BOBY JOHN

SQC & OR Unit, Indian Statistical Institute

RVCE Post, 8th Mile, Mysore Road, Bangalore – 560 059

Mobile: 94487 04182   email: boby@isibang.ac.in

Employment

Technical Officer, Statistical Quality Control & Operations Research Unit, Indian Statistical Institute, Bangalore.

Paper published in International Journals

1. "A fuzzy quantitative model for assessing the performance of pharmaceutical supply chain under uncertainty", *Kybernetes*, Vol. 52, No. 3, pages: 828-873. 2023. https://doi.org/10.1108/K-08-2021-0750

2. "A control chart pattern recognition methodology for controlling information technology-enabled service (ITeS) process customer complaints", *International Journal of Productivity and Performance Management*, Vol. 71, No. 8, pages: 3826-3848. 2022. https://doi.org/10.1108/IJPPM-08-2020-0463

3. "Modeling and optimization of multiobjective programming problems in neutrosophic hesitant fuzzy environment", *Soft Computing*, Vol. 26, No. 12, pages: 5719–5739. 2022. https://doi.org/10.1007/s00500-022-06953-9

4. "A novel approach for the solution of multiobjective optimization problem using hesitant fuzzy aggregation operator", *RAIRO - Operations Research*, Vol. 56, No.1, pages: 275-292. 2022. https://doi.org/10.1051/ro/2022006

5. "Minimizing the dry content variation in the pulp drying process using Six Sigma methodology", *Operations Research Forum*, Vol. 2, No. 4, pages: 1-21. 2021. https://doi.org/10.1007/s43069-021-00110-y

6. "A service level agreement baselining methodology for non-normal characteristics using the Pearson distribution", *International Journal of Industrial and Systems Engineering*, Vol. 37, No.2, pages: 222-240. 2021. https://doi.org/10.1504/IJISE.2020.10026172

7. "Improving the insurance claim processing process using Six Sigma methodology", *International Journal of Six Sigma and Competitive Advantage*, Vol.12, No.4, pages: 348-368, 2020. https://doi.org/10.1504/IJSSCA.2020.10034104

8. "Improving the resolution time performance of an application support process using Six Sigma methodology", *International Journal of Lean Six Sigma*, Vol.11, No.4, pages: 663-686, 2020. https://doi.org/10.1108/IJLSS-10-2018-0108

9. "A modified control chart for monitoring non-normal characteristics", *International Journal of Productivity and Quality Management*, Vol. 29, No.3, pages: 309 - 328, 2020. https://doi.org/10.1504/IJPQM.2019.10019471

10. "An application of fuzzy optimisation methodology for simultaneous optimisation of continuous and categorical characteristics", *International Journal of Quality Engineering and Technology*, Vol. 7, No.3, pages: 298 - 319. 2019. https://doi.org/10.1504/IJQET.2019.104885

11. "Optimization of software development life cycle process to minimize the delivered defect density", *Opsearch*, Vol. 56, No. 4, pages: 1199-1212. 2019. https://doi.org/10.1007/s12597-019-00414-y

12. "A regression spline control chart for monitoring characteristics exhibiting nonlinear profile over time", *The TQM Journal*, Vol. 31, No. 3, pages: 507-522, 2019. https://doi.org/10.1108/TQM-08-2018-0105

13. "An application of integrated EPC-SPC methodology for simultaneously monitoring multiple output characteristics", *International Journal of Quality and Reliability Management*, Vol. 36, No.5, pages: 669-685, 2019. https://doi.org/10.1108/IJQRM-04-2018-0104

14. "A fuzzy optimization approach for software reliability estimation", *International Journal of Business and Systems Research*, Vol. 13, No.2, pages: 259 – 273, 2019. https://doi.org/10.1504/IJBSR.2019.098624

15. "Reduction of rework in bearing end plate using six sigma methodology: A case study", *Journal of Applied Research on Industrial Engineering*, Vol. 5, No.1, pages: 10 – 26, 2018. https://doi.org/10.22105/jarie.2018.120059.1033

16. "Designing software development process to optimize multiple output performance characteristics", *Software Quality Professional*, Vol. 19, No.4, pages: 16 – 24, 2017.

17. "A brief review of software reliability prediction models", *International Journal for Research in Applied Science & Engineering Technology*, Vol. 5, No. 4, pages: 990 - 997, 2017.

18. "Application of multistage process control methodology for software quality management", *Journal of Project Management*, Vol. 1, No. 2, pages: 55 - 66. 2016. https://doi.org/10.5267/j.jpm.2017.2.001.

19. "A methodology for quantitatively managing the coding phase of software development process", *International Journal of Research in Engineering and Technology*, Vol.5, No.16, pages: 13 - 20. 2016.

20. "Recent advancements in software quality management: A review", *Merit Research Journal of Business and Management*, Vol. 4, No.5, pages: 018 - 026. 2016

21. "A methodology for quantitatively managing the bug fixing process using Mahalanobis Taguchi system", *Management Science Letters*, Vol 5, No.12, pages: 1081 - 1090. 2015. https://doi.org/10.5267/j.msl.2015.10.006

22. "A methodology for reducing bench strength in information technology companies", *Journal of Engineering, Project, and Production Management,* Vol. 5, No.2, pages: 91 – 97. 2015.

23. "A dual response surface optimization methodology for achieving uniform coating thickness in powder coating process", *International Journal of Industrial Engineering Computations*, Vol. 6, No.4, pages: 469 – 480. 2015. https://doi.org/10.5267/j.ijiec.2015.5.004

24. "A methodology to reduce the counter gear subassembly reworks*", Journal of Engineering Science and Technology,* December 2014, pages: 46 – 56. 2014

25. "A methodology for achieving design review defect density goals in software development process", *International Journal of Manufacturing, Industrial & Management Engineering*, Vol. 2, No.1, pages: 181 - 191. 2014

26. "Application of Mahalanobis - Taguchi system and design of experiments to reduce the field failures of splined shafts", *International Journal of Quality and Reliability Management*, Vol.31, No.6, pages: 681-697. 2014. https://doi.org/10.1108/IJQRM-10-2012-0134

27. "Application of desirability function for optimizing the performance characteristics of carbonitrided bushes", *International Journal of Industrial Engineering Computations*, Vol. 4, No.3, pages: 305-314. 2013. https://doi.org/10.5267/j.ijiec.2013.04.003

28. "Identification of potential churn customers for a telecom service provider: A case study", *Quality & Reliability Journal*, Vol.6, No.1, pages: 11-13, 2013.

29. "An Approach to reduce the variation in the continuous operating voltages across lightening arrester assemblies", *International Journal of Electrical Engineering*, Vol. 5, No.6, pages: 691 – 698, 2012.

30. "An optimum test stopping criterion based on software reliability modeling and Taguchi methods", *International Journal of Reliability and Safety*. Vol. 6, No. 4, pages: 372 - 385, 2012. https://doi.org/10.1504/IJRS.2012.049612

31. "Simultaneous optimization of multiple performance characteristics of Carbonitrided pellets: A case study", *International Journal of Advanced Manufacturing Technology*, Vol. 61, No. 5-8, pages: 585 - 594, 2012. https://doi.org/10.1007/s00170-011-3751-2.

32. "Modeling the defect density of embedded system software using Bayesian belief networks: A case study", *Software Quality Professional*, Vol. 14, No. 3, pages: 39 - 45, 2012.

33. "Lean Six-Sigma application in business process outsourced organizations*", International Journal of Lean Six Sigma*, Vol. 2. No.4, pages: 371-380, 2011. https://doi.org/10.1108/20401461111189443

34. "Optimization of actuator performance using robust engineering and feature selection methodologies – A case study", *International Journal of Productivity and Performance Management*, Vol. 60, No.6, pages: 642 – 652, 2011. https://doi.org/10.1108/17410401111150797.

35. "SLA baselining of Non-Normal metrics: A profit optimization approach", *Software Quality Professional*, Vol. 12, No.2, pages: 42 – 44, 2010.

36. "Optimization of the induction hardening operation using robust design", *Journal of Quality Engineering Forum*, Vol. 11, No. 4, 70-80, 200

Papers published in Books

1. "Optimizing a supply chain network using metaheuristic for pre and post pandemic scenario", *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, 2021, pp. 41-45, doi: http://doi.org/10.1109/IEEM50564.2021.9673031

2. "An application of dual-response surface optimization methodology to improve the yield of pulp cooking process", *Advanced Mathematical Techniques in Engineering Sciences*, Chapter 5, pages: 91 – 110, CRC Press (Taylor & Francis Group), 2018, ISBN: 978-1-31-514897-7.

3. "Quality & reliability engineering: An introduction", *Quality and Reliability Engineering: Recent Trends and Future Directions*, pages: 1 – 3, Allied Publishers, India, 2013, ISBN: 978-81-8424-831-9.

4. "Optimization of the yield of a code review process", *Proceedings of the International Conference on Quality, Reliability and Operations Research*, pages: 161 – 168, Excel India Publishers, India, 2013. ISBN: 978-93-82880-27-1.

5. "Modeling of code review process yield using Bayesian belief networks: A case study", *Proceedings of International Conference on Software Engineering*, pages: 121 – 127, Tata McGraw Hill Education Private Limited, India, 2011. ISBN: 978-0-07-107816-9.

Books published

- Boby, J., Acharya, U.H. and Chakraborty, A. (eds): *Quality and Reliability Engineering: Recent Trends and Future Directions*, Allied Publishers, India, 2013. ISBN: 978-81-8424-831-9.

Academic Events organized

- Invited Talk on *Effortless Monte Carlo Simulation for Production lines,* 15 April, 2025 (Online)
- Invited Talk on *Artificial Intelligence / Machine Learning (AI / ML) Applications in Banking,* 27 March 2024, SQC & OR Unit, Indian Statistical Institute, Bangalore
- *U H Acharya Lecture Series,* 26 - 30 October, 2023 (online)
- Invited lecture on *A tour to time series forecasting: past, present & the future,* 26 August 2022, SQC & OR Unit, Indian Statistical Institute, Bangalore
- Invited lecture on *Some Korovkin-type results in matrix algebra*, 12 August 2022, SQC & OR Unit, Indian Statistical Institute, Bangalore
- Invited lecture on *Attribute measurement system analysis*, 04 July 2022, SQC & OR Unit, Indian Statistical Institute, Bangalore
- *IndustryConnect through MS-QMS Alumni - Webinars on Data Science,* November 2021-January 2022.
- *Ishteaqul Islam Memorial Lecture,* 23 October, 2021 (online).
- *Chowdhury Lecture Series*, 22 – 25 February, 2021 (online).
- Invited lecture on *A Comparison of Robust Multivariate Control Charts for Individual Observations,* 08 January, 2020, SQC & OR Unit, Indian Statistical Institute, Bangalore
- *International Conference on Quality and Reliability Engineering: Recent Trends & Future Directions*, 20 – 22 December, 2011, Hotel Atria, Bangalore.

Paper presented/accepted in Conferences

1. "A feature selection methodology using design of experiments", *7th International Conference on Statistics for Twenty-First Century (ICSTC-2021)*, 15 – 19 December 2021, Trivandrum (online)

2. "Optimizing a supply chain network using metaheuristic for pre and post pandemic scenario", *IEEE International Conference on Industrial Engineering and Engineering Management (IEEM2021)*, 13 -16 December 2021, Singapore (online).

3. "An application of Taguchi's loss function for handling multicollinearity", presented in *5th International Conference on Statistics for Twenty-First Century (ICSTC-2019)*, 18 - 20 December 2019, Trivandrum.

4. "Optimization of software development life cycle process to minimize the delivered defect density", presented in *International Conference on Advancing Frontiers in Operational Research: Towards a sustainable world (AFOR-2017)*, 21 – 23 December 2017, Kolkata.

5. "Improving the recruitment process quality using predictive modeling", presented in *14th Annual Conference of Indian Society for Quality*, 8 – 9 December 2017, Bangalore.

6. "A methodology for quantitatively managing agile software projects using Taguchi's loss function", presented *in International Conference on Robust Quality Engineering (ICRQE - 2017)*, 19 - 21 January 2017, Mumbai.

7. "A fuzzy optimization approach for software reliability estimation", presented in *International Conference on Advanced Materials, Manufacturing, Management and Thermal Sciences (AMMMT - 2016)*, 23 - 24 September 2016, Tumkur, Karnataka.

8. "A methodology for quantitatively managing the coding phase of software development process", presented in *International Conference on Recent Advances in Engineering Sciences (ICRAES - 2016),* 8 -9 September 2016, Bangalore.

9. "A methodology to improve the membership renewal rate of a holiday resort group", presented in *International Conference on Statistics for Twenty First century (ICSTC-2015)*, 17 – 19 December, Trivandrum.

10. "A methodology to qualitatively managing the bug fixing process using Mahalanobis – Taguchi System", presented in *2nd International Conference on Robust Quality Engineering (ICRQE 2014)*, 15 – 17 December, Bangalore.

11. "A methodology to achieve the requirement review defect density goals in software development process", *International Conference on Business Analytics and Intelligence (ICBAI 2014)*, 18 – 20 December, 2014. Bangalore.

12. "A methodology for achieving design review defect density goals in software development process", presented in *International Conference on Recent Advances in Engineering Sciences (ICRAES 2014)*, 4-5 September, 2014. Bangalore.

13. "A Methodology to Reduce the Counter Gear Subassembly Reworks", presented in *International Conference on Mathematical Techniques in Engineering Applications (ICMTEA 2013)*, 24 – 25 October 2013, Dehradun.

14. "A dual response surface optimization approach for minimizing the variation of paint thickness in powder coating process", presented in *International Conference on Advanced Materials, Manufacturing, Management and Thermal Sciences (AMMMT 2013)*, 3 – 4 May 2013, Tumkur.

15. "Optimization of Code Review Yield Process", presented in *International Conference on Quality, Reliability & Operations Research (ICONQROR 2013)*, 7 – 9 January 2013, Mumbai.

16. "Modeling of Code Review Process Yield using Bayesian Belief Networks: A Case Study", *International Conference on Software Engineering (CONSEG 2011)*, 17 – 19 February, 2011, Bangalore.

17. "Identification of Potential Churn Customers for a Telecom Service Provider: A Case Study", Presented in *13th international Conference on Quality (ICQ 2011),* 6 - 7 January 2011, Bangalore.

18. "Optimization of Mobile Tower Utilization for a Telecom Service Provider: A Case Study", presented in *International Congress on Productivity, Quality, Reliability, Optimization and Modeling (ICPQROM 2011)*, 7 – 8 February, 2011, New Delhi.

19. "Arriving at Optimum Test Stopping Criteria using Software Reliability Modeling: A Case Study", accepted in *13th International Conference on Reliability and Quality in Design (ISSAT 2010)*, 5 – 7 August 2010, Washington DC, USA
20. "Optimization of Bench Strength for Software Company", Presented in *4th International Conference on Quality, Reliability and Infocom Technology: Trends and Future Directions (ICQRIT 2009),* 18 – 20 December 2009 New Delhi.
21. "Forecasting Daily Call Volumes", presented in *National Conference on Tools & Techniques for Quality and Productivity Improvement*, 8 – 9 February 2005, New Delhi.

Software Applications Developed

SL No	Application / App Name	Client / Address
1.	A web based shiny application for Statistical Process Control (Boby-SPC)	https://jesboby.shinyapps.io/Boby-SPC/
2.	A web based shiny application for visualizing relationship between two features or variables (Boby-Stats)	https://jesboby.shinyapps.io/Boby-Stats/
3.	A web based shiny application for Hypothesis Testing (Boby-ToH)	https://jesboby.shinyapps.io/Boby-ToH/
4.	A web based shiny application for the Design and Analysis of Experiments (Boby-DoE)	https://jesboby.shinyapps.io/Boby-DoE/
5.	Development of a decision support system, aiding the suppliers, contractors, and other stakeholders engaged in the e-tender process of Karnataka Government in the determination of optimal bid amounts	https://jesboby.shinyapps.io/Boby-eTender/
6.	An Excel R application to check the randomness of the prize winning numbers generated by lottery machines	Bureau of Indian Standards (BIS)
7.	An Excel R application for checking multivariate normality and multivariate process capability analysis	
8.	An Excel app for reliability estimation using bootstrap methodology	Defence Institute of Quality Assurance (DIQA)
9.	An Excel app for the construction of confidence interval using bootstrap methodology	BEML Ltd

- Please email any inquiries regarding user guidelines and other details of software applications to boby@isibang.ac.in

Externally Funded Projects (2025-25)

Project Title	Funding Agency	Amount
Certification Program on Reliability Engineering	Defence Institute of Quality Assurance (DIQA)	Rs. 1,75,000

Teaching / Training Assignments (2025)

Course Name	Number of Participants	Amount Generated
Online Certification Course on Six Sigma Green Belt	12	Rs. 1,68,000/-
Certified Reliability Engineering Program	14	Rs. 56,000/-

Post Doc Supervision

Name	Year	Affiliation
Dr. Anirban Kundu	2021	IIT, Delhi
Dr. Firoz Ahmad	2021-22	Aligarh Muslim University

Research Scholar

Name	Year	Affiliation
Raquibuddin Ahmad Molla	2024	Indian Statistical Institute

Dissertation Students

Name	Year	Current Employment
Ripunjay Gohain	2016	Tata Communications
Shreya Singhal	2017	JP Morgan Chase & Co
Souradip Chakraborty	2018	University of Maryland
Pooja Mansharamani	2018	Aegon Financial Services
Vaibhav Agarwal	2018	Societe Generale
Mridul Sachdeva	2019	Games24x7
Subhankar Khatua	2019	Credit Saison India
Saoni Das	2020	Toshiba Software India
Pramit Samanta	2020	ZEE
Saurav Bardhan	2020	Philips Innovation Campus
Abhishek Chowdhary	2021	Ernst & Young India
Ravi Goyal	2021	DCube Analytics
Soudip Karmakar	2021	Genpact India
Akash Dey	2022	Ernst & Young India
Nidhi Shashikant Talwar	2022	Lowe's India
Vineet Kumar Singh	2022	Maybank
Archan Karmakar	2023	Amazon
Anjali	2023	Maybank
Shouvik Mondal	2024	PwC India
Shibangi Das	2024	Aditya Birla Capital

Major Consultancy Assignments (Completed)

- Design of Experiments and Reliability Engineering Applications: *Jaguar Land Rover*, 2024-25
- Statistical Process Control: *Kirloskar Toyota Textile Machinery*, 2024-25
- Six Sigma Green Belt Certification: *CleanHarbors*, 2024-25
- Extracting Insights through Data Analysis: *String Bio*, 2024-25
- Lean Six Sigma Certification and Data Analytics Applications: *Bharat Electronics*, 2024-25
- Design of Experiments and Statistics applications: *Recipharm Pharma Services*, 2024-25
- Six Sigma Black Belt Certification: *BEML,* 2024-25

- Six Sigma Green Belt and Black Belt Certification: *DIQA*, 2023-25
- Statistical Process Control, Reliability Engineering and its Applications: *DIQA*, 2023-25
- Six Sigma Green Belt Certification: *BEML*, 2023-24
- Problem Solving using Design of Experiments: *Walvoil Fluid Power*, 2023-24
- Business Analytics using Python: *Jamshedpur Management Association*, 2023-24
- Problem Solving Tools and Process Improvement: *Reetam HR*, 2023-24
- Six Sigma Green Belt Certification training and project guidance: *DIQA*, 2023-24
- Business analytics and its applications using R: *Bharat Electronics*, 2023-24
- Business Analytics and its applications: *ClinChoice*, 2022-23
- Six Sigma Green Belt Certification training and project guidance: *GE Healthcare*, 2022-23
- Business Analytics and its applications using R: *Airbus India*, 2022-23
- Six Sigma Green Belt Certification training and project guidance: *DIQA*, 2022-23
- Predictive modeling and its applications using Python: *Caterpillar India*, 2021-22
- Six Sigma Green Belt training and project guidance: *Bharat Electronic*s, 2021-22
- Business analytics and its applications using R: *Bharat Electronics*, 2021-22
- Business Forecasting and its applications using Python: *Hewlett Packard Inc.*, 2021-22
- Business analytics, forecasting, optimization and its applications using Python: *Hewlett Packard Inc.*, 2020-21
- Predictive modeling and its applications using Python: *Caterpillar India*, 2020-21
- Data analytics and its applications using R: *L & T India*, 2020-21
- Business analytics and its applications using R: *Bharat Electronics*, 2020-21
- Training and guidance on business analytics and time series modeling: *LKQ India*, 2019-20
- Training and guidance on achieving operational excellence using Six Sigma: *Walvoil Fluid Power*, 2019-20
- Training and guidance on predictive modeling: *Manthan Software Services*, 2019-20
- Training and guidance in developing solutions to business problems using Analytics: *Hewlett Packard Inc*, 2019-20
- Problem solving using Design of Experiments: *Syngene International,* 2019-20
- Training and guidance on achieving operational excellence using Six Sigma: *UltraTech Cements*, 2019-20
- Problem solving using Design of Experiments: *Toyota Industries Engine India Ltd,* 2019-20
- Training and Consulting in Business Analytics: *Quest Global,* 2018 – 19
- Training and Consulting in Business Analytics: *Tata Steel,* 2017 – 18
- Training and Consulting in Business Analytics: *Airbus India,* 2016 – 17
- Training and Consulting in Business Analytics funded by *Adani Power, 2016 - 17*
- Training and Consulting in Business Analytics: *L&T Infotech,* 2016 – 17
- Six Sigma Black Belt and Green Belt certification programs: *Huawei Technologies, 2016 - 17*
- Training and Consulting in Business Analytics: *Deloitte, 2015 - 17*
- Six Sigma Black Belt and Green Belt certification programs: *Hinduja Global Solutions,* 2016-17.
- Process Improvements through Six Sigma methodology: Project execution, *Infosys bpo,* 2012–14.
- Process Improvements through Six Sigma methodology: Training & Project execution, *Accenture Services,* 2010–13.
- Process Improvements through Six Sigma methodology: Training & Project execution. *Infosys bpo Ltd*: 2003 – 2011.

- Process Improvements through Six Sigma Methodology: Training & Project execution. *Hinduja Global Solutions Ltd*. 2009 – 2011.
- Development of Statistical approach for Service Level Agreement Baselining. *Wipro Technologies Ltd*, 2009.
- Development of Process Performance Models: *Robert Bosch (India) ltd*, 2001 – 03 & 2007 – 08.
- Development of Orthogonal Array based Software Testing Methodology. *Wipro Technologies Ltd*, 2004 – 06.
- Development of Residual Bugs Estimation Methodology using Software Reliability Modeling. *Wipro Technologies Ltd*, 2004 – 06.
- Statistical Data Analysis: *ITC Tobacco Technology Center,* 2004 – 05.
- Process improvements through Six Sigma methodology: Training & Project execution. *Harihar Polyfibers & Grasilene Division*, 2000 – 03

Major Teaching & Training Assignments (Completed)

- **General Programs**
    1. Certified Reliability Engineering Program (1 batch)
    2. Online Course on Machine Learning using Python and R (3 batches)
    3. Online Certification Program on Six Sigma Green Belt: ISI, Hyderabad (3 batches)
    4. Online Course on Machine Learning using Python (2 batches)
    5. Online Course on Business Analytics using R (3 batches)
    6. Online Course on Business Forecasting using Python (2 batch)
    7. Online Course on Data Processing using Python (1 batches)
    8. Faculty Development program on Data Science using R (1 batch)
    9. Certification Program on Data Mining and Business Analytics: ISI, Mumbai (5 batches)
    10. Online Course on Data Processing using R (2 batches)
    11. Foundation Course on Machine Learning using Python (1 batch)
    12. Foundation Course on Predictive Modeling using Python (5 batches)
    13. Foundation Course on Business Analytics using R: ISI, Hyderabad (3 batches)
    14. Foundation Course on Business Forecasting using R (5 batches)
    15. Program on Problem Solving using Design of Experiments (7 batches)
    16. Foundation Course on Business Analytics using R (7 batches)
    17. Program on Advanced Data Analysis using R (North-East): Agartala. Tripura
    18. Program on Advanced Data Analysis: North East: Imphal, Manipur
    19. Program on Advanced Data Analysis: Cochin
    20. Program on Data Mining and Business Analytics - North East: Aizawl, Mizoram
    21. Program on Data Mining and Business Analytics: 10 batches (ISI, Mumbai)
    22. Program on Statistics for Data Exploration and Modeling: 1 batch
    23. Six Sigma Black Belt (with Lean) Training Program for IT / ITES Industries: 4 batches
    24. Six Sigma Advanced Green Belt Training Program for IT / ITES Industries: 2 batches
    25. Workshop on Statistical Techniques for Data Mining & Business Analytics: 12 batches
    26. Workshop on Statistical Techniques for Software Metrics Analysis: 2 batches.
    27. Workshop on Statistical Models & Techniques for Quantitative Project Management (QPM): 5 batches

- **Corporate Training Programs**
    1. Advanced Program on Design of Experiments and Reliability Engineering: *Jaguar Land Rover,* 2024-25
    2. Six Sigma Green Belt Certification Program: *CleanHarbors*, 2024-25
    3. Program on Statistical Process Control: *Kirloskar Toyota Textile Machinery*, 2024-25
    4. Certification Program on Data Analytics using R: *Bharat Electronics*, 2024-25
    5. Lean Six Sigma Certification Program: *Bharat Electronics*, 2024-25
    6. Program on Descriptive Statistics: *String Bio*, 2024-25
    7. Program on Design of Experiments and Statistical Methods: *Recipharm Pharma Services*, 2024-25
    8. Six Sigma Black Belt Certification Program: *BEML*, 2024-25
    9. Six Sigma Black Belt Certification Program: *DIQA*, 2023-25
    10. Six Sigma Green Belt Certification Program: *DIQA*, 2023-25
    11. Certification Program on Reliability Engineering: *DIQA*, 2023 – 25
    12. Statistical Process Control Program: *DIQA*, 2023-25
    13. A Comprehensive Course on Analytics: *Jamshedpur Management Association*, 2023
    14. Six Sigma Green Belt Certification: *BEML*, 2023
    15. Problem Solving using Design of Experiments course: *Walvoil Fluid Power*, 2023
    16. Statistical Process Control Training program: *Kirloskar Toyota Textile Machinery Pvt Ltd.*, 2023.
    17. Statistical Process and Quality Control training program: *DIQA*, 2023-24
    18. Program on Problem Solving Tools & Data Visualization: *Reetam HR*, 2023
    19. Foundation Curse on Data Analytics Techniques using R: *ClinChoice*, 2022
    20. Foundation Curse on Problem Solving Tools & Plots: *ClinChoice*, 2022
    21. Six Sigma Green Belt Certification Program: *GE Healthcare*, 2022
    22. Foundation Course on Business Analytics using R: *Airbus India*, 2022
    23. Foundation Course on Data Analytics using R: *Bharat Electronics*, 2022
    24. Six Sigma Green Belt Certification Program: *DIQA*, 2022
    25. Six Sigma Green Belt Certification Program: *Bharat Electronics*, 2021
    26. Foundation Course on Data Analytics using R: *Bharat Electronics*, 2021
    27. Online Course on Predictive Modeling using python: *Caterpillar India,* 2021
    28. Online Course on Business Forecasting using Python: *Hewlett Packard*, 2021
    29. Online Course on Data Science using R: *L&T India*, 2020
    30. Online Course on Predictive Modeling using Pyhton: *Caterpillar India*, 2020
    31. Foundation Course on Data Analytics using R: *Bharat Electronics*, 2020
    32. Online Course on Advanced Analytics using Python: *Hewlett Packard*, 2020
    33. Foundation Course on Business Analytics using Python: *Hewlett Packard*, 2020
    34. Foundation Course on Business Analytics using Python: *LKQ India*, 2019
    35. Program on Business Analytics using R: *Hewlett Packard Inc.* 2019
    36. Program on Design of Experiments: *Toyota Industries Engine India, 2019*
    37. Program on Applied Statistics using Minitab: *Natco Pharma* , 2019
    38. Program on Six Sigma Green Belt Certification: *Walvoil Fluid Power, 2019*
    39. Foundation Course on Predictive Modeling*: Manthan Software Services*, 2019
    40. Program on Business Forecasting: *Hewlett Packard Inc.* 2019
    41. Program on Design of Experiments: *Syngene International 2019*

42. Program on Six Sigma Green Belt Certification: *A P Cement Works 2019*
43. Program on Data Analytics & Visualization: *Adani Solar. 2019*
44. Program on Data Analytics & Visualization: *Adani Power Maharashtra Ltd. 2019*
45. Program on Six Sigma Green Belt Certification: *Narmada Cement Works 2019*
46. Program on Data Analytics & Visualization: *Udupi Power Corporation 2019*
47. Program on Six Sigma Green Belt Certification: *Vikram Cement Works 2019*
48. Foundation Course on Business Analytics using R: *Quest Global 2018*
49. Program on Design of Experiments: *Syngene International 2018*
50. Advanced Course on Analytics: *Tata Steel 2018*
51. Foundation Course on Business Analytics using R: *Hewlett Packard Inc. 2018*
52. Foundation Course on Predictive Modeling using Python: *Caterpillar 2018*
53. Foundation Course on Business Analytics using R: *Ernst & Young 2018*
54. Program on Six Sigma Green Belt Certification: *Rajshree Cement Works 2018*
55. Program on Six Sigma Green Belt Certification: *Gujarat Cement Works 2018*
56. Program on Business Analytics: *Tata Steel 2018*
57. Program on Statistical Techniques: *Altran Technologies* 2017
58. Foundation Course on Business Analytics: *Tesco* 2017
59. Program on Design of Experiments: *Toyota Industries Engine India* 2017
60. Program on Business Analytics: *Airbus India* 2017
61. Program on Business Analytics: *Adani Power* 2017
62. Program on Design of Experiments: *Titan Jewellery Division* 2017
63. Program on Business Analytics: *L&T Infotech* 2016-17
64. Six Sigma Black Belt Certification Program: *Huawei Technologies* 2016
65. Program on Business Forecasting: *SIAM* 2016
66. Program on Business Analytics: *Deloitte* 2016
67. Program on Advanced Data Analysis: *Hewlett Packard Enterprise* 2016
68. Six Sigma Black Belt Certification Program: *Hinduja Global Solutions* 2016
69. Program on Business Analytics: *Infosys Technologies*, 2016
70. Program on Design of Experiments: *Hical Technologies*, 2015
71. Program on Business Analytics: *Infosys Technologies*, 2015
72. Program on Total Quality Management: *Tractors India Pvt Ltd.* Kolkata, 2015.
73. Program on Business Analytics: *TCS*, 2015
74. Six Sigma Green Belt Program: *Accenture*, 2015
75. Six Sigma Green Belt Program: *Huawei Technologies*, 2015.
76. Data Science program – *Samsung*, 2015.
77. Program on Statistics for Data Exploration and Modeling: *Deloitte, Mumbai*, 2015.
78. Program on Statistical Tools and Techniques for Six Sigma Green Belts: *Mindtree Solutions*, 2015.
79. Statistics for Data Exploration and Modeling: *Deloitte, Hyderabad*, 2015.
80. Program on Business Analytics: *Infosys Technologies*, 2015.
81. Six Sigma Green Belt Program: *Hinduja Global Solutions*, 2015
82. Program on Business Analytics: *Infosys Technologies*, 2014.
83. Six Sigma Green Belt Program: *Hinduja Global Solutions*, 2014
84. Program on Statistical Techniques for Business Intelligence: *Cross-domain Solutions Private Ltd*, 2014.

85. Program on Statistical Techniques for Business Intelligence: *Tally Solutions*, 2014.

86. Program on Statistical Tools and Techniques for Six Sigma Green Belts: *Mindtree Solutions*, 2014.

87. Program on Statistical Techniques for IT Analytics: *Honeywell Technology Solutions*, 2014

88. Statistical Techniques for Business Analytics: *Adobe Systems*, New Delhi, 2013

89. Six Sigma Black Belt Program: Bharat Electronics, 2013

90. Design For Six Sigma Program: Bharat Electronics, 2013

91. Six Sigma Black Belt Program: *TVS Motors*, Hosur, 2012.

92. Six Sigma Black Belt Program: *Barat Electronics*, Bangalore, 2012

93. Statistical Techniques for Business Analytics: *Apollo Munich*, New Delhi, 2012

94. Statistical Techniques for Data Mining & Business Analytics: *Hewlett Packard e Global Operations,* 2012.

95. Six Sigma Green Belt Program: *Visionet Systems*, 2012.

96. Statistical Models & Techniques for Quantitative Project Management. *Siemens Information Systems Ltd..* 2011.

97. Statistical Techniques for Business Analytics. *Firstsource Solutions,* 2011.

98. Six Sigma Green Belt Program: *Accenture Services*, 2011.

99. Statistical Techniques for Business Analytics. *Microsoft India (R & D) Pvt Ltd.*, 2010.

100. Design of Experiments & Advanced Taguchi Methods. *Beceem Communications.* 2010.

101. Statistical Models & Techniques for Quantitative Project Management. *Beceem Communications.* 2010.

102. Six Sigma Green Belt Program. *Bharat Electronics.* 2010

103. Six Sigma Black Belt Program. *Hewlett Packard e Global,* 2010

104. Program on Business Analytics & Optimization Techniques. *Honeywell Technologies Ltd.* 2009.

105. Program on Business Analytics & Optimization Techniques. *Tesco HSC.* 2009.

106. Program on Software Reliability Modeling. *Cognizant Technologies Ltd.* 2009.

107. Program on Advanced Statistical Techniques for Six Sigma Black Belts. *First Source Solutions.* 2009.

108. Six Sigma Black Belt Training Program. *IBM Daksh.* 2008.

109. Program on Statistical Techniques for Software Metrics Analysis. *Unisys Global Services.* 2008.

110. Program on Quantitative Project Management. *Huawei Technologies.* 2008.

111. Program on Quantitative Project Management. *Cognizant Technologies Ltd.* 2008.

112. Program on Six Sigma Green Belt tools. *Wipro Technologies.* 2008.

113. Program on Statistical Techniques for Software Metrics Analysis. *Torry Harris Solutions.* 2007.

114. Program on Statistical Techniques for Software Metrics Analysis. *Cognizant Technologies Ltd.* 2007.

115. Program on Statistical Techniques for Software Metrics Analysis. *Unisys Global Services.* 2007.

116. Program on Statistical Techniques for Software Metrics Analysis. *Nokia Siemens Networks.* 2006

Software Skills

1. MS Excel and programming using Visual Basic for Applications (VBA)
2. Minitab
3. SPSS and Amos
4. R and R Studio
5. SAS
6. Python

Invited Talks / Lectures delivered (2025)

1. Invited lecture on CART and Ensemble methods using Python at Workshop on Data Analytics in Health Sciences (WDAHS 2025) organized by Manipal Academy of Higher Education, Manipal on 08 January 2025
2. Invited talk on Classification and Class Probability estimation at workshop on Deep Learning using Tensor flow and Python organized by Vellore Institute of Technology, Vellore on 07 March 2025

Other Activities

- Editor in Chief, "The Beacon", National Institution for Quality & Reliability (NIQR) newsletter. 2005 – 2008.
- Associate Editor, SQC & OR Division Newsletter, 2008 – 2012.

Work Experience

1. Senior Technical Officer (since 2021): Statistical Quality Control & Operations Research Unit, Indian Statistical Institute, Bangalore
2. Technical Officer Grade I (2013 - 2021): Statistical Quality Control & Operations Research Unit, Indian Statistical Institute, Bangalore
3. Technical Officer Grade II (2009 - 2013): Statistical Quality Control & Operations Research Unit, Indian Statistical Institute, Bangalore
4. Technical Officer Grade III (2004 - 2009): Statistical Quality Control & Operations Research Unit, Indian Statistical Institute, Bangalore
5. Consultant (2003 – 2004): Infosys, Bangalore. Taken sabbatical from Indian Statistical Institute and worked for Infosys bpo as a full time consultant.
6. Technical Officer Grade III (1999 - 2003): Statistical Quality Control & Operations Research Unit, Indian Statistical Institute, Bangalore

Awards and Recognition

- Best paper award for the paper titled "A methodology to qualitatively managing the agile software projects using Taguchi's loss function" at *3rd International Conference on Robust Quality Engineering (ICRQE 2017)*, 19 – 21 January, Mumbai.
- Best paper award for the paper titled "A methodology to qualitatively managing the bug fixing process using Mahalanobis – Taguchi System" at *2nd International Conference on Robust Quality Engineering (ICRQE 2014)*, 15 – 17 December, Bangalore.

Education

Degree	Subjects	University / Institute	Year
PhD	Mechanical Engineering Sciences	Visvesvaraya Technological University, Belagavi	2018
Master of Technology	Quality, Reliability & Operations Research	Indian Statistical Institute, Kolkata	1997
Master of Science	Statistics	Mahatma Gandhi University, Kottayam	1995