

MAHESH SHIVAJI BARALE

Designation : Assistant Professor
Organization : Central University of Rajasthan, Ajmer.
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ACADEMIC DETAILS

Degree	Board/University	Year	Marks (%)
Ph.D. (Statistics)	Shivaji University, Kolhapur	Oct-2020	-
SET	SP Pune University, Pune	May-2018	-
M.Sc. (Statistics)	Shivaji University, Kolhapur	June-2015	70.25
B.Sc. (Statistics)	Shivaji University, Kolhapur	June-2013	74.80
HSC	Kolhapur	May-2010	60.67
SSC	Kolhapur	June-2008	76.76

Topic of Ph.D. : Robust Quality Control Charts
Research Guide : Dr. D. T. Shirke
Date of Award : 27th, October 2020

SOFTWARES/PROGRAMMING LANGUAGES KNOWN

- Excel, R, Basics of Python, SAS, SPSS, MINITAB, WEKA.

POSITIONS HELD

- Working as **Assistant Professor** in the Department of Statistics, Central University of Rajasthan, Ajmer from 16 June 2022.
- Worked as **Assistant Professor** in the Symbiosis Statistical Institute, Pune from March 30, 2021 to June 15, 2022.
- Worked as **Assistant Professor (Temp)** in the Department of Statistics, Shivaji University, Kolhapur from September 11, 2019 to March 25, 2021.
- Worked as **Assistant Professor (CHB)** in the Department of Statistics, Vivekanand College, Kolhapur from June 25, 2018 to March 31, 2019.
- Worked as **Project Fellow** under the UGC Major Research Project in the Department of Statistics, Shivaji University, Kolhapur from December 19, 2015 to June 30, 2018.

COURSES TAUGHT

- **M.Sc. (Statistics/ Applied Statistics and Informatics):** Distribution Theory, Statistical Inference, Regression Analysis, Multivariate Analysis, Generalized Linear Models, Computer Intensive Statistical Methods, Quality Control, Theory of Testing of Hypothesis, Design of Experiments, Introduction to Python, Data Mining, Machine Learning.
- **B.Sc. (Statistics):** Probability Distributions, Quality Management and Data Mining.

MEMBER OF ACADEMIC BODIES

- Elective postgraduate meritorious alumnus member of Board of Studies (Statistics), Vivekanand College (Autonomous), Kolhapur (2019-2024).

ADDITIONAL RESPONSIBILITIES

- IQAC and Exam Coordinator at Symbiosis Statistical Institute, Pune (May 1, 2021 to June 15, 2022).
- Warden of the Boys Hostel (B7), Central University of Rajasthan, Ajmer (September 26, 2022 to July 10, 2024).

RESEARCH

- **Research Interests**

Statistical Quality Control, Nonparametric Statistical Inference

- **Publications**

1. **Barale M. S.**, Shirke D. T. (2016), Cascaded Modeling for PIMA Indian Diabetes Data, *International Journal of Computer Applications*, 139 (11), 1-4
2. Shirke D. T., **Barale M. S.** (2018), A Nonparametric CUSUM Chart for Process Dispersion. *Quality and Reliability Engineering International*, 34(5), 858-866.
3. Shirke D. T., **Barale M. S.** (2019), Variable Sampling Interval Nonparametric Control Chart for Variability. *Communication in Statistics- Computation and Simulation*, 1-12.
4. **Barale M. S.**, Shirke D. T. (2019), A Nonparametric Control Charts Based on Data Depth for Location Parameter. *Journal of Statistical Theory and Practices*, 13 (3), 41.
5. **Barale M. S.**, Shirke D. T. (2020), A Test Based on Data Depth for Testing Location-Scale of the Two Multivariate Populations. *Journal of Statistical Computation and Simulation*, 1-18.
6. **Barale M. S.**, Shirke, D. T. (2023), A control chart based on data depth for monitoring the variability in a multivariate process. *Communications in Statistics-Simulation and Computation*, 1-15.
7. Badetiya, Y., & **Barale, M.** (2024). Modeling groundwater level using geographically weighted regression. *Arabian Journal of Geosciences*, 17(9), 251.
8. **Barale, M. S.**, & Shirke, D. T. (2025). Two-Sample Test for Testing Equality of Location Vectors Based on Outlying Function. *Annals of Data Science*, 1-26.

• Paper Presentation

1. Presented a research paper entitled “Variable Sampling Interval Nonparametric Control Chart for Variability” at the National Conference on Applied Statistics (2016) organized by the Department of Statistics, Shivaji University, Kolhapur.
2. Presented a research paper entitled “A Nonparametric CUSUM Chart for Process Dispersion” at the National Conference on Applied Statistics and Informatics (2017), organized by the Department of Statistics, Shivaji University, Kolhapur.
3. Presented a research paper entitled “A Control Chart Based on Data Depth for Monitoring Variability in Multivariate Process” at the International Conference on Computer Age Statistics (2019) organized by the Department of Statistics, Savitribai Phule Pune University and Indian Statistical Association (ISA).
4. Presented a research paper entitled “A Test Based on Data Depth for Testing Location-Scale of the Two Multivariate Populations” at the International Conference on Importance of Statistics in Global Emerging Scenario (2020) organized by the Department of Statistics, Savitribai Phule Pune University and Society of Statistics, Computer, and Applications.
5. Presented a research paper entitled “An Outlying Function Based Test for Comparing Location” at Silver Jubilee (Annual) International Conference of the Society of Statistics, Computer and Applications (SSCA) ON Significance of Statistical Sciences in the Emerging Scenario (SSSES 2023 –SSCA XXV)) (2023) organized by the Department of Statistics, University of Jammu, Jammu and Society of Statistics, Computer and Applications.
6. Presented a research paper entitled “A Two-Sample Data Depth Based Test for Testing Locations Vectors” at Three-Day International Conference on Statistics and Data Science (ICSDDS-2024) organized by the Department of Statistics, Sree Sankara College, Kalady, in conjunction with the 45th Annual Conference of the Kerala Statistical Association.
7. Presented a research paper entitled “Missing Data Imputation using Data Depth” at International Conference on Computations and Data Sciences (CoDS-2024) organized by the Department of Mathematics, IIT Roorkee in collaboration with iHUB DivyaSampark IIT Roorkee, India.
8. Presented a research paper entitled “Monitoring the Boring Machine Failures through V-EWMA Control Chart” at the International Conference on Advanced Statistical and Computational Techniques for Sustainable Development (ASCTSD-2025) organized by the Department of Statistics, University of Rajasthan, Jaipur, Rajasthan, India.

INVITED LECTURES

1. Demonstration sessions on the topic “Working with SAS Data” to M.Sc. statistics students, Shivaji University, Kolhapur.
2. Hands-on Session in “A National Workshop on Data Analysis Using SPSS” (Dec 2016), Shivaji University, Kolhapur on the topics “Working with data, Exploratory Data Analysis, Sorting, Merging, Replacing missing values etc.”
3. Delivered a guest lecture on “Data Mining” to the BCA students at Arts, Commerce and Science College, Palus.

4. Delivered lecture in a workshop on "Training Programme for M.Sc. Entrance Examination in Statistics" (May 2018) organized by the Department of Statistics, Rajarshi Chhatrapati Shahu College, Kolhapur.
5. Delivered lecture in a workshop on "Training Programme for M.Sc. Entrance Examination in Statistics" (May 2019) organized by the Department of Statistics, Rajarshi Chhatrapati Shahu College, Kolhapur.
6. Delivered a series of lectures in a workshop on "R Programming" (11th to 12th January 2020) organized by Department of Statistics, Vivekanand College, Kolhapur.
7. Delivered a series of lectures on "Logistic Regression and Distribution Theory" in the Department of Statistics, Shivaji University, Kolhapur.
8. Delivered an invited talk "Training Data Analysis Using MS Excel" at the Two-Week Capacity Building Program on 'Research Methodology' organized by the Department of Statistics, Internal Quality Assurance Cell and Social Science Association, Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi during (28th Nov. 2022 to 10th Dec. 2022).
9. Delivered the lecture as the guest faculty on the topic "Applications of Resampling Methods" on 7th September 2023 at Rajarshi Chhatrapati Shahu College, Kolhapur.
10. Delivered the lecture as the guest faculty on the topic "Bootstrap Method" on 7th October 2024 at Vivekanand College, Kolhapur.
11. Delivered the lecture as the guest faculty on the topic "Career Opportunities in Statistics" on 8th October 2024 at The New College, Kolhapur.
12. Delivered the lecture as the guest faculty on the topic "Jackknife Method" on 10th October 2024 at Vivekanand College, Kolhapur.

WORKSHOP/SEMINAR/FDP ATTENDED

- Attended one-day state-level seminar on "Recent Trends in Industrial Statistics" organized by Arts, Science and Commerce College, Ramanandnagar (Burli), (2016).
- Attended and completed 5 days workshop "Enhancing of Teaching and Learning Skills in Statistics" organized by Teaching Learning Center, Central University of Rajasthan, Bandarsindri, (2018).
- Attended and completed 15 days FDP on "Applications of Statistical Techniques in Real World" organized by Teaching Learning Centre, Ramanujan College University of Delhi, (2021).
- Attended four-week FDP on "Python for Data Science" conducted by Prof. Andrew Thangaraj, IIT Madras, through SWAYAM, Jan-Feb 2023.
- Attended four-week FDP on "Python for Data Science" conducted by Prof. Andrew Thangaraj, IIT Madras, through SWAYAM, Jan-Feb 2023.
- Attended and completed a two-week refresher course in Statistics organized by Teaching Learning Centre Ramanujan College, University of Delhi, (30 November – 14 December, 2023).

- Attended and completed a five-day capacity development programme on Curriculum Development Process, Design, Evaluation, and Implementation organized by Central University of Rajasthan and NITTTR, Bhopal, (9 September - 13 September, 2024).
- Attended and completed a five-day capacity development programme on Wellness & Meditation organized by Central University of Rajasthan and NITTTR, Bhopal, (30 September - 04 October, 2024).