

Curriculum Vitae

I PERSONAL PROFILE

Name: Dr. MARTIN LUTHER WILLIAM

Gender: Male

Date of Birth : May 14th, 1962

Residential Address:

Door # 30, Plot # 4
Subhalakshmi Nagar 1st Street Extension
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II EDUCATIONAL QUALIFICATION

S. No.	Degree Program	Major	Name of the College / University	Year of Passing
1.	Ph.D.	STATISTICS	LOYOLA COLLEGE, CHENNAI (UNIVERSITY OF MADRAS)	1997
2.	M.Phil.	STATISTICS	LOYOLA COLLEGE, CHENNAI (UNIVERSITY OF MADRAS)	1986
3.	M. Sc.	STATISTICS	LOYOLA COLLEGE, CHENNAI (UNIVERSITY OF MADRAS)	1984
4.	B. Sc.	STATISTICS	LOYOLA COLLEGE, CHENNAI (UNIVERSITY OF MADRAS)	1982

III TEACHING EXPERIENCE

Department	Institution	From – To (Period)	Designation
STATISTICS	LOYOLA COLLEGE, CHENNAI, INDIA	2020 – 2022	ASSOCIATE PROFESSOR & HEAD OF THE DEPARTMENT
STATISTICS	LOYOLA COLLEGE, CHENNAI, INDIA	2015 – 2020	ASSOCIATE PROFESSOR
STATISTICS	LOYOLA COLLEGE, CHENNAI, INDIA	2012 – 2015	ASSOCIATE PROFESSOR & DEAN OF STUDENTS
STATISTICS	LOYOLA COLLEGE, CHENNAI, INDIA	2006 – 2012	ASSOCIATE PROFESSOR
STATISTICS	LOYOLA COLLEGE, CHENNAI, INDIA	1984 – 2006	ASSISTANT PROFESSOR / LECTURER

Subjects Handled:

Under-Graduate Level: Descriptive Statistics, Probability Theory, Distribution Theory, Estimation Theory, Sampling Theory, Design of Experiments, Regression Analysis, Quality Control, Matrix Theory & Linear Algebra, Real Analysis,

Post-Graduate Level: Mathematical Analysis, Quality Control, Testing of Hypothesis, Regression Analysis, Categorical Data Analysis, Multivariate Analysis, Non-Parametric Methods, Design of Experiments

M.Phil. Level: Mathematical Analysis, Testing of Hypothesis

Projects Guided for B.Sc. and M.Sc. Students:

- Guided several students on Projects involving data analysis for real time data using statistical packages like SPSS and R.
- Topics covered include various areas of statistics like: Quality Control, Medical Data Analysis, Regression Analysis, Multivariate Analysis, Business Data Analytics, Socio-Economic Data Analysis

Dissertations Guided for M.Phil. Scholars:

- Guided 15 research scholars on several areas of research interests including Stochastic Processes, Statistical Inference, Distribution Theory, Regression Modeling, Multivariate Analysis, Categorical Data Analysis, Medical Data Analysis.

IV ADMINISTRATIVE POSITIONS HELD

S. No.	Name of the Position	Period
1.	Head of the Department	2020 – 2022
2.	Department Level Industry Interaction Coordinator	2018 – 2020
3.	Dean of Students	2012 – 2015
4.	Faculty Advisor – Outreach	2009 – 2011
5.	Member – Extended Internal Quality Assurance Cell	2004 – 2007
6.	President – Loyola Statistics Association	1998 – 1999
7.	Faculty Advisor – LEAP (Loyola Extension Awareness Program)	1994 –1996
8.	President – Loyola Statistics Association	1988 - 1989

V RESEARCH ACTIVITIES

M. Phil. guidance

Guided: **FIFTEEN**

Ph.D. guidance

Guided: **FIVE** Guiding: **1**

Ph.D. Level Research Areas:

Multivariate Analysis, Statistical Inference, Regression Models, Distribution Theory, Computational and Data Analysis

Ph.D. Theses of Students Completed Under My Guidance:

1) “Elliptically Symmetric Non-Mesokurtic Distributions: Construction and Application”

[Student: **Ms. K. N. Radhalakshmi** - Submitted in September 2022]

2) “Statistical Fitting and Prediction in Root-Transformed Models: A Challenger to Functional Inversion Approach”

[Student: **Ms. D. Sarala** - Evaluation completed – Viva Voce completed in January 2023]

3) “Obtaining Super-Efficient Estimators for Real-Valued Parameters: Delta Method”

[Student: **Mr. K. Sivasakthi** - Viva Voce completed in September 2021]

4) “Nonparametric Discriminant Model Building Algorithms for Optimum Classification to Two Populations”

[Student: **Mr. S. Padmanaban** - Submitted in July 2019]

5) “New Approaches to Testing for Multivariate Normality”

[Student: **Mr. R. Sakthivel** - Viva Voce completed in January 2018]

Funded Research Project Undertaken:

UGC funded Minor Research Project titled “A STEPWISE DISCRIMINANT ALGORITHM FOR CLASSIFICATION TO TWO GROUPS WITH A BIOMEDICAL APPLICATION” for a grant of Rs. 80,000/- sanctioned by SERO-UGC (January 2015 – January 2017)

VI RESEARCH PUBLICATIONS

- 1) Sakthivel, R. and Martin L. William (2022). Pooled Shapiro-Wilk’s Test for Multivariate Normality and Power Analysis for Entirely Non-Normal Alternatives. Accepted for publication in *International Journal of Statistics and Reliability Engineering*, 9(2), 322-328.
- 2) Radhalakshmi, K.N. and Martin L. William (2022). An Analysis of Abnormal Shifts in Nifty 50 Index using a Non Mesokurtic Distribution. *Stochastic Modeling and Applications*, 26 (3), pp 694-701.
- 3) Radhalakshmi, K.N. and Martin L. William (2021). A Class of Univariate Non-Mesokurtic Distributions using a Continuous Uniform Symmetrizer and Chi Generator. *Statistica*, 81(2), pp 217-227.
[<https://rivista-statistica.unibo.it/article/view/12336>]
- 4) Sarala, D. and Martin L. William (2021). Prediction of future responses from Square-Root Models: Unbiased Prediction versus Functional Inversion. *Aut Aut Research Journal*, 12(6), pp 7-15.
[<https://drive.google.com/file/d/1fR9RGZgqYkS5V-dBAYtWRaio86851Hx3>]
- 5) Sarala, D. and Martin L. William (2021). Unbiased Fitting versus Functional Inversion in Square-Root Models. *International Journal of Applied Mathematics and Statistics*, 60(2), pp 42-49.
[<http://www.ceser.in/ceserp/index.php/ijamas/article/view/6723>]
- 6) Preethi, C., Martin L. William and Sathiyarayanan, M. (2019). Understanding and Using Factor Scoring Methods for Ranking of Countries based on Health Indicators: A Data Science Approach, *2019 International Conference on contemporary Computing and Informatics (IC3I), Singapore, 2019*, pp. 136-141 doi: 10.1109/IC3I46837.2019.9055530. Publisher: IEEE
[<https://ieeexplore.ieee.org/abstract/document/9055530>]
- 7) Betsy Theodore and Martin L. William (2019). Determinants of Petrol Prices in India: A Regression Model with De-autocorrelated Time-Series Data, *Asian Journal of Economic Modelling*, 7(3), pp 110-120
[https://econpapers.repec.org/article/asiajemod/2019_3ap_3a110-120.htm]
- 8) Sangli Theresanathan, P. and Martin L. William (2019). An Investigative Resolution of Collinearity through Location Shift and Partial Regression Splines with an Application to Crime-Data Modeling, *International Journal of Scientific Research in Mathematical and Statistical Sciences*, 6(1), pp 53-60
[https://www.isroset.org/journal/IJSRMSS/full_paper_view.php?paper_id=1140]
- 9) K. Sivasakthi and Martin L. William (2018). A Class of Super-Efficient estimators of the Normal Variance: A study on Sample Size Preference, *International Journal Scientific Research in Mathematical and Statistical Sciences*, 5(6), pp 212-221
[https://www.isroset.org/journal/IJSRMSS/full_paper_view.php?paper_id=996]
- 10) S. Padmanaban and Martin L. William (2018). A Nonparametric Discriminant Stepwise Algorithm for Classification to Two Populations, *International Journal Scientific Research in Mathematical and Statistical Sciences*, 5(6), pp 123-129
[https://www.isroset.org/journal/IJSRMSS/full_paper_view.php?paper_id=983]
- 11) S. Padmanaban and Martin L. William (2018). Variable Selection for Identification of Fatty Liver Cases: Nonparametric Discriminant Analysis, *International Journal of Statistics and Applied Mathematics*, 3(2), pp 321-325
[<http://www.mathsjournal.com/pdf/2018/vol3issue2/PartE/3-1-67-610.pdf>]
- 12) S. Padmanaban and Martin L. William (2018). Backward Model Building for Nonparametric Discrimination and Classification of Fatty Liver Cases: *International Journal of Statistics and Applied Mathematics*, 3(2), pp 152-156
[<http://www.mathsjournal.com/pdf/2018/vol3issue2/PartC/3-1-66-393.pdf>]

- 13) K. Sivasakthi, R. Sakthivel, Martin L. William (2017). Preference for a Class of Super-Efficient Estimators of the Normal Mean: A Study on Sample Size Requirement, *International Journal of Statistics and Applied Mathematics*, 2(6), pp 241-249
[<http://www.mathsjournal.com/pdf/2017/vol2issue6/PartD/2-6-28-741.pdf>]
- 14) K. Sivasakthi, T. M. Durairajan, Martin L. William (2017). Obtaining Super-Efficient Estimators for A Real-Valued Parameter: Delta Method, *International Journal of Applied Mathematics and Statistical Sciences*, 6(1), pp 81-88
[<https://archive.org/stream/7.IJAMSSOBTAININGSUPEREFFICIENTESTIMATORS1>]
- 15) S. Padmanaban and Martin L. William (2016). A Nonparametric Discriminant Variable-Elimination Algorithm for Classification to Two Populations, *International Journal of Applied Mathematics and Statistical Sciences*, 5(6), pp 7-16
[http://www.iaset.us/view_archives.php?year=2016_27_2&id=45&jtype=2&page=4]
- 16) S. Padmanaban and Martin L. William (2016). A Nonparametric Discriminant Variable-Selection Algorithm for Classification to Two Populations, *International Journal of Applied Mathematics and Statistical Sciences*, 5(2), pp 87-98
[<https://archive.org/stream/9.IJAMSSANONPARAMETRICDISCRIMINANTVARIABLESELECTIONALGORITHM1>]
- 17) Martin L. William and L. Maria Alphonse Ligorì (2016). A Modified Least-Squares Approach to Mitigate the Effect of Collinearity in Two-Variable Regression Models, *International Journal of Mathematics Trends and Technology*, 30(1), pp 48-52
[<http://www.ijmtjournal.org/2016/Volume-30/number-1/IJMTT-V30P509.pdf>]
- 18) R. Sakthivel and Martin L. William (2016). A Multivariate Extension of Shapiro-Wilk's Test and Power Investigation for Mixed Alternatives, *International Journal of Applied Mathematics and Statistical Sciences*, 5(1), pp 49-62
[<https://archive.org/details/6.IJAMSSAMULTIVARIATEEXTENSIONOFSHAPIROWILKSTEST>]
- 19) R. Sakthivel and Martin L. William (2015). An Extension of Shapiro-Wilk's Test for Multivariate Normality and Power Investigation for Contaminated Alternatives, *International Journal of Scientific and Research Publications*, 5(12), pp 609-617
[www.ijsrp.org/research-paper-1215/ijsrp-p4895]
- 20) T. M. Durairajan and Martin L. William (2008). Optimal Estimating Function for Estimation and Prediction in Semi-Parametric Models, In *Advance in Statistics* – Ed. Arnold, B.C., Gather, U. and Bendre, S.M., pp 73-87
- 21) T. M. Durairajan and Martin L. William (2008). Optimal Estimating Function for Estimation and Prediction in Semi-Parametric Models, *Journal of Statistical Planning and Inference*, 138, pp 3283-3292
[<https://www.sciencedirect.com/science/article/pii/S037837580800030X>]
- 22) Martin L. William and T. M. Durairajan (2005). Optimal Simultaneous Equivariant Prediction in Scale Families, *Journal of Applied Statistical Science*, 14, pp 333-341
[<https://statindex.org/articles/217613>]
- 23) Yadavalli, V.S.S., Jeeva, M., Rajalakshmi Rajagopal, Martin L. William (2005). A Bivariate Optimal Recruitment Policy in Manpower Planning, *Bulletin of the Allahabad Mathematical Society*, 20, pp 35-45
[<https://www.researchgate.net/publication/267444850>]
- 24) Jeeva, M., Rajalakshmi Rajagopal, Martin L. William, Yadavalli, V. S. S. (2004). Expected Time for Attainment Threshold Level – A Shock Model Approach, *Economic Quality Control*, 19, pp 97-105
[<https://www.researchgate.net/publication/237252122>]
- 25) Martin L. William and T. M. Durairajan (2004). Minimum Convex Risk Equivariant Finite Population Prediction for Linear Functions in Regression Models, *Communication in Statistics – Theory and Methods*, 33, pp 1171-1185
[<https://www.tandfonline.com/doi/abs/10.1081/STA-120029831>]
- 26) Martin L. William and T. M. Durairajan (2003). Optimal Equivariant Vector Prediction in Location Families, In *Focus on Applied Statistics* – Ed. M. Ahsanullah, pp 205-213. Publisher: Nova Science Publishers
[<https://books.google.co.in/books?id=81Bhe6NTP1YC&pg=PA205&lpg=PA205&dq=Focus+on+Applied+Statistics,+2003,+M.+Ahsanullah,+pp+205-213>]
- 27) Martin L. William and T. M. Durairajan (2002). Optimal Equivariant Vector Prediction in Location Families, *Journal of Applied Statistical Science*, 11, pp 319-326
[<https://www.statindex.org/articles/207309>]

- 28) T. M. Durairajan and Martin L. William (2001). Nuisance Parameter Elimination and Optimal Estimating Functions, *Institute of Mathematical Sciences – Lecture Notes and Monograph Series*, 37, pp 237-245
[<https://www.jstor.org/stable/4356153>]
- 29) Martin L. William and T. M. Durairajan (2001). Estimating Functions in the Bayesian Paradigm, *Statistical Papers*, 42, pp 111-122
[<https://link.springer.com/article/10.1007/s003620000044>]
- 30) Martin L. William and T. M. Durairajan (1999). A Generalized Quasi-Likelihood Estimation, *Journal of Statistical Planning and Inference*, 79, pp 237-246
[<https://www.sciencedirect.com/science/article/pii/S0378375898002274>]
- 31) T. M. Durairajan and Martin L. William (1995). An Extended Optimality Criterion and Invariant Estimating Functions, *Proceedings of the XV Indian Society for Probability and Statistics*, pp 42-50

VII CONFERENCES / SEMINARS / WORKSHOPS/OTHER EVENTS (Last 20 years):

S.No.	Theme	Venue	Organization Level	Mth&Year	Contribution Level
1.	Endowment Lecture Dr. J. Ranganathan Endowment Lecture	Presidency College, Chennai	State Level	May 2023	Invited Speaker
2.	Invited Talk National Symposium on Significance of Statistical Science	Madras Christian College, Tambaram	City Level	March 2023	Invited Speaker
3.	Endowment Lecture Dr. B. Chandrasekar Endowment Lecture	Loyola College, Chennai	State Level	Jan 2023	Resource Person
4.	Invited Talk FDP on Applications of Statistics in Engineering & Data Science	Rajalakshmi Engineering College, Thandalam	City Level	Jan 2023	Invited Speaker
5.	Invited Talk On Delving Deep into Data	Presidency College, Chennai	College Level	April 2022	Invited Speaker
6.	International Conference on Advances in Statistical Methods and Applications	University of Madras, Chennai	International Level	Jan 2022	Invited Speaker
7.	Virtual Conference On Emerging Trends in Statistics and Data Science	Indian Society for Probability and Statistics	International Level	Sept 2021	Invited Speaker
8.	Webinar Workshop For CSIR UGC NET / JRF Exam Aspirants on Mathematical Sciences	Presidency College, Chennai	National Level	July 2021	Resource Person

9.	Webinar – National Statistics Day: நீங்களும் ISS அதிகாரி ஆகலாம்	Loyola College, Chennai	State Level	July 2021	Organizer
10.	Webinar Workshop For CSIR UGC NET / JRF Exam Aspirants on Mathematical Sciences	Presidency College, Chennai	State Level	Aug 2020	Resource Person
11.	Webinar On Statistical Modeling for High Dimensional Data	Presidency College, Chennai	National Level	July 2020	Resource Person
12.	Webinar On Recent Trends in Statistical Theory and Applications	University of Kerala, Thiruvananthapuram	National Level	June 2020	Invited Speaker
13.	Endowment Lecture Dr. J. Ranganathan Endowment Lecture	Presidency College, Chennai	State Level	Mar 2020	Invited Speaker
14.	Academic Connect: Inter-College Event: Hosted by IASCT & Loyola College	Loyola College, Chennai	City Level	Nov 2019	Organizer
15.	Inter-College Event d-ANALYTICA 2K19	SDNBVaishnav College, Chennai	City Level	Mar 2019	Inaugural Address Speaker
16.	Conference International Conference on Computing Sciences	Loyola College, Chennai	International Level	Nov 2018	Paper Presentation
17.	Seminar On Regression Analysis	MOP Vaishnav College, Chennai	National Level	Feb 2018	Resource Person
18.	Conference International Conference on Computing Sciences	Loyola College, Chennai	International Level	Jan 2018	Paper Presentation
19.	Workshop on “Research Methodology”	Presidency College, Chennai	National Level	May 2015	Resource Person
20.	National Conference on "Mixed Method Research - Exploring the Interactive Continuum"	SRM University	National Level	Feb 2013	Invited Speaker

21.	Orientation Program for Veterinary College Teachers	Madras Veterinary College	State Level	April 2012	Resource Person
22.	Workshop “ Work shop on Biostatistical Inference”	Madras Christian College, Tambaram	State Level	Feb 2012	Resource Person
23.	Workshop “Statistical Package for Social Sciences (SPSS)”	Loyola College, Chennai	State Level	Feb 2012	Resource Person
24.	Conference of Indian Society of Medical Statistics	ICMR - TRC Chennai	National level	Nov 2011	Invited Speaker
25.	Conference: Inter National Conference on Statistics & Information Analytics	Loyola College, Chennai	International Level	Aug 2011	Organizer (Convener)
26.	Workshop “ R Language”	Loyola College, Chennai	State Level	Feb 2011	Resource Person
27.	Workshop “A Work shop on Modern Tools in Applied Statistics”	University of Jammu	International Level	Dec 2010	Participation
28.	Workshop “ Work shop on Biostatistics & Clinical Trials”	Loyola College, Chennai	City Level	Nov 2010	Organizer
29.	Conference “Inter National Conference on Statistics & Information Analytics	Loyola College, Chennai	International Level	Jan 2010	Organizer
30.	Workshop: Statistical Package for Social Sciences (SPSS)	Loyola College, Chennai	State Level	Aug 2008	Resource Person
31.	Conference “Inter national Conference on Mathematics & Computer Science”	Loyola College, Chennai	International Level	July 2008	Paper Presentation
32.	Workshop “Statistical Package for Social Sciences (SPSS)”	Loyola College, Chennai	State Level	Feb 2008	Resource Person
33.	Conference “Higher Education at Cross Roads”	Loyola College, Chennai	National Level	Feb 2008	Participation
34.	Maths Festival	Patrician College,	City Level	Mar 2007	Inaugural Address Speaker

	“MA-ST-OR FEST 2006-07”	Chennai			
35.	Exhibition of Mathematical Models “MAX MELA 2007”	G.S.S. Jain College, Chennai	City Level	Jan 2007	Inaugural Address Speaker
36.	Conference “National Conference on Recent Trends in Statistical Methodologies”	Presidency College, Chennai	National Level	Mar 2006	Paper Presentation
37.	Seminar “Statistics – A Lead to the Facts”	Loyola College, Chennai	National Level	Feb 2006	Organizer
38.	Seminar “Campus 2010” – Information Communication Technologies with Human Face	Loyola College, Chennai	National Level	Feb 2006	Participation
39.	Workshop on “Exchangeability & Bayesian Non-Parametrics”	University of Mysore	National Level	Jan 2005	Participation

VIII INDUSTRY EXPERIENCE

- Analytics Consulting Experience of 8 years (2004 to 2012) for **Global Analytics India Pvt. Ltd., Chennai**
- Analytics Consulting Experience of 2 years (2015 to 2017) for **Customer Centria Enterprises Solutions Pvt. Ltd., Bengaluru**
- Analytics Consulting Experience of 6 months (Dec 2022 to date) for **Customer Centria Enterprises Solutions Pvt. Ltd., Bengaluru**

IX OTHER CONTRIBUTIONS

Contributions at the Statistics Department Level in Loyola College, Chennai

- Extended special coaching to students who were interested in pursuing higher education in institutions like Indian Institute of Technology and Indian Statistical Institute
- Arranged for training programs for students by corporate personnel on Applications of Statistics
- Arranged for career guidance programs exclusively for Statistics students
- Interacted with several companies to secure internships and arrange for recruitment drives exclusively for Statistics students
- Generated funds from corporate bodies to support the education of economically disadvantaged students
- Roped in the department alumni for guidance and mentoring of students and emotional and financial support to the students’ activities
- Played a consistent role in resolving workload matters and took lead in delegating work and time-table scheduling activities for several years (even before taking up administrative roles officially)
- Played a pivotal role in restructuring of syllabus of undergraduate and graduate programs

- Participated (singing) in college cultural programs and encouraged students in extra-curricular activities
- Designed and conducted quiz events for students in the format of the popular Indian television game shows '*Kaun Banega Crorepati*' and '*Thanga Vaettai*'
- Instituted '**Dr. T. M. Durairajan Medal for the Overall Top Scorer of M.Sc. Statistics**' in honour of the former Head of the Department and my Ph.D. guide **Dr. T. M. Durairajan**
- Introduced *Mini-Projects* as a component of continuous assessment and enabled students to directly apply the knowledge they earned to analyze data using statistical packages and present it in seminars evaluated by academicians from other colleges and industry experts and gave exposure to the students on industry expectations

Contributions at the College Level (as Dean of Students) in Loyola College, Chennai

- Organized the mega cultural fest **OVATIONS** in September 2012, 2013 and 2014 and enriched the college life of students – The 23rd edition of OVATIONS held in 2014 has been rated the 'Best OVATIONS' in the 30-year old history of the festival.
- Organized intercollege dance competition **IGNITE** in February / March 2013, 2014 and 2015
- Organized **Pongal Vizhaa (Pongal Festival)** in January 2013, 2014 and 2015 wherein the much-needed emphasis and encouragement to Tamil culture, Ethnic wear and Traditional art forms were given
- Organized fund collection for Poor Students Scholarships
- Led the Loyola Students' Union to collect funds for the natural calamities relief fund of the government.
- Introduced a computer-based election process for the annual election to the Loyola Students' Union to eliminate paper wastage
- Played an effective leadership role to streamline the election process and enabled all the faculty members across all departments to effectively participate as 'Polling Officials' and 'Authentication Officials' in the electoral process
- Introduced an online system of enrolment of first year undergraduate students in extra-curricular clubs
- Formed new extra-curricular clubs, namely, **Loyola Club of Performing Arts, Loyola Radio Club** and initiated the process of transforming **Loyola Debating Society** into an extra-curricular club to cater to and bring out the varied talents of students
- Instituted the '**Loyola Students Union (2012-13) Award for Cumulative Excellence**' to be awarded every year to a student who excels in multiple dimensions at the whole college level.

X ON DISCHARGING THE ROLES OF OMBUDSMAN

- In discharging the role as ombudsman, all the necessary Rules and the Principle of Natural Justice will be followed in letter and spirit
- In cases where specific experts are to be roped in for handling issues, necessary requests will be made to the university authorities to proceed further
- All the required follow-up steps for final settlement of grievances will be scrupulously followed in every instance

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