


## PROFILE

Name	:	Dr. R.Arumugam	
Designation	:	Assistant Professor (SG)	
Department	:	Mathematics	
Educational Qualification	:	M.Sc (Stat)., M.Sc (Maths)., MBA., PGDCA., M.Phil., Ph.D	
Subject of Interest	:	<b>Stochastic Processes, Operations Research, Statistical Quality Control</b>	
Publications :	:	<b>International:39</b> <b>1. R.Arumugam and Dr.A. Pandurangan,“Variance of the time to Recruitment in a Single Graded Manpower System- SCBZ Property”, - International Journal of Research in Computer Application and Management, Vol. No.1 (2011), Issue No. 6(August), ISSN-2231 1009.</b> <b>2. R.Arumugam, “A Study on Applications of Statistics in Higher Education”, -International Journal of Scientific Research, Vol.No.4, Issue 4, April special issue 2015, ISSN-2277 8179.</b> <b>3. Dr.R.Arumugam, “Applications of Stochastic Models in Manpower Levels for Business”, - International Journal of Recent Trends in Engineering and Research (IJRTER), Vol.3, Issue 1, January 2017, Page No. 14-18, ISSN-2455 1457.</b> <b>4. Dr.R.Arumugam and M.Rajathi, “Applications of Manpower with Various Stages in Business Using Stochastic Models”, - International Journal of Recent Trends in Engineering and Research (IJRTER), Vol.3, Issue 1, January 2017, Page No. 95-100, ISSN-2455 1457.</b> <b>5. E.Preethi and Dr.R.Arumugam, “Applications of Stochastic Models in Web Pageranking”, - International Journal of Recent Trends in Engineering and Research (IJRTER), Vol.3, Issue 3, March 2017, Page No. 245-252, ISSN-2455 1457.</b> <b>6. Dr.R.Arumugam , “A Comparative Study on Stochastic Analysis of Manpower levels for Business using four and six point state space” International Journal of Research in Computer Application &amp;Management , Vol. No.7 Issue No.10, October 2017, Page No. 59-62, ISSN-2231 1009.</b> <b>7. Dr.R.Arumugam and M.Rajathi, “Applications of manpower levels for business using six and eight point state space in the stochastic models”, - International Journal of Statistics and Applied Mathematics, Vol. No.2 Issue No.6 October 2017, Page No. 56-60, ISSN- 2456-1452.</b>	

	<ol style="list-style-type: none"> <li><b>8. M.Rajathi and Dr.R.Arumugam, “A Study on PageRank Algorithm using Markov Chain Model”, Shanlax International Journal of Arts, Science and Humanities, Vol.5, Special Issue 4, April 2018, Page No. 97-101, UGC Approved Journal Number 4S960, ISSN- 2321-788X.</b></li> <li><b>9. Dr.R.Arumugam and M.Rajathi, “Applications of Stochastic Models on Test mis-scaling in Educational and Psychological Measurement” International Journal of Recent Trends in Engineering and Research (IJRTER), Vol.4, Issue 6, June 2018, Page No. 133-137, ISSN-2455 1457.</b></li> <li><b>10. Dr.R.Arumugam, V.Yogendramani and M.Rajathi “Applications of Manpower System with Various Qualifications In Educational Institution Using Mortality Table Techniques”, - International Journal of Modern Trends in Engineering and Research (IJMTER), Vol. No.5 Issue No.10 October 2018, Page No. 1-8 Scientific Journal Impact Factor(SJIF)- 5.278. ISSN-2349-9745.</b></li> <li><b>11. R.Arumugam and M.Rajathi, “Manpower Levels for Business with Various Recruitment Rates in the Ten Point State Space System through Stochastic Models”,- International Journal of Computer Sciences and Engineering (IJCSE), Vol. No.7, Special Issue No.2 January 2019, Page No. 58-61, UGC Approved journal. Impact factor.3.02, EISSN- 2347-2693</b></li> <li><b>12. R.Arumugam and M.Rajathi, “Manpower Levels for Business with Various Recruitment Rates through Stochastic Models”,- International Journal of Engineering and Future Technology (IJEFT), Vol. No.16, Issue No.24 Feb 2019, Page No. 58-61, ISSN- 2455-6432</b></li> <li><b>13. M.Rajathi and R.Arumugam, “Applications of Mobile Learning In The Higher Educational Institutions Through Statistical Approach” International Journal of Recent Technology and Engineering, Paper Id: A3296058119, ISSN 2277-3878(online) / Impact Factor 5.11, Vo.8, Issue 1, May 2019, Page No 1431-1439, indexed by Scopus</b></li> <li><b>14. R.Arumugam and M.Rajathi, “Applications of Manpower Levels for Business with various Recruitment Rates in the System Through Stochastic Models” International Journal of Recent Technology and Engineering, ISSN 2277-3878(online) / Impact Factor 5.11, Vo.8, Issue 2S4, July 2019, Page No 719-722, indexed by Scopus</b></li> <li><b>15. Dr.R.Arumugam, R.Rakesh and M.Rajathi, “A Statistical Approach on Experimental Study for Determining Switching Frequency of Inductive Sensor Using PLC” International Journal of Research and Analytical Reviews (IJRAR), E-ISSN 2348-1269, P- ISSN 2349-5138 /</b></li> </ol>
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International Peer Reviewed Journal, Refereed Journal, Indexed Journal, Impact Factor 5.75, (**Journal No : 43602**)Vo.6, Issue 2, June 2019, Page No 469-473, **Approved by UGC and ISSN.**

16. **K. Subhikshaa, Dr.R.Arumugam and M.Rajathi, “A Study on Applications of Transportation Problem to Minimize Cost in Various Pharmacies” International Journal of Research and Analytical Reviews (IJRAR), E-ISSN 2348-1269, P- ISSN 2349-5138 / International Peer Reviewed Journal, Refereed Journal, Indexed Journal, Impact Factor 5.75, (Journal No : 43602)Vo.6, Issue 2, June 2019, Page No 507-512, Approved by UGC and ISSN.**
17. **R. Yasotha Nandhini, Dr.R.Arumugam and M.Rajathi, “A Statistical Approach on Applications of Inventory Management in the Departmental Store” International Journal of Research and Analytical Reviews (IJRAR), E-ISSN 2348-1269, P- ISSN 2349-5138 / International Peer Reviewed Journal, Refereed Journal, Indexed Journal, Impact Factor 5.75, (Journal No : 43602)Vo.6, Issue 2, June 2019, Page No 513-518, Approved by UGC and ISSN.**
18. **Dr. R.Arumugam and M.Rajathi, “Applications of Manpower Levels for Business with Various Recruitment Rates in an Eleven point State space through Stochastic Models”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.10, Issue 12, Dec 2019, Page No 384-392, An UGC-CARE Approved Group II Journal**
19. **Dr. R.Arumugam, B. Sri Ranjani and M.Rajathi, “A Statistical Study on the Production of Crops Before and After Gaja Cyclone in the Delta Region around Thanjavur District”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.10, Issue 12, Dec 2019, Page No 598-607, An UGC-CARE Approved Group II Journal**
20. **Dr. R.Arumugam, C. Gowri and M.Rajathi, “A Statistical Study on the Impact of Dengue Fever in Thanjavur District Using SPSS”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.10, Issue 12, Dec 2019, Page No 671-683, An UGC-CARE Approved Group II Journal**
21. **Dr. R.Arumugam, and M.Rajathi, “ A Markov Model for Prediction of Corona Virus COVID-19 in India- A Statistical Study”, Journal of Xidian University, ISSN 1001-2400/ Impact Factor 5.4, Vol.14, Issue 4, April 2020, Page No 1422-1426, An UGC-CARE Approved Group II Journal**
22. **Mr. R.Rakesh, Dr. R.Arumugam and M.Rajathi, “A Statistical Study on Segregation and Reuse of Domestic Waste in Apartments at Metro Cities Using Automation Technology (PLC)”, AEGAEUM JOURNAL, ISSN 0776-3808 / Impact Factor 6.1, Vol.8, Issue 4, April 2020, Page No 1214-1221, An UGC-CARE**

### **Approved Group II Journal**

- 23. M.Rajathi and Dr. R.Arumugam, “An Application of Spatial Data mining in the study of Corona Virus (COVID-19) Pandemic through Statistical Approach”, AEGAEUM JOURNAL, ISSN 0776-3808 / Impact Factor 6.1, Vol.8, Issue 4, April 2020, Page No 1698-1704, An UGC-CARE Approved Group II Journal**
- 24. Dr. R.Arumugam, and M.Rajathi, “Air Pollution During Pre Pandemic Covid-19 and In The Lockdown Period At Chennai City: A Statistical Study”, Juni Khyat, ISSN 2278-4632/ Impact Factor 6.625, Vol.10, Issue 5, No.15, May 2020, Page No 152-163, An UGC-CARE Approved Group I Journal**
- 25. R.Rakesh, Dr. R.Arumugam, M.Rajathi and U.SaravanaKumar “A statistical approach on experimental study for determining switching frequency of retro reflector sensor using PLC”, International Journal of Advance Research, Ideas and Innovations in Technology, ISSN 2454-132X / Impact Factor 6.078, Vol.6, Issue 3, May-June 2020, Page No 640-647, Peer Reviewed Journal**
- 26. Dr. R.Arumugam, M.Rajathi, R.Rakesh and U.SaravanaKumar, “An Impact of Corana Virus Covid-19 in India During the Initial Lockdown Period - A Statistical Study”, Juni Khyat, ISSN 2278-4632/ Impact Factor 6.625, Vol.10, Issue 6, No.9, June 2020, Page No 214-224, An UGC-CARE Approved Group I Journal**
- 27. Dr. R.Arumugam, M.Rajathi, T.Sureshkumar, R.Yasotha Nandhini, D.Aasha, “Manpower Levels for Business with Various Recruitment Rates in Twelve point State space through Stochastic Models”, Juni Khyat, ISSN 2278-4632/ Impact Factor 6.625, Vol.10, Issue 7, No.10, July 2020, Page No 132-139, An UGC-CARE Approved Group I Journal**
- 28. S.Sowmya Bharathi, Dr. R.Arumugam, M.Rajathi, “A Statistical Study on Intelligence Quotient (IQ) test between males and females in the age group of 20 and 30 in Thanjavur District”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.11, Issue 12, Dec 2020, Page No 325-336, An UGC-CARE Approved Group II Journal**
- 29. M.Harikumaran, Dr. R.Arumugam, M.Rajathi, “The Impact of COVID – 19 at Mayiladuthurai District, Tamilnadu: A Statistical Study”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.11, Issue 12, Dec 2020, Page No 349-362, An UGC-CARE Approved Group II Journal**
- 30. Dr. R.Arumugam, V.Nandhini, M.Rajathi, “The Impact of Diabetic based on BMI, BP and Sugar –A Statistical Study”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.12, Issue 1, Jan 2021, Page No 207-221, An UGC-CARE**

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31. **Dr. R.Arumugam, K.RajaSri, M.Rajathi, “Students Health based on Body Mass Index of the High School Students During the academic years 2017-2020”,** Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.12, Issue 1, Jan 2021, Page No 285-296, **An UGC-CARE Approved Group II Journal**
32. **Dr. R.Arumugam, S.Safrin Preethi, M.Rajathi, “Application of Latin Square Design in the Analysis of the Effectiveness of Four Different Traffic Violation on Road Accidents –A Study”,** Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.12, Issue 2, Feb 2021, Page No 18-27, **An UGC-CARE Approved Group II Journal**
33. **K.Kanimozhi, Dr. R.Arumugam, M.Rajathi, “Students involvement in sports and cultural by using Correlation and Chi-square test”,** Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.12, Issue 2, Feb 2021, Page No 167-178, **An UGC-CARE Approved Group II Journal**
34. **R.Rakesh, I. Karthic Subramiyan, Dr. R.Arumugam, M.Rajathi,** “Experimental investigation of Switching Frequency of magnetic sensor Using Statistical approach”, Compliance Engineering Journal, ISSN 0898-3577 / Impact Factor 6.2, Vol.12, Issue 4, April 2021, Page No 155-165, **An UGC-CARE Approved Group II Journal**
35. **Dr. R.Arumugam, S.Vinodhini, “Quality Analysis in the Interlocking Stones with Markov Model”,** Journal of Hunan University (Natural Sciences) , ISSN 1674-2974 / Impact Factor 0.48, Vol.48, No.12, Dec 2021, Page No 2094-2104, **Indexed by Scopus Web of Science**
36. **R.Rakesh, Dr. R.Arumugam, M.Rajathi, S.Sanjai, M.Gobinath,** “A Mother-Child Aerial Dynamic Charging station for Survey Drones”, International Journal of Early Childhood Special Education (INT-JECSE)ISSN: 1308-5581 Vol 14, Issue 03, April 2022 / Impact Factor 6.2, Page No 2966-2973, **An UGC-CARE Approved Group II Journal, Indexed by Web of Science**
37. **Dr.R.Arumugam, S.Vinodhini, “Quality Analysis In The Manufacturing Industry By Using Markov Chain Method”,** International Journal of Early Childhood Special Education (INT-JECSE), ISSN: 1308-5581/ Impact factor. 0.76, Vol 14, Issue 05, July 2022, Page No.2966-2973 **Indexed by Web of Science**
38. **M.S Nidhya, R. Arumugam, A. Kannagi, T. Revathi, M.P. Karthikeyan,** Analysis of Flat and Hierarchical Routing Structure Supported Protocol in Mobile Ad-hoc Networks published in 2023 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE), IEEE Xplore: 10 April 2023, INSPEC Accession Number: 22931737, DOI: 10.1109/IITCEE57236.2023.10091055, **Indexed by Scopus**

- 39. M.Rajathi, S. Abinaya. and Dr. R.Arumugam**, Detection of Plant Leaf Diseases using Machine Learning Algorithm, Education and Society, ISSN : 2278-6864, Publisher : Indian Institute of Education UGC Care Group I. May 2023

#### **National: 07**

- 1. R.Arumugam, “Identifying various facilities in BHC Through Factor Analysis”**, The PMU Journal of Humanities and Sciences and Management, Jan – June 2011, Vol 2. No.2, Page No.79-88.
- 2. R.Arumugam, “Comparitive Study on Human Values in School and College Students for Promoting Peace Education”**, The PMU Journal of Humanities Sciences and Management, January – June 2011, Vol No.2, Page No.79-88.
- 3. R.Arumugam , “A Study on the Traffic Problems Through Factor Analysis”**, The PMU Journal of Humanities Sciences and Management, Jan – June 2012, Vol 3. No.1, Page No.01- 12.
- 4. R.Arumugam, “Optimal Promotion Policy to Manpower system”**, - The PMU Journal of Humanities Sciences and Management, July – Dec 2012, Vol 3. No.2, Page No.39-49.
- 5. R.Arumugam, “Stochastic Analysis of Manpower levels for Business”**, - PMU Journal of Humanities Sciences and Management, January – June 2013, Vol 4 No.1, Page No.45-56.
- 6. R.Arumugam and M.Rajathi, “Optimal Time for intended Retirement and Promotion”**, - The PMU Journal of Humanities Sciences and Management, July – Dec 2013, Vol 4. No.2, Page No.61-74.
- 7. R.Arumugam, “A Study on Service Quality in Service Industries Using Sampling Techniques”**, - PMU Journal of Humanities Sciences and Management, January- June 2014, Vol 5 No.1, Page No.61-71.

Books Written

- 1. Statistics and Operations Research** (Sep 2008) ISBN :978-81-90-7821-7-6
- 2. Business Statistics** (Sep 2008) ISBN : 978-81-90-7821-6-8
- 3. Probability and Statistics** (for COADE)
- 4. TNPSC Guide (Sep 2016)** ISBN :978-93-80132-16-7
- 5. Business Mathematics and statistics** (March 2020) ISBN: 978-81-945211-2-9
- 6. Business Statistics** (for BBA, BCo, and BSc Science students) –(Dec 2022), “978-93-94503-03-8”
- 7. Mathematics for Data Science – III ( for Data Science – III)** (Nov 2023)-“978-93-94503-55-7”

Patend Published

- 1. Title of the invention: A MODEL TO PREDICT VITAL SIGN USING MACHINE LEARNING**  
Application No.202241019884A

Awards and Achievements	<p>Date of filing of Application :01/04/2022, Publication Date : 22/04/2022</p> <p>2. Title of the invention: <b>METHOD FOR REDUNDANT TRANSMISSION OF DATA MESSAGES IN COMMUNICATION USING MACHINE LEARNING</b> Application No. 202341054350 A, Date of filing of Application :12/08/2023, Publication Date: 01/09/2023</p> <ol style="list-style-type: none"> <li>1. National Level Award on “<b>Perasiriyar Kalaimani Award -2019</b>”, Awarded by Kaviyarasar Kalai Tamil Sangam, Namakkal on 20.10.2019</li> <li>2. Department Award - <b>Pulliyiyal Semmal award</b>, awarded by Erode Tamil Sangapperavai, Erode on 20.10.2019</li> <li>3. National level Award on “<b>Aasiriya Arima Award 2020</b>”, awarded by Kurinji Kabilar Tamil Sangam, Pilikkal palayam, Namakkal on 26.01.2020</li> <li>4. “<b>Kalam Research Award</b>”, awarded by ISSN International Research award (Board of Research Bureau Veritas) on 13.10.2021</li> <li>5. <b>C V Raman Prize 2022 award</b> given by Institute of Researchers for the outstanding professional &amp; research achievement in the field of Mathematics on 25<sup>th</sup> May 2022. This research unit of ISPI, registered with Ministry of MSME, Govt of India</li> <li>6. Certificate of Appreciation <b>Extra Mile Award</b> given by Periyar Maniammai Institute of Science and Technology, Thanjavur for the completion of NPTEL course during the month of Nov 2022 organized by PMIST staff club</li> <li>7. Certificate of Appreciation <b>Extra Mile Award</b> given by Periyar Maniammai Institute of Science and Technology, Thanjavur for the book publication during the month of Dec 2022 organized by PMIST staff club</li> <li>8. Certificate of Appreciation <b>Extra Mile Award</b> given by Periyar Maniammai Institute of Science and Technology, Thanjavur for the Scopus publication during the month of May 2023 organized by PMIST staff club</li> <li>9. Certificate of Appreciation <b>Extra Mile Award</b> given by Periyar Maniammai Institute of Science and Technology, Thanjavur for the Patend publication during the month of Sep 2023 organized by PMIST staff club</li> <li>10. Certificate of Appreciation <b>Extra Mile Award</b> given by Periyar Maniammai Institute of Science and Technology, Thanjavur for the Book publication during the month of Dec 2023 organized by PMIST staff club</li> </ol>
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Google Scholar Link	:	<a href="https://scholar.google.com/citations?hl=en&amp;user=tLF_oO8AAAAJ">https://scholar.google.com/citations?hl=en&amp;user=tLF_oO8AAAAJ</a>
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