

Faculty Profile



Dr. H. Mary Henrietta, M. Sc., M.Phil., Ph.D.
Assistant Professor (SG)

HIGHLIGHTS:

- Number of Journal Publications:
- H-Index: 7 (Google Scholar)
- Project Funding Received: -
- Patents Published: -
- Patents Granted: 2

PROFESSIONAL LINKS:

- Scopus ID: 57211461493
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57211461493>
- Google Scholar ID: <https://scholar.google.com/citations?user=hPpx7J4AAAAJ&hl=en>
- Anna University Faculty ID: 2122286
- AICTE Faculty ID: 12710399165
- Anna University Supervisor ID: -
- LinkedIn: https://www.linkedin.com/public-profile/settings?trk=d_flagship3_profile_self_view_public_profile

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 15 years
- Industrial Experience: -

INTERNATIONAL EXPOSURE:

- Acting as a Committee member of 2nd International Conference on Recent Advances in Engineering and Computer Applications organized by LJ University & IFERP during 24th & 25th Jan 2025.
- Acted as the Co-Editor of Recent Innovations in Science and Humanities, Taylor & Francis Proceedings for International Conference on Innovations in Science and Humanities held during 18th & 19th July 2024.
- Acting as a member in Associate Editorial Board in Open Access Journal of Data Science and Artificial Intelligence (OAJDA).
- Editor in Journal of Model Based Research.
- Associate Editor of Indiana Journal of Multidisciplinary Research Journal.
- Acting as a Reviewer for 14 International Journals.

AREA OF SPECIALIZATION:

- Operations Research, Inventory models, Optimization,
- Fuzzy sets
- Coconuts (Cocos Nucifera)
- Nutrition & Human health

PH.D. THESIS “A Quantitative Analysis of an Efficient Optimal Order Quantity Model with Fuzzy based Evaluation for different parameters”

PATENTS PUBLISHED/GRANTED:

- Machine Learning based Stress Detection Device, Indian Design Patent, August 2024.
- Math Teaching Device, Indian Design Patent, October 2024.

COURSES CERTIFIED:

- Completed NPTEL Online Certification on The Joy of Computing using Python during 25th Jul – 14th Oct 2022 (12-week course).
- Completed NPTEL Online Certification on Scientific Computing using MATLAB during 24th Jan – 15th Apr 2022 (12-week course).

ACHIEVEMENTS AND AWARDS:

- Promoted as an Assistant Professor (SG) in 2017 for being the **Department topper** for producing highest results in **Anna University End Semester** in 2015-2016 and 2016-2017.
- Received **Best Academic Excellence award** for the years 2015-2016, 2016-2017 and 2017-2018.

SPECIAL SESSIONS DELIVERED:

- Acted as a **Guest Speaker** for St. Joseph’s University, Nagaland and delivered a lecture (online) on the topic "The Mathematics of Accumulation and Change: Understanding the World through Integrals" on May 11th, 2023.

Journal Publications

1. **H. Mary Henrietta**, AI-Enabled Algorithm for Evaluating the impact of COVID-19 on Food Consumption and Nutrition, Open Access Journal of Data Science & Artificial Intelligence. 2(1): 000140.
2. **H. Mary Henrietta**, K. Kalaiarasi, M. Sumathi, V.N. Jayamani, A. Stanley Raj, An Investigation of Inventory Optimization by using Geometric Programming technique with decagonal fuzzy number representation. Nonlinear Studies. 30(4):1201-1215 (2023).
3. K. Kalaiarasi, **H. Mary Henrietta**, M. Sumathi, A. Stanley Raj, The optimality representation of a finite-life inventory model with exiguous defectives with Hessian matrix approach, Nonlinear Studies. 30(2): 393-398 (2023).
4. **H. Mary Henrietta**, K. Kalaiarasi, M. Sumathi, Optimizing Economic order quantity through Geometric programming with fuzzification of Inventory parameters, Indian Journal of Natural Sciences. 14(79): 58071-58078 (2023).
5. **H. Mary Henrietta**, A Comprehensive Review on human health, promoting the well-being of teaching professionals, International Journal of Environment, Engineering and Education. 5(2): 79-86 (2023).
6. A. Stanley Raj, **H. Mary Henrietta**, J.P. Angelena, Rainfall data classification using Mann-Kendall test statistics associated with Neuro fuzzy technique: A case study of Chennai district, International Journal of Hybrid Intelligent Systems 19:95-109 (2023).

7. K. Kalaiaarasi, **H. Mary Henrietta**, M. Sumathi, Applying Hessian Matrix Techniques to obtain the efficient optimal order quantity using Fuzzy parameters, *Communications in Mathematics and Applications*. 13 (2): 725 - 735 (2022).
8. K. Kalaiaarasi, **H. Mary Henrietta**, M. Sumathi, A. Stanley Raj, The Economic order quantity in a fuzzy environment for a periodic inventory model with variable demand, *Iraqi Journal of Computer Science and Mathematics*. 3(1):102-107 (2022).
9. N. Yusroni, D. Galgotia, Bodhankar H, Tannady, **H. Mary Henrietta**, et.al. A multi-cast policy management process for improved network security with the group-oriented applications, *International Journal of Intelligent Systems and applications in Engineering*. 10(2): 246 -251 (2022).
10. J. Arockia Venice, Kiran Kumar, **H. Mary Henrietta** et al. Artificial Intelligence based robotic system with enhanced information technology, *IEEE Xplore* (2022).
11. **H. Mary Henrietta**, K. Kalaiaarasi, A. Stanley Raj, Coconut Tree (*Cocos Nucifera*) Products: A review of Global cultivation and its benefits, *Journal of Sustainability and Environmental Management*, 1(2):257-264 (2022).
12. **H. Mary Henrietta**, A. Stanley Raj, M. Megavathi, V. Kavinil, B. Giridharan, An Investigation on Dietetics and Nutritional interests using Quantitative analysis in the existing prevalent conditions on COVID-19, *Journal of Human Health Research*, 1(3):15-23 (2021).
13. **H. Mary Henrietta**, Megavathi Mohanraj, Implementation of Hydroponics as a Twin support for Electric Power, *Annals of Romanian Society for Cell Biology*, 25(2):1002-1007 (2021).
14. K. Kalaiaarasi, M. Sumathi, **H. Mary Henrietta**, A. Stanley Raj, Determining the Efficiency of Fuzzy Logic EOQ Inventory Model with Varying Demand in Comparison with Lagrangian and Kuhn-Tucker. *Journal of Model based Research* 1(3):1-12 (2020).
15. K. Kalaiaarasi, M. Sumathi, **H. Mary Henrietta**, Optimizing EOQ using geometric programming with varying fuzzy numbers by applying Python, *Journal of Critical Reviews* 7:596-603 (2020).
16. K. Kalaiaarasi, M. Sumathi, **H. Mary Henrietta**, Optimization of fuzzy inventory EOQ model using Kuhn-tucker method, *Journal of Advanced Research and Dynamical Control Systems* 11(3):595-599 (2019).
17. K. Kalaiaarasi, M. Sumathi, **H. Mary Henrietta**, Optimization of fuzzy inventory model for EOQ using Lagrangian method, *Malaya Journal of Matematik* 7(3):497-501 (2019).
18. Summet S S, Mathan Kumar, Vivek P, Shrinivas P, Vijay M, **H. Mary Henrietta**, The Role of Cloud Computing in Real-Time Big Data Analytics for Smart cities an Infrastructure Automation. *IEEE Xplore*, 15th ICCCNT IEEE Conference. 2024.

Publications as Book Chapters

1. **H. Mary Henrietta**, The Estimation of Optimal order quantity in an Inventory model utilizing Fuzzy logic, *Recent Innovations in Sciences and Humanities: Highlights the state-of-art developments and innovations which impacts science and engineering* 1:81-85 (2025). CRC Press
2. S. Sindu Devi, **H. Mary Henrietta**, K. Ruth Isabels, Analyzing the effectiveness of fuzzy in solving first order differential equations using Laplace Transforms. *Recent Innovations in Sciences and Humanities: Highlights the state-of-art developments and innovations which impacts science and engineering* 1: 93–98 (2025). CRC Press.
3. **H. Mary Henrietta**, Exploring the Evolution and Implications of E-Learning Ecosystems, *Pedagogical Revelations and Emerging Trends*. 1:144-147 CRC Press.
4. **H. Mary Henrietta**, Artificial Intelligence in Agriculture: A Review of Current Applications and Future Trends. *Futuristic Trends in Agriculture Engineering & Food Sciences* Cp 1: 1- 6
5. A. Stanley Raj, **H. Mary Henrietta**, A Robust self-generating ANFIS training algorithm for time series and non-times series intended for non-linear optimization, *Lecture Notes in Networks and Systems*, 647:21-31 (2023). Springer.
6. A. Stanley Raj, **H. Mary Henrietta**, K. Kalaiaarasi, M. Sumathi, Rethinking the limits of optimization Economic Order Quantity (EOQ) using Self generating training model by Adaptive

Manuscripts (Accepted)

1. **H. Mary Henrietta**, Unveiling the Diverse traits and Breeding Techniques of Coconut (*Cocos nucifera* L.), *Advances in Plant Breeding Strategies*, Vol 16 Leaf and Fruit Fiber Crops (Springer).

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

1. AI-enabled Recapitulated Neuro Fuzzy Optimization (RNFO) algorithm for evaluating the food consumption and nutrition during COVID-19 at 3rd IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation organized by IEEE MP Section and AB-IIITM Gwalior on 6th to 8th March 2025.
2. The Estimation of optimal order quantity in an Inventory model utilizing fuzzy logic at the International Conference on Innovations in Science and Humanities (ICISH 2023) organized by the Department of Science and Humanities, **Saveetha Engineering College**, Chennai during 18th - 19th July 2024.
3. An Optimization technique based on predictive analysis for enhanced mattress inventory management at the International Conference on Advanced Technology in Engineering and Management (ICATEM 2024) organized by Saveetha Engineering College & **DE MONTFORT University, Dubai** during 18th – 25th March 2024.
4. A predictive analysis-based optimization strategy for improved mattress inventory management efficiency at the National Symposium on Mathematics and Applications (NSMA 2023) organized by the Department of Mathematics, **Indian Institute of Technology, Madras** on 22nd December 2023.
5. Optimizing Inventory management using Lagrange optimization: Comparing the benefits of crisp and fuzzy values at the International Conference on Innovations in Science and Humanities (ICISH 2023) organized by the Department of Science and Humanities, **Saveetha Engineering College**, Chennai during 19th - 20th April 2023.
6. The Optimality of a finite-life inventory model with exiguous defectives with Hessian matrix approach at the National Conference on Recent Developments in Fractional Calculus and its Applications (RDFCA 2022) organized by the School of Humanities and Education, **SASTRA Deemed to be University, Tanjore** during 18th – 19th November 2022.
7. A Novel proportionate stratified random sampling (PSRS) defuzzification method to determine the economic order quantity at the International conference on Recent developments in Applied Sciences (ICRDAS 2022) organized by the Department of Humanities and Science, **Rajalakshmi Institute of Technology**, Chennai during 15th – 16th July 2022.
8. Applying Hessian Matrix technique for examining the optimality of the cost function using Hexagonal fuzzy numbers at the International Conference on Mathematics Analysis and Applications (ICOMAA 2022) organized by Department of Mathematics, **University of Kalyani**, India during 28th & 29th June 2022.
9. Comparative analysis of the optimal values of a periodic inventory model under distinct fuzzy environment at the International Conference on new ideas in technology and innovations, organized by Institutions innovation council jointly with CSIR-IMMT at **Cauvery College for Women (Autonomous)**, Tiruchirappalli during 24th and 25th February 2022.
10. Analyzation of an undecayed inventory model with constant production rate and obtaining the optimal values at the International Conference on Emerging Trends in Materials, Computing and Communication Technologies organized by **Annai Vailankanni College of Engineering**, Kanyakumari held during 9th and 10th December 2021.
11. An Intuitionistic fuzzy approach for a multi-objective inventory model at the National Conference on Recent Frontiers in Fractional Calculus and its Applications organized by **Vel Tech High Tech Dr. Rangarajan Dr. Sakunthala Engineering College**, Chennai during 7th and 8th March 2021.

12. Rethinking the limits of optimization Economic Order Quantity (EOQ) using Self generating training model by Adaptive Neuro Fuzzy Inference System at the International Conference on Soft Computing and its Engineering Applications (icSoftComp2020) organized by **Smt. Chandaben Mohanbhai Patel Institute of Computer Applications, Charotar University of Science & Technology** (CHARUSAT), Changa, India during 11th and 12th December 2020.
13. Optimization of inventory models under fuzzy environment at the International Conference on Recent trends and technology of Mathematics and Science organized by **Queens College of Arts and Science for Women**, Punalkulam (Affiliated to Bharathidasan University) during 7th and 8th October 2020.
14. Comparative analysis between the varying fuzzy numbers in optimization of an EOQ at the International Conference on Science Technology Engineering and Management, organized by **Jeppiaar Engineering College**, Chennai. (Virtual) on 15th July 2020.
15. A Neutrosophic fuzzy approach in optimization of fuzzy inventory models, International Conference on Innovative Research in Engineering and Technology at the International Conference on Innovative Research in Engineering and Technology organized by **Park College of Engineering and Technology**, Coimbatore. (Virtual) during 21st & 22nd Sept 2020.
16. Economic Order Quantity for Impaired Items Using Cloudy Fuzzy Numbers at the International Conference on Mathematical Sciences organized by **Sathyabama Institute of Science and Technology**, Chennai during 4th to 6th March 2020.
17. Economic Order Quantity Attained for An Inventory Model with Shortages Using Varying Fuzzy Numbers at the International Conference on Mathematical Computer Engineering organized by **Vellore Institute of Technology**, Chennai during 21st & 22nd Feb 2020.
18. Optimization of Fuzzy Inventory Model with Price-Dependent Demand Using Trapezoidal Numbers at the International Conference on Integrated Knowledge towards Enriched Society organized by **Loyola College (Autonomous)**, Chennai during 22nd & 23rd Jan 2020.
19. Inventory Model Optimized to Rectify the shortage by Using Kuhn-Tucker Method at the 1st International Conference on Pure and Applied Mathematics organized by **Idhaya College for Women**, Kumbakonam. (Affiliated to Bharathidasan University) on 11th January 2020.
20. Attended workshop on Teaching Engineering Mathematics via Experiential Learning using MATLAB organized by Saveetha Teaching Learning Centre during 6th May 2022.

PROFESSIONAL MEMBERSHIPS:

- International Indian Statistical Association (IN-00-2412)
- The Indian Mathematical Society (Annual/2021/16)

OTHER DETAILS:

- **Faculty Coordinator** for **MATH CLUB**, Saveetha Engineering College (Autonomous), Chennai.
- **Member of Discipline Committee** for CELANZA & DRESTEIN.