famoye, F. & Lee, C. Properties and Applications of Truncated T -X family of Distributions. Presented at an Invited session of *the* 9<sup>th</sup> *International Workshop on Applied Probability* (IWAP 2018), June 23-27, 2018, Budapest, Hungary.
- 35. <u>Lee, C.</u> and Famoye, F. A new generalized regression model for count data. Presented (invited) at the 26<sup>th</sup> South Taiwan Statistical Conference, National Taipei, University, June 23-24, 2017.
- Lee, C. Strategies of Data Analytics: Some Case Studies. National Chung Cheng University, Taiwan. June 7, 2016.
- Lee, C. Strategies of Data Analytics: Some Case Studies. National Taipei University, Taiwan. June 15, 2016.
- 38. Lee, C. Research opportunities in statistics. American Mathematics Society Student Chapter, CMU, November 23, 2015.
- 39. Lee, C. Analytics and Data Science: Dealing with Big Data. Statistics Club, CMU, April 6<sup>th</sup>, 2015.
- 40. Alzaatreh, A., <u>Lee, C.</u>, and Famoye, F. A New Approach for Generating Distributions from the Normal Distribution. Presented (Invited) at the 2014 International Conference on Statistics and Society in the New Information Age: Challenge and Opportunities, Dec. 28-30, 2014, at Colombo, Sri Lanka.
- 41. Zeleke, A., <u>Lee, C.</u>, Cheng, C.-I., Daniels, J. & Divi, K. A comparison of attitudes between traditional and hands-on classes in an introductory statistics course. *The 9<sup>th</sup> International Conference on Teaching Statistics*, Flagstaff, AZ, USA. July 12 to July 18, 2014.
- 42. Lee, C. Strategy of Business Analytics: Some Case Studies. Colloquium, Business College, Miami University, Oxford, OH. April 24, 2014.
- Lee, C. Misconceptions of some probability and statistical concepts. Invited presentation by FaCIT Director, Dr. James Therrell, in "Research for Education Leadership" class at EHS 315, November 20, 2013.
- 44. Lee, C. Misconceptions of some probability and statistical concepts. Invited feature presentation at the Saginaw Valley Chapter of the American Society of Quality, Midland, MI, November 4, 2013.
- 45. <u>Famoye, F.</u>, Lee, C. and Alzaatreh, A. Some recent developments in probability distributions. Presented at the 59th World Statistics Congress of the International Statistical Institute held in Hong Kong, August 25 30, 2013.

- 46. <u>Alzaatreh</u>, A., Lee, C. and Famoye, F. T-normal family of distribution: A new approach for generalizing the normal distribution. Presented at the First International Conference on Distributions and Applications held in Mt. Pleasant, MI, USA, October 10 12, 2013.
- 47. Lee, C. Some common misuses of Probabilities and Statistics. Invited talk at the National Taiwan University, June 25, 2013.
- Lee, C., Famoye, F. & Alzaatreh, A. A method for generating discrete analogues of continuous distributions. Invited talk at the 22<sup>nd</sup> South Taiwan Statistics Conference, Kaohsiung, Taiwan, June 28-29, 2013.
- 49. <u>Lee, C.,</u> Famoye, F., Alzaatreh, A. An overview of methods for generating continuous distributions. Invited talk at the Institute of Statistics, Academia Sinica, Taipei, Taiwan, June 24, 2013.
- 50. Lee, C. Misconceptions of some probability and statistical concepts. Invited feature presentation at the Dow Corning Technical Exchange Society, Midland, MI, March 27, 2013.
- Lee, C. Using real-time hands-on activities to engage students in quantitative reasoning. Invited talk, The 3<sup>rd</sup> Annual conference on Teaching & Learning Collective. Central Michigan University, February 1, 2013.
- 52. Lee, C. Exploratory data analysis (data mining) for the Social Sciences and Medicine. Invited Public Lecture, Department of Management and Health Economics, National Research University, the Higher School of Economics, Moscow, Russia, September 11, 2012.
- 53. Lee, C. A text Mining Analysis on the effects of presidential State of Union addresses to their Performance rating. Mid-Michigan Chapter, American Statistical Association, October 25, 2012.
- 54. Lee, C. The Trend of Online Learning and a Case for Introductory Statistics. Department of Statistics, Grand Valley State University, November 15, 2012.
- 55. Lee, C. Career Opportunities in Statistics and Analytics. Statistics Club Meeting, Central Michigan University, November 8, 2012.
- Lee, C. Statistics and Probability in Everyday Lift: Some misuse and misconception of statistical concepts. National Bureau of Standards & Metrology and Inspection, Hualand Subdivision, Taiwan. May 30, 2011.
- 57. Lee, C. On issues of Data Production in Teaching Statistics. An invited presentation at the *International Conference on Teaching Statistics*, Ljubljana, Slovenia, 11-16, July 2010.
- 58. Lee, C. 'Strategy of conducting data mining projects with applications.' Department of Statistics, Seoul National University, May 25, 2009, Seoul, Korea.
- 59. <u>Lee, C.,</u> Mocko, M., Moreno, J. & Rogness, N. 'An Overview of K-16 Poster and Project Competitions. An invited presentation at the Joint Statistical Conference, Denver, August, 2008.
- <u>Lee, C</u>. and Angelos, J. 'Six Sigma Project for Improving Mathematics Placement. An invited presentation as the final four for the 1<sup>st</sup> Education Team Excellence Competition organized by the American Society of Quality. 15<sup>th</sup> National Quality Education Conference, November 11-13, St. Louis, MO, 2007.

- 61. Lee, C. Colloquium Talk on "The First Undergraduate Statistics Project Competition". Department of Statistics, Grand Valley State University, September, 2006.
- 62. <u>Lee, C.</u> and Famoye, F. Teaching Basic Statistics using Real-Time Hands-on Activities. The Data Day Special Event, Annual Conference organized by the Michigan Council of Teaching Mathematics, Holt, Michigan, August, 2006.
- 63. <u>Lee, C</u>. and Famoye, F. Teaching Statistics Using a Real Time Online Database Created By Students. *International Conference on Teaching Statistics,* Brazil, July, 2006.
- 64. <u>Zeleke, A.</u>, Lee, C. and Daniels, J. Developing Projects Based Students' Own Data In Introductory Statistics. *International Conference on Teaching Statistics*, Brazil, July, 2006.
- 65. <u>Daniels, J.</u> and Lee, C. Colloquium on "Using Real-Time data for Teaching Statistics" at Department of Statistics, Western Michigan University, Kalamazoo, Michigan, March, 2006.
- 66. Lee, C. Some Common Misconceptions and Unexpected Difficult Statistical Concepts. Workshop at National Taipei University, May 4<sup>th</sup>, 2005, Taiwan.
- 67. Lee, C. Some Data Mining Case Studies. May 5<sup>th</sup>, 2005, at the National Academia Sinica, Taipei, Taiwan.
- 68. Lee, C. Some Business Applications using Data Mining Techniques. May 3rd, 2005, at the National Central University, Taiwan.
- 69. Lee, C. Predictive Modeling for Loyalty and Profitability A Data Mining Case Study in a Chemical Industry. April 28, 2005, at the National Central University, Taiwan.
- Lee, C. Panelist on Research in Statistics Education: It's not a solo sport. The 1<sup>st</sup> United State Conference on Teaching Statistics, May 19-21, 2005, Columbus, OH.
- 71. <u>Lee, C.,</u> Rey, T., Mentele, J. & Garver, M. Structural Neural Network Models for Modeling Loyalty and Profitability. Presented at the 30<sup>th</sup> SUGI Conference, Philadelphia, Maryland, USA, April 2005.
- 72. Lee, C. Activity-based curriculum using Technology and real-time online database created by students. Presented at the AMS/MAA Annual Conference, Atlanta, GA, January, 2005.
- 73. Lee, C. The issue of student attitudes and motivation in introductory statistics. Presented at the Beyond Formula Statistics Conference, Rochester, NY, July, 2004.
- 74. Lee, C. Planning and assessing student learning outcomes for statistics. Presented at the Beyond Formula Statistics Conference, Rochester, NY, July, 2004.
- 75. Lee, C. Distance Learning the experience of teaching an online introductory statistics. Joint Statistics Meetings, Toronto, Canada, August, 2004.
- 76. Lee, C. Motivation and Active Learning. Presented at the Colloquium, Department of Statistics, Iowa State University, October, 2002
- 77. Lee, C. Motivation and Active Learning. Presented at the Colloquium, Department of Statistics, Kansas State University, October, 2002

- 78. <u>Lee, C.</u>, Meletiou, M., Wachtel, H. & Zeleke, A. The issue of motivation and expectation in the introductory statistics obstacles and opportunities. The 6th International Conference of Teaching Statistics, Durban, South Africa, July, 2002.
- Lee, C. Developing an Active Learning Environment for Introductory Statistics From Framework to Practice. International Conference on Stats, Probability & Relate. Northern Illinois University, June, 2002.
- 80. Lee, C. Classroom experience in using the net for teaching. in the 2001 International Statistical Institute Conference, Seoul, South Korea.
- 81. Lee, C. Making the case for Undergraduate Statistics. Symposium on Undergraduate Statistics Education Initiatives, American Statistical Association, Indianapolis, IN, August 12, 2000.
- 82. Lee, C.: One of the three feature speakers at the Mid-West Conference On Teaching Statistics held at Oshkosh, Wisconsin in June, 1999.
- 83. <u>Lee, C.,</u> Fouladi, R. and Meletious, M. Organized and presented a two hours special theme presentation on Teaching and Learning on Introductory Statistics at the International Conference of Research on Undergraduate Mathematics Education at South Bend, IN September, 1998.
- 84. Lee, C. An overview of test statistics for identifying dispersion effects for unreplicated fractional designs. Presented at the Department of Statistics at National Ching-Hua Univ., June, supported by the National Research Council, Taiwan, 1997.
- 85. Lee, C. A study of principle components associated with the complete lipid profile. Department of Biostatistics, Univ. of Michigan, 1992.
- 86. Lee, C. A view of statistical consultation from experience. Dept. of Statist., National Cheng Kung Univ., Taiwan, 1991.
- 87. Lee, C. From the misuse of statistics to statistical applications. Dept. of Statist., Tong-Hai University, Taiwan, 1991.
- Lee, C. A new method for estimating discrete distributions. Institute of Statist., Academia Sinica, Taiwan, 1991.
- 89. Lee, C. Some misused/constructive examples of statistical applications. National Bureau of Census, Taiwan, 1991.
- 90. <u>Lee, C.</u>, Hoffman, C. & Rasche, R. A study on the dimensionality of lipid profile associated with heart disease. 1991 National Annual Statist. Conference, Taiwan.
- 91. Lee, C. On the estimation of discrete distributions using the method of weighted rates of change. Dept. of Math., Univ. of Singapore, 1991.
- 92. Lee, C. Statistical consultation experience in universities. Invited talk at the Graduate Institute of Statist., National Ching-Hua University, Taiwan, 1990.
- 93. Lee, C. On the computation of incomplete Beta integral and its related distributions. Colloquium talk at the Graduate Institute of Statist., National Central Univ., Taiwan, 1990.
- 94. Lee, C. Parametric models for complex data. Invited talk at the Biometry Group, Dept. of Agronomy, National Taiwan Univ., Taiwan, 1990.

- 95. Lee, C. Some Aspects of Constrained Optimal Designs. Department of Statistics, NC State U., Raleigh, 1989.
- 96. Lee, C. Experimental error and sampling error for agricultural experiments. Department of Agronomy, National Taiwan University, 1986.

#### **IV-3: Contributed Conference Article Presentations:**

- 97. Abayomi, O., <u>Lee, C</u>. and Famoye, F. Generalized regression models when responses follow family of flexible distributions. *2023 Joint Statistical Meeting*, August 5-10, 2023, Toronto, Canada.
- 98. Lee, C. Incorporating ChatGPT for teaching and learning statistical concepts: a Devil or an Angel? Presented at *the 2023 Statistics and Data Science Symposium*, May 22-26, 2023, St. Louis, MO
- 99. <u>Lee, C</u>. and Zeleke, A. Dunning-Kruger effect for students taking statistics courses. Presented at the 10<sup>th</sup> *International Conference on Teaching Statistics*, July 8 12, 2018, Kyoto, Japan.
- 100. Lee, C. Some observations of students' performance and attitudes towards a flipped classroom for introductory statistics. Presented at the 2016 Joint Statistical Meetings at Chicago, USA, July 31, 2016.
- 101. <u>Alzaatreh, A.</u>, Lee, C. & Famoye, F. Generalized family of Cauchy distribution. Presented at the *Joint Statistical Meetings*, Seattle, WA, August 8 13, 2015.
- 102. Gautam, Y., Lee, C., Cheng, C.-I. and Langefeld, C. MiDCoP Approach of Allele Frequency Estimation of Untyped SNP Using the Allele Frequencies of Neighboring SNPs. Presented at *the 2<sup>nd</sup> International Conference on Computational Science and Intelligence 2015*, Okayama, Japan, July 12-16, 2015.
- 103. <u>Soshnikov, S.</u>, Lee, C. The Modelling Approach for Identifying Factors Associated with the Alcoholism Incidence in Russia. Presented at the *17th International Symposium on Health Information Management Research (ISHIMR 2015)*, City of York, England, UK, June 25-26, 2015.
- Lee, C. Reflection of using a flipped classroom for teaching introductory statistics in an active learning environment. Presented at the *United States Conference of Teaching Statistics 2015*, Penn State University, May 29-30, 2015.
- 105. Lee, C., Cheng, C.-I. and Zeleke, A. Can Text Mining Technique be used as an Alternative Tool for Qualitative Research in Education? Presented at the 15<sup>th</sup> IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2014). June 30 – July 3<sup>rd</sup>, 2014, Las Vegas, USA.
- 106. Zeleke, A., <u>Lee, C.</u>, Cheng, C.-I., Daniels, J., and Divi, K. A. Comparison of attitudes between traditional and hands-on classes in an introductory statistics course. Presented at the International Conference on Teaching Statistics, Flagstaff, AZ USA, July 13 – 18, 2014.
- 107. <u>Al-Aqtash, R</u>., Lee, C. and Famoye, F. Gumbel-Weibull distribution: Properties and applications. Presented at the *First International Conference on Distributions and Applications* held in Mt. Pleasant, MI, USA, October 10 – 12, 2013.
- 108. <u>Alzaatreh, A.</u>, Lee, C. and Famoye, F. T-normal family of distribution: A new approach for generating the normal distribution. Presented at the *First International Conference on Distributions and Applications* held in Mt. Pleasant, MI, USA, October 10 – 12, 2013.

- 109. <u>Aljarrah, M.</u>, Famoye, F. and Lee, C. A new Weibull-Pareto distribution and its applications. Presented at the *First International Conference on Distributions and Applications* held in Mt. Pleasant, MI, USA, October 10 – 12, 2013.
- 110. <u>Alzaghal, A.</u>, Famoye, F. and Carl Lee, C. Exponentiated Weibull-exponential distribution: Properties and applications. resented at the *First International Conference on Distributions and Applications* held in Mt. Pleasant, MI, USA, October 10 12, 2013.
- *111.* <u>Famoye, F.</u>, Lee, C., Alzaatreh, A. The T-X class of probability distributions. Presented at the Joint Statistical Meetings, Montreal, Canada, August 3-8, 2013.
- 112. Soshnikov, S., Lee, C. and Vladimirov, S. A Modeling approach to identify factors associated with Infant mortality in Russia. Presented at the 12<sup>th</sup> IEEE/ACIS International Conference on Computer and Information Science (ICIS 2013) June 16 -20, 2013, Toki Messe, Niigata Japan.
- 113. Soshnikov, S., <u>Lee, C.</u>, Vlassov, V., Gaidar, M. and Vladimirov, S. (2013). A comparison of some predictive modeling techniques for modeling abortion rates in Russia. Presented at the 14<sup>th</sup> IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2013), July 1<sup>st</sup> July 3<sup>rd</sup>, 2013, Honolulu, Hawaii, USA.
- 114. Crockett, S., & Lee, C. (2012). Does it Matter What They Said? A Text Mining Analysis of the State of the Union Address of USA Presidents. 13<sup>th</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing (SNPD 2012) August 8<sup>th</sup> – 10<sup>th</sup>, Kyoto, Japan.
- 115. <u>Alzaatreh, A.</u>, Lee, C. & Famoye, F. A new method for generating families of continuous distributions. Joint Statistical Meetings, Miami, FL, July 30-August 4, 2011.
- 116. <u>Fulton, L.</u>, Musal, R., Ivanitskaya, L., Haidar, S., Lee, C. Bayesian Hierarchal Models of Final Exam Grades in Statistics Classes, a Two-University Study. Joint Statistical Meetings, Miami, FL, July 30 – August 4, 2011.
- 117. Robertson, k., Beregulko, A., Lee, C. Risk Factors Associated with Methamphetamine Production: A Spatial Predictive Modeling Approach. Presented at *International Conference on Computers, Networks, Systems, and Industrial Engineering (CNSI 2011), Jeju, South Korea, May 23-25, 2011.*
- 118. <u>Li, S.</u>, Black, D., Yang, F., Famoye, F., and Lee, C.. An alternative frequency dependence model and its applications. Presented (by Li, S.) at the 2011 Enterprise Risk Management (ERM) Symposium, Chicago, IL, March 14-16, 2011.
- 119. Lee, C. Graduate Data Mining Program at Central Michigan University at the Michigan Undergraduate Mathematics Conference, Grand Valley State University, MI, Oct. 9, 2010
- 120. <u>Zeleke, A</u>. and Lee, C. Teaching Introductory Statistics Using Student Generated Data in a Large Class. Presented at the *International Conference on Teaching Statistics*, Ljubljana, Slovenia, 11-16, July 2010.
- 121. Sharaf El Din, G., Lee, C., Fattah, M. What Make Democracy Possible: a Predictive Modeling Approach. 10t<sup>h</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing, May 27-29, Daegue, Korea, 2009.

- 122. Lee, C., Daniels, J. & Famoye, F. A Real-Time web-based system to facilitate meaningful learning in Statistics. ED-MEDIA, World Conference on Educational Multimedia. Hypermedia & Telecommunications. Vancouver, BC, Canada, June 25-29, 2007.
- <u>Zeleke, A.</u> & Lee, C. Incorporating Online Real-Life Activities in Large Lecture Classes for Introductory Statistics. 2<sup>nd</sup> United States Conference on Teaching Statistics, Columbus, OH, May, 2007.
- 124. Lee, C. Fostering active learning using Real-time data gathered by students for introductory statistics. Hawaii International Conference in Mathematics, Statistics and Related Fields. Honolulu, Hawaii, January 2007.
- 125. Famoye, F. & Lee, C. Evaluation of student's learning in real-time online activities environment. Presented at the Joint Statistical Meeting, Seattle, WA, August 2006.
- 126. <u>Li, S.</u>, Famoye, F. & Lee, C. Quasi-probability distribution based on the Lagrange expansions. Presented at the Joint Statistical Meeting, Seattle, WA, August 2006.
- 127. Lee, C. Real-time online database for statistics. May 19, 2006, CAUSE Webnar presentation.
- 128. Lee, C. and Famoye, F. Active learning using real-time online hands-on activities. Presented at the 2005 Joint Statistical Meetings at Minneapolis, Minnesota, August 7, 2005.
- 129. <u>Famoye, F.</u> and Lee, C. Beta-Weibull distribution and its applications. Presented at the 2005 Joint Statistical Meetings at Minneapolis, Minnesota, August 10, 2005.
- Lee, C. and Famoye, F. Activity-based Learning Using Real-Time Online Hands-on Activities. The 1<sup>st</sup> United State Conference on Teaching Statistics, May 19-21, 2005, Columbus, OH.
- 131. Lee, C. An investigation of students' knowledge retention of statistical concepts using problem-solving methodology. The 1<sup>st</sup> United State Conference on Teaching Statistics, May 19-21, 2005, Columbus, OH.
- 132. Lee, C. and Lu, Xiaomin . A Comparison of Partial Least Square Model and Neural Network Model. 5<sup>th</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing, June 2004, Beijing, China.
- 133. Wang, D. Lee, C., Mehta, R.H., Kaiser, J. & Bott, M. An Image Retrieval System Based on Patient Data and Image Content. 5<sup>th</sup> International Conference on Software Engineering, Artificial Intelligence, Networking & Parallel /Distributed Computing, June 2004, Beijing, China.
- 134. Lee, C. Distance Learning The experience of Teaching an Online Introductory Statistics. Presented at the, *Joint Statistical Meetings*, Toronto, Canada, August 10, 2004, 2740-2744.
- 135. Meletiou, M. & Lee, C. Investigating college-level introductory statistics students' thinking on variability: Insights gained from two studies. The 3<sup>rd</sup> International Research Forum on Statistical Reasoning, Thinking and Literacy, Lincoln, Nebraska, July 23-28, 2003.
- 136. <u>Lee, C.</u> & Meletiou, M. A missing link toward understanding variability: The unexpected difficulty of histograms. The Joint Statistical Conference, American Statistical Association, San Francisco, CA, August 3<sup>rd</sup> – 8<sup>th</sup>, 2003.
- 137. Lee, C., Zeleke, A. & Meletiou, M. On the issue of noncongnitive factors in developing an active learning environment for introductory statistics. Hawaii International Conference on Statistics and Related Fields, Honolulu, HI, June 5<sup>th</sup> – June 10<sup>th</sup>, 2003.

- Zeleke, A., & Lee, C. On students' conceptual understanding of variation in introductory statistics. Hawaii International Conference on Statistics and Related Fields, Honolulu, HI, June 5<sup>th</sup> – June 10<sup>th</sup>, 2003.
- 139. <u>Famoye, F.</u>, Lee, C., Eugene, N. Bimodality of Beta-Normal Distributions and applications.2002 Joint Statistical Meetings at New York, August.
- 140. <u>Wang, D.,</u> Lee, C. The effect of baseline selection in statistical shape analysis. 2002 Joint Statistical Meetings at New York, August. 2002.
- 141. Lee, C., Zeleke, A. & Wachtel, H. Where do students get lost: the concept of variation. To appear in the refereed proceeding, the 6th International Conference of Teaching Statistics, Durban, South Africa, July, 2002.
- Meletiou, M., Lee, C. Student understanding of histograms: A stumbling stone to the develop of intuitions about variation. The 6<sup>th</sup> International Conference of Teaching Statistics, Durban, South Africa, July, 2002.
- 143. Lee, C. A paradigm shift in the technology era in higher education. Refereed Proceedings, ED-MEDIA 2000:The World Conference on Educational Multimedia, Hypermedia & Telecommunications. Montreal, Canada. July, 2000
- 144. Lee, C. Misconceptions Vs. Missed Conceptions in introductory statistics. Presented at the Annual Michigan Mathematical Association, Mt. Pleasant, MI May, 2000
- 145. Lee, C. & Searcey, M. Learning style, beliefs and anxieties in remedial college mathematics. Presented at the 4<sup>th</sup> International Conference on Research in Undergraduate Mathematics Education, Chicago, September 16-19, 1999.
- 146. <u>Lee, C. A comparison of students' beliefs and attitudes towards statistics between technology-rich environment and traditional lecture.</u> Presented at the American Statistical Association Annual Meetings at Baltimore, August 8-14, 1999.
- 147. Lee, C. Meletiou, M. Statistical instruction informed by student's thinking: The case of statistical variation. Presented at the 4<sup>th</sup> International Conference on Research in Undergraduate Mathematics Education, Chicago, September 16-19, 1999.
- Meletiou, M. and <u>Lee, C.</u> Students' intuitive understanding of variability. The 2<sup>nd</sup> International Midwest Conference on Teaching Statistics at Oshkosh WI, June 26, 1999.
- 149. <u>Meletiou, M.</u>, Myers, M. & Lee, C. The role of technology in the introductory statistics classroom: Reality and Potential. Presented at the 1999 International Conference on Mathematics/Science Education and Technology at San Antonio in March.
- 150. <u>Lee, C.</u> An assessment of the PACE strategy for an introductory statistics. Presented at the 5<sup>th</sup> International Conference On teaching Statistics at Singapore in June, 1998.
- 151. Lee, C. St. John, D. On the use of technology for mathematics at secondary schools Presented at the 1998 International Conference of Society for Information Technology & Teacher Education(SITE 98) at Washington D.C. in March, 1998.
- 152. <u>Lee, C.</u> An assessment of the PACE model through student opinion survey. The 2nd International Collegiate Mathematics Education Conference, 1997.

- 153. <u>Lee, C.</u> & Hill, James, P. Crime Impact Study for a Native American casino in rural area. Presented at the 1997 Annual Statistical Meetings.
- 154. <u>Lee, C.</u> Promoting active learning in an introductory statistics using the PACE strategy at the 6th International Mathematics Education Conference, 1997.
- 155. <u>Lee, C.</u> Casino impact study for a Native American Casino in a rural area. Presented at the 1997 Joint Statistical Meeting at Las Angles, CA, August, 1997.
- 156. <u>Lee, C.</u> Teaching introductory statistics by the PACE approach. Presented at the 1st Midwest Conference on Teaching Statistics at Oshkosh. WI, March, 1997.
- 157. <u>Lee, C.</u> & Vanderkolk, K. Statistical models for modeling daily maximum ozone concentration in the Detroit metropolitan area. Presented at the 1996 ASA Meeting Sec. Environmental Stat.
- 158. <u>Lee, C.</u> & Pauken, D. A study of Statistics & Probability Curriculum for secondary schools in the State of Michigan. Presented at the 1995 ASA Meeting Sec. Stat. Edu.
- 159. <u>Lee, C.</u>, Famoye, F. A comparison of generalized Poisson models for the number of chromosome aberrations exposed to different dosages of radiation. Presented at the 1994 ASA Meeting-Sec. Biometrics.
- 160. Lee, C. A case study on the factors associated with the "no-bore stamp" V8 engine cases at a GM plant. Presented at the 1993 Annual Meeting of the American Statistical Association - Section on Quality & Productivity.
- 161. <u>Root, S.</u> and Lee, C. Ego Identity Status and the Structure of Students' Daily College Experience. Presented at the Mid-Western Educational Research Association, 1993.
- 162. <u>Lee, C.</u> Efficiency comparison of methods computing incomplete beta integral. Presented in the 1992 Joint Statistical Meetings.
- 163. Lee, C., <u>Hoffman, C.</u> and Rasche, R. An analysis of principal lipid components associated with the risk of coronary heart disease. Presented at the 7th National Conference on Chronic Disease Prevention and Control at Salt Lake City, Utah, 1992.
- 164. <u>Colarelli, S.</u> & Lee, C. Personnel selection in complex organizations. Presented in the Annual Meeting of the Midwestern Psychological Association, 1991.
- 165. <u>Aron, R.</u> & Lee, C. Favorable temperatures for the induction of citrus flowers in Israel. Presented in the 87th Annual Meeting of the Association of American Geographers, 1991.
- 166. <u>Lee, C.</u> Comparison of sensitivity between survival and hazard functions. Presented at the 1990 ENAR Meeting at Baltimore.
- 167. <u>Lee, C.</u> An efficient method for noncentral beta probabilities when parameters are small or moderate. Presented at the 22nd Symposium on INTERFACE, 1990.
- Famoye, F. & Lee, C. Estimation of generalized Poisson distribution using weighted discrepancies method. Presented at the 22nd Symposium on INTERFACE, 1990.
- 169. <u>Lee, C.</u> On Generating randomly Censored Generalized Gamma Variate. Presented at the 2nd Annual IMSL Meeting at Ann Arbor, 1989.

- 170. Lee, C. An Algorithm for Incomplete Beta Integral. Presented at the 1989 Annual Statist. Meeting.
- 171. Lee, C. & Jobe, M. Evaluation of Coverage Probabilities for Control Charts. Presented at the 1989 Annual Statist. Meeting.
- 172. Lee, C., Aron, R. & Aron, I.-M., A comparison of dropout rates in the State of Michigan with respect to racial makeup. Presented at the 1988 Michigan Academy Conference.
- 173. Lee, C. A new algorithm for computing F-Probability. Presented at the 1988 Annual Joint Statistical Meetings.
- 174. Angelos, J., <u>Lee, C.</u> & Singh, K.P. B-spline approximation for estimating baseline hazard function. Presented at the 1988 Annual Joint Statistical Meetings.
- 175. <u>Aron, R.,</u> Aron, I.-M. & Lee, C. An analysis of Michigan Educational Assessment Program (MEAP) scores and school district revenues and expenditures. Invited talk at the 1988 Annual Educational Finance Conference.
- 176. Lee, C. Estimation of instructor's performance at the 1986 National Statistical Meetings, Chicago.
- 177. <u>Lee, C.</u> D-optimal designs for regression models when some parameters are more important at the First International Statistical Symposium, 1986, Taiwan.
- 178. <u>Lee, C.</u> Constrained optimal designs for polynomial regression at the 1985 Joint Statistical Meetings, Las Vegas.
- 179. <u>Lee, C.</u> Constrained optimal designs for multiresponse models at the 191th Eastern Regional Meeting of the Institute of Mathematical Statistics, 1985.

#### V. FUNDED EXTERNAL GRANTS AND CONTRACTS

- 1. Famoye, F., Lee, C. (2019). Third International Conference on Statistical Distributions and Applications. Funded by NSA (Grant #: H98230-19-1-0267, Amount: \$20,170).
- 2. Famoye, F., Lee, C., and Ejaz Ahmed (2016). Second International Conference on Statistical Distributions and Applications. Funded by the Canadian Statistical Science Institute. (CAN\$ 20,000).
- 3. Famoye, F. & Lee, C. (2013). First International Conference on Statistical Distributions and Applications. Funded by the National Security Agency. (\$19,485).
- 4. Dealer Predictive Analytics. (2011). Harley-Davidson Company. Principle Investigator: Tim Pletcher, Institute of Health and Business Insight, College of Health Professions. Served as a senior research investigator. Amount: \$315,000.
- Lee, C., Inungu, J., Corbin, A. & Holmes, M. (2007). An evaluation study on the effectiveness and the diagnostic accuracy of GP physicians using NxOpinion expert system with Gastro-Intestinal (GI) disease patients (\$11600).
- 6. Lee, C. (2007). School Climate Study, Gratiot-Isabella Regional Education School District (\$3780).
- 7. Holt, W. and Lee, C. Student Enrollment Project (FTIAC), Central Michigan University Research Corporation, (\$4960).

- Lee, C. (PI), Famoye, F., Lenker, S., Sepanski, J., Frank, M., Wang, D., Low, W. Activity-based Cooperative Learning in Introductory Statistics Using Dynamic Web Database. NSF/CCLI Grant (\$177,052), 2003 - 2007.
- 9. Lee, C. (2006). GM Phoenix Project (\$360).
- 10. Lee, C. Longitudinal study on school climates in Mid-Michigan region. Supported by the Regional Educational School District (\$4000), 2005.
- 11. Lee, C. and Devine, R. Casino impact study for the Soaring Eagle Casino & Resort. (\$10,063), 2004.
- 12. Lee, C. and Kennedy, M. Predicting the usage of hospital beds using both in-patient and out-patient databases for the Henry Ford Hospital System (\$12,079), 2004.
- 13. Lee, C. and Inugu, J. Text mining on analyzing the patterns of doctors' and patients' comments for Eli-Lily Pharmaceutical Company (\$3,961 and \$3,301), 2004.
- 14. Lee, C. (Team Chair), Famoye, F., Erickson, D., St. John, D., Miles, T. & Richardson, A. To participate in the 1<sup>st</sup> TEAMS Conference to develop projects for reforming K-16 Statistics Education Curriculum Supported by the TEAMS Conference funded by NSF and ASA. University of Georgia, Athens, GA, USA. October, 2003. (\$6,000), 2003.
- 15. Lee, C. & Wang, D. Effect of Aloe Versa drink using quantified image data. Project from Mid-Michigan Hospital funded by Pardee Foundation. (\$3,500), 2002.
- 16. Grant Contract with RESD (Regional Education School District) at St. Louis, Michigan for the project of "School Climate Study" conducted by RESD yearly (\$2,500 annually), 1996-Present.
- 17. Lee, C., Li, B. & Westmoreland, S. Phase II data mining project for the International Paper. Supported by International Paper for the Center for Applied Research & Technology. (\$11,972), 2003.
- Lee, C., Devine, R., Famoye, F. A study on modeling the gains Vs. Losses of a new business model supported by DOW-CORNING Company for the Center of Applied Research & Technology (\$9,846), 2003.
- 19. Lee, C., & Palaniswami, K. Predictive modeling using Time Series, Cluster Analysis and Text Mining supported by EDS for the Center of Applied Research & Technology. (\$10,117), 2002.
- 20. Garver, M. & Lee, C. Predictive modeling for Loyalty & Profitability. Supported by DOW Chemical for the Center for Applied Research & Technology. (\$53,889), 2002.
- 21. Lee, C., Li, B. & Westmoreland, S. A data mining project for the International Paper. Supported by International Paper for the Center for Applied Research & Technology. (\$30,483), 2002.
- 22. Grant contract with RESD (Regional Education School District) at St. Louis, Michigan. Serves as a project evaluator on a federal grant for developing prevention programs for free drug and violence school environment (\$20,000), 2001-2003.
- A study on the effectiveness of aloe versa for preventing/reducing side effects induced by radiation. Supported by Mid-Michigan Medical Center through the grant of Restricted Aloe Versa Grant (\$3,100), 1999.
- 24. A study of the adequacy of the pole survey methodology for the joint poles estimation. A grant contract supported by Consumer Energy and Ameritech. (With Felix Famoye, \$4,000), 1998.

- 25. NSF/ILI grant on developing a mobile computer lab for mathematical courses (with David Matthews, Sue Lenker, Dennis St. John, \$76,000), 1996.
- Casino Impact Study Grant supported by Mt. Pleasant Area Government Agencies and Business. On "Saginaw Chippewa Tribe Casino Expansion Impact Study" (with Jim Hill, Dick Clemmer, Alice Littlefield, \$30,000), 1996.
- 27. Annenberg/NSF grant on "Innovative approaches in teaching mathematics service courses" responsible for the course of Introduction to Statistics (\$150,000; Project co-Director: Susan Lenker (Math), Keith Nelson Rich St. Andre, Nancy Cooley), 1995.
- 28. Grant from the Institute of Teaching Math with Technology: To conduct two workshops on how to integrate technology into teaching Math for middle and high school Math and Science teachers. (With Charles Vonder Embse, Dennis St. John, Sue Lenker and Felix Famoye. \$12000), 1995.

# VI: CURRICULUM DEVELOPMENTS AND STUDENT SUPERVISIONS

## VI-1: Curriculum Developments

2020-Present	Created the following new data science courses: DAS 253 – Visualization and Programming for Data Science : SAS Module DAS 450 – Applied Analytics I DAS 460 – Applied Analytics II
2019-Present	In charge of developing a university-wide undergraduate data science program involving 9 departments from four colleges.
2017-2019:	In charge of the creation of the Department of Statistics, Actuarial and Data Sciences and oversee the curricular and program revisions for the new department at Central Michigan University. The new department will be launched in July, 2019.
2009-present	Initiated and developed two SAS professional certification programs: Base SAS Programming Certification exam, SAS Enterprise Miner Predictive Modeler Certification Exam.
2014 - 2016:	Coordinated the PhD program revision including several major revisions:
•	<ul> <li>Change name from PhD in Mathematics with Concentration in Collegiate Mathematics</li> <li>Teaching to PhD in Mathematical Sciences with three concentrations: Mathematics,</li> <li>Collegiate Mathematics Education and Statistics.</li> <li>Change the coursework structure</li> <li>Change the number of required credit hours</li> </ul>
2015:	Developed a new course for the PhD in Mathematical Sciences: MTH 795: Advanced Practicum/Internship
•	Developed two new courses for the MS in Applied Statistics & Analytics program: 9 STA 675: Advanced Statistical Data Management and Simulation 9 STA 695: Practicum/Internship
2014:	Coordinated the revisions of master course syllabi for 25 courses in Statistics.

- 2010 2014: Led and in charge of the student learning outcomes assessment activities for Statistics major.
- 2012 2013: Led the development of quantitative reasoning curriculum in statistics courses in the Department of Mathematics.
- 2010: In charge and developed the student learning outcomes assessment plan for Statistics major.
- 2006 2007: Led the development of the Data Mining Certificate program across three departments (Computer Science, Geography and Mathematics) at Central Michigan University.
- 1996-1997: Led the development of the coursework related to statistics in the Ph.D. in Mathematics, Central Michigan University.
- 2003 2007: Led the development of an activity-based curriculum using real-time online database. The Real-time online web site is at <u>http://stat.cst.cmich.edu/statact/</u> supported by an NSF/CCLI grant.
- 2000 2011: Co-led the development and maintenance of an SPSS online training workshop using interactive movie clips(<u>http://calcnet.mth.cmich.edu/org/spss/</u>), which has been the top site on SPSS online training through most online search engine.

In charge of the development of Statistics Undergraduate program in the Department of Mathematics, Central Michigan University. This program has been in place since late 1980's

1998 – 2004: In charge of the student learning outcomes assessment for the department of Mathematics for six years.

Developed and taught many statistics courses at graduate and/or undergraduate level, including

- Data Mining Techniques
- Advanced Data Mining Techniques
- Statistical Theory and Methods for Quality Control,
- Six Sigma Strategy and Implementation,
- Design of Experiment,
- Statistical Programming for Data Management and Analysis,
- Advanced Statistical Programming for Data Management and Analysis,
- Applied Statistical Methods I,
- Applied Statistical Methods II,
- Mathematical Statistics I,
- Mathematical Statistics II,
- Probability and Statistics for Engineers,
- Multivariate Statistical Methods,
- Theory of Statistical Inference.

#### VI-2: Advising (Co-Advising) of Ph.D. Dissertation and Master's Theses/Plan B

#### **PhD Dissertation (Graduated):**

- 1. Eugene, Nicolas: Dissertation: Beta-normal generalized distributions: Theory and Applications. 2002.
- Maynard, Jacinth : A class of Beta-exponential distributions: properties, estimation and applications. 2003.
- 3. Kong, Lingji : A study of the properties, estimations and applications for the Beta-Gamma distribution. 2004.
- 4. Pararai, Mavis : Measurement errors in generalized Poisson regression model. 2005.
- 5. Li, Shubiao : The generalized Lagrangian probability distributions: properties and applications. 2007
- 6. Almohalwas, Akram : Nonparametric classification techniques applied to gene expression data. 2010.
- 7. Alzaatreh, Ayman : A new method for generating families of continuous distributions. 2011.
- 8. Alshawarbeh, Etaf : Beta-Cauchy distribution and its applications. 2011.
- 9. Al-Aqtash, Raid : Generalized families of distributions arising from Gumbel distribution. 2013.
- Alzaghal, Ahmad : Families of exponentiated generalized distributions: Properties and Applications. 2013.
- Gautam, Yadu: Novel approach for imputing association statistics for genome wide association study. 2014.
- 12. Al-Jarrah, Mohammad: Generating families of continuous distributions using quantile functions. 2014.
- 13. Almheidat, Maalee: Family of generalized distributions and applications using logistic quantile function. 2015.
- 14. Hamed, Duha: T-Pareto family of distributions: Properties and Applications. 2016.
- Aldeni, Mahmoud: Generalized family of distributions using Generalized Lambda quantile function. 2019.
- 16. Oluremi Abayomi: A framework of developing generalized regression models for lifetime data. 2020.
- 17. Warahena Liyanage, Gayan: A Generalization of LASSO Modeling using Bayesian Approach, 2021
- 18. Yi-Fan Hsu: A new method for imbalanced data classification, 2022.
- Emma Akpene Gyasi: Higher Education Enrollment Projections to Inform Effective Enrollment Decisions: A Survey of Common Practices, Modeling Techniques, and an Interactive System for Broad Use Among Enrollment Professionals, 2023.
- 20. Emmanuel Naatei Nartey: Determining the Optimal K in Cluster Analysis and Application of Such Approaches to Feature Selection in Classification, 2024.

#### **Ph.D. Dissertation in Progress**

21. Muna Al-Kasasbeh: On measurements of Risks based on the T-R{Y} Framework.

#### Master's Plan B and Thesis (Graduated)

- 22. Ramesh Bhandari: Nuclear Mass predictions using Machine Learning Algorithms on AME2020 dataset. 2023.
- 23. Tan Xi: Plan B Paper, "A new Rule Induction Methods for Rare Events'. M.A. in Mathematics.
- 24. Tan Xi: Plan B Paper, "Measures of Skewness", M.A. in Mathematics
- 25. Steven Crockett: Plan B Paper, "Graphical Network Analysis of SNPs in Genomics Study"
- 26. Tulsi Paudel: Plan B Paper.
- 27. Aaron Satterlee: Plan B Paper.
- 28. Wenyan Guo: Plan B Paper.
- 29. Xiaomin Lu: Master's Thesis.

#### VI-3: Served as a Committee Member for Ph.D. Dissertations/Master's Theses

- 30. Derochowski, Wanda: Determining the relationship between family literacy habits and student achievement scores in reading and writing, Department of Educational Administration and Community Leadership. 1998.
- 31. Fache, Frances: Mentoring by senior-level healthcare executives as a method for preparing future chief executive officers. School of Health Sciences. 2005.
- 32. Meng-Hsiu Tsai: Thesis Committee Member Master's, Geography. 2006.
- 33. Fockler, Thomas: A study of the effect of federal emergency preparedness funding on the preparedness of local public health departments in the State of Michigan. School of Health Sciences. 2009.
- 34. Ken Robertson: Plan B Committee Member, "Spatial Entropy based Classification Tree for Predicting Multi-clusters phenomena in geospatial datasets:" Geography. 2010.
- 35. Low Yeh Ching: Ph.D. Dissertation External Examiner, "Some Families of Count Distributions for Modelling Zero-inflation and Dispersion", University of Malaya, Malaysia. 2016.
- 36. Grace Ebunoluwa Witherspoon: Ph.D. Dissertation Committee Member, "Generalization of the odd Weibull family for competing risk analysis". Department of Mathematics. 2016.
- Channon Mdziniso: Ph.D. Dissertation Committee Member, "Odd Pareto Families of Distributions for Modeling Loss Payment Data". 2016.

- 38. Raju Chowdhary: Ph.D. Dissertation Committee Member, "Predictive modeling on the use of physical or occupational therapy using advanced machine learning techniques". 2017. (Western Mich. Univ)
- 39. Ken Goward: Ph.D. Dissertation Committee Member. Bayesian Estimators for the Parameters of Two Non-Standard Distributions, 2018.
- 40. Sean McMannamy: Ph.D. Dissertation Committee Member. Learning Styles on the Teaching of Statistical Probability, 2019.
- 41. Didarul Islam: Thesis Committee (Dept of Geog & Environmental Studies) Housing price modeling: An Eigenvector Spatial Filtering Based XGBoost Model. 2020.

# VI-4: Supervised Student Research Projects presented at the CMU's Annual Student Research and Creative Endeavors Exhibition in April each year.

- 1. Nirajan Budhathoki, Asthma Prediction with Machine Learning Models: Insights from 2019 Michigan BRFSS. 2024.
- 2. Emmanuel Nartey, Sales volume forecasting with statistical and machine learning models. 2021.
- Joshua Paiva, Nick Olechnowicz and Brad Raine: Predicting the Sale Price of California Homes. 2020.
- 4. Andrew Meehan, Rasha Almughrabi, Xiwen Wang and Md Iqbal Hossain: Student Alcohol Use and Academic Outcomes. 2020.
- 5. Samantha Lowe (Undergraduate): The United States and COVID-19: A Statistical Analysis of Factors Contributing to the Spread of the Coronavirus in the United States. (Honor's Project), 2020.
- 6. Allison Rolewicz (Undergraduate): The United States and COVID-19: A Statistical Analysis of Factors Contributing to the Spread of the Coronavirus in the United States. (Honor's Project), 2020.
- 7. Joseph Krinke (Undergraduate): Evaluating Value in Higher Education: A Data-Mining Approach. (Honor's Project). 2019.
- 8. Mahmoud Aldeni: A generalized family of lifetime distributions and survival models. 2019
- 9. Aaron Bauman, Min Jeoung Kim and Jianping Chen: Finding contributing factors in levels of completion and Mid-Michigan College using data mining techniques. 2019
- 10. Keshab Dahal, Kenneth Goward and Oluremi Abayomi: Analysis of the resolution of crime using predictive modeling. 2019
- 11. Daniel Hatcher (Undergraduate): Predicting permanent foreign labor certification decisions. 2019 (Undergraduate)
- 12. Benjamin Schilling and Gabriel Radoccia-Feuerstein: Behind the numbers: The impact of player performance on salaries in major league baseball. 2019
- 13. Jennifer Daniels: A statistical study of languages: Origin of the Native Americans, Part II. 2019
- 14. Dong Li, Oluwaburede Akinola and Michael Hudec: Using Predictive Modeling to Determine Youth with High Suicide Risk. 2018

- David Hooley, Anand Panduranga and Maria Arceo: Predicting Airline Flight Prices in the USA. 2018
- 16. Gayan Warahena Liyanage, Wilson Gyasi, Kristina Sepanski: Prevalence of Coronary Heart Disease in Rural and Urban areas in the United States in 2016. 2018
- Mahmoud Aldeni: Families of distributions arising from quantile of generalized Lambda distribution. 2017
- 18. Fadal Aldhufairi, Yi-Fan Hsu and Mahmoud Aldeni: Identification of the determinants pf poverty using Albania demographic and health survey data. 2017
- Sara Andrasik, Ibraheem Adams and Ranadeera Samanthi: Predicting social security benefit under OASDI program. 2017
- Nonhle Mdziniso, Parinita Gajare and Emma Gunu: Prediction of credit loan default among credit one bank customers. 2017
- 21. Kelly Twigg, Tyler George and Sean McMannamy: Predictable crimes? 2017
- Simonna Tsai, Andrew Wittbrodt and Vladimir Chaynikov: Price prediction of real estate in Taiwan. 2017
- Riley Litwiller, Jordyn Brengosz, Kelly Twigg, Nicholas Cracchiolo, Shivam Patel: Undergraduate, "Telemarketing".v 2015
- 24. Nicole Schram, Connor Southwell, Kyle Clem (Undergraduate): "Alcohol consumption behavior predicted and confirmed by geographic specific trends or criminal activity". 2015
- Cody Weiss, Katelyn Gordon (Undergraduate): "Relationships of arrests and demographics, 2008 2012". 2015.
- 26. Ben Williams, Yitan Wu: "Heavy metal blood levels as a predictor of depressive symptoms: An applied data mining study". 2015
- 27. Luke Lubber, Sara DeVries: "Analysis of significant predictors of autism". 2015
- 28. Sunghoon Chung: "Predictive modeling on MLB MVP". 2015
- 29. Maalee Almheidat, Srikanth Seelam: "Geospatial data mining of road accidents on Michigan highways". 2015
- 30. Alma Bazarbayeva, Anthony Pochini, Zhengwei Zhang: "Factors associated with financial institutions stock prices". 2014
- 31. Raju Chowdhary, Doug Nye, Monisha Narayan: Predictors of back pain in the US". 2014
- 32. Kelly Holloway, Elliott Brown, Mahoney Hillary, Jinxin Li: "Enterprise release management". 2014
- 33. Robert Journeau, Matt Tingle (Undergraduate): Analysis of past A.L. Cy Young winners". 2014
- 34. Michael Wesner (Undergraduate): Are you getting a lemon?". 2014
- 35. Jennifer Daniels, Grace Witherspoon: "Investigating student learning & attitudes in statistics using data mining techniques". 2013

- 36. Michael Grossenbacher, Mihyang An, Sergey Shishlenin:, "Predicting mental health via the behavioral risk factor surveillance survey". 2013
- 37. Mo Yang: "The influence of maternal education on infant health".
- 38. David Peacock, Alexander Maday, Robert Shubert (Undergraduate): "Exploring income as a function of demographic and employment related factors". 2013
- 39. Griffin Bohannon, Richard Hauser, Nathan Tess (Undergraduate): "Do people who have higher income enjoy higher quality of life?" . 2013
- 40. Troy Klinger, Michael DeLaura, Ashley McFall (Undergraduate): "Predicting forest cover type". 2013
- 41. Drew Lazar, Ken Goward, Ojo Job: "A Predictive Modeling Approach to Participation in U.S. Federal Elections". 2012
- 42. Hasan Cheema, David Creech, Sarah Freehafer: "Factors associated the uninsured population in USA". 2012
- 43. Olapade Olagbemi, Grace Witherspoon, Olaseni Fadipe: "Predicting house sales prices" . 2012
- 44. Yuan Huang: "Predicting Crime Rates in Detroit Area using Open Source Data Mining Tools" . 2012
- 45. Alycea Maki, Sidai Dong, Liyuan Guo (Undergraduate): "Factors associated with Happiness". 2012
- 46. Bryan Buresh, Ben Lindemulder, Ken Chuang (Undergraduate): "Predicting models for Gas Consumption Index" . 2012
- Marienne Brown, Nowicki Matt, Justin Marzinski (Undergraduate): "Predicting the need for government assistance". 2012
- 48. Yuhao Wu (Undergraduate): "Predicting models for writing skills". 2012
- 49. Beini Hou, Wendy Russel: "A study of factors associated with divorce rates in USA" . 2011
- 50. Chao Chen, Novera Monwar: "Factors associated with the US Net Immigration from Foreign Countries". 2011
- 51. Dan Cramer, David Creech: "Predicting free and reduced lunch". 2011
- 52. Joe Pomerville, Christina Pfaff: "Examining pattern in foreclosure data". 2011
- 53. Travis Tamez: "Relationship between security delays and terror alerts". 2011
- 54. David Isakson, Kiran Punna, Yakam Temmo: "The effects of retirement on American budget deficits". 2010
- 55. Eric Famutimi, Ken Robertson, Alex Neregulko: "Statistical modeling to identify high risk methamphetamine hot spots". 2010
- 56. Gunja Malla, Ahmed Alzaghal: "Predicting CVD" . 2010
- 57. Madhavi Dodamgoda, Daniel Ghebre: "Impact of inflation on output of developed and developing countries". 2010
- Monisola Baruwa, Albert Brown: "Predicting patients with Erythemato-Squamous skin diseases".
   2010

- 59. Rachel Cook, Philip Zerull (Undergraduate): "Who Passed the Gas? Predicting customer response to changing gas prices". 2010
- 60. Steven Crockett, Emily Baker, Andrzej Kupraszewicz (Undergraduate): "CMU football coach departures". 2010
- 61. Zhenlei Wang, Dike Kalu: "What influences change in GDP" . 2010
- 62. Matthew Richardson (Undergraduate): "Predicting the Hall of Fame in major league baseball". 2010
- 63. Travis Tamez (Undergraduate): "Factors associated with people's perception of their health condition" . 2010
- 64. Vinaya Adusumilli (Undergraduate, Honors Thesis): "Predicting Crime Rates in USA". 2009
- 65. Adeyinka Owotuyi, Tom Rader: "A greener future: Predictive modeling for tomorrow's clean energy source". 2009
- 66. Andrew Wittbrodt: "Predictors of withdraws from off-campus courses". 2009
- 67. Ayman Alzaatreh, Raid Al-Aqtash, Barbara Shelden: "Model to predict two types of diabetes" . 2009
- 68. Brandon Stange, Jonathon Hall (Undergraduate): "Predicting attendance in major league baseball: Why people attend baseball games?". 2009
- Josh Sefton, Karl Gregory, Yadu Gautam: "Exploring determinants f hospitals' charge-to-cost ratio".
   2009
- 70. Mihai Paraschiv, Romona Serban: "Important factors that influence per capita income in the United States". 2009
- 71. Vinaya Adusmilli, Latha Adiga, Durga Gautam: "Use of a crime index for crime control: A predictive modeling approach to criminal justice system". 2009
- 72. Andrew Krussell (Undergraduate): "Lending to a stranger: Borrower quality in peer-to-peer lending". 2009
- 73. Kirsten Trombly, Nick Bites, Casey Siereveld (Undergraduate): "International Vs. National companies in the Dow: Is there any competition?". 2009
- 74. Michelle Benmark, Natalie Cook, Jennifer Clemens (Undergraduate): "Trend in foreign student enrollment in American Schools before and after September 11, 2001". 2009
- 75. Ghada Sharaf, Yi Liu, Olayemi Ishola: "What makes democracy possible. 2008
- 76. Amy Painter, Tulsi Paudel, Foluso Oladunni: Lung Cancer: Modeling Future Incidences and Evaluating Significant Predictors. 2008
- 77. David Grollimund, Alex Kotowski, Brad Sjoquist: Predicttors of Suicidal Tendencies in Adolescents: A look at the National Youth Risk Behavior Survey Questionnaire. 2008
- 78. Derek McAdon, Solomon Osifodunrin, and Kathryn Pavel: Variation in the income level using demographic data. 2008

# VI-5: Supervised Student Research Projects conducted – did not present at the Annual Student Research Exhibition

- 79. Jordan Leh, Rebekah Skrzynski, John Schultz and Samantha Sacra. Swiftly Rising: An analysis of the popularity of Tylor Swift's music. Fall 2023.
- 80. Julia Plotkowski, Myla Soulliere. Predicting the number of major league baseball games won. Fall 2023.
- 81. Drake Hath, Ritesh Patil, Harshavardhan Reddy Suddamalla and Benjamin Ilacqua. Predicting plays in the National Football League. Fall 2023.
- 82. Anuhya Dasari, Santhosh Vemula, Durga Prasad Tekumudi and Kyosuke Goto. Red wine analysis. Fall 2023.
- 83. Hairu Fan, Ziang Wang and Qianqian You. Key factors influencing data science salary. Fall 2023.
- 84. Johnathon Kulich, Dang Huu Thien Nguyen and Ruthwik Nadam. Predicting of soccer matches using data mining techniques. Fall 2023.
- 85. Ruiqiang Song. Ground motion characteristics of earthquake. Fall 2023.
- 86. Asef Hoque and Liling Li. Prescription opioid misuse, substance abuse and risky behaviors in adolescents. Fall 2023.
- 87. Samantha Lowe, Allison Rolewicz, and Sarah Shippy: Housing Adequacy in the United States Using the 2019 American Housing Survey. Spring 2022.
- 88. Richard Dankwa & Vincent Lograsso: Tesla Stock Price Prediction: A Comparative Study Among Different Machine Learning Approaches. Spring 2022.
- 89. Nabil Julkif, Millan Kumar Neupane. Service sector employment and covid vaccinations rate: A county-level analysis. Spring 2022.
- 90. Aminat Adefolu and Emmanuel Esivwenughwu. Predicting the quality of product in a production line. Spring 2022.
- 91. Adam Zettel and Ryan Weeks. Utilizing machine learning to predict n-gamma cross sections. Srping 2022.
- 92. Ally Hatfield, Olivia Moeggenborg, Julie Colling (Undergraduate): The Prediction of Movie Revenue. Fall 2021.
- Vincent Lograsso and Richard Dankwa: Examining Covid-19 Deaths Through Demographic Trends. Fall 2021.
- 94. Adefolu, Aminat, Esivwenughwu, Emmanuel, Joslin, Priscilla, Ofori Aboah, Valerie: Predicting Delays in Domestic Flights Operated by Large Air Carriers in the US. Fall 2021.
- 95. Daniel Nicol (Undergraduate): All-NBA Teams Player Selection Analysis. Fall 2021.
- 96. John Whitinger, Kelsey McElroy, Rachel Kauflin, Sarah Shippy: Where the Fish Wild Go. Fall 2021.
- 97. Luca Bonaldo, Adam Zettel, Ryan Weeks (Undergraduate): Using Traditional Stock Indicators as Methods of Prediction for Cryptocurrency Market Trends. Fall 2021.

- 98. Ruishuo Cheng (Undergraduate): Exploration and Analysis of Airline Operation Data. Fall 2021.
- 99. Dakota Rodda, Myka Luplow (Undergraduate): Applying Modern Data Mining Techniques to Compare Factors from Fatal Crashes to Determine what Factors Lead to Higher Mortality or Injury. Fall 2021.
- 100. Eli Goldman, Nabil Julkif, Milan Kumar Neupane: Service sector employment and covid vaccinations rate: a county level Analysis. Fall 2021.
- 101. Braiden Rodarmer, Muna Al-Kasasbeh: Investigating the Performance of Data Mining Regression Model for Interfering the Predicted Average Global Temperature. Fall 2021.
- Bharati Basu, Eric Cronstrom, Woodam Nam and Xiwen Wang: Factors Affecting the Preparation for College in Michigan Schools. Fall, 2019.
- Riley Armil, Laura Willman, Jenna Zardus (Undergraduate): Juvenile Crime: Modeling Future Rates and Evaluating Significant Predictors by State. Fall, 2019
- 104. Zachary Felix, Jordyn Pinnoo, Travis Henski, Mitchell Kubiak (Undergrafuate): How can we limit injuries of car crashes. Fall, 2019.
- 105. Jordan Rigelman & Cody Brown: Predicting Marvel Legends Sales. Fall, 2019.
- 106. Jenna Bates, Jessica Netzley, Laura Conklin, Makenzy Gaigalas (Undergraduate): Ten Year Risk Factors of Coronary Heart Disease in the United States. Fall, 2019.
- 107. Brad Raine, Joshua Paiva, Tanner Brown: UFC Red Corner Advantage? Fall, 2019.
- 108. Andrew Meehan, Bernhard Raimann, Muazzam Nashat, MD Iqbal Hossain, Rasha Almughrabi: Predicting NHL player Salaries. Fall, 2019.
- 109. Lindsey Meyers, Julie Dukovich, Nick Olechnowicz, Jake Foster (Undergraduate): Determining the Factors that Influence Wine Quality. Fall, 2018.
- 110. Keshab Dahal, Shahid Mohammad, and Salam Dagamseh: Analysis of the Resolution of crime using Predictive Modeling. Fall 2018.
- 111. Kieran Elder, Daniel Hatcher, Shelby Jayne, Clare Pauck (Undergraduate): Predicting the effectiveness of future Project Green Light installations. Fall 2018.
- 112. Olivia Berquist, Rachel Rooks, Natalie Campbell, and Austin Yeaky (Undergraduate): Predicting Automobile Property Damage from Accidents. Fall 2018.
- 113. Benjamin Schilling, Gabriel Radoccia-Feuerstein: Baseball Salary Prediction: A MLB Performance Analysis. Fall 2018.
- Isaiah Morel, Tyler Steinhaus, Brooke Koning, Brett Collins (Undergraduate): All NBA Analysis. Fall 2018.
- 115. Aaron Bauman, Jianping Chen, Min Jeoung Kim: Improving Retention Rate at Mid Michigan College Using Predictive Data Mining Techniques. Fall 2018.
- Michael Hudec, Isaac Miller, & Thaddeus Zabor (Undergraduate): Predicting Video Game Sales. Fall 2017.

- 117. Steven Fraser, Noah Cobb, and Lucas Klingler (Undergraduate): How a player's past performance influences their future performance of Fantasy Football games? Fall 2017.
- 118. Jorge Martinez, Frank Leahy, Oluwaburede Akinola: Predicting GDP through Socio-Economic Factors. Fall 2017.
- 119. Maria Arceo, Anand Panduranga, Joseph Krinke, David Hooley: A study on early predictors of diabetes. Fall 2017.
- Megan Dwyer, Katie Smillie, Dong Li: Predicting Model For Youth With High Suicide Risks. Fall 2017.
- 121. Sara Andrasik, Kevin Tracy, Stephen Giacobbi: Predicting Online News Popularity. Fall 2016.
- 122. Emma Akpene Gunu, Wilson Kwame Gyasi: A Model For Predicting Graduation Among On-Campus First Time In Any College (FTIAC) Student Within Six Years At Central Michigan University (CMU). Fall 2016.
- 123. Benjamin Robinson, Kalysta Palmer, Kari Steenwyk, Samantha Cornell (Undergraduate): A study of factors associated overweight among adults in USA. Fall 2016.
- 124. Ibraheem Adams, Joshua Coulter, Carson Prichard, and Simonna Tsai: Applying Data Mining Techniques to Analyze a Fish Otolith Microchemistry Data Set. Fall 2016.
- 125. Gayan Warahena Liyanage, Tyler George, Yanjun Liu: Prevalence of Coronary Heart Disease in Urban and Rural areas in the United States in 2015. Fall 2016.
- 126. Dustin Stevens and Parinita Gajare (undergraduate): Affecting the Resolution of Crime: San Francisco. Fall 2016.

### VII. SERVICES

#### VII-1: At Departmental Level:

- Faculty Advisor for Data Science Major. 2019-present.
- Faculty advisor for Graduate Data Mining Program 2007-present.
- Graduate program internship Coordinator. 2019-2022.
- Faculty advisor for Statistics Club, 2016- 2019.
- Departmental Graduate Program Coordinator in the Department of Mathematics. 2014 2016.
- Area Coordinator for Statistics & Actuarial Science in the Department of Mathematics. 2012-2014
- Area Coordinator for Statistics in the Department of Mathematics. 2006-2008, 2010-2012.
- Area Coordinator for Statistics and Applied Mathematics in the Department of Mathematics. 1995-2002
- Statistics advisor for Statistics Major in the Department of Mathematics. 1999 2013.
- Have serviced on every departmental committee more than one time including Personnel, Hiring, Curriculum on Statistics Courses, Graduate, Assessment, Library and Technology committees.

• Supervised independent studies at both undergraduate and graduate levels regularly. On average 3 to 4 per academic year during the recent decade.

## VII-2: At University/College Level:

- Have served on many university committees and served as committee chair for several committees. They include Hiring Committee for Vice-President of Research & Graduate Study, FRCE, FTPD, Assessment Council, Library, DASH, Academic, Res Life, and Student Affairs liaison Committee, University Technology Summit Committee, and various hiring committees for hiring senior Administrative Professionals, Excellent Teaching Award Committee.
- Have served in the College Tenure and Promotion Personnel Committee, The Teaching Award Committee and others.
- 2021- present: Online Content Committee (Ad Hoc Committee appointed by the Provost Office).
- 2019-present: Dean's Advisory Committee, College of Science & Engineering
- 2019-present: Council of Chairs
- 2019-2020: Advisory Council for Curriculum & Instruction Support
- 2017-2019: Advisory Council for Center of Excellence in Teaching and Learning.
- 2014-2017: University Academic Service Learning Committee.
- 2014-2015: Ad Hoc Hiring Committee for Excellent Teaching & Learning Center to hire two senior consultants for the Excellent Teaching and Learning Center.
- 2013-2016: University Excellent Award Committee. Chaired this committee in 2014-2015.
- 2013- 2015: College Graduate Committee.
- 2012-2014: University Graduate Committee.

### VII-3: At the Professional Level:

- 2018- 2019: Co-Chair (Organizing Committee and Program Committee) of the 3<sup>rd</sup> International Conference on Statistical Distributions and Applications held at Eberhard Conference Center, Grand Rapids, USA, October 10 – 12, 2019.
- February 2017: Served as the External Program Reviewer for the Statistics program of Department of Mathematics and Statistics, University of Wisconsin, La Crosse.
- 2015- 2016: Co-Chair (Organizing Committee and Program Committee) of the second International Conference on Statistical Distributions and Applications to be held at Niagara Falls, Canada, October 15 – 16, 2016.

- 2015- present: Associate Editor, Journal of Health Information Science and Systems (<u>http://www.hissjournal.com/</u>). Published by BioMed Central (<u>http://www.biomedcentral.com/</u>).
- 2013 present: Steering Committee member for the International Undergraduate Statistics Project Completion, sponsored by the CAUSE (Consortium for the Advancement of Undergraduate Statistics Education).
- 2013 2021: Co-founder and Co-Chief Editor, Journal of Statistical Distributions and Applications (<u>www.jsdajournal.com</u>). Published by Springer Publishing Company.
- 2013: Co-Chair (Organizing Committee and Program Committee) of the International Conference on Statistical Distributions and Applications held in Mt Pleasant, MI, USA, October 10 12, 2013.
- 2006-2013: Membership Committee member for the CAUSE (Consortium for the Advancement of Undergraduate Statistics Education).
- 2006 2013: Founder and Committee Chair for the International Undergraduate Statistics Project Completion. Sponsored by the CAUSE (Consortium for the Advancement of Undergraduate Statistics Education).
- 2005- 2007: Editorial Board member for the Journal of Taiwan Studies.
- 2003-2005: Associate Editor for the CAUSE (Consortium for the Advancement of Undergraduate Statistics Education) Online Resources of American Statistical Association.
- 2003-2005: Advisory Board Member of the Statistics Education Research Division, CAUSE, American Statistical Association.
- 2002-2010: Research and Advisory Committee Member for the Center for Applied Research & Technology, Central Michigan University Research Corporation.
- 2002-2004: Advisory Board Member of the NSF-supported WEB ARTIST Statistics Assessment Project by Garfield, delMas and Chance.
- 2003-2005: Undergraduate Education Committee ASA/MAA Joint Committee.
- 2000: Ad Hoc committee on Undergraduate Statistics Education Initiative, American Statistical Association.
- 1999-2004: President, Mid-Michigan Chapter, American Statistical Association.

### VII-4: External Reviewer for Program/Tenure/Promotion Applications

- 2012 Yuping Wu, Department of Mathematics, Cleveland State University.
- 2015 Qin Wang, Department of Statistical Sciences and Operations Research Virginia Commonwealth University.
- 2015 Abdel-Razzaq Mugdadi, Department of Mathematics & Statistics, Jordan University of Science and Technology.
- 2018: External program reviewer for Statistics, Department of Mathematics and Statistics, University of Wisconsin, La Crosse, February, 2018.

- 2018 An-Lin Cheng, College of Medicine, University of Missouri, Kansas City.
- 2019 Hsin-Hsiung Huang, Department od Statistics & Data Science, University of Central Florida.
- 2019 Rita Benhaddou, Department of Mathematics, Ohio University.
- 2021 Yaqin Feng, Department of Mathematics, Ohio University
- 2022- Michael Pokojovy, Department of Mathematical Sciences, University of Texas at El Paso
- 2022 Yuhang Xu, Department of Applied Statistics and Operations Research, Bowling Green State University
- 2023 Raid Al-Aqtash, Department of Mathematics and Physics, Marshall University

#### VII-5: List of Referee works for professional journals (2012-2021)

	Journal Name	Paper ID ( or Title)	Time
1	STATISTICS IN TRANSITION new series	Estimation the confidence interval of the regression coefficient	2021
2	Journal of Statistical Distributions and Applications	JSDA-D-21-00012	2021
3	Journal of Statistical Distributions and Applications	JSDA-D-21-00010	2021
4	Journal of Statistical Distributions and Applications	JSDA-D-21-00014	2021
5	Journal of Statistical Distributions and Applications	JSDA-D-21-00012	2021
6	Journal of Statistical Distributions and Applications	JSDA-D-21-00006	2021
7	Journal of Statistical Distributions and Applications	JSDA-D-21-00002	2021
8	Journal of Statistical Distributions and Applications	JSDA-D-21-00004	2021
9	Journal of Statistical Distributions and Applications	JSDA-D-20-00064	2020
10	Journal of Statistical Distributions and Applications	JSDA-D-20-00076	2020
11	Journal of Statistical Distributions and Applications	JSDA-D-20-00074	2020
12	Journal of Statistical Distributions and Applications	JSDA-D-20-00072	2020
13	Journal of Statistical Distributions and Applications	JSDA-D-20-00070	2020
14	Journal of Statistical Distributions and Applications	JSDA-D-20-00068	2020
15	Journal of Statistical Distributions and Applications	JSDA-D-20-00066	2020
16	Journal of Statistical Distributions and Applications	JSDA-D-20-00062	2020
17	Journal of Statistical Distributions and Applications	JSDA-D-20-00060	2020
18	Journal of Statistical Distributions and Applications	JSDA-D-20-00058	2020
19	Journal of Statistical Distributions and Applications	JSDA-D-20-00056	2020
20	Journal of Statistical Distributions and Applications	JSDA-D-20-00054	2020
21	Journal of Statistical Distributions and Applications	JSDA-D-20-00050	2020
22	Journal of Statistical Distributions and Applications	JSDA-D-20-00046	2020
23	Journal of Statistical Distributions and Applications	JSDA-D-20-00044	2020
24	Journal of Statistical Distributions and Applications	JSDA-D-20-00042	2020

25	Journal of Statistical Distributions and Applications	JSDA-D-20-00040	2020
26	Journal of Statistical Distributions and Applications	JSDA-D-20-00038	2020
27	Journal of Statistical Distributions and Applications	JSDA-D-20-00032	2020
28	Journal of Statistical Distributions and Applications	JSDA-D-20-00030	2020
29	Journal of Statistical Distributions and Applications	JSDA-D-20-00028	2020
30	Journal of Statistical Distributions and Applications	JSDA-D-20-00026	2020
31	Journal of Statistical Distributions and Applications	JSDA-D-20-00018	2020
32	Journal of Statistical Distributions and Applications	JSDA-D-20-00016	2020
33	Journal of Statistical Distributions and Applications	JSDA-D-20-00014	2020
34	Journal of Statistical Distributions and Applications	JSDA-D-20-00012	2020
35	Journal of Statistical Distributions and Applications	JSDA-D-20-00008	2020
36	Journal of Statistical Distributions and Applications	JSDA-D-20-00006	2020
37	Journal of Statistical Distributions and Applications	JSDA-D-20-00004	2020
38	Journal of Statistical Distributions and Applications	JSDA-D-19-00048	2019
39	Health Information Science and Systems	HISC-D-19-00097	2019
40	Journal of Statistical Distributions and Applications	JSDA-D-19-00044	2019
41	Journal of Statistical Distributions and Applications	JSDA-D-19-00043	2019
42	Journal of Statistical Distributions and Applications	JSDA-D-19-00048	2019
43	Journal of Statistical Distributions and Applications	JSDA-D-19-00044	2019
44	Journal of Statistical Distributions and Applications	JSDA-D-19-00043	2019
45	Journal of Statistical Distributions and Applications	JSDA-D-19-00031	2019
46	Journal of Statistical Distributions and Applications	JSDA-D-19-00028	2019
47	Journal of Statistical Distributions and Applications	JSDA-D-19-00022	2019
48	Journal of Statistical Distributions and Applications	JSDA-D-19-00020	2019
49	Journal of Statistical Distributions and Applications	JSDA-D-19-00018	2019
50	Journal of Statistical Distributions and Applications	JSDA-D-19-00016	2019
51	Journal of Statistical Distributions and Applications	JSDA-D-19-00014	2019
52	Journal of Statistical Distributions and Applications	JSDA-D-19-00012	2019
53	Journal of Statistical Distributions and Applications	JSDA-D-19-00010	2019
54	Journal of Statistical Distributions and Applications	JSDA-D-19-00006	2019
55	Journal of Statistical Distributions and Applications	JSDA-D-18-00042	2018
56	Journal of Statistical Distributions and Applications	JSDA-D-18-00040	2018
57	Journal of Statistical Distributions and Applications	JSDA-D-18-00037	2018
58	Journal of Statistical Distributions and Applications	JSDA-D-18-00038	2018
59	Journal of Statistical Distributions and Applications	JSDA-D-18-00024	2018
60	Journal of Statistical Distributions and Applications	JSDA-D-18-00019	2018
61	Journal of Statistical Distributions and Applications	JSDA-D-18-00016	2018
62	Journal of Statistical Distributions and Applications	JSDA-D-18-00014	2018
63	Journal of Statistical Distributions and Applications	JSDA-D-18-00012	2018
64	Journal of Statistical Distributions and Applications	JSDA-D-18-00010	2018

65	Journal of Statistical Distributions and Applications	JSDA-D-18-00006	2018
66	Journal of Statistical Distributions and Applications	JSDA-D-18-00005	2018
67	Journal of Statistical Distributions and Applications	JSDA-D-18-00004	2018
68	Journal of Statistical Distributions and Applications	JSDA-D-18-00001	2018
69	Journal of Statistical Distributions and Applications	JSDA-D-17-00055	2017
70	Journal of Statistical Distributions and Applications	JSDA-D-17-00054	2017
71	Journal of Statistical Distributions and Applications	JSDA-D-17-00053	2017
72	Journal of Statistical Distributions and Applications	JSDA-D-17-00052	2017
73	Journal of Statistical Distributions and Applications	JSDA-D-17-00051	2017
74	Journal of Statistical Distributions and Applications	JSDA-D-17-00050	2017
75	Journal of Statistical Distributions and Applications	JSDA-D-17-00045	2017
76	Journal of Statistical Distributions and Applications	JSDA-D-17-00043	2017
77	Journal of Statistical Distributions and Applications	JSDA-D-17-00047	2017
78	Journal of Statistical Distributions and Applications	JSDA-D-17-00036	2017
79	Journal of Statistical Distributions and Applications	JSDA-D-17-00046	2017
80	Journal of Statistical Distributions and Applications	JSDA-D-17-00040	2017
81	Journal of Statistical Distributions and Applications	JSDA-D-17-00034	2017
82	Journal of Statistical Distributions and Applications	JSDA-D-17-00038	2017
83	Journal of Statistical Distributions and Applications	JSDA-D-17-00026	2017
84	Journal of Statistical Distributions and Applications	JSDA-D-17-00024	2017
85	Journal of Statistical Distributions and Applications	JSDA-D-17-00022	2017
86	Journal of Statistical Distributions and Applications	JSDA-D-17-00013	2017
87	Journal of Statistical Distributions and Applications	JSDA-D-17-00020	2017
88	Journal of Statistical Distributions and Applications	JSDA-D-17-00017	2017
89	Journal of Statistical Distributions and Applications	JSDA-D-17-00012	2017
90	Journal of Statistical Distributions and Applications	JSDA-D-17-00016	2017
91	Journal of Statistical Distributions and Applications	JSDA-D-17-00010	2017
92	Journal of Statistical Distributions and Applications	JSDA-D-17-00008	2017
93	Journal of Statistical Distributions and Applications	JSDA-D-17-00006	2017
94	Journal of Statistical Distributions and Applications	JSDA-D-17-00004	2017
95	Journal of Statistical Distributions and Applications	JSDA-D-16-00036	2016
96	Journal of Statistical Distributions and Applications	JSDA-D-16-00034	2016
97	Journal of Statistical Distributions and Applications	JSDA-D-16-00030	2016
98	Journal of Statistical Distributions and Applications	JSDA-D-16-00028	2016
99	Journal of Statistical Distributions and Applications	JSDA-D-16-00026	2016
100	Journal of Statistical Distributions and Applications	JSDA-D-16-00024	2016
101	Journal of Statistical Distributions and Applications	JSDA-D-16-00022	2016
102	Journal of Statistical Distributions and Applications	JSDA-D-16-00020	2016
103	Journal of Statistical Distributions and Applications	JSDA-D-16-00018	2016
104	Journal of Statistical Distributions and Applications	JSDA-D-16-00016	2016

105	Journal of Statistical Distributions and Applications	JSDA-D-16-00014	2016
106	Journal of Statistical Distributions and Applications	JSDA-D-16-00012	2016
107	Journal of Statistical Distributions and Applications	JSDA-D-16-00010	2016
108	Journal of Statistical Distributions and Applications	JSDA-D-16-00008	2016
109	Journal of Statistical Distributions and Applications	JSDA-D-16-00006	2016
110	Journal of Statistical Distributions and Applications	JSDA-D-16-00004	2016
111	Journal of Statistical Distributions and Applications	JSDA-D-16-00002	2016
112	Journal of Statistical Distributions and Applications	JSDA-D-16-00016	2016
114	Journal of Statistical Computation and Simulation	GSCS-2014-0762	Feb., 2015
115	Communications in Statistics – Theory and Methods	LSTA-2015-0239	March, 2015
116	Health Information Science and Systems	HISS-D-15-00004	June, 2015
117	Communications in Statistics – Theory and Methods	LSTA-2015-0239.R1	August, 2015
118	Applied Mathematical Modelling	APM-D-15-00264	Nov., 2015
119	Sankhya Series B	SANB-D-14-00011	March, 2014
120	Applied Mathematical Modelling	APM-D-13-01988	May, 2014
121	TISE	StatLiteracy_PositionPaper_ 22969-85335-1-RV(7-8-14)	July, 2014
122	Pakistan Journal of Statistics	The McDonald Modified Weibull Distribution: Properties and Applications	August, 2014
123	Communications in Statistics – Theory & Methods	REVSTAT-97-2014	Oct., 2014
124	Colombian Journal of Statistics	The Gompertz-G family of distributions	December, 2014
125	Colombian Journal of Statistics	Dagum - Weibull Distributionand	November, 2013
126	Communications in Statistics – Theory and Methods	LSTA-2013-0204	March, 2013
127	Pharmaceutical Statistics	PST-13-0037	April 2013
128	Communications in Statistics – Theory and Methods	LSTA-2013-0545	July, 2013
129	Communications in Statistics – Theory and Methods	LSTA-2013-0942	Nov., 2013
130	International Conference On Teaching Statistics, 2014	Paper # 2159	December, 2013
131	International Conference On Teaching Statistics, 2014	Paper # 5732	December, 2013
132	International Conference On Teaching Statistics, 2014	Paper # 8475	December, 2013
133	International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing 2012	An Empirical Study on the Relationship between User Characteristics and	March, 2012
134	Statistics	GSTA-2012-0038	May, 2012

# VIII: CURRENT MEMBERSHIPS OF PROFESSIONAL ORGANIZATIONS

- Life-time member, American Statistical Association
- Life-time member, International Chinese Statistical Association
- Consortium for the Advancement on Undergraduate Statistics Education
- International Statistical Institute
- International Association of Statistical Education
- American Association for the Advancement of Science