

CURRICULLUM – VITAE

Prof.T.SUMATHI UMA MAHESWARI

Professor
Department of Mathematics
Kakatiya University
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EDUCATION

Jan 1994- Dec 1997, Post Doctoral Researcher, UGC

1988- 1991: Ph.D, Kakatiya University, Warangal.

1985-1987: M.Sc (Mathematics), Kakatiya University, Warangal.

1981-1984: B.Sc (Mathematics, Physics, Chemistry), Kothagudem, Osmania University.

PROMOTIONS

Assistant Professor (AGP 6000/-) – 21-06-2005

Assistant Professor (AGP 7000/-) – 21-06-2009

Assistant Professor (AGP 8000/-) – 21-06-2014

Associate Professor (AGP 9000/-) – 21-06-2017

TEACHING EXPERIENCE

From 1990 as a faculty member in the Department of Mathematics, Kakatiya University, Warangal, Andhra Pradesh

RESEARCH EXPERIENCE

MAJOR RESEARCH PROJECT

Reliability study for redundancy of cascade system – A Markovian approach, funded by UGC, 2011- 2014.

1. **Postdoctoral Research Fellow (Jan. 1994 to Dec. 1997)**
2. **Ph.D Programme (1988- 1991):**

TITLE OF THESIS : “Studies on some stress strength Reliability Models”
(Supervisor: Professor A.C.N.Raghavarchari, Department of Mathematics, Kakatiya University, Warangal)

Ph.D'S AWARDED

1. **M.Tirumala Devi** --- *Reliability Improvement Methods for Stress – Strength Models* --
-- Awarded on 10th October, 2012.
2. **Swathi Nalabolu** --- *Reliability of Stochastic Stress-Strength Models* --- Awarded on
11th April, 2016.
3. **Sandhya Khammam** --- *A Study on Multi Component Systems following Mixture
Distributions in Reliability Theory* --- Awarded on 30th May, 2017.
4. **Hari Prasad Pentti** --- *A Study on Stress Dependent Models in Reliability Theory*
--- Awarded on 4th September, 2017.

ADMINISTRATIVE POSITIONS

- Associate NCC Officer at University Arts and Science College, Kakatiya University from
March 2003 to November 2010
- Deputy Director for PG Courses, SDLCE, Kakatiya University from March 2010 to
August 2011
- Principal, University College of Engineering and Technology for Women, Kakatiya
University from October 2013 to September 2017

ACADEMIC POSITIONS

- Head, Department of Mathematics, Kakatiya University from May 2011 to May 2013
- Chairperson, Board of Studies in Mathematics, Kakatiya University from March 2013 to
August 2015
- Member on Departmental Committee of Kakatiya University

WORKSHOPS/CONFERENCES ORGANIZED

1. National Conference on Applications of Mathematics in Engineering and Industry from
26th – 28th March, 2013
2. National Workshop on Graph Theory and Statistics for PG Teachers and Students of
Affiliated Colleges of Kakatiya University from 28th – 29th February, 2012

CONFERENCES ATTENDED & PRESENTED PAPERS

1. International Conference on Mathematical Sciences and Applications(ICMSA-2019) organized by Department of Mathematics, School of Technology, GITAM(Deemed to be University), Hyderabad from 9th -11th August, 2019
2. International Conference on Science Engineering and Technology(ICSET-2K19) organized by Amalapuram Institute of Management Sciences and College of Engineering, Mummidivaram, Andhra Pradesh from 26th – 27th July 2019
3. 106th Indian Science Congress held at Lovely Professional University, Phagwara, Jalandhar from January 3 to 7, 2019
4. National Conference on Recent Advances in Mathematics & XXVII Congress of APTSMS, Department of Mathematics, Maris Stella College, Vijayawada, 08th -10th December, 2018.
5. International Conference on Science, Computers, Technology and Engineering(ICSCTE-2018), organized by Shree Velagapudi Ramakrishna Memorial College, Nagaram, Guntur from 26th – 27th October 2018
6. Two Day National Workshop on Linear Algebra, Real Analysis and Algebra, Department of Mathematics, Kakatiya University, Warangal, 28th -29th September, 2018.
7. 2nd International Conference on Contemporary Engineering and Technology, Potti Sriramulu Chalavadi Mallikarjuna Rao College of Engineering and Technology, Vijayawada, 02-03 April, 2018.
8. International Conference on Pure and Applied Mathematics, Sri Chandrashekharendra Saraswathi Viswa Mahavidyalaya(SCSVMV) University, Kanchipuram, 19th-20th February, 2018.
9. National Workshop on Design and Analysis of Algorithms, Department of Computer Science, Kakatiya University, Warangal, 29th -30th December, 2017.
10. National Conference on Harmony with Nature in Context of Environmental Issues and Challenges, Kakatiya University, Warangal, 21st-23rd December, 2017.
11. National Conference on Emerging Research Trends in Pure and Applied Mathematics held at Sri Padmavathi Mahila Viswa Vidyalayam, Tirupati from 29th – 30th August, 2017

12. XXVI Congress of APSMS & National Conference on Recent Advances in Mathematics from 11th – 13th August, 2017 by the Department of Mathematics, Kakatiya University, Warangal
13. International workshop and conference on Analysis and Applied mathematics held at NIT, Tiruchirapalli, 6th – 10th June, 2016
14. National Seminar on Recent Advances in Mathematical Sciences held at Andhra Loyola College, Vijayawada on 12th February, 2016
15. National Conference on Recent Trends in Computer Science & Applications and Computational Mathematics held at Indira College of Commerce and Science, Pune from 21st – 22nd December, 2012
16. XXI Congress and National Conference on Applications of Mathematics on Engineering, Physical and Life Sciences held at Sri Venkateswara University, Tirupati from 7th – 9th December, 2012
17. National Conference on Geometry, Algebra, Logic and Number Theory, Applications held at Department of Mathematics, Tumkur University, Tumkur on 06 – 12 – 2012
18. National Seminar on Mathematical Modeling in Science and Technology held at The Technological Institute of Textile and Sciences, Bhiwani on 18 – 08 – 2012
19. AP Science Congress held at Acharya Nagarjuna University, Guntur from 14th – 16th November, 2012
20. The 31st Annual Convention of ISPS & International Conference on Statistics, Probability and Related Areas held at Cochin University of Science and Technology, Cochin from 19th – 22nd December, 2011
21. The National Conference on Recent Developments in statistics held at Gulbarga University, Gulbarga from 8th – 9th September, 2011
22. The 5th National conference on Applicable Mathematics in wave mechanics and vibrations (WMVC-2010), held at Department of Mathematics, Kakatiya University, 13th – 15th March, 2010

POSTER PRESENTATIONS

1. National Conference on Harmony with Nature in Context of Environmental Issues and Challenges, organized by Department of Zoology, Kakatiya University from 21st-23rd December, 2017

ORIENTATION COURSES ATTENDED

1. Orientation Course at Academic Staff College, Osmania University, Hyderabad from 25-08-2006 to 22-08-2006

REFRESHER COURSES ATTENDED

1. Refresher Course in Mathematics and Statistics at Academic Staff College, Osmania University, Hyderabad from 07-12-2010 to 29-12-2010

SHORT TERM COURSES ATTENDED

1. Faculty Development Programme on Developing Teaching Competencies in Teachers of Higher Education held at NIT, Warangal from 13-05-2017 to 19-05-2017

LIST OF PUBLICATIONS

1. G. Saritha, M. Tirumala Devi and **T. Sumathi Uma Maheswari**, Availability measures for 4-component system using Markov process, *International journal of advanced trends in computer science and engineering*, 2278-3091, Scopus, 340-344, Feb 2021.
2. **T. Sumathi Uma Maheswari** and M. Tirumala Devi, Reliability analysis of m-modular redundancy system using markovian technique, *Journal of Xian University of Architecture and Technology*, 1006-7930, Scopus, 2725-2728, 2020.
3. G.Saritha, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability model for 4-modular and 5-modular redundancy system by using markov technique, *Advances in Intelligent Systems and Computing*, Springer Link, pp:329-338, April 2020
4. A.Sathyanarayana, **T.Sumathi Uma Maheswari**, M.Tirumala Devi, Reliability analysis over I - Section of beam due to uniform distribution of load, *International Journal Performability Engineering*, Vol 16, No.3, pp:333-341, March 2020
5. **T.Sumathi Uma Maheswari**, M.Tirumala Devi, Reliability analysis of m-modular redundancy system using markovian technique, *Journal of Xian University of Architecture and Technology*, ISSN No.1006-7930, Vol XII, iss v, pp:2725-2728, 2020
6. A.Sathyanarayana, **T.Sumathi Uma Maheswari**, M.Tirumala Devi, Reliability of simply supported rectangular beam under uniformly distributed load, *Journal of Xian University of Architecture and Technology*, ISSN No.1006-7930, Vol XII, iss V, pp:2678-2684, 2020

7. K.Sandhya Rani, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability estimation for n independent stresses based on exponential and pareto distribution, *Journal of Xian University of Architecture and Technology*, ISSN No.1006-7930, Vol XII, iss v, pp:2627-2634, 2020
8. K.Sandhya Rani, P.Ashok, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability estimation of time dependent stress strength system for different distributions, *International Journal of Advanced Science and Technology*, ISSN No.2005-4238, Vol 29, No.3, pp:6571-6577, 2020
9. **T.Sumathi Uma Maheswari**, M.Tirumala Devi, Reliability analysis of resultant stress for unsymmetrical columns for stress follow exponential distribution, *International Journal of Engineering and Advanced Technology*, ISSN No.2249-8958, Vol. 8, iss 6S3, September 2019
10. **T.Sumathi Uma Maheswari**, M.Tirumala Devi, Research on stress strength model under random repeated cycles, *International Journal of Innovative Technology and Exploring Engineering*, ISSN No.2278-3075, Vol 8, July 2019
11. P.Ashok, N.Swathi, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability of time dependent stress strength system for finite mixture of exponential and pareto distribution under different cycles, *Journal of Physics- Conference Series*, 2019
12. P.Ashok, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability of a cascade system of type($X < Y < Z$) for pareto and weibull distributions, *AIP Conference Proceedings*, 2019
13. **T.Sumathi Uma Maheswari**, J.Saritha, M.Tirumala Devi, Reliability Analysis of n component system using markovian model, *Journal of Engineering Technology and Innovative Research*, ISSN No.2349-5162, Vol 6, iss 6, pp:296-299, 2019
14. P.Hari Prasad, **T.Sumathi Uma Maheswari**, J.Shirisha, Reliability analysis of symmetrical columns with eccentric loading from lindley distribution, *Communications in Mathematics and Statistics*, ISSN No.2194-6701, Springer Links, May 2019
15. P.Ashok, N.Swathi, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability of multi component system using pareto distribution, *International Journal of Mathematics Trends and Technology*, ISSN No.2231-5373, Vol 64, No.2, 2018
16. P.Hari Prasad, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability analysis of structural beam section using first order reliability method, *International Journal of Scientific Research in Science and Technology*, ISSN No.2395-6011, Vol 4, iss 5, March 2018
17. P.Ashok, N.Swathi, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability of a multi component system using strength and stress mixture of two exponential and lindley distribution, *International Journal of Pure and Applied Mathematics*, ISSN No.1314-3195, Vol 119, No.15, pp: 1357-1367, 2018
18. **T.Sumathi Uma Maheswari**, Estimation of reliability of time dependent stress strength model for finite number of cycles, *Global Journal of Engineering Science and Research Management*, ISSN No.2349-4506, June 2017
19. P.Ashok, N.Swathi, M.Tirumala Devi, **T.Sumathi Uma Maheswari**, Reliability of time dependent stress strength system which follow different distributions when the number of cycles follows binomial distribution, *International Journal of Mathematical Archieve*, 8(11), ISSN No.2229-5046, pp:213-217, 2017
20. **T.Sumathi Uma Maheswari**, N.Swathi, M.Tirumala Devi, P.Ashok, Reliability analysis of time dependent stress strength system when the number of cycles follows binomial

- distribution, *International Journal of Statistics and Systems*, ISSN No.0973-2675, Vol 12, pp: 575-583, Research India Publications, 2017
21. M.Tirumala Devi, **T.Sumathi UmaMaheswari**, N.Swathi, Cascade system reliability with stress & strength follow lindley distribution, *International Journal Engineering Research & Technology*, Volume 5, Issue 9, ISSN 2278-0181, September -2016
 22. P.Hari Prasad, **T.Sumathi UmaMaheswari**, Reliability analysis of the sectional beams due to distribution of shearing stress, *International journal of Engineering and science*, Vol. 4, issue 6, April 2016
 23. N.Swathi, **T.S.Uma Maheswari**, M.Tirumala Devi, Reliability model of time dependent stress strength system, *Special Issue on Computational Science, Mathematics and Biology, JCSME-SCSMB-16*, ISSN-2349-8439, March-2016
 24. N.Swathi, **T.Sumathi Uma Maheswari**, Reliability analysis of a redundant cascade system by using markovian approach, *Journal of applied mathematics and physics*, 3, 911-920, July 2015
 25. N.Swathi, **T.Sumati Uma Maheswari**, Reliability of time dependent stress strength using a finite mixture of exponential distribution, *International Journal of Mathematical Sciences*, Vol. 34, Issue 2, pp:1612-1620, July 2014
 26. N.Swathi, **T.Sumathi Uma Maheswari**, Reliability analysis of time dependent stress-strength system when the number of cycles follow binomial distribution, *International Journal of Statistika and Matematika*, volume 10, Issue 2, pp 16- 30, 2014
 27. N.Swathi, **T.Sumathi Uma Maheswari**, Reliability of time dependent stress strength system for finite mixture model for different cycles, *International Journal of Mathematical Archive- 5(2)*, pp 5-9, 2014
 28. **T.Sumathi umamaheswari**, K.Sandhya, Reliability of a multi component system under repeated attacks, *IAPQR Transactions*, Vol. 39, No. 1, pp:13-27, 2014
 29. **T.Sumathi UmaMaheswari**, N.Swathi, Cascade reliability of stress- strength system when strength follows mixed exponential distribution, *IOSR journal of Mathematics*, Vol. 4, issue 5, pp: 27-31, Jan-Feb 2013
 30. **T.Sumathi UmaMaheswari**, N.Swathi, Cascade reliability for generalized exponential distribution, *International Journal of Computational Engineering Research (IJCER)*, vol. 3, issue 1, pp: 132-136, Jan 2013.
 31. **T.Sumathi Uma Maheswari**, K.Sandhya, Reliability of a multi component stress strength model with standby system using mixture of two exponential distribution, *Journal of reliability and statistical studies*, Vol. 6, Issue 2, pp:105-113, 2013
 32. **T.Sumathi Uma Maheswari**, K.Sandhya, Estimation of stress- strength reliability model using finite mixture of exponential distribution, *International Journal of Computational Engineering Research*, Vol.3, Issue 11, pp:39-46, 2013
 33. P.Hari Prasad, **T. Sumathi Uma Maheswari**, Reliability analysis of a beam when shearing stresses acted on if stress follow pareto distribution, *Proceedings of the National conference in Computer science and Application and Computational Mathematics*, Indira college of Commerce and Science, Pune, December 21-22 , 2012
 34. N.Swathi, **T.Sumathi Uma Maheswari**, Reliability of time dependent stress- strength model for type- I smallest extreme value distributed stress and weibull distributed strength, *Proceedings of the National conference in Computer science and Application and Computational Mathematics*, Indira college of Commerce and Science, Pune, December 21-22 , 2012,

35. **T.Sumathi Uma Maheswari**, N.Swathi, Reliability of stress- strength system when stress follows mixture of exponential distribution, *Proceedings of the National conference in Computer science and Application and Computational Mathematics*, Indira college of Commerce and Science, Pune, December 21-22 , 2012
36. **T.Sumathi Uma Maheswari**, P.Hari Prasad, Reliability computations for distribution of shear stresses over the beam using weibull distribution, *Proceedings of National conference on Geometry, Algebra, Logic and Number theory, Applications*, Tumkur University,Tumkur, Karnataka, December 06,2012
37. **T.Sumathi Uma Maheswari**, N.Swathi, Cascade reliability when Stress follows mixed exponential distribution, *Proceedings of National conference on Geometry, Algebra, Logic and Number theory, Applications*, Tumkur University,Tumkur, Karnataka, December 06,2012
38. M.Tirumala Devi, K.Sandhya, **T.Sumathi Uma Maheswari**, Reliability of a system with m-stresses and n-strengths, *OPSEARCH Springer* , 49(4): 463-481, Oct- Dec, 2012
39. N.Swathi, **T.Sumathi Uma Maheswari**, Reliability of Time dependent stress- strength system for various distributions, *IOSR journal of Mathematics*, Vol 3, issue 6, pp: 01-07, Sep-Oct, 2012
40. N.Swathi, **T.Sumathi Uma Maheswari**, M.Tirumala Devi, K.Sandhya, P.Hari Prasad, Reliability of time dependent system when stress and strength follow extreme value distribution, *Proceedings of National seminar on Mathematical modeling in Science and Technology*, TheTechnological institute of Textile and Sciences, Bhiwani, Haryana, August 18, 2012
41. P.Hari Prasad, **T.S Uma Maheswari**, M.Tirumala Devi, N.Swathi, K.Sandhya, Reliability Computations for shearing stress in Beams, *Proceedings of the International Conference on Mathematical modeling and applied soft computing*, July 11-13, 2012.
42. N.Swathi, **T.S Uma Maheswari**, M.Tirumala Devi, K.Sandhya, P.Hari Prasad, Reliability of Time dependent system when stress and strength follow Pareto distribution, *Proceedings of the International Conference on Mathematical modeling and applied soft computing*, July 11-13, 2012.
43. M.Tirumala Devi, **T.S. Uma Maheswari**, K.Sandhya, N.Swathi, P.Hari Prasad, Reliability of a cascade system with Extreme value distributed stress and strength, *Proceedings of the International Conference on Mathematical modeling and applied soft computing*, July 11-13, 2012.
44. N.Swathi, **T.Sumathi Uma Maheswari**, M.Tirumala Devi, Reliability of time dependent stress and strength for deterministic and random cycles, *CiiT International Journal of Programmable Device Circuits and Systems*, vol. 4, No. 2, February 2012.
45. K.Sandhya, M.Tirumala Devi, **T.S.Uma Maheswari**, Reliability of n- cascade system under stress attenuation with extreme value distributed stress and weibull strength, *Proceedings of the International Conference on Mathematics in Engineering and Business Management*, March 9-10, 2012.
46. M.Tirumala Devi, K.Sandhya, **T.S.Uma Maheswari**, N.Swathi, Reliability of a Cascade system with stress and strength follow Pareto distribution, *CiiT International Journal of Programmable Device Circuits and Systems*, vol. 4, No. 2, February 2012.
47. M.Tirumala Devi, K.Sandhya, **T.S.Uma Maheswari**, Reliability of n-Cascade system when stress and strength follow extreme value distribution, *CiiT International Journal of Software Engineering and Technology*, 17thDecember, 2011.

48. Zeenath Farheen, **T.S.Uma Maheswari**, M.Tirumala Devi, Post optimal analysis for transportation problem, *International Journal of Agricult.Stat Sci.* Vol.5 No.2, 2009.
49. Zeenath Farheen, **T.S.Uma Maheswari**, M.Tirumala Devi, Structural changes in a linear programming problem of a post optimal solution, *International Journal of applied Mathematical Analysis and Applications*, Vol.3, No.2, pp 167-171, July-Dec 2008.
50. Zeenath Farheen, **T.S.Uma Maheswari**, M.Tirumala Devi, Post Optimal analysis for non linear programming problems using wolf's modified simplex method, *International Journal of Logic Based Intelligent Systems*, Vol.2, No.2, December 2008
51. **T.S.Uma Maheswari** et al, The Reliability of a Cascade system with Exponential strength and Gamma stress distribution. *Assam Statistical Review*, Vol.6, 2000.
52. **T.S.Uma Maheswari** et al, Reliability of single stress under n-strengths of life distribution, *Micro Electron Reliability*, Vol. 34, No. 3, pp: 569-572, Pergoman Press, OXFORD, 1994.
53. **T.S.Uma Maheswari** et al, Reliability of a cascade system with normal stress and exponential strength, *Micro Electron Reliability*, Vol. 33, No.7, pp: 927-936, Pergamon Press, OXFORD, 1993
54. **T.S.Uma Maheswari** et al, Reliability comparison of an n-cascade system with the addition of 'n' strength systems, *Micro Electron Reliability*, Vol 33, No.4, pp 477-479, Pergoman Press, OXPORD, 1993
55. **T.S.Uma Maheswari** et al, Reliability of single strength under n-stresses, *Micro Electron Reliability*, Vol.32, No. 10, pp: 1475-1478. Pergamon Press, OXFORD, 1992

ACADEMIC ASSOCIATION

1. A life member in Andhra Pradesh Society for Mathematical Sciences, Osmania University, Hyderabad
2. A life member in The Indian Science Congress Association, Kolkata
3. Member in Departmental Research Committee