

## Profile of Dr. SHINDE RAMKRISHNA LAHU (Sept 2018)

### PERSONAL INFORMATION

**Name:** Ramkrishna Lahu Shinde

**Date of Birth:** August 19, 1969.

**Present Position:** Professor and Head, Department of Statistics,  
Head, Department of Actuarial Science and  
Director, School of Mathematical Sciences,  
*Kavayitri Bahinabai Chaudhari* North Maharashtra University, Jalgaon.  
PIN: 425 001, India.

#### Phone Numbers:

(Office): (+)91-257-2257467, (Residential): (+)91-257-2258463 Cell: (+)91-9420943752.

**E-mail ID:** *rlshinde@nmu.ac.in* and *shinde.stat@gmail.com*

**Marital Status:** Married with Smt. Sujata on 27.12.1994. (M.Phil., Ph.D.(Physics))  
One Daughter-Ms. Madhujā (M.Sc.(Statistics))

**Permanent Address:** **At:** Borgaon, **Post:** Marwad, **Tal.:** Amalner, **Dist.:** Jalgaon,  
PIN: 425 402. (Maharashtra State, India).

### ACADEMIC INFORMATION

#### Educational Qualification (All in India):

Ph.D. (Statistics): 2001 Sardar Patel University, Vallabh-Vidyanagar, Anand.

M.Phil.(Statistics): 1994 University of Pune (Now SPPU)

M.Sc. (Statistics): 1992 University of Pune (Now SPPU)

National Eligibility Test(NET) for Lectureship with JRF by CSIR: 1991

B.Sc. (Statistics): 1990 University of Pune (Now SPPU)

**Teaching Experience:** 25 Years.

**Headship Experience:** 21 Years.

**School of Mathematical Sciences Directorship Experience:** 7 Years.

#### Visiting Fellow/Speaker/Professor:

1. Department of Statistics, University of Pune as a **Visiting Fellow** under the UGC's Centre for Advance Studies scheme during June 15-30, 2005.
2. Department of Statistics, Sardar Patel University, Vallabh-Vidyanagar, Anand during Feb 25-28, 2010. (**Visiting Teacher**)
3. Department of Mathematics and Statistics, University of Calgary, Canada during July-August, 2010, May-June 2011 and May-June 2012 (**Visiting Professor**).
4. Department of Mathematics, University of Colombo, Sri Lanka in March 2014 (**Invited Speaker** in the International Conference and Resource person in the workshop on Insurance and Actuarial Science)
5. **Invited Speaker** in the session on "Actuarial Science" and **Chair** of a session on Statistics in the 102<sup>nd</sup> Indian Science Congress held at University of Mumbai during January 3-7, 2015.
6. **Invited Speaker** for the International/National Conferences at ISI Delhi, Savitribai Phule Pune University, BHU Varanasi, Punjab University Chandigarh, Central Uni. of Rajasthan, Dr. BAMU Aurangabad, SP University Anand, Gauhati University, VN South Gujarat University, Shivaji University Kolhapur; ICRISAT Hyderabad etc.



**EMPLOYMENT/TEACHING EXPERIENCE:**

| Institution   | Position Held   | Nature of Appointment                      | Subject    | Period of Appointment         |
|---|---|--|------------|-------------------------------|
| University of Pune, India   | Tutor   | By virtue of Junior Research Fellow (CSIR) | Statistics | Aug. 1992 - Sept.1993         |
| <i>Kavayitri Bahinabai Chaudhari</i><br>North Maharashtra University,<br>Jalgaon, India | Lecturer  | Permanent                                  | Statistics | Sept. 25, 1993 - Nov. 4, 1999 |
|   | Reader  | Permanent                                  | Statistics | Nov. 5, 1999 - Dec. 31, 2005  |
|   | Associate Professor                                   | Permanent                                  | Statistics | Jan. 1, 2006 - Nov. 30, 2007  |
|   | Professor<br>(Under Career Advancement Scheme of UGC) | Permanent                                  | Statistics | Dec. 1, 2007-Present          |

**Courses Taught/Teaching for M.Sc.(Statistics / Comp. Science /Life Sciences)/MCA/ M. Library and Information Science/PG Diploma in Actuarial Science(PGDAS), B.Sc.(Actuarial Science), M.Phil. and Ph.D.:**

1. Mathematical Methods
2. Sample Surveys and Statistics for National Development
3. Statistical Process Control & TQM
4. Reliability Theory
5. Theory of Probability
6. Parametric Inference
7. Asymptotic Inference
8. Stochastic Processes
9. Multivariate Analysis
10. Design and Analysis of Clinical Trials
11. Principles and Practices in Insurance
12. Theory of Interest
13. Financial Mathematics
14. Life Contingencies
15. Actuarial Statistics
16. Time Series Analysis
17. Practicals using Statistical Software Packages
18. Bio-Statistics for Life Sciences
19. Research Methodology and Statistics for Library Sciences
20. Research Methodology for M.Phil. (Science students)
21. Research Methodology for Ph.D.(Science/ Engineering/Pharmacy) students

**Guidance for Project work:**

Guided about 75 projects of M.Sc.(Statistics), PG Diploma in Actuarial Science and M.Lib. & I.Sc. students for their projects based on Industrial/Banking/ Medical/ Health/ Library/Social problems.

### List of some Projects Topics/Areas assigned to the M.Sc. students:

1. Statistical Process Control and Capability analysis of Industrial (Manufacturing /Service) data.
2. Process Control and Capability analysis of pharmaceutical product data.
3. Analysis of Bioequivalence and Bioavailability Study of Drug.
4. Statistical analysis of Health related data sets.
5. Statistical analysis of survey data on lifestyle, diets and some risk factors related to heart diseases.
6. Statistical Survey and Analysis of some causes and preventive measures of Anemia during pregnancy.
7. Computer programs for Statistical Theory.
8. Library books users' study.
9. Probability Distributions through Physical tools.
10. Rainfall based insurance (Case Study).
11. Insurance against child mortality.
12. Statistical analysis (Case Study) of delay in supply related data.
13. Computer programs related to Markov chains and counting of runs and patterns in DNA sequences.
14. Study of Unit Linked Insurance Plans.
15. Multivariate data analysis related to production process of Elbow, TEE and Polyethylene pipe.
16. A Study of Life time distribution and sex ratio based on births and deaths recorded by Jalgaon Municipal Corporation.
17. Construction of life tables calculations of life insurance premiums based on mortality data collected from Jalgaon Municipal Corporation and.
18. Solutions to the problems appeared in NET and SET question papers.
19. Statistical Survey on Mobile Uses.
20. Energy Statistics of Maharashtra.
21. Survey of Senior Citizens about their Practices, Life Style and Problems.
22. A Statistical Study of Blood Pressure and related issues for Employees and students of North Maharashtra University.
23. Problem solving on Statistical Process Control.
24. Process Capability Analysis for Some Quality Parameters of Irrigation Tube in Inline Plant.
25. Higher Education Enrollment Statistics: Based on All India Survey on Higher Education.
26. Process Capability Analysis for Some Quality Parameters of Brake System.
27. Investment in Mutual Funds.
28. Statistical Analysis of Passenger Traffic Data of Indian International Airports.
29. Analysis of Sales Data of Furniture Products at Jalaram Steel Furniture, Surat.
30. Process Capability Analysis of PVC Sheet Production Process.
31. Statistical Study on Crankshaft Production Process.
32. Statistical Analysis on Production Process for some *Ayurvedic* Products.
33. Process Capability Analysis of Quality Parameters of Drip Tape Extruder.
34. Process Capability Analysis for Printed Circuit Board used in AC and DC Solar Pump Controller.
35. Process Capability Analysis for some Quality Parameters of Brake System
36. Predictive Modeling of Disease Datasets.

### Extensive use of computers in teaching and projects:

(Following topics were demonstrated more effectively)

1. Probability Distributions and their approximations.
2. Chebychev's Rule, Sampling Distributions, CLT, WLLN.
3. Sampling Error, biased and unbiased estimators.
4. SRSWR in birthdates coincide problem.
5. Income Distribution and income inequality.
6. Periodically population variance may be same under many situations but population mean changes at larger scale.
7. Sample size and power analysis.
8. Concept of Confidence interval.
9. Likelihood function plotting and locating MLE.
10. p-value and type-I error probability and their relation.
11. Simulation of Markov chain, Poisson process, renewal process.
12. Simulation of  $X(t)$  under queuing systems.
13. Probability Distributions of quality characteristics.
14. Concept of establishing control on process mean is easier than process variability (based on industrial data) and hence reduction of variability is called quality improvement.
15. OC curves for Control Charts and Acceptance Sampling Plans
16. Estimating value of  $\pi$  using simulations.
17. Role of Least count in SPC.
18. Future financial requirements and investment plans for common man.
19. Applications of Life Tables in Inventory management.
20. Parameters useful for estimation of Utility function.
21. Statistical thinking and TQM in administration.
22. Applications of Graphical Tools of SPC in Service industries and day to day real life.
23. Process Capability Analysis for non-normally distributed quality characteristics.
24. Estimation of some regularly useful constants in SPC.

### Contribution for Curriculum Development:

1. Worked for framing syllabus of B.Sc.(Statistics).
2. Played major role in the development and implementation of revised syllabi (w.e.f. **July 2002, July 2007, July 2012 and July 2015**) of M.Sc.(Statistics) with specialization in Industrial Statistics. We introduced new topics like C++, some part of Economics, TQM, Technical Communications, Design and Analysis of Clinical Trials, Financial Mathematics, Actuarial Statistics and **Project carrying weightage of 100 marks**. More focus was also given on computational work.
3. Framed the syllabi of **M.Phil.(Statistics)** in 2006.
4. Worked as a Member of Syllabus revision and Examination structure development committee of Maharashtra Public Service Commission (**MPSC**) for the subject Statistics.
5. Worked as a resource person for development of syllabus of **M.Sc.Statistics (Actuarial) at Central University of Rajasthan**, Jaipur during March 19-20, 2010 and in Feb 2013.
6. Worked as Peer review committee member of syllabus of M.Sc.(Statistics) of Pune University in 2013.
7. Department of Statistics has started PG Diploma in Actuarial Science (**PGDAS**) w.e.f. 2007-2008 and Three-year **B.Sc.(Actuarial Science)** w.e.f. 2010-11. Responsibility of framing the Syllabi for these courses was carried out successfully by me with the help of other teachers and Universities' Professors and Dr. J.K. Wani, late Professor Emeritus of Statistics and Actuarial Science and other faculty members from Calgary University, Canada.

8. Worked as a member of committee for framing the syllabus for **Ph.D. Entrance Test for Paper-I for all subjects.**
9. Framed the syllabus for Ph.D. Entrance Test for Paper-II of **Ph.D.(Statistics) Entrance Test.**
10. Framed the syllabus for **Paper-I: Research Methodology for all faculties** for the course work of Ph.D. (all subjects).
11. Introduced two courses for M.Sc.(Mathematics) with specialization in Computational Mathematics which is being run by School of Mathematical Sciences and Framed the syllabus for these two courses: **Financial Mathematics and Actuarial Mathematics.** These courses will improve employability of our students of M.Sc.(Mathematics) other than teaching sector.
12. Chaired the Committee for **Choice Based Credit System (CBCS)** for University Campus courses. Established a proper system with eleven elective courses in the campus. Many students of different Academic Schools/Departments of KBC NMU are taking these courses. As per need of interdisciplinary knowledge, syllabi of eleven courses were framed. This system implemented w.e.f. 2015-16.
13. As a one person Committee, developed **7-Point Scale System** degree awarding system for N.M.U. which is implemented w.e.f. 2013-14.
14. Guided the BOS Section and Examination Section of N.M.U. as and when needed in regard with Credit and CGPA System and matters related to result declarations.
15. As the chairman of committee, prepared new 10-point scale CGPA system which is implemented under NMU w.e.f 2017-18. Weighted percentage(WP) is also added in the grade sheet of student. These both things (new 10-point CGPA system and concept of WP) are effectively accepted by University and working good as WP provides additional information. In fact, WP is the best possible statistical measure than CGPA to rank the candidates.
16. Prepared revised structure of three year program of B.Sc.(Actuarial Science) and detailed syllabus of first year of B.Sc.(Actuarial Science) for the year 2018-19. Opinions of teachers from School of Mathematical Science was taken into account.
17. Suggested revised CBCS pattern to NMU campus PG courses.

**Extension Activities (As a Teacher, Researcher and Head/Director):**

1. Taught courses for other academic Departments of North Maharashtra University and provided analytical services to the research students and teachers from other departments.
2. Arranged placement activities for students at School of Mathematical Sciences.
3. Arranged interviews of needy students for sponsorship through Cytel, Software Company, Pune.
4. Review of research papers of journals and Ph.D. thesis as a Referee.
5. Guidance and lectures regarding preparation for NET/SET examination.
6. Guidance for placement of students.
7. Arranged vacation training programs (Summer School/Camp/workshop) for college students for popularization of subjects: Statistics and Actuarial Science.
8. Activities organized for industry personnel, college teachers and students.
9. Tree plantation in the University campus.
10. Personal level financial support to poor/needy students and contributory Lecturers.
11. Organization of State and National level Conferences/Workshops.
12. Organization of one day Trip, Sports and Cultural Activities for students.
13. Submitted proposal of new building for School of Mathematical Sciences which got sanctioned from UGC. New building is ready with good infrastructure facilities. This enhanced overall laboratories, Library and other academic facilities.

## **Administrative Experience:**

### **Worked/ working under different capacities as mentioned below:**

1. In-charge Head, Department of Statistics, *Kavayitri Bahinabai Chaudhari* North Maharashtra University (KBC NMU), Jalgaon. (Jan. 1997- Jan. 2002).
2. Head, Department of Statistics, KBC NMU, Jalgaon. (Jan. 2002-Present).
3. Head, Department of Actuarial Science, KBC NMU, Jalgaon. (May 2012-Present)
4. Director, School of Mathematical Sciences, KBC NMU, Jalgaon. (Oct 2011-Present).
5. Member and Chairman of Board of Studies in Statistics KBC NMU, Jalgaon.
6. Member of RRC, BUTR, Faculty (Science) and Academic Council of KBC NMU, Jalgaon.
7. Member of Board of Examination, KBC NMU, Jalgaon,
8. Member of Purchase Committee and different committees related to Evaluation of purchased items and process followed at KBC NMU, Jalgaon.
9. Member of BOS(Statistics and Actuarial Science) and member of Science faculty at MS Baroda University.
10. Member of Board of Studies in Statistics of Dr. BAMU Aurangabad.
11. Member of Board of Studies in Statistics and Computer Management, SPPU, Pune.
12. Subject expert for interviews at Colleges/University.
13. Chairman/Member of Local Inquiry Committees (LIC) at different colleges.
14. Member of the University's Central Admission Committee.
15. Member of Scrutiny Committee for the selection of "Colleges with Potential and Excellence".
16. Member/Chairman/Convener of organizing committees of workshop, seminars and conferences organized by Department/University.
17. Member of the Management Committee of Kendriya Vidyalaya, KBC NMU, Jalgaon.
18. Member of Committee of Day Care Centre, KBC NMU, Jalgaon.
19. Member of Search committee under examination related unfair.
20. Director of Central Assessment Programme (CAP) at KBC NMU, Jalgaon.
21. Member of committee for CAP rules and remunerations of KBC NMU, Jalgaon.
22. Member of committee for remunerations for Examinations of KBC NMU, Jalgaon.
23. Member of committee for evaluation of functioning of central library of University.
24. Member of the committee for distribution of financial help for poor students from colleges and University Departments of KBC NMU, Jalgaon.
25. Chairman of committees for physical verification of indoor game facilities, Girl's hostel and other buildings constructed under UGC's grants.
26. Judge for evaluating Avishkar Research competition activities at NMU. Jalgaon and State-level activity at Shivaji University, Kolhapur (January, 2012).
27. Member of evaluation committee for departmental performance of Department of Statistics, Shivaji University, Kolhapur (September 8, 2012).
28. Coordinator, North Maharashtra University Campus level research competition "Avishkar 2013" (Oct 5, 2013)
29. Coordinator, NMU Campus level Avishkar-2013 and Chairman of sub-committee for State level Avishkar-2013 competition activities.
30. Hon'ble VC Nominee for conducting interviews of college Principals and Teachers.
31. Hon'ble Chancellor's Nominee for conducting interviews of Engineering College Teachers.
32. Development of 7-point and 10-point scale CGPA system for NMU, Jalgaon. Delivered lectures to campus students and teachers about these systems.
33. Chairman, University level Research Convention "Avishkar-2014" and guided team selected for state level Avishkar event. North Maharashtra University's team secured second positions among Universities in Maharashtra state.
34. Chairman of committee for development of model of "Choice Based Credit System" for University Campus.

35. Member for SET in Mathematical Sciences for three states.
36. Chairman, Committee for deciding allocation of grants under R&D section of KBC NMU.
37. Chairman, Committee for overview of KBC NMU Hostel facilities.
38. Member of committee for evaluation of possible exemption from NET/SET to College teachers.
39. Chairman, Committee for allotment of research Guides in Mathematical Sciences for KBC NMU Jalgaon.

**Academic Events organized (as Head/Director/Chairman) for industry/Teachers/Students**

| Sr. No. | Name of the Program   | Date(s)                         | Participants   |
|---------|---|---------------------------------|--|
| 1.      | Lecture Series on "Research in Statistics"  | 27.03.1998                      | College Teachers and Industrial Practitioners.   |
| 2.      | Workshop on Statistical Problems in Industries  | 29.11.1998<br>and<br>24.10.1999 | College Teachers, Industrial Practitioners, T.Y.B.Sc. and M.Sc. Students.  |
| 3.      | Annual meeting of Statistics Teachers' Association  | 29.04.2001                      | College and University Teachers of Statistics.   |
| 4.      | Workshop on T.Y.B.Sc. Syllabi framing.  | 22-03-2004                      | College Teachers.  |
| 5.      | Summer School on "Computational Statistics"   | 01-06-2004<br>to<br>05-06-2004  | S.Y.B.Sc. and T.Y.B.Sc.(Statistics) students.  |
| 6.      | Summer Camp for students  | 02-06-2005<br>to<br>08-06-2005  | F.Y.B.Sc, S.Y.B.Sc. and T.Y.B.Sc. (Statistics) students.   |
| 7.      | Statistics Quiz   | 17-02-2006                      | F.Y.B.Sc., S.Y.B.Sc., T.Y.B.Sc. (Statistics) and M.Sc. students.   |
| 8.      | Popular Lectures on "Statistical Ecology and Statistics"  | 17-02-2006                      | B.Sc. and M.Sc. Students and teachers (National Science Day celebration)   |
| 9.      | Summer School on "Actuarial Statistics"   | 05-06-2006 to<br>07-06-2006     | S.Y.B.Sc. and T.Y.B.Sc.(Statistics) students.  |
| 10.     | Poster and LCD presentation competition based on Data Representation and Analysis of data related to the field of Agriculture Science | 24-02-2007                      | B.Sc. and M.Sc.(Statistics) students (National Science Day celebration)  |
| 11.     | Popular lectures on 'Statistics in Crop-Weather relationship' with the theme 'More Crop per Drop'                                     | 24-02-2007                      | B.Sc., M.Sc. students, Research students and College and University Teachers. (National Science Day celebration)     |
| 12.     | Workshop on "Career opportunities in Statistics and Related Areas" for 12 <sup>th</sup> standard students                             | 22.05.2007                      | 12 <sup>th</sup> standard students, B.Sc. students and College Teachers  |
| 13.     | Workshop on "Industrial Statistics and Career as a statistician in Industries   | 12.01.2008 to<br>14.01.2008     | B.Sc., M.Sc. students, Research students and College and University Teachers.  |
| 14.     | One-Day Meeting of Alumni of Department of Statistics   | 23-02-2008                      | Alumni of Department of Statistics, N.M.U., Jalgaon  |
| 15.     | Poster and Power-Point presentation competition of students based on "Statistics of Earth"  | 25-02-2008                      | B.Sc. and M.Sc. students (National Science Day-2008 celebration)   |
| 16.     | Popular lectures on 'Statistical Aspects of Planet Earth'   | 25-02-2008                      | B.Sc., M.Sc. students, Research students and College and University Teachers (National Science Day-2008 celebration) |
| 17.     | Workshop on "Statistical Computing using R-Software"  | 29.06.2009 to<br>01.07.2009     | B.Sc., M.Sc. students, Research students and College and University Teachers.  |

| Sr. No. | Name of the Program   | Date(s)                    | Participants  |
|---------|---|----------------------------|---|
| 18.     | <b>National Conference</b> on "Industrial Statistics and Computational Mathematics"   | 21.01.2010 to 23.01.2010   | Researchers and College and University Teachers, M.Sc. students,                        |
| 19.     | One Day Workshop on "Statistical and Economical Aspects on Gender Inequality, Sex Ratio and Related Socioeconomic Issues"   | 08.03.2010                 | S.Y./ T.Y. B.Sc., M.A.(Economics), M.Sc. (Statistics) students.                         |
| 20.     | A five day Workshop on 'Training of SAS software' was conducted by Ultramax Solutions, Pune.  | 10.05.2010 to 14.05.2010   | M.Sc. students and University Teachers.   |
| 21.     | <b>National Workshop</b> on "Official Statistics in National Development".  | 17.01.2011 to 19.01.2011   | B.Sc., M.Sc. students from Colleges and Universities in India.                          |
| 22.     | <b>National Conference</b> on "Mathematical Sciences"   | March 5, 2012              | Research scholars, College and University Teachers, M.Sc. students                      |
| 23.     | One Day Workshop on "Energy Statistics, Clean Energy Options and Safety Issues"   | March 13, 2012             | B.Sc., M.Sc. students from Colleges, University and College and University Teachers.    |
| 24.     | One-Day Workshop for College teachers in Statistics on "Statistical Practicals using Software for F.Y.B.Sc."  | Feb. 10, 2013              | College Teachers.   |
| 25.     | <b>National Conference</b> on "Current Practices in Mathematics, Statistics & Actuarial Sci."   | March 7-8, 2013.           | Research scholars, College and University Teachers, M.Sc. students                      |
| 26.     | NMU Campus level Avishkar Event   | 05.10.2013                 | Research scholars, College and University Teachers/students                             |
| 27.     | <b>State level workshop</b> for college teachers in statistics on "Introduction of Statistical Software" and "Modifications Required in the Syllabus of B.Sc. (Statistics)" | January 10-11, 2014        | College Teachers teaching for B.Sc.(Statistics) under different colleges in Maharashtra |
| 28.     | <b>National Conference</b> on "Applied Statistics and Related Working Practices"  | January 30-31, 2014        | B.Sc., M.Sc. students, Research students and College and University Teachers            |
| 29.     | <b>National Workshop</b> on "Statistics for Experimental Researchers"   | February 14-15, 2014       | Research Scholars from Science Faculty  |
| 30.     | <b>National Conference</b> on "Algebra, Analysis and Fuzzy Mathematics"   | February 21-22, 2014       | Research scholars, College and University Teachers, M.Sc. students                      |
| 31.     | Celebration of <b>National Mathematics Day - 2013</b>   | March 15, 18-19 & 24, 2014 | B.Sc., M.Sc. students, Teachers from Colleges and University                            |
| 32.     | One-Day Workshop for College teachers in Statistics on "Financial Mathematics"  | 31.08.2014                 | College Teachers  |
| 33.     | University level Avishkar Event   | 17.10.2014-18.10.2014      | Research scholars, College and University Teachers/students                             |
| 34.     | Training programs of team selected for State Level Avishkar Event   | Dec 2014 & Jan 2015        | 48 candidates selected for State Level Avishkar Event                                   |
| 35.     | National Statistics Day Celebration   | 29.06.2015                 | B.Sc.(Statistics) and M.Sc.(Statistics) students and teachers                           |
| 36.     | 2nd <b>National Conference</b> on "Algebra, Analysis and Fuzzy Mathematics"   | January 29-30, 2016        | Research scholars, College and University Teachers, M.Sc. students                      |
| 37.     | National Science Day Celebration 2016-17  | 15.03.2016 to 17.03.2017   | UG and PG students from University Campus   |
| 38.     | Workshop on <i>Lilavati</i> : Bhasaksracharya's Treatise  | Sept 22, 2017              | Students from School of Mathematical Sci.   |
| 39.     | <b>National Conference</b> on "Algebra, Analysis and Number Theory"   | Jan 13-14, 2018            | Research scholars, College and University Teachers, M.Sc. students                      |



| Sr. No. | Name of the Program  | Date(s)           | Participants  |
|---------|--|-------------------|---|
| 40.     | <b>State level workshop</b><br>for students on "Actuarial Science"   | Feb<br>6-7, 2018  | College Teachers in Statistics and students of Actuarial Science and Statistics |
| 41.     | Celebration of National Science Day-2018<br>Celebration<br>(Theme: Role of Statistics in National Development) | March 10,<br>2018 | UG and PG students, Research students   |
| 42.     | Celebration of National Mathematics Day -<br>2017  | March 2018        | B.Sc., M.Sc. students, Teachers from Colleges and University                    |

### Life Membership of Professional Bodies / Association:

1. Indian Association for Productivity, Quality and Reliability (IAPQR) (w.e.f. 1997).
2. Indian Society for Probability and Statistics (ISPS) (w.e.f. 1998).
3. Indian Statistical Association (ISA) (w.e.f. 2001).

### Research Experience and Related:

#### Details of Research Degrees obtained:

##### (1) M.Phil.(1992-1994)

|                          |  |
|--------------------------|--|
| <b>University</b>        | University of Poona (Now Savitribai Phule Pune University).                        |
| <b>Fellowship</b>        | CSIR JRF (Full time during 1992-1993)  |
| <b>Topic</b>             | Geometric Infinite Divisibility.   |
| <b>Name of the Guide</b> | Dr.(Mrs) S. R. Deshmukh , Professor, Department of Statistics, University of Pune. |

##### (2) Ph.D.(1996-2000, Part time)

|                          |  |
|--------------------------|--|
| <b>University</b>        | Sardar Patel University, Vallabh-Vidyanagar, Gujrat.   |
| <b>Topic</b>             | Estimation of Parameters and Reliability in some Failure Time Distributions.                         |
| <b>Name of the Guide</b> | Prof. A. Shanubhogue, Department of Statistics, Sardar Patel University, Vallabh-Vidyanagar, Gujrat. |

#### Research Project Completed:

| Title of the Project        | Funding Agency | Duration |
|-----------------------------|----------------|----------|
| A Study of some Random Sums | BCUD, KBC NMU  | 1999-01  |

#### Ongoing Research Project:

| Title of the Project   | Funding Agency                                   | Duration                     |
|--|--|------------------------------|
| Study of Weather and Banana Crop Loss Relationship and Its Applications in Weather Based Crop Insurance for Jalgaon District | RGSTC, Govt. of Maharashtra<br>(Through KBC NMU) | 2015-17<br>(Period Extended) |

### Thrust areas of research:

Statistical Process Control, Stochastic Mortality Modeling  
Life Insurance, Crop Insurance, Public Health Statistics, Reliability Theory,  
Distribution Theory of Runs, Scans & Patterns and their applications.

### Research Guidance to the M.Phil. Scholars (Degree Awarded):

| Sr. No. | Name of the Student  | Year of Award | Topic of Dissertation          |
|---------|--|---------------|--------------------------------|
| 1       | Mr. Jagdish C. Agrawal, Assistant Professor, Pratap College, Amalner | 2009          | Bivariate Poisson Distribution |

### Research Guidance to the Ph.D. Scholars (Degree Awarded):

| Sr. No. | Name of the Student  | Year of Award | Title of Ph.D. thesis  |
|---------|--|---------------|--|
| 1       | Ms. Kirtee S. Kotwal<br>NET-JRF (Assistant Professor<br>KBC NMU, Jalgaon)  | 2007          | Distributions of Statistics based on Runs, Scans and Patterns in Sequences of Markov Dependent Trials. |
| 2       | Mr. Kailas G. Khadse<br>Associate Professor, M.J.<br>College, Jalgaon      | 2008          | On Multivariate Process Capability Indices   |
| 3       | Ms. Madhuri M. Mahale<br>NET-JRF (Assistant Professor<br>SP Pune Uni.)     | 2009          | Some Distributional and Estimation Problems Associated with Consecutive-k-out-of-n:F-Systems           |
| 4       | Mr. Rajendra N. Chavhan<br>(DST-SRF) & NET.<br>Assistant Professor, Mumbai | 2017          | Some Contribution to Actuarial Statistics: Using Computational Approach                                |
| 5       | Mr. Y. P. Patil, Associate<br>Professor at College, Jalgaon                | 2017          | A Statistical study of Body Mass Index and other related Health and Socio Economic Parameters          |

### Achievements of the Ph.D. Scholars:

1. Ms. Madhuri. M. Mahale has won the "**Prof. U.S.Nair Young Statistician Award**" given by Indian Society for Probability and Statistics (ISPS) for the year 2005. This award has been awarded to Ms. Mahale based on her research paper presented in the Annual Conference of ISPS held at Bangalore during December 27-30, 2005.
2. Ms. Kirtee S. Kotwal, has won the "**Best Doctoral Thesis Award**" (Based on Thesis work presentation) given by ISPS in its annual conference held at Tirupati during January 07-09, 2007.
3. Ms. Ruhi S. Kulkarni was shortlisted for the "**Prof. U.S.Nair Young Statistician Award**" given by Indian Society for Probability and Statistics (ISPS) for the year 2012. She got selected for Indian Statistical Services in 2014.
4. Mr. Rajendra N. Chavhan has cleared three papers of Institute of Actuaries of India.

### Ph.D. Students (Registered/Admitted):

| Sr. No. | Name of the Student  | Year of registration | Topic of Ph.D. research work   |
|---------|--|----------------------|--|
| 1       | Ms. Ruhi S. Kulkarni<br>(DST-JRF/SRF during 2012-2014) &<br>SET (Presently Assist Director, IIS) | 2012                 | Women's Health Status in India and its relation with socioeconomic factors: Statistical Analysis based on Nationwide Health Surveys. <b>(Final Thesis submitted)</b> |
| 2       | Mr. Manoj C. Patil<br><b>SET, NET-JRF</b><br>Assistant Professor, NMU, Jalgaon                   | 2012                 | Development of a MATLAB Package for Distributions of Statistics based on Runs, Scans and Patterns in Some Stochastic Processes.                                      |
| 3       | Mr. Jagdish C. Agrawal, Assistant Professor, Pratap College, Amalner                             | 2012                 | Applications of Bivariate Poisson Distribution and Its Variants  |
| 4       | Mr. Rakesh H. Wagh, SET  | 2018                 | Yet to be Approved   |

### Papers Published in Research Journals

1. **Shinde R.L. and Shanubhogue A.** (1999). Negative binomial distribution through a random sum of Markov dependent binomial variables. *Statistical Methods*, Vol. 1 p.78-82.
2. **Shinde R.L. and Shanubhogue A.** (2000). Estimation of parameters and the mean life of a mixed failure time distribution. *Communications in Statistics-Theory and Methods*. Vol. No. 29(11), p. 2621-2642. (IF: 0.353)
3. **Kotwal K.S. and Shinde R.L.**(2005). Markov Binomial and Trinomial Distributions. *Journal of Indian Statistical Association*. Vol. No. 43(1), p. 15-31.
4. **Shinde R.L. and Khadse K.G.**(2005). A Review and Comparison of Some Multivariate Process Capability Indices based on Fraction Conforming Interpretation. *Statistical Methods* 7(2) p. 95-115.
5. **Shinde, R.L. and Kotwal, K.S.** (2006). On the joint distribution of runs in the sequence of Markov dependent multi-state trials. *Statistics and Probability Letters* 76, p. 1065-1074. (IF: 0.533)
6. **Kotwal K.S. and Shinde R.L.** (2006). Joint distribution of runs in the sequence of higher-order two-state Markov chain. *Annals of Institute Statistical Mathematics*, 58, p. 537-554. (IF: 0.733)
7. **Shinde R.L. and Mahale M.M.** (2006). On the Distribution of the Number of Failed Components in a Consecutive-k-out-of-n:F-System. *Journal of Indian Association for Productivity, Quality and Reliability (IAPQR Transactions)*, 31(1), p.19-26.
8. **Khadse K.G. and Shinde R.L.** (2006). Multivariate Process Capability using Relative Importance of Quality Characteristics. *Journal of Indian Association for Productivity, Quality and Reliability (IAPQR Transactions)*, 31(2), p.85-97.
9. **Shinde R.L. and Mahale M.M.** (2007). On Estimation of Parameter of Consecutive-k-out-of-n:F-System with Weibull distributed components lifetimes. *Journal of Indian Association of Productivity, Quality and Reliability (IAPQR Transactions)*, 32(2), p.89-101.

10. **Shinde, R. L. and Kotwal, K.S.** (2008). Distributions of scan statistics in a sequence of Markov Bernoulli trials. *Metron* 66, 2, p.135-155. (IF: 0.59)
11. **Shinde R.L. and Khadse K.G.** (2009). On Multivariate Process Capability Indices using Principal Component Analysis. *Quality and Reliability Engineering International* 25, p.69-77. (IF: 1.03)
12. **Khadse K.G. and Shinde R.L.** (2009) Probability based Process Capability Indices *Communications in Statistics- Simulations and Computation* 38, p.884-904. (IF: 0.501)
13. **Kamalja K.K. and Shinde R. L.** (2011) Runs and Patterns in a Sequence of Markov Dependent Bivariate Trials, *American Open Journal of Statistics*, 1, 115-127. (IF: 0.56)
14. **Chavhan R. N. and Shinde R. L.** (2013). Human mortality pattern in India and China and total cost of life insurance for whole population and subpopulations. *Journal of Indian Statistical Association*. Vol. No. 51(2), p. 399-418.
15. **Kamalja K.K. and Shinde R. L.**(2014) On the reliability of  $(n,f,k)$  and  $\langle n,f,k \rangle$  systems *Communications in Statistics-Theory and Methods* 43, p-1649-1665. (IF: 0.353)
16. **Patil Y. P. and Shinde R. L.**(2014). Undernutrition among Indian Men: A state-wise study based on National Family Health Survey-3. *American Journal of Men's Health* Nov;8(6), p-492-502. (IF: 2.306)
17. **Kulkarni R. S. and Shinde R. L.** (2014). Depression and its associated factors in older Indians: A study based on SAGE-2007. *Journal of Aging and Health* Vol. 27(4) 622-649. (IF: 2.134)
18. **Kulkarni R. S. and Shinde R. L.** (2015). Role of Least Count of a Gage in Statistical Process Control. *Journal of Indian Association of Productivity, Quality and Reliability (IAPQR Transactions)* Vol.40(1) 33-43.
19. **Chavhan R. N. and Shinde R. L.** (2016). Modelling and Forecasting Mortality Using the Lee-Carter Model for Indian Population Based on Decade-wise Data. *Sri Lankan Journal of Applied Statistics*, 17(1) 51-68.
20. **Chavhan R. N. and Shinde R. L.** (2016). Stochastic Mortality Modelling and Forecasting for Indian Population with Applications in Actuarial Science *Stochastic Modeling and Applications*, Vol.20(2) 79-90.
21. **Shinde R. L. and Chavhan R. N.**(2016). Social Security Life Insurance Scheme *Pradhan Mantri Jeevan Jyoti Bima Yojana* (PMJJBY): Actuarial insight based on Indian Mortality *SAARJ Journal on Banking & Insurance Research* 5 (6), 68-74. (IF: 2.38)
22. **Patil Y. P. and Shinde R. L.** (2017) Distribution of Body Mass Index and Risk Factors of Obesity among Adult Indian Men: A Study based on NFHS-3 *Assam Statistical Review* Vol.31(1) 4-25.
23. **Kulkarni R. S. and Shinde R. L.** (2017). Individuals with Diabetes are at Higher Risk of Asthma in India: Evidence from National Family Health Survey-3" Accepted for publication in *International Journal of Diabetes in Developing Countries* Vol. 37(1) 31-41. (IF: 0.361).

24. **Shinde R. L. and Patil Y. P.**(2017). Distribution of body mass index of Indian women: a study based on NFHS-2 and NFHS-3. **Sri Lankan Journal of Applied Statistics**, 18(2) 119-144.
25. **Shinde R. L. and Chavhan R. N.**(2018). Markov Chain Modeling of Stochastic Process defined on Daily Minimum Temperature and Its Applications in Weather Based Crop Insurance Scheme for Banana. **Journal of Indian Meteorological Department 'Mausam'** Vol. 69(1) 156-160. (IF: 0.467)
26. **Kulkarni R. S. and Shinde R. L.** (2018). Catastrophic Maternal Health Care Expenditure in India. **Sarvekshana -Journal of National Sample Survey Office of India** Issue no. 105(September 2018) 41-58.

#### **Full papers in conference proceedings**

27. **Shinde R.L. and Mahale M. M.** (2004). "Estimation in Consecutive-k-out-of-n:F-System". *Proceeding of Sri Lankan Statistical **International** conference held at Kandy, Sri Lanka during December 28-30 2004*, p.287-293.
28. **M.C. Patil and R. L. Shinde**(2012). "MATLAB programs for probability distributions of runs in DNA sequences" in conference proceeding of XI Biennial Conference of the **International** Biometric Society (Indian Region) on computational statistics and Biosciences held at Pondicherry University, Pondicherry, during March 8-9, 2012, p.56-65.

#### **Book Published**

1. **Shinde S.D. and Shinde R. L.** (2011) Anemia in Pregnancy: Causes and preventive measures of anemia in pregnancy, **LAP LAMBERT Academic Publishing, Germany**, ISBN:978-3-8454-1077-7. (Based on Project work).

#### **Refresher Courses/Workshops /Seminar (only attended):**

1. Refresher Course on "Analysis, Linear Algebra and its Applications", sponsored by UGC, held at N.M.U., Jalgaon during August 1996.
2. Workshop for Statistics' Teachers and practicing Statisticians held at Jain Group of industries, Jalgaon during April 19-20, 1997.
3. "UGC Refresher Course in Statistics at the PG Level" Conducted by ISI, Kolkata during February 2-26, 1999.
4. Workshop on FEEL(Facilitating Excellence in Effective Leadership) Principal held at N.M.U., Jalgaon during June 19-21,1999.
5. Workshop on "Activities for Promoting Statistics" held at Department of Statistics, University of Pune on September 2, 2006.
6. Workshop on "Digital Governance and Surveillance using Geoinformatics" held at M.J. College Jalgaon during September 24-26, 2006.
7. Workshop on "Multivariate Statistical Methods with Recently Emerging Applications" held at Indian Statistical institute, Kolkata during December 23-27, 2006.
8. Workshop on "Effective Functioning of IQAC" held at N.M.U., Jalgaon on February 10, 2007.
9. National Seminar on "Weather Insurance: Addressing Risk Mitigation Needs of Weather-Sensitive Industries in India" held at Administrative Staff College of India, Hyderabad during January 28-29, 2011.

10. One week training program on "Official Statistics" for University Heads at National Academy of Statistical Administration (NASA) during November 19-23, 2012.
11. Attended one day workshop on "Indian Patenting and Patent Filing Procedure" at NMU on August 23, 2016.
12. Attended one day workshop on "Financing Higher Education" at NMU in Oct 2016.
13. Attended one day workshop on CBCS pattern at NMU on 08.06.2018.

#### Resource Person for Refresher/Orientation Courses and others:

1. Resource person in the UGC sponsored Refresher Courses in held at N.M.U., Jalgaon in 1996, 1997, 2005.
2. Resource person for conducting Group Discussions at Orientation course for Teachers held at N.M.U., Jalgaon during March 2007.
3. Resource person for conducting Group Discussions and Personal Interviews of the candidates seeking admission to M.B.A. held at N.M.U., Jalgaon during 2006- 2009.
4. Resource person in the UGC sponsored Refresher Course on "Mathematics and Statistics" in held at Dr. BAMU Aurangabad during September 2012.

#### Guest Lectures at Colleges/University:

1. Delivered popular lectures for B.Sc. students and resource person at colleges.
2. Delivered invited talks on **"TQM and Statistical Tools for Engineers"** and **"Interview Skills"** at Suresh Dada Engineering College, Jalgaon on March 9, 2009.
3. Served as the chief guest and delivered invited talk on **"ISO Certification"** in the National level Seminar on "Recent Developments in SQC" held at **K.B.P. College, Pandharpur** during October 5-6, 2009.
4. Invited as a resource person by K.T.H.M. College, Nashik to serve as an expert for the courses on **Actuarial Science and SPC** in the workshop for syllabus revision of T.Y.B.Sc.(Statistics) under the **University of Pune** held during November 17-19, 2009.
5. Delivered invited talks on **"TQM and Statistical Tools for Engineers"** in the workshop held at S.G.B. Engineering College, Bhusawal on 21.04.2010.
6. Delivered guest lecture on **"Financial Mathematics"** at Shivaji University, Kolhapur on September 7, 2012.
7. Delivered series of talks on **"Research Methodology"** for Ph.D. students of Science, Engineering and Pharmacy faculty at NMU, Jalgaon (September 2012, 2013).
8. Delivered guest lecture on "Research in Actuarial Science" at **Central University of Rajasthan** on November 29, 2012.
9. Delivered invited talks on **"Sampling and Statistical Methods for Research in Library and Information Science"** in the Workshop for Librarians held at Central Library, NMU during Feb. 4-9, 2013.
10. Delivered **Expert lecture** on "Total Quality Management and Statistical Quality Control", in **Short Term Training Program** on "Mathematical and Statistical Approaches in Engineering Applications 2013" at Government College of Engineering, Jalgaon on December 30, 2013.
11. Delivered **inaugural speech** as the **Chief Guest for Quiz and Poster Competition** of B.Sc.(Statistics) students and also delivered **Guest Lecture** on "Financial Mathematics and Its Applications in Actuarial Science" at Z. B. Patil College Dhule on 04.02.2014.
12. Delivered two talks as a **local resource person in the National Workshop** on "Statistics for Experimental Researchers" held at Department of Statistics, N.M.U., Jalgaon during February 14-15, 2014.
13. Delivered a **Popular lecture** for motivating **High School students** on "Applications of Mathematics, Statistics and Actuarial Science" at Indira Gandhi Vidyalaya, Sakegaon as the part of parallel session conducted under National Conference on "Algebra, Analysis

- and Fuzzy Mathematics” organized by Department of Mathematics, North Maharashtra University, Jalgaon during February 21-22, 2014.
14. Delivered **Speech as a Chief Guest** at the occasion of inauguration of Science Exhibition of "Mathematical Models" on National Science Day 2014 celebration at Bhagirath English Medium School, Jalgaon on February 28, 2014.
  15. Delivered **Guest lecture as resource person** on "Latest Trends in Mathematical Teaching through Projects in Mathematics and Statistics for School Students" for Primary School Teachers during In-Service Course at **Kendriya Vidyalaya**, North Maharashtra University, Jalgaon on May 29, 2014.
  16. Delivered two **Expert lectures** on "Sampling Methods" and "Statistical Process Control" in the **Short Term Training Program** for Engineering Teachers at Government College of Engineering, Jalgaon on July 7, 2014.
  17. Delivered **Popular talk on "Statistics in Computer Science"** on the occasion of celebration of National Mathematics and Science Day at School of Computer Sciences, NMU on March 2, 2016.
  18. Delivered **guest lectures** on "Basic Financial Mathematics and Its Applications" and "Career in Statistics" for M.Sc.(Statistics) students at Shivaji University, Kolhapur on March 12, 2016.
  19. Delivered **Invited talk on "Sampling Methods"** in the Workshop on Statistical Techniques for researchers held at M. J. College on April 26, 2016.
  20. Delivered a **Popular lecture** on Role of Statistics in Engineering for teachers of Deokar Engineering College, Jalgaon on Sept 17, 2016.
  21. Delivered an **awareness lecture about Avishkar** event for Avishkar Coordinators of Dhule district at Vidyavardhani College, Dhule on Dec 6, 2016.
  22. Delivered a **Popular lecture** on Statistics for B.Sc. students of Pratap College Amalner on January 21, 2017.
  23. Delivered a **lecture** on CBCS System for College teachers at Pratap College Amalner on January 21, 2017.
  24. Delivered a **Popular lecture** on Role of Statistics in Engineering for students and teachers at College of Engineering, Velneshwar on Feb 17, 2017.
  25. Delivered **Speech as a Chief Guest** at the occasion of Prize Distribution ceremony of at Bhagirath English Medium School, Jalgaon on February 16, 2018.
  26. Worked as a **Mentor** for M.Sc.(Statistics) students for guiding spot project at National Big Data Analytics Championship 2018 held at KC College, Mumbai during January 23-24, 2018.
  27. Worked as a **Jury** for judging spot projects of B.Sc.(Statistics) students at National Big Data Analytics Championship 2018 held at KC College, Mumbai during January 23-24, 2018.

**National/International Conferences/Seminar/Workshops  
Papers Presentations and Invited Talks (\*: Name of paper presenter)**

1. **Shinde R. L.** (1998). "Estimation of parameters and the mean life of a mixed failure time distribution", *18<sup>th</sup> Annual Conference of ISPS and National Seminar on Probability and Analysis held at Sambalpur during January 27-30, 1998.*
2. **Shinde R.L.** (1998). "Quality Assurance in Higher Education" (talk), *Conference on "Statistical Quality Control and ISO-9000" held at M.J. College, Jalgaon during December 19-20, 1998.*
3. **Shinde R.L.\* and Shanubhogue A.** (1998). "A Characterization of Negative Binomial Distribution by a Random Sum of Markov Dependent Binomial Variables". *International*

*Conference on "Combinatorics, Statistics, Pattern Recognition and Related Areas" held at Mysore during December 28-30, 1998.*

4. **Shinde R. L.** (1999) "Bivariate Geometric Sums". *19<sup>th</sup> Conference of Indian Society for Probability and Statistics and National Seminar on Stochastic Modeling and its Applications held at Vishakhapatnam during December 24-26, 1999.*
5. **Shinde R.L.\* and Shanubhogue A.** (1999). "Instantaneous failures of components in Freund Bivariate exponential Model for two components parallel system". *National Conference on "Reliability Analysis" held at Cochin during December 28-29, 1999.*
6. **Shinde R.L.\*and Shanubhogue A.** (2000). "Instantaneous failures of components in Proschan-Sullo Bivariate Exponential Model for two components parallel system". *National Conference on "Developments in Statistical Sciences & Statistical Computing " held at S.P.University Vallabh Vidyanagar during February 18-19, 2000.*
7. **Shinde R.L.\* and Shanubhogue A.** (2001). "Maximum Likelihood Estimation of Parameters of Freund Bivariate Exponential Model under Modified Sampling Schemes". *20<sup>th</sup> Annual Conference of ISPS and National Seminar on Industries Oriented Statistical Research held at Raipur during February 19-21, 2001.*
8. **Shinde R.L.\* and Kotwal K.S.** (2001). "On Markov Binomial and Trinomial Distributions and some Related Waiting Time Distributions", *International conference on Statistical Inference and Reliability held at Chandigarh during December 21-24, 2001.*
9. **Shinde R. L. and Mahale M. M.\*** (2002). "Estimation of Parameters and Reliability of Consecutive-k-out-of-n:F-System". *22<sup>nd</sup> Annual Conference of ISPS and National Seminar on Advances in Statistics held at Pune during August 11-14, 2002.*
10. **Shinde R. L.\* and Khadse K. G.** (2003). "Multivariate Process Capability Indices: A Review and Comparison". *International conference on "Statistics in Industry and Business" held at Cochin during January 2-4, 2003.*
11. **Mahale M.M.\* and Shinde R.L.**(2003) "On Estimation of Parameter of Consecutive-k-out-of-n:F-System". *Golden Jubilee conference on Recent Developments in Statistics and Probability held at Pune during December 22-24, 2003.*
12. **Shinde R. L.\* and Kotwal K.S.** (2003) "Markov Binomial and Negative Binomial Distributions of order  $k$  by the  $l$ -overlapping Enumeration Scheme" *Golden Jubilee conference on Recent Developments in Statistics and Probability held at Pune during December 22-24, 2003.*
13. **Kotwal K.S.\* and Shinde R.L.**(2003). "Sooner and Later Waiting Time Problems in a Sequence of Markov Dependent Trials" *Golden Jubilee conference on Recent Developments in Statistics and Probability held at Pune during December 22-24, 2003.*
14. **Shinde R. L. and Kotwal K.S.\*** (2003). "Distributions of Success Runs in  $n$  Markov Bernoulli Trials". *5<sup>th</sup> International Triennial on 'Probability and Statistics' held at Kolkota during December 28-31, 2003.*
15. **Shinde R. L. and Khadse K.G.\***(2004) "A Review and Comparison of Some Multivariate Process Capability Indices based on Fraction Conforming Interpretation" *National*



*Seminar on 'Recent Developments in Data Collection and Analysis held at S.P.University Vallabh Vidyanagar during January 29-31, 2004.*

16. **Shinde R.L. and Mahale M. M. (2004)** "Estimation in Consecutive-k-out-of-n:F-System". *International conference held at Kandy, Sri Lanka during December 28-30 2004.*
17. **Shinde R.L. and Khadse K.G. (2005)** "On Multivariate Process Capability Indices Using Principal Component Analysis" *International conference held at Tirupati during January 3-4, 2005.*
18. **Shinde, R. L.\* and Kotwal, K. S. (2005)** "Distributions of scan statistics in a sequence of Markov Bernoulli trials" *International conference held at Tirupati during January 3-4, 2005.*
19. **Kotwal K.S.\* and Shinde R.L. (2005)** "Joint distributions of runs in a sequence of Markov dependent bivariate trials" *National Conference on Statistics, Computer and Applications held at Amaravati during November 28-30, 2005.*
20. **Shinde, R. L.\* and Kotwal, K. S. (2005): Invited talk** on "Joint distributions of runs and patterns in the sequence of Markov dependent multi-state trials and their applications in reliability of multi-state consecutive-k-out-of-n systems" in the *International Conference on Reliability and Survival Analysis held at Indian Statistical Institute, Delhi during December 20-22, 2005.*
21. **Shinde, R. L.\* and Kotwal, K. S. (2006):** "Distributions of patterns in a sequence of Markov dependent bivariate trials" *National conference on "Statistical Inference" held at University of Pune during January 8-10, 2006.*
22. **Khadse K.G. and Shinde R.L.\* (2006):** Multivariate Process Capability using Relative Importance of Quality Characteristics. *International Conference on "Multivariate Statistical Methods" held at Indian Statistical Institute, Kolkata, during December 28-29, 2006.*
23. **Shinde R. L.\* and Khadse K.G. (2007)** "Multivariate Process Capability Using Principal Component Analysis" in the National conference on "Biostatistics and Industrial Statistics" held at University of Pune during August 4-6, 2007.
24. **Sonar Y.R.\* and Shinde R.L. (2008)** "Pharmacokinetic(PK) Parameters in Bioequivalence Studies of Clinical Drugs" in the National Conference on "Recent Statistical Techniques in Bio-Statistics, Management Sciences and Related Areas held at M. S. University of Baroda during February 14-16, 2008.
25. **Khadse K.G. and Shinde R.L.\* (2008) Invited talk** on "Probability based Process Capability Indices" and **chaired one session** in the National conference on "Statistical Inference and Inferential aspects in Industrial Statistics" held at University of Pune during December 16-18, 2008.
26. **Kamalja K.K.\* and Shinde R.L. (2008).** "On the reliability of  $(n, f, k)$  and  $\langle n, f, k \rangle$  systems" in the National conference on "Statistical Inference and Inferential aspects in Industrial Statistics" held at University of Pune during December 16-18, 2008.

27. **Shinde R.L.**(2009) **Invited talk** on “ISO 9001 Certification” and **chaired one session** in the National level Seminar on “Recent Developments in SQC” held at K.B.P. College, Pandharpur during October 5-6, 2009.
28. **J. C. Agrawal\* and R. L. Shinde.**(2010). “Estimation of Parameters of Bivariate Poisson Distribution and related Simulation Results” in the National Conference on “Industrial Statistics and Computational Mathematics” held during January 21-23, 2010 at N.M. University, Jalgaon.
29. **Khadse K.G.\* and Shinde R.L.**(2010). “Multivariate Process Capability Indices for Multivariate Non-Normal Processes” in the National Conference on “Industrial Statistics and Computational Mathematics” held during January 21-23, 2010 at N.M. University, Jalgaon.
30. **R. L. Shinde and Amol Y. Surve\* .**(2010) “Life insurance under varying rate of interest at random time points” in the National Conference on “Industrial Statistics and Computational Mathematics” held during January 21-23, 2010 at N.M. University, Jalgaon.
31. **R. L. Shinde and Yatin R. Sonar\***(2010): “On Bioequivalence Index for Clinical Drugs” in the National Conference on “Industrial Statistics and Computational Mathematics” held during January 21-23, 2010 at N.M. University, Jalgaon.
32. **R. L. Shinde (2010):** **Invited talk** on "Bioequivalence Index for Assessing Bio-availability under 2x2 Cross over Design" and **chaired one session** in the *National Workshop on “Medical and Pharmaceutical Statistics” held at Sardar Patel University, V. V. Nagar, Anand during February 25-28, 2010.*
33. **R. L. Shinde (2011):** Talk on "Managing Interviews Your Way" *National Workshop on “Official Statistics” held at N.M. University, Jalgaon during January 17-19, 2011.*
34. **A. Y. Surve\* and R. L. Shinde (2011):** “Probability Distributions of Meteorological Parameters and their Applications in crop insurance” in 65<sup>th</sup> Annual Conference of the Indian Society of Agricultural Statistics to be held at National Dairy Research Institute, Kamal-132001 (Haryana) during December 03-05,2011.
35. **R. N. Chavhan\* and R. L. Shinde(2011):** “Estimation of Net Single Premium For Different Life Insurance Products And Their Periodical Comparison For Some Developed Countries.” in the *international conference on “Applied Mathematics and Statistics” held at Department of Statistics and Mathematics, Gujarat University, Ahmedabad during December 16-18, 2011.*
36. **R. S. Kulkarni\* and R. L. Shinde(2011):** “Role of Least Count of a Gage in Statistical Process Control”. in *the international conference on “Applied Mathematics and Statistics” held at Department of Statistics and Mathematics, Gujarat University, Ahmedabad during December 16-18, 2011.*
37. **Y. P. Patil\* and R. L. Shinde(2012):** “Distribution of Body Mass Index (BMI) of Indian Adult Population based on National Family Health Surveys”, in the National conference on “Mathematical Sciences” held at NMU, Jalgaon on March 5, 2012.

38. **R. L. Shinde and A.Y. Surve\*(2012):** "Study of Climate Change and Feasibility of Weather based crop Insurance Scheme for Banana in Jalgaon District", in the National Conference on Environmental Surveillance for Natural Resource Management (ESNRM-2012) held at NMU, Jalgaon during January 9-10, 2012.
39. **R. L. Shinde (2012) Invited talk** on "Actuarial Science and Related Research Areas" and a specific presentation on "Life Tables and Cost of Insurance in India and China: A Comparative Study" and **chaired one session** in the National Seminar on 'New Dimensions in Statistics: Concepts and issues" held at Banaras Hindu University, Varanasi during March 2-4, 2012.
40. **R. L. Shinde(2012): Invited talk** on" Data and Data Analysis reporting in a Thesis" *workshop on "Project, Thesis and Paper Writing in Chemistry" held at School of Chemical Sciences, NMU, Jalgaon on March 9, 2012.*
41. **Y. P. Patil\* and R. L. Shinde(2012):** "Changes in the Distribution of Body Mass Index of Indian Women based on National Family Health Survey II and III" in the 21<sup>st</sup> **International** Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2012 - FIM XXI) held at *held at Punjab University Chandigarh during December 15-17, 2012.*
42. **R. L. Shinde (2012): Invited talk** on "Actuarial Science and its Applications in Crop Insurance" in the 21<sup>st</sup> **International** Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2012 - FIM XXI) held at *held at Punjab University Chandigarh during December 15-17, 2012.*
43. **M.C. Patil\* and R. L. Shinde(2013):** "Development of MATLAB GUI for Empirical Probability Distributions of some Scan Statistics" in the **International** Conference on 'Statistics, Science, and Society: New Challenges and Opportunities' held at Chennai during January 2-5, 2013.
44. **R. L. Shinde (2013): Invited talk** on "Sampling and Statistical Methods for Research in Library and Information Science" in the Workshop for Librarians held at Central Library, NMU during Feb. 4-9, 2013.
45. **R. N. Chavhan\* and R. L. Shinde(2013):** "Mortality Modeling and its Forecasting for Indian Population during 1901-2011" in the National Conference on "Recent Advances in Statistics with Application in Finance and Actuarial Science" held at Central University of Rajasthan during Feb 22-23., 2013.
46. **R. L. Shinde (2013): Invited talk** on "Weather Based Crop Insurance Scheme: Case studies for Banana and Grapes" in the National Conference on "Recent Advances in Statistics with Application in Finance and Actuarial Science" held at Central University of Rajasthan during Feb 22-23., 2013.
47. **R. L. Shinde(2013):** Talk on "Financial Mathematics and Its Applications in Actuarial Science" in the National conference on "National Conference on "Current Practices in Mathematics, Statistics and Actuarial Science" held at NMU, Jalgaon during March 7-8, 2013.

48. **Y. P. Patil\* and R. L. Shinde(2013):** “Undernutrition among Indian Men: A state-wise study based on National Family Health Survey-3” in the National conference on “National Conference on “Current Practices in Mathematics, Statistics and Actuarial Science” held at NMU, Jalgaon during March 7-8, 2013.
49. **R. L. Shinde (2013):** Invited talk on “**Weather Based Crop Insurance**” in the State level Conference on “Applications of Statistics In Various Domains of Science” held at S. P. College, Pune during October 25-26, 2013.
50. **R. N. Chavhan and R. L. Shinde\*(2013):** Invited talk on “Human Mortality Pattern in India and China and Total Cost of Life Insurance for Whole Population and Subpopulations” and **chaired one session** in the **International Conference** on “Role of Statistics in the Advancement of Science and Technology” organized by Department of Statistics and Centre for Advanced Studies, University of Pune, Pune during December 16-18, 2013.
51. **R. S. Kulkarni and R. L. Shinde\*(2013):**Invited talk on “Nationwide Health Surveys in India: An Overview and a specific presentation on Diabetics are at Higher Risk of Asthma in India: Evidence from National Family Health Survey-3” and **chaired two sessions** in the **International Conference** on ‘Recent advances in Statistics and their applications’ in conjunction with XXXIII Annual Convention of Indian Society for Probability and Statistics(ISPS) organized by Department of Statistics, Dr. BAMU, Aurangabad during 26-28 December 2013.
52. **R. S. Kulkarni\*and R. L. Shinde(2013):** Depression and its Associated Factors in Older Indians" in the **International Conference** on ‘Recent advances in Statistics and their applications’ in conjunction with XXXIII Annual Convention of Indian Society for Probability and Statistics(ISPS) organized by Department of Statistics, Dr. BAMU, Aurangabad during 26-28 December 2013.
53. **Y. P. Patil\* and R. L. Shinde(2013):** "Prevalence and risk factors of undernutrition among Indian teen aged 15-19 years based on NFHS-3" in the **International Conference** on ‘Recent advances in Statistics and their applications’ in conjunction with XXXIII Annual Convention of Indian Society for Probability and Statistics(ISPS) organized by Department of Statistics, Dr. BAMU, Aurangabad during 26-28 December 2013.
54. **R. N. Chavhan \* and R. L. Shinde(2014):** “Life Annuity based on Varying Life Tables” in the National Conference on "Recent Advances in Statistics with Application in Finance, Actuarial Science and other areas" held at Central University of Rajasthan during Feb 14-15, 2014.
55. **R. L. Shinde(2014):** Invited talk on “Choice Based Credit System” in the **National Conference** on “New Trends in Examination System” organized by Department of Education, North Maharashtra University, Jalgaon on March 04, 2014.
56. **R. N. Chavhan and R. L. Shinde\*(2014):** Invited talk on “Stochastic Mortality Modeling and Forecasting for Indian Population with Applications in Actuarial Science” and **chaired one session** in the **International Conference** on "Mathematical Modeling 2014" held at the Research and Development Center for Mathematical Modeling, Department of Mathematics, **University of Colombo**, Sri Lanka during March 13-14, 2014.

57. **R. N. Chavhan and R. L. Shinde\*(2015): Invited talk** on "Stochastic Mortality Models" and **chaired one session** in the national conference on "Recent Advances in Statistics" held at Savitribai Phule Pune University during January 2-3, 2015.
58. **R. N. Chavhan and R. L. Shinde\*(2015): Invited talk on** "Weather Based Crop Insurance Schemes for Banana, Grapes and Orange in the Maharashtra state of India" and **chaired one session** in the 102nd Session of the **Indian Science Congress** held at University of Mumbai during January 3-7, 2015.
59. **R. N. Chavhan and R. L. Shinde\*(2015): Invited talk on** "Stochastic Mortality Modeling and Forecasting for Indian Population with Applications in Actuarial Science" and **chaired one session** in the **International Conference**, "International Conference on Frontiers in Mathematics" held at Gauhati University, Guwahati, Assam during March 26-28, 2015.
60. **R. N. Chavhan and R. L. Shinde\*(2015): Invited talk on** "Banana Crop Insurance" in the International Statistical Institute's Outreach Committee Organized Three Day **International Workshop** on "Statistics and Society" held at Sardar Patel University, Anand, Gujarat during April 4-6, 2015.
61. **R. L. Shinde(2015): Invited talk invited talk on** "Statistical Data Analysis Through MINITAB and Reporting" in seven days **National Workshop** on "Faculty Improvement for Research in Science and Technology-2015 (FIRST-2015)" held at North Maharashtra University, Jalgaon during June 18-24, 2015.
62. **R. L. Shinde(2015): Special talk** on "Quality Parameters/Aspect-wise Preparation of Presentation before NAAC Peer Team" in the **NAAC Awareness Workshop** under National Quality Renaissance Initiative (NQRI) organized by IQAC, North Maharashtra University, Jalgaon during March 23-24, 2015.
63. **R. L. Shinde(2016): Keynote address** on "Research Methods and Sampling" in the **National Workshop** on Research Methods and Applications of SPSS software in Research held at Shendurni on January 21, 2016.
64. **R. L. Shinde(2016): Popular talk on** "Statistics in Computer Science" on the occasion of celebration of National Mathematics and Science Day at School of Computer Sciences, NMU on March 2, 2016.
65. **R. N. Chavhan and R. L. Shinde\*(2016): Invited talk on** "Social Security Life Insurance Scheme *Pradhan Mantri Jeevan Jyoti Bima Yojana* (PMJJBY): Actuarial insight based on Indian Mortality" in the **National Conference** on Applied Statistics held at Shivaji University, Kolhapur during March 11-12, 2016. Also **chaired one session** of invited speakers in this conference.
66. **R. L. Shinde(2016): Keynote address** on "Role of Statistics in Current Scenario" in the **National Seminar** held at Veer Narmad South Gujarat University, Surat on March 27, 2016. Also **chaired one session** of contributory papers in this National Seminar.
67. **R. L. Shinde(2016):Invited talk on** "Sampling Methods" in the Workshop on Statistical Techniques for researchers held at M. J. College on April 26, 2016.

68. **R. L. Shinde and R. N. Chavhan (2016):** Delivered an **invited talk** on 'Statistical Modeling of Meteorological Data and its Applications in Weather Based Crop Insurance Schemes for Banana' in the **International Conference** on Statistics & Big Data Bioinformatics in Agricultural Research held at the International Crops Research Institute for the Semi-Arid Tropics (**ICRISAT**), **Hyderabad** during November 21-23, 2016.
69. **R. L. Shinde(2017):** Delivered an **invited talk** on 'Curriculum Aspects under Choice Based Credit System: Challenges and Opportunities' in the **National Seminar** on Curriculum Development held at Ghogrey Science College, Dhule on January 17, 2017.
70. **R. L. Shinde(2017):** Delivered **keynote address** on 'Process Capability Indices and their Applications in Engineering and Technology ' in the **National Conference** on 'Mathematical Modelling and its Applications in Engineering and Science (NCMMAES-2017)' held at Government College of Engineering, Karad during February 03-04, 2017. Also **chaired one session** of contributory papers in this National conference.
71. **R. L. Shinde(2017):**Delivered three talks as a resource person on ' Statistical Methods for Library Science' in the **National Workshop on Bibliometrics, Scientometrics and Webometrics** held at Maharshi Parshuram College of Engineering, Velneshwar during February 15-17, 2017.
72. **R. L. Shinde(2017):** Delivered **keynote address** on "Role of Statistics in Research" in the **National Seminar** organized by Veer Narmad South Gujarat University, Surat on March 5, 2016. Also **chaired one session** of contributory papers in this National Seminar.
73. **R. L. Shinde\* and R. S. Kulkarni (2017):** Delivered an **invited talk on** " Impact of Rounding on Process Performance Measurement " in the **National Seminar** on Recent Advances in Statistics and their Applications held at Sardar Patel University during March 17-18, 2017. Also **chaired one session** of contributory papers in this National Seminar.
74. **R. L. Shinde\* and Y. P. Patil(2017):** Delivered an **invited talk** on "Distribution of Body Mass Index of Indians: A Study based on NFHS-2 and NFHS-3" in the **National Conference** on "Recent Advancements in Statistics and Their Applications to Society" held at SPPU, Pune during March 23-25, 2017. Also **chaired one session** of contributory papers in this National Conference.
75. **R. L. Shinde(2018)** Delivered an **invited talk** for the participants of National Big Data Analytics Championship 2018 held at KC College, Mumbai during January 23-24, 2018.
76. **R. L. Shinde(2018)** Delivered an **invited talk** on "Actuarial Science as an Emerging field of Mathematical Science" in the state level Seminar on Recent Applications on Mathematics and Statistics held at S.P.H. *Mahila Mahavidyalaya*, Malegaon on February 3, 2018. Also **chaired one session** of contributory papers in this Seminar.
77. **R. L. Shinde (2018)** Delivered an **invited talk on** "Process Capability Indices and Process Capability Analysis based on real life Industrial Data" in the **National Seminar** on Recent Advances in Statistics in Industries and Corporate held at Sardar Patel University during February 10-11,2018. Also **chaired one session** of contributory papers in this National Seminar.

### **My Aims/Objectives**

- To become good teacher and researcher in Statistics and Actuarial Science and produce good Statisticians/Experts as well as good citizens for the country.
- To convince organizations about the use of Statistical Methods and for appointments of Statisticians to monitor/improve quality of their product or to improve their services.
- To contribute for developing better educational environment/system.

**(Ramkrishna L. Shinde)**