

**Name: Dr. L. Sherly Puspha Annabel**

**Degree:** M.E., Ph.D

**Designation:** Professor and Head

**Experience:** 22 years and 8 months

**Area of Specialization:** Artificial Intelligence, Networking

**Contact (Email id):** hodads@stjosephs.ac.in

**Subjects Handled:**

- Machine Intelligence for Network Sciences
- Optimization for Machine Learning
- Probabilistic Graphical Models
- Design And Analysis of Algorithms
- Data Structures
- Problem Solving and Python Programming
- Computer Architecture
- Principles of Management
- Professional Ethics in Engineering
- Digital Principles and System Design
- Object Oriented Analysis and Design
- Introduction to C Programming

**Publications (Journals & Conferences):**

**International Journals Publications**

- Jetlin, C. P., **Sherly Puspha Annabel, L.**, 2025. PyQDCNN: Pyramid QDCNNet for multi-level brain tumor classification using MRI image. *Biomedical Signal Processing and Control*, 100, 107042 (Annexure I).
- Sam Chandra Bose, Anandh, Laxman Singh, Shamimul Qamar, S. Uma, **L. Sherly Puspha Annabel**, and Sanjay Singla. 2024. "Content-Based Image Retrieval by Classification with Reinforcement Optimisation Evolutionary Machine Learning with Applications." *Journal of Experimental & Theoretical Artificial Intelligence*, August, 1–21. doi:10.1080/0952813X.2024.2383652 (Annexure I).
- Nagaraj, S., Sivakumar, S.P., **Annabel, L.S.P.** *et al.* Utilising SkyScript for Open-Vocabulary Categorization, Extraction, and Captioning to Enhance Multi-Modal Tasks

in Remote Sensing. *Remote Sens Earth Syst Sci* (2024).  
<https://doi.org/10.1007/s41976-024-00113-3> (Annexure I).

- Anslam Sibi, S., & **Sherly Puspha Annabel, L.** (2024). Optimizing Energy Resources in WSNs: ARIMA Feature Selection Meets Adaptive Reinforcement Learning. *Fiber and Integrated Optics*, 43(2), 69-96 (Annexure I).
- Sekaran, K., & **Lawrence, S. P. A.** (2024). Mutation boosted salp swarm optimizer meets rough set theory: A novel approach to software defect detection. *Transactions on Emerging Telecommunications Technologies*, 35(3), e4953 (Annexure I).
- Jetlin, C. P., & **Puspha Annabel, L. S.** (2023). TDACVO: Exponential Tasmanian Devil Anti-Coronavirus Optimization-Assisted Deep Model For Multi-Level Brain Tumor Categorization. *Journal of Mechanics in Medicine and Biology*, 2350089 (Annexure I).
- Aggarwal, K., Renjith, P. N., Udayakumar, P., Thyagarajan, K., **Sherly Puspha Annabel, L.**, & Jayachitra, S. (2023). Enhancing quality of service in wireless systems using iterative weighted least squares with fuzzy logic integration algorithm. *Optical and Quantum Electronics*, 55(12), 1086 (Annexure I).
- Natesan, G., Manikandan, N., Pradeep, K., & **Sherly Puspha Annabel, L.** (2023). Task scheduling based on minimization of makespan and energy consumption using binary GWO algorithm in cloud environment. *Peer-to-Peer Networking and Applications*, 16(5), 2560-2573 (Annexure I).
- Deepak, A., Chavan, A. S., Bodhankar, A., **Annabel, L. S. P.**, & Vanathi, A. (2023). Advancing Air Quality Prediction in Specific Cities Using Machine Learning. *International Journal of Intelligent Systems and Applications in Engineering*, 11(11s), 309-317.
- Jetlin, C. P., & **Annabel, L. S. P.** (2022). Brain Tumor MRI analysis using Deep Convolution Neural Network with Optimization Framework. *International Journal of Intelligent Systems and Applications in Engineering*, 10(3), 52-56.
- **L. Sherly Puspha Annabel**, & K. Murugan, An Asynchronous and Adaptive Quorum Based MAC Protocol for Wireless Sensor Networks , *Journal of Information Science and Engineering*, Vol. 33, No. 5, Sept. 2017, pp.1307-1322. DOI: 10.6688/JISE.2017.33.5.12 (Impact Factor – 0.541) (Annexure I).
- **Sherly Puspha Annabel, L** & Murugan, K 2015, 'Energy-Efficient Quorum based MAC Protocol for Wireless Sensor Networks', *ETRI Journal*, Vol.37, No.3, June 2015, pp. 480-490.<http://dx.doi.org/10.4218/etrij.15.0114.0688>. P-ISSN: 1225-6463, E-ISSN: 2233-7326, (Impact Factor – 1.094) (Annexure I).

- **Sherly Puspha Annabel, L** & Murugan, K 'Traffic Based Energy Efficient MAC Protocol for Wireless Sensor Networks', *International Journal of Information and Communication Technology*, Vol.8, No.2/3, Feb. 2016, pp. 249-262. <http://dx.doi.org/10.1504/IJICT.2016.074866> P-ISSN: 1466-6642, E-ISSN :1741-8070.
- G. Rangunathan & **Sherly Puspha Annabel, L** , 'Energy based encryption and keying with collision avoidance in wireless sensor networks', *Elixir Adhoc Network*, Vol. 38, 2011, pp.4469-4472.

#### **International Conference Publications:**

- **Annabel, L. S. P.**, Sruthi, B. S., Rohini, M., & Svetha, B. S. (2023, December). Effective Prediction of Cardiovascular Disease Using Deep Learning. In *International Conference on Information and Communication Technology for Competitive Strategies* (pp. 259-270). Singapore: Springer Nature Singapore.
- **Annabel, L. S. P.**, & Thulasi, V. (2023, November). Environmental Sound Classification Using 1-D and 2-D Convolutional Neural Networks. In *2023 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA)* (pp. 1242-1247). IEEE.
- **Annabel, L. S. P.**, Rajan, K. R., & Siva, L. (2023, December). Machine Learning-Based Tamil Handwritten Word Recognition. In *2023 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI)* (pp. 1-7). IEEE.
- Kumar. D, D, **L. Sherly Puspha Annabel** (2023, October). Secure User Recommendation using Machine Learning Techniques. In *2023 7th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC)* (pp. 233-240). IEEE.
- **Annabel, L. Sherly Puspha**, S. Abirami, and M. Angelin. "Design and Development of Multimodal Virtual Mouse." In *2023 International Conference on Inventive Computation Technologies (ICICT)*, pp. 902-907. IEEE, 2023.
- Sekaran, Kripa, and **L. Sherly Puspha Annabel**. "A Deep Learning Based Model for Defect Prediction in Intra-Project Software." In *2023 7th International Conference on Trends in Electronics and Informatics (ICOEI)*, pp. 1148-1155. IEEE, 2023.
- **Sherly Puspha Annabel, L.**, G. Ramanan, R. Prakash, and S. Sreenidhi. "Machine Learning-Based Approach for Airfare Forecasting." In *Proceedings of International Conference on Data Science and Applications: ICDSA 2022, Volume 2*, pp. 901-912. Singapore: Springer Nature Singapore, 2023.
- Sibi, S. Anslam, and **L. Sherly Puspha Annabel**. "Q Energy and SARSA Energy Learning for Energy efficient Routing in Wireless Sensor Networks." In *2022*

*International Conference on IoT and Blockchain Technology (ICIBT)*, pp. 1-5. IEEE, 2022.

- Sindhu, R. Mahizhini, **L. Sherly Puspha Annabel**, and G. Monisha. "Development of a 2d game using artificial intelligence in unity." In *2022 6th International Conference on Trends in Electronics and Informatics (ICOEI)*, pp. 1031-1037. IEEE, 2022.
- **L. Sherly Puspha Annabel**, Priscilla Rajadurai, S. Geetha, "MRI-Based Brain Tumor Image Detection – A Review", *International Conference on Emerging Trends & Innovation in Science, Engineering and Education*, pp.225-235, 2022.
- **Annabel, L. S. P.**, Sreenidhi, S., & Vishali, N. (2021). A Novel Diagnosis System for Parkinson's Disease Using K-means Clustering and Decision Tree. In *Communication and Intelligent Systems* (pp. 607-615). Springer, Singapore.
- **L. S. Puspha Annabel** and K. Sekaran, "Automatic Signal Clearance System using Density Based Traffic Control," *2021 5th International Conference On Trends In Electronics And Informatics (Icoei)*, 2021, pp. 1630-1635, doi: 10.1109/ICOEI51242.2021.9452877.
- **Annabel, L. Sherly Puspha**, and Kripa Sekaran. "Blockchain-Based Security for IoT in Cloud—A Review." *Internet of Things* (2020): 53-70.
- **L. Sherly Puspha Annabel**, and V. Muthulakshmi. "AI-Powered Image-Based Tomato Leaf Disease Detection." In *2019 Third International conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC)*, pp. 506-511. IEEE, 2019.
- Manikandan, G., K. Suresh, and **L. Sherly Puspha Annabel**. "Performance Analysis of Cluster based Secured Key Management Schemes in WSN." In *2019 International Conference on Smart Systems and Inventive Technology (ICSSIT)*, pp. 944-948. IEEE, 2019.
- **L. Sherly Puspha Annabel**, T. Annapoorani, P. Deepalakshmi, "Machine Learning for Plant Leaf Disease Detection and Classification – A Review", *International Conference on Communication and Signal Processing, IEEE*, pp.0538 – 0542 April 2019.
- **Sherly Puspha Annabel, L** & Murugan, K, 'Adaptive Quorum Based MAC Protocol in Non Uniform Node Distribution of Wireless Sensor Networks', *Second International Conference on Computer Science and Information Technology CCSIT, Springer, Part I, LNICST*, vol. 84, pp.1-9, 2012.
- **Sherly Puspha Annabel, L** & Murugan, K, 'An Energy Efficient Wakeup Schedule and Power Management Algorithm for Wireless Sensor Networks', *Second International Conference on Recent Trends in Information Technology ICRTIT, IEEE*, pp.314-319, 2012.

## National Conference Publications

- R.Siba, **L. Sherly Puspha Annabel**, V. Muthulakshmi, G. Lathaselvi, JerrishJosanne, “Post-Harvest Disease Identification and Utilization of Mulberry leaf Extracts” International Conference on Recent Advances in Food Processing Technology, IIFPT, August 2018.
- **Sherly Puspha Annabel, L** ‘Integration of watermarking and cryptography techniques for electronic management of copyright in open-networks’, Proceedings of National Conference on web technology & open source, WEBTOPS 2006, 9<sup>th</sup>& 10<sup>th</sup> February, pp.21.
- **Sherly Puspha Annabel, L**, Sridevi, R, ‘An Energy efficient MAC protocol using Fuzzy based Quorum for Wireless Sensor Networks’, 3<sup>rd</sup> National Conference on Recent Trends & Technologies in Soft Computing , NCRITSC 2011, 20<sup>th</sup> April, 2011, pp.101-105
- R. Rukmini, **Sherly Puspha Annabel, L**, ‘Energy Efficient Dominator Tree Construction and Scheduling in Wireless Sensor Networks, National Conference on innovation and research areas in computer applications, pp.67-70.

## Book Chapters

**L. Sherly Puspha Annabel**, Kripasekaran, ‘Blockchain Based Security for IoT in Cloud – A Review’, Internet Of Things: Integration And Security Challenges \_2020 published in Taylor and Francis December 2020.

## Books Published:

Usha B.A., R. Priscilla, **L. Sherly Puspha Annabel**, “Big Data Analytics in Cybersecurity”, 2023, Lambert Academic Publishing.

## Patents Grants:

Dr.M.Anbarasan Dr. N. Gobalakrishnan **Dr. L. Sherly Puspha Annabel**  
Dr.K.Regin Bose, Portable AI Device for Intelligent Classroom, Indian Patent 402037-001,

## Patents Published:

- Dr.k.Sita kumari, Dr.Naveen I G, Mayuri Rohidas Londhe, Ankit Shrivastava, K Bangaru Krishna Veni, **Dr. L. Sherly Puspha Annabel**, Ramya N, S. Vijayalakshmi, Susmitha S, Kalaivani. K, Artificial Intelligence-based knowledge Evolutionary process for optimization Decision Support and Personalized Recommendation in E-Commerce using Machine Learning Algorithms, Indian Patent 202441030296, Filed Date: 15/04/2024, Published Date: 19/04/2024.

- Ms. Lavanya, Mr. Mahesh Sanjay Ghorpade, Ms. Radha Balkrishna Ghodke, Mr. Sainath Asaram Bhad, **Dr. L. Sherly Puspha Annabel**, Dr. B. Senthil Kumar, Ms. Ashlesha Kolarkar, Dr. P. Chitra, Dr. V.Krsihnanaik, Dr. Anandbabu Gopatoti, A Generative AI System for Realistic Background Replacement in Augmented Reality Applications, Indian Patent: 20441099731, Filed Date: 16/12/2024, Published Date: 20/12/2024.
- Dr. Smitha Kurian, Dr. Saurabh Suman, Mrs. M. Mahabooba, **Dr. L. Sherly Puspha Annabel**, Dr. G. Sundar, Dr. Sheshang Degadwala, Dr. P. Patchaiammal, Dr. Gaurav Gupta, Predicting the progression of acute respiratory syndrome impairment using machine learning analytics, Indian Patent:202341026769, Filed Date: 11/04/2023, Published Date 05/05/2023.
- Dr.S.Seivi, D. MohanaPriya, Dr.R.Sridevi Dr.l. Sharalh Chandra, **Dr. L.Sherly Puspha Annabel**, Dr.M.Gobi, Dr. R. Thiagarajan, Smart Contract Based Fog Resource Accessibility And Distribution Permittance Through Blockchain. Indian Patent: 202241005105, Filed Date: 31/01/2022, Published Date 11/02/2022.

#### **NPTEL Certifications:**

- Data Science for Engineers
- Python for Data Science
- Essential Mathematics for Machine Learning
- Introduction to Internet of Things
- Principles of Management
- Introduction to Algorithms and Analysis
- Deep Learning – Part I
- Introduction to Machine Learning
- Design and Analysis of Algorithms

#### **Awards /Achievements:**

- Mentored and Received State Ministry Award, Cash Prize of Rs. 50,000/- for Smart India Hackathon 2018
- Received NPTEL Discipline Star Award during Jul-Dec 2021

**Google Scholar ID:** [https://scholar.google.com/citations?user=Fvg\\_e2MAAAAJ&hl=en](https://scholar.google.com/citations?user=Fvg_e2MAAAAJ&hl=en)

**Scopus ID:** <https://www.scopus.com/authid/detail.uri?authorId=55263582500>

**WOS researcher ID:** <https://www.webofscience.com/wos/author/record/1966136>

**Orchid id:** <https://orcid.org/0000-0003-0262-1356>