


FACULTY PROFILE

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|--|--|---------------------------------|---------------------------|---|
| Name of Teaching Staff / RMK ID | Dr. S. Pavai Madheswari / T0004 | | |  |
| Designation | Professor , HoD & Academic Coordinator | | | |
| Department | Science and Humanities | | | |
| Date of Joining the Institution | September 1995 (Regular) | | | |
| Qualifications | M.Sc., M.Phil., (Mathematics) | M. Tech., (Computer Science) | Ph.D. (Mathematics) | |
| Total Experience | Overall : 30 Years 6 Month | | in RMK : 28 Years 9 Month | |
| Papers Published in Journal | Overall : 33 | | After Joining RMK : 33 | |
| List of Papers Published | <ol style="list-style-type: none"> 1. B. Krishna Kumar, S. Pavai Madheswari, 'Transient Behaviour of the M/M/2 Queue with Catastrophes', Statistica, 2002, pp. 129-136. 2. B. Krishna Kumar, S. Pavai Madheswari, A. Vijayakumar, 'The M/G/1 Retrial Queue with Feedback and Starting Failures', Applied Mathematical Modelling, 2002, Vol. 26, pp.1057-1075. 3. B. Krishna Kumar, S. Pavai Madheswari, 'Transient Solution of an M/M/2 Queue with Catastrophes', Mathematical Scientist, 2003, Vol. 28, pp.99-114. 4. B. Krishna Kumar, S. Pavai Madheswari, 'MX/G/1 Retrial Queue with Multiple Vacations and Starting Failures', OPSEARCH, 2003, Vol. 40, No. 2, pp.115-137. 5. B. Krishna Kumar, S. Pavai Madheswari, 'Mixed Loss and Delay Retrial Queueing System with Two Classes of Customers', Statistica, 2004, pp.57-73. 6. B. Krishna Kumar, S. Pavai Madheswari, K. S. Venkatakrisnan, 'Busy Period Analysis of an M/M/2 Queue with Catastrophes', Stochastic Modelling and Applications, 2004, Vol. 7, No. 1, pp. 27-43. 7. B. Krishna Kumar, S. Pavai Madheswari, D. Ariudainambi, 'On the Busy Period of an M/G/1 Retrial Queueing System with Two-Phase Service and Preemptive Resume', Stochastic Modelling and Applications, 2005, Vol. 8, No. 2, pp. 18-34. 8. B. Krishna Kumar, S. Pavai Madheswari, 'Transient Analysis of an M/M/1 Queue Subject to Catastrophes and Server Failures', Stochastic Analysis and Applications, 2005, Vol.23, No.2, pp.329-340. 9. B. Krishna Kumar, S. Pavai Madheswari, 'An M/M/2 Queueing System with Heterogeneous Servers and Multiple Vacations', Mathematical and Computer Modelling, 2005, Vol. 41, | | | |

pp. 1415-1429.

10. B. Krishna Kumar, S. Pavai Madheswari, K. S. Venkatakrishnan, 'Transient Solution of an M/M/2 Queue with Heterogeneous Servers Subject to Catastrophes', *International Journal of Information and Management Sciences*, 2007, Vol. 18, No. 1, pp. 63-80.

11. B. Krishna Kumar, S. Pavai Madheswari, A. Krishnamoorthy, S. Sadiq Basha, 'Transient Analysis of a Single Server Queue with Catastrophes, Failures and Repairs', *Queueing Systems*, 2007, Vol. 56, pp. 133-141.

12. B. Krishna Kumar, S. Pavai Madheswari, 'Analysis of an M/M/N Queue with Bernoulli Service Schedule', *International Journal of Operations Research*, 2009, Vol. 5, No. 1, pp. 48 – 72.

13. D. Bhanu, S. Pavai Madheswari, 'Retail Market Analysis in Targeting Sales based on Consumer Behaviour using Fuzzy Clustering – A Rule Based Model', *Journal of Computing*, 2009, Vol. 1, pp.92 – 99.

14. B. Krishna Kumar, S. Pavai Madheswari, S. Ananthalakshmi, 'Queueing System with State – Dependent Controlled Batch Arrivals and Server Under Maintenance', *Top*, 2011, Vol. 19, pp. 351–379.

15. B. Krishna Kumar, S. Pavai Madheswari, S. Ananthalakshmi, 'An M/G/1 Bernoulli Feedback Retrial Queueing System with Negative Customers', *International Journal of Operations Research*, March 2013.

16. S. Umarani, S. Pavai Madheswari, N. Nagarajan, 'A New Recovery Scheme for Single link Failures in Crossbar Networks', *International Journal of Soft Computing*, 2013, Vol. 8, Issue 6, pp. 416 – 423.

17. B. Krishna Kumar, S. Pavai Madheswari, S. Ananthalakshmi, S. Anbarasu, 'Transient and Steady-state Analysis of Queueing Systems with Catastrophes and Impatient Customers', *International Journal of Mathematics in Operational Research*, 2014, Vol. 6, No. 5.

18. P. Suganthi, S. Pavai Madheswari, 'Retrial Queueing System with Customer Impatience', *Global Journal of Pure and Applied Mathematics*, 2015, Vol.11, No. 5, pp. 3177 – 3188.

19. S. Pavai Madheswari, P. Suganthi, S. A. Josephine, 'Retrial Queueing System with Retention of Reneging Customers' *International Journal of Pure and Applied Mathematics*, 2016, Vol. 106, No. 5. 11-20.

20. S. Pavai Madheswari, X. Ignatious Viola and S. Radhika, 'Improving Deduplication Efficiency with Multilevel Hashing in Cloud Storage Backup', *International Journal of Control Theory and Applications*, 2016, Vol. 9, pp.7-13.

21. S. Pavai Madheswari, P. Suganthi, 'An M/G/1 Retrial Queue with Second Optional Service and Starting Failure under Modified Bernoulli Vacation' *Transylvanian Review*, 2016, Vol. 24, No. 10. 601-6021.

22. S. Pavai Madheswari, P. Suganthi, 'A Comparative Study of Various Vacation Policies in an M/G/1 Retrial Queue with Customer Balking', *Asia Matematika*, 2017, Vol. 1, No.2, pp 22-48.
23. S. Pavai Madheswari, P. Suganthi, 'An M/G/1 retrial queue with second optional service and unreliable server under single exhaustive vacation', *Nonlinear Studies*, 2016, Vol. 24, No. 2,389-415.
24. Pavai Madheswari, S, Krishna Kumar, B & Suganthi, P 'Analysis of M/G/1 retrial queues with second optional service and customer balking under two types of Bernoulli vacation schedules', *RAIRO-Oper. Res.*, 2019, vol. 5, no. 3, pp. 415-443.
25. Pavai Madheswari, S & Suganthi, P 2019, 'An M/G/1 Retrial Queue with Unreliable Server and Customer Feedback under Modified Bernoulli Vacation Schedule', *Journal of Applied Science and Computations*, vol. 6, no. 5, pp. 1937-1953.
26. 24. Pavai Madheswari, S & Josephine, S.A. 'Analysis of Discrete time Geo/G/1 Retrial Queue with Displacement and Feedback', *Journal of Advanced Research in Dynamical and Control Systems*, Vol. 11, no. 12, pp. 658-666. DOI: 10.5373/JARDCS/V11SP12/20193262.
27. Pavai Madheswari, S & Josephine, S.A. 2019 'Analysis 'Analysis of an M/G/1 Retrial Queue with Second Optional Service and Customer feedback,, under Bernoulli Vacation schedule' *Malaya Journal of Matematik*, Vol. 7, no. 4, pp. 795-807, <https://doi.org/10.26637/MJM0704/0027>.
28. Pavai Madheswari, S and Uma Mageswari, S.D. 2020 'Changing Paradigms of Engineering Education - An Indian Perspective, *Procedia Computer Science*, Vol. 172, 2020, pp. 215-224.
29. V.Vijayabaskar and S. Pavai Madheswari, 'Big data analytics: Characteristics, tools and Methods, Data analysis techniques, Challenges, Security and its applications: An Overview', *A Journal of Composition Theory*, 2020.
30. Pavai Madheswari, Josephine, SA & Suganthi, P, *Life Time Elongation Of Wireless Sensor Networks Using Discrete Time Queues With Vacation Control Dynamic Systems and Applications*, vol. 30, no. 7, 2021.
31. Pavai Madheswari S, Suganthi P and Vasanthamani K, 2021, 'A Study on Geo/G/1 Retrial Queueing System with Starting Failure and Customer Feedback,' *Book Chapter*, Taylor & Francis eBooks ,CRC Press, 1st Edition, 2021.
32. S. PavaiMadheswari, V. Sharmila Bhargavi2 *Inter-Intra Cluster Energy Balance Routing (I2cebr) Protocol for Underwater Acoustic Sensor Networks Using Network Coding*, *International Journal of Modern Agriculture*, ISSN: 2305-7246, Volume 10 Issue 3, 2021.
33. Pavai Madheswari, S. and Suganthi, P. 2021, *Retrial queue with unreliable server and second optional service under K types of Bernoulli vacations'*, *Int. J. Services and Operations Management*, Vol. 40, No. 4, pp.502–533.

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| Papers Presented in Conferences | Overall : 32 | After Joining RMK : 32 |
| Ph.Ds / Projects Guided | Ph.Ds Guided : 2 | Student Projects Guided: NIL |
| Books Published : | Count :1 | |
| | List : 1. Pavai Madheswari S, Suganthi P and Vasanthamani K, 2021, 'A Study on Geo/G/1 Retrial Queueing System with Starting Failure and Customer Feedback,' Book Chapter, Taylor & Francis eBooks , CRC Press, 1st Edition, 2021. | |
| Patents | Published Count: | Granted Count: NIL |
| | List : | |
| Professional Memberships | Count : | |
| | List : 1. The Indian Society for Technical Education | |
| Consultancy Projects Completed | Count : NIL | |
| Awards Received | Count : | |
| | List : 2. As Junior, Research Fellow, CSIR joint UGC, 1988 3. University Second Rank in M. Tech. (Computer Science), Dr. M.G.R Educational and Research Institute, 2013 4. Best Teacher Award, Cognizant, 2016 5. Service Excellence Award, Alumni Association of R.M.K. Engineering College, 2017 | |
| Research grants Received | NIL | |

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| Google Scholar Link / ID | ID : https://scholar.google.co.in/citations?user=uDn4yVEAAAJ&hl=en |
| Vidwan Link / ID | ID : 281369 |
| Research Gate Link / ID | P-8180-2015 |
| Scopus Link / ID | ID : 8981114400 |