

List of Publication

Bioinformatics

1. S. Chatterjee; Ananya Das; “An Ensemble Algorithm Using Quantum Evolutionary Optimisation of Iterative Type-II Fuzzy Rule-Based System and Staged Pegasos Quantum Support Vector Classifier for Diagnosis of Breast Cancer” accepted for publication in Soft Computing, Springer, Impact Factor: 3.643.
2. S. Chatterjee; Ananya Das; “An ensemble algorithm integrating consensus-clustering with feature weighting based ranking and probabilistic fuzzy logic-multilayer perceptron classifier for diagnosis and staging of breast cancer using heterogeneous datasets”, Applied Intelligence, Springer, <https://doi.org/10.1007/s10489-022-04157-0> , SCI, Impact Factor 5.086.
3. S. Chatterjee; Ananya Das; “A Novel Systematic Approach to Diagnose Brain Tumor Using Integrated Type-II Fuzzy Logic and ANFIS (Adaptive Neuro Fuzzy Inference System) Model”, accepted for publication in Soft Computing, Springer, Vol. 24, 2020, Page 11731–11754; Impact Factor: 3.643.

Software Dependability Analysis in Early Phase of Development

1. Chatterjee, S.; Saha, Deepjyoti; “Software dependability analysis under Neutrosophic environment using optimized Elman recurrent neural network-based classification algorithm and Mahalanobis distance-based ranking algorithm”, Annals of Operation Research, Springer; <https://doi.org/10.1007/s10479-024-05888-8>, Impact Factor: 4.8.

Software Reliability Analysis in Early Phase of Development

1. Chatterjee, S.; and Maji, Bappa; “A Mahalanobis distance based algorithm for assigning rank to the predicted fault prone software modules”, Applied Soft Computing, Elsevier, Vol. 70, 2018, Page: 764-772, SCIE, Impact Factor: 6.725.
2. Chatterjee, S.; Maji, Bappa; and Pham, H; “A fuzzy rule base generation algorithm in interval type-2 fuzzy logic system for fault prediction in the early phase of software development”, Journal of Experimental & Theoretical Artificial Intelligence, Taylor & Francis, Vol. 31, 2019, Page 369-391, SCIE, Impact Factor: 2.34.
3. Chatterjee, S.; and Maji, Bappa; “Application of Bayesian belief network and interval type-2 fuzzy inference system to fault prediction during early phase of software development process”, Applied Intelligence, Vol. 48, No. 8, 2018, page 2214–2228, Springer, SCI, Impact Factor: 5.086.
4. Chatterjee, S.; and Maji, Bappa; “A new fuzzy rule based algorithm for estimating software faults in early phase of development”, Soft Computing, Springer, Vol. 20 (10), 2016, Page 4023–4035, SCIE, Impact Factor: 3.643.
5. Chatterjee, S.; Nigam, S.; Roy, Arunava; “Software fault prediction using neuro-fuzzy network and evolutionary learning approach”, Neural Computing and Applications, Springer, Vol. 28, 2017, Page 1221-1231, SCIE, Impact Factor: 5.606.

Software Reliability

1. Chatterjee, S.; Saha, Deepjyoti; Sharma, Akhilesh and Verma, Yogesh; "Reliability and optimal release time analysis for multi up-gradation software with imperfect debugging and varied testing coverage under the effect of random field environments", *Annals of Operation Research*, Springer; <https://doi.org/10.1007/s10479-021-04258-y>, Impact Factor: 4.
2. Chatterjee, S.; Saha, Deepjyoti and Sharma, Akhilesh; "Multi-upgradation software reliability growth model with dependency of faults under change point and imperfect debugging", *Journal of Software: Evolution and Process*, John Wiley & Sons, <https://doi.org/10.1002/smr.2344>, Impact Factor: 1.972.
3. Chatterjee, S.; Bhagyashree Chaudhury and Chandan Bhar; "Optimal Release Time Determination via Fuzzy Goal Programming Approach for SDE Based Software Reliability Growth Model", *Soft Computing*, Vol. 25, 2021, Page: 3545–3564, Springer, Impact Factor: 3.643.
4. Chatterjee, S. ; Bhagyashree Chaudhury and Chandan Bhar; "Optimal Release Time Determination in Intuitionistic Fuzzy Environment Involving Randomized Cost Budget for SDE-Based Software Reliability Growth Model", *Arabian Journal for Science and Engineering*, Springer, Vol. 45, 2020, Page 2721–2741, SCIE, Impact Factor: 2.205.
5. Chatterjee, S.; and Shukla, Ankur; "A Unified Approach of Testing Coverage based Software Reliability Growth Modelling with Fault Detection Probability, Imperfect Debugging and Change Point", *Journal of Software: Evolution and Process*, John Wiley & Sons, Vol. 31(3), 2019; SCIE, Impact Factor: 1.972.
6. Chatterjee, S.; Singh, J.B.; Roy, Arunava and Shukla, Ankur; "NHPP Based Software Reliability Growth Modeling and Optimal Release Policy for N-Version Programming System with Increasing Fault Detection Rate under Imperfect Debugging" *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, Springer, Vol. 90; 2020; Page 11-26; SCIE, Impact Factor: 1.544.
7. Chatterjee, S.; Shukla, Ankur; and Pham, H; "Modeling and Analysis of Software Fault Detectability and Removability with Time Variant Fault Exposure Ratio, Fault Removal Efficiency and Change Point", *Proceedings of the Institution of Mechanical Engineers Part O: Journal of Risk and Reliability*, SAGE, SCIE, Volume 233(2), 2018, page 246-258, Impact Factor: 2.021.
8. Chatterjee, S.; and Shukla, Ankur; "An Ideal Software Release Policy for An Improved Software Reliability Growth Model Incorporating Imperfect Debugging with Fault Removal Efficiency and Change Point"; *Asia Pacific Journal of Operational Research*, World Scientific, Vol. 34, No. 3 (2017) 1740017 (21 pages), SCIE, Impact Factor: 1.109.
9. Chatterjee, S.; and Shukla, Ankur; "Change point–based software reliability model under imperfect debugging with revised concept of fault dependency", *Proceedings of the Institution of Mechanical Engineers Part O: Journal of Risk and Reliability*, SAGE, Vol. 230 (06), 2016, Page 579-597, SCIE, Impact Factor: 1.914.

10. Chatterjee, S.; and Shukla, Ankur; "Modeling and Analysis of Software Fault Detection and Correction Process Through Weibull-Type Fault Reduction Factor, Change Point and Imperfect Debugging"; *Arabian Journal for Science and Engineering*, Springer, Vol. 41 (12), 2016, Page 5009–5025, SCIE, Impact Factor: 2.205.
11. Chatterjee, S.; and Roy, Arunava; "Novel Algorithms for Web Software Fault Prediction", *Quality and Reliability Engineering International*, John Wiley & Sons, Vol. 31, 2015, Page 1517–1535, SCIE, Impact Factor: 2.885.
12. Chatterjee, S.; and Roy, Arunava; "Web software fault prediction under fuzzy environment using MODULO-M multivariate overlapping fuzzy clustering algorithm and newly proposed revised prediction algorithm", *Applied Soft Computing*, Elsevier, Vol. 14, 2014, Page 372-396, SCIE, Impact Factor: 6.725.
13. Chatterjee, S.; Singh, J.B.; Roy, Arunava; "A structure-based software reliability allocation using fuzzy analytic hierarchy process", *International Journal of System Science*, Taylor & Francis, Vol. 36, 2013, Page 513-525, SCIE, Impact Factor: 2.469.
14. Chatterjee, S.; Nigam, S.; Singh, J.B. and Upadhyaya, L.N.; "Effect of change point and imperfect debugging in software reliability and its optimal release policy", *Mathematical & Computer Modelling of Dynamical Systems: Methods, Tools and Applications in Engineering and Related Sciences*, Taylor & Francis, Volume 18, Issue 5, 2012, Page 539-551, SCIE, Impact Factor: 0.862.
15. Chatterjee, S.; Nigam, S.; Singh, J.B. and Upadhyaya, L.N.; "Software Faults Predication Using NARX Network", *Applied Intelligence*, Springer, Vol. 37, Issue 1, 2012, Page 121-129, SCI, Impact Factor: 5.086.
16. Chatterjee, S.; Nigam, S.; Singh, J.B. and Upadhyaya, L.N.; "Transfer Function Modeling in Software Reliability" *Computing*, Springer, Vol. 92, No.1, 2011, Page 33-48, SCI, Impact Factor: 2.044.
17. Chatterjee, S; Alam, S.S.; and Misra, R.B.; "Sequential Bayesian Technique: An Alternative Approach for Software Reliability Estimation"; *Sadhana*, Springer, Vol. 34, Part 2, April 2009, Page 235-241, SCIE, Impact Factor: 1.188.
18. Chatterjee, S; Misra, R.B. and Alam, S.S.; "N-Version Programming with Imperfect Debugging"; *Computer and Electrical Engineering-An International Journal*; ELSEVIER, Vol. 30; No. 6; 2004; Page 453-463, SCIE, Impact Factor: 3.818.
19. Chatterjee, S; Misra, R.B. and Alam, S.S.; "A Generalized Shock Model for Software Reliability"; *Computer and Electrical Engineering-An International Journal*, ELSEVIER, Vol. 24; 1998, Page 363-368, SCIE, Impact Factor: 3.818.
20. Chatterjee, S; Misra, R.B. and Alam, S., S.; "Joint Effect of Test Effort and Learning Factor on Software Reliability and Optimal Release Policy"; *International Journal of System Science*; Taylor & Francis; Vol. 8; No. 4; 1997; Page 391-396, SCIE, Impact Factor: 2.281.
21. Chatterjee, S; Misra, R.B. and Alam, S.,S.; "Prediction of Software Reliability Using an Auto Regressive Process"; *International Journal of System Science*; Taylor & Francis, Vol. 28; No. 2, 1997; Page 205-211, SCIE, Impact Factor: 2.281.

Other Journal Publication (Bioinformatics)

1. Chatterjee, S.; and Swarnaker, S; "Protein-Protein Interaction Prediction using Extended Natural Vector Representation of Proteins and Comparison with Natural Vector Method"; Design optimization using artificial intelligence; Book Chapter; CRC Press Taylor & Francis, 2024.

Other Journal Publication (Software Reliability)

1. Chatterjee, S.; Saha, Deepjyoti; Sharma, Akhilesh and Verma, Yogesh, "Early Phase Software Dependability Analysis: A Neutrosophic Inference System-based Approach", accepted in International Journal of Reliability, Quality and Safety Engineering, Scopus Indexed, (World Scientific); <https://doi.org/10.1142/S0218539324500529>.
2. Chatterjee, S.; and Saha, Deepjyoti; "IT2F-SEDNN: An Interval Type-2 Fuzzy Logic-based Stacked Ensemble Deep Learning Approach for Early Phase Software Dependability Analysis", Innovations in Systems and Software Engineering, Springer; <https://doi.org/10.1007/s11334-024-00563-4>.
3. Chatterjee, S.; Saha, Deepjyoti; Sharma, Akhilesh and Verma, Yogesh; "Software Reliability Analysis Using Nonlinear Transfer Function"; International Journal of Reliability, Quality and Safety Engineering, Vol. 29, No. 6, 2022.
4. S. Chatterjee; Bhagyashree Chaudhury, Chandan Bhar and Ankur Shukla; "Optimal Release Time Determination Using FMOCCP Involving Randomized Cost Budget for FSDE Based Software Reliability Growth Model", accepted for publication in International Journal of Reliability, Quality & Safety Engineering, World Scientific, Scopus Indexed.
5. Chatterjee, S.; and Roy, Arunava; "Transfer Function Modeling In Web Software Fault Prediction Implementing Pre-Whitening Technique", International Journal of Reliability, Quality & Safety Engineering, World Scientific, Vol.21 (05), 2014, Page 1-18, Scopus Indexed.
6. Chatterjee, S.; and Roy, Arunava; "APPLICATION OF NON-DECIMATED WAVELET PACKET TRANSFER FUNCTION IN WEB ERROR PREDICTION", International Journal of Systems Assurance Engineering and Management, Springer, Vol. 6, Page 407-433, Scopus Indexed.
7. Chatterjee, S.; Singh, J.B.; "A NHPP based software reliability model and optimal release policy with Logistic-Exponential test coverage under imperfect debugging", International Journal of Systems Assurance Engineering and Management, Springer, Vol. 5, 2014, Page 399-406, Scopus Indexed.
8. Chatterjee, S.; Singh, J.B.; Nigam, S. and Upadhyaya, L.N.; "A Study of a Single Multiplicative Neuron (SMN) Model for Software Reliability Prediction", Innovations in Intelligent Machines-3 Contemporary Achievements in Intelligent Systems, Book Edited by Springer-Verlag, 2012, Page 89-103.
9. Chatterjee, S.; Nigam, S.; Singh, J.B. and Upadhyaya, L.N.; "An Improved Additive Model for Reliability Analysis of Software with Modular Structure", Journal of Applied Mathematics and Informatics, The Korean Society for Computational and Applied Mathematics, Vol. 30(2012), No. 3 - 4, Page 489 - 498.
10. Chatterjee, S.; Singh, J.B.; Nigam, S. and Upadhyaya, L.N.; "Best Subset Selection of ARMA and ARIMA Models for Software Reliability Estimation" International Journal of Modeling and Simulation, Acta Press, Vol. 31, No. 2, 2011, 120-125, Scopus Indexed.

11. Chatterjee, S.; Nigam, S.; Singh, J.B. and Upadhyaya, L.N.; "Application of Fuzzy Time Series in Prediction of Time Between Failures & Faults in Software Reliability Assessment" Fuzzy Information and Engineering, Springer, Vol. 3, 2011, Page 293-309.
12. Chatterjee, S.; Singh, J.B.; Nigam, S. and Upadhyaya, L.N.; "Prediction of Software Reliability Using Fuzzy ARIMA Model" Journal of Fuzzy Mathematics, International Fuzzy Mathematics Institute, USA, Vol. 19, No.2, 2011, Page 495-502.
13. Chatterjee, S.; Upadhyaya, L.N.; Singh, J.B. and Nigam, S.; "Combined Effect of Fault Detection and Fault Introduction Rate on Software Reliability Modeling" Statistics in Transition-New Series, Vol. 10, No. 3. December 2009, Page 457-464.
14. Chatterjee, S., Das; S.K., Shekhar, A, and Dasgupta, S.; "A Realistic Approach for Software Reliability Growth Modeling with Imperfect Debugging and Multiple Failures" Statistics in Transition-New Series, vol. 9, No. 3, December 2008, Page 571-586.
15. Chatterjee, S; Misra, R.B. and Alam, S.,S.; "Symbolic Reliability Evaluation of software with Network Structure"; presented in International Conference APORS-2003, New Delhi, India, published in OPSEARCH, Springer, Vol. 41, No. 3, 2004.
16. Chatterjee, S; Alam, S.,S. and Misra, R.B.; "Analysis of Software Reliability Using Fuzzy Test Effort"; Journal of Fuzzy Mathematics; International Fuzzy Mathematics Institute, USA, Vol. 6; No. 1, 1998, Page 395-403.
17. Chatterjee, S; Alam, S.,S.; and Misra, R.B.; "Prediction of Software Reliability Using Fuzzy Time Series Approach"; Journal of Fuzzy Mathematics; International Fuzzy Mathematics Institute, USA, Vol. 6; No. 2, 1998, Page 373-380.

Sampling

1. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2013): "A General Procedure of Estimating the Population Variance when Coefficient of Variation of an Auxiliary Variable is known in Sample Surveys"; Quality & Quantity (Springer), 47, 4, 2331-2339, SCIE: 1.072.
2. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2013): "A Generalized Family of Transformed Ratio-Product Estimators for Variance in Sample Surveys"; Communication in Statistics – Theory and Methods (Taylor & Francis), 42, 10, 1839-1850, SCIE, Impact Factor: 0.353.
3. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2014): "A Class of Estimators of Population Variance using Auxiliary Information in Sample Surveys"; Communication in Statistics – Theory and Methods (Taylor & Francis), 43, 6, 2014, 1248-1260, SCIE, Impact Factor: 0.353.
4. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2014): "Improved Ratio and Product Exponential type Estimators for Finite Population Mean in Stratified Random Sampling"; Communications in Statistics: Theory & Methods (Taylor & Francis), 43, 15, 3269-3285, SCIE, Impact Factor: 0.353.

Other Journal Publication (Sampling)

1. Upadhyaya, L.N., Singh, H.P., Chatterjee, S. and Yadav, R. (2011): A Generalized Family of Transformed Ratio-Product Estimators of Finite Population Mean in Sample Surveys. Model Assisted Statistics and Applications, 6, 2, 137-150, Scopus Indexed.
2. Upadhyaya, L.N., Singh, H.P., Chatterjee, S. and Yadav, R. (2011): Improved Ratio and Product Exponential type Estimators for Finite Population Mean in Sample Surveys. Journal of Statistical Theory and Practice, 5, 2, 285-302, Scopus Indexed.
3. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2011): Improved Separate Ratio Exponential Estimator for Population Mean using Auxiliary Information. Statistics in Transition-new series, 12, 2, 401-412.
4. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2012): Almost Unbiased Ratio and Product Type Exponential Estimators. Statistics in Transition, 13, 3, 537-550.
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6. Yadav, R., Upadhyaya, L.N., Singh, H.P. and Chatterjee, S. (2013): A Chain Ratio Exponential type Estimators in Two-Phase Sampling using Auxiliary Information. Statistica, 73, 2, 221-234.

Conference Publication

1. Deepjyoti Saha and Subhashis Chatterjee (2022, November), "Optimized decision tree-based early phase software dependability analysis in uncertain environment", International Interdisciplinary Conference on Mathematics, Engineering and Science (MESIICON) (pp. 1-6), Scopus Indexed (IEEE), 2022.
2. A. Das and S. Chatterjee; "Cancer Classification based on an Integrated Clustering and Classification Model using Gene Expression" accepted and presented in International Conference on Artificial Intelligence and Sustainable Engineering (AISE-2020), NIT Goa, January 2021. Published in "Lecture Notes in Electrical Engineering" book series.
3. A. Das and S. Chatterjee; "A Novel Algorithm to Detect Brain Tumor using Staged Type-II Fuzzy Classifier" presented and published in 2020 IEEE Symposium Series on Computational Intelligence (SSCI), Canberra, Australia, December 2020.
4. Chatterjee, S and Shukla, Ankur, Enhancing the Predictive Capability of Testing Effort Dependent Software Reliability Model through Imperfect Debugging and Change Point, Proceeding of IMBIC-2014, Kolkata, India., Page 224-234.
5. Roy, A. and Chatterjee, S, A Structure Based Multi-layered Web Application Using Fuzzy Analytic Hierarchy Process, Proceeding of ETES-2014, Assasol Engineering College, W.B., Page 57-68, TMH Publication.
6. Roy, A. and Chatterjee, S, 2013, 'An Innovative Approach for Web Software Reliability Analysis', Proceeding of Recent Advances in Mathematics and its Applications (RAMA), Page 72-77.

7. Chatterjee, S. , Singh, J.B.; Nigam, S; and Upadhyay, L.N.; “A NHPP Based Software Reliability Growth Model for N-Version Programming System With Increasing Fault Detection Rate Under Imperfect Debugging”, presented in CET 2011, held in Guang Doang Hotel, Shanghai, 28th October 2011 to 31st October 2011, published in IEEE Explore.
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Conference (Presented)

1. Saha, Deepjyoti, Chatterjee, S.; “Adaptive Fuzzy Inference System-based Deep Learning Model for Software Dependability Analysis at its Early Phase of Development”, Computational Techniques and Applications Conference (CTAC2024); Monash University, Australia; November 2024.
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3. Shukla, Ankur; Chatterjee, Subhashis and Chaudhuri, Bhagyashree; “Performance Analysis of Change Point based Software Reliability Growth Model Incorporating Both Fault Reduction Factor and Test Coverage”, ISSAT International Conference on Reliability and Quality in Design, Chicago, Illinois, USA, 03-05 August 2017.
4. Chatterjee. S and Shukla, Ankur, “Effect of Test Coverage and Change Point on Software Reliability Growth Based on Time Variable Fault Detection Probability”, 7th International Conference on Computer Technology and Development-2015, Singapore, published in Journal of Software.
5. Chatterjee. S and Shukla, Ankur, Software reliability modeling with different type of faults incorporating both imperfect debugging and change point, Proceeding of 4th International Conference on Reliability, Infocom Technologies and Optimization-2015, Amity University, Noida, U.P. published in IEEE Explore.
6. Chatterjee. S and Shukla, Ankur, Enhancing the Predictive Capability of Testing Effort Dependent Software Reliability Model through Imperfect Debugging and Change Point, Proceeding of IMBIC-2014, Kolkata, India., Page 224-234.
7. Roy, A. and Chatterjee. S, “Logic Based Algorithm for Web Software Reliability Analysis and Estimation’, ICAMTCS -2013, Jan. 24-26, Nagercoil, Tamilnadu, India.

8. Chatterjee, S. , Singh, J.B.; Nigam, S; and Upadhyay, L.N.; “ Application of Single multiplicative Neuron Model in Software Reliability”, Presented in International Congress on Productivity, Quality, Reliability, Optimization and Modeling(ICPQROM-2011), Indian Habitat Center, New Delhi, Feb. 2011, Organized by ISI Delhi.
9. Chatterjee, S. and Dasgupta, S.; “An Improved Software Reliability Growth Model with Multiple Failure and Imperfect Debugging”; presented in 37th Annual Convention of Operational Research Society of India (ORSI), held in Indian Institute of Management, Ahmedabad, India, Jan., 2005.
10. Chatterjee, S; Misra, R.B. and Alam, S.S.; “A Sequential Bayesian Approach for Software Reliability Estimation”; presented in International Conference On Stochastic Models, Optimization Techniques and Computer Applications; Dec. 1994; PSG College of Technology, Coimbatore, India.