

Credential Report

Dr.P.Kalyanasundaram, BE., M.Tech, PhD.,

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Educational Qualification

- ❖ **BE** – (Computer Science and Engineering) - Bharathiyar University .
- ❖ **M.Tech** (Communication Engineering) - Vellore Institute of Technology ,
- ❖ **PhD** – Wireless Sensor Networks) Anna University, Chennai

Professional Experience Profile:

Total Experience : 24 Years 5 months
Teaching : 22 Years 4 month
Industry : 1 Years 6 months

Publications:

Total	WoS / SCI	Scopus	Citation	h-index	i10-index
47	14	31	224	7	4

- ❖ Kalyanasundaram.P, Punithashankari.S, Dr.Gnanasekaran.T, “Energy Saving In Wireless Sensor Network Using Burst Algorithm”, IOSR Journal of Electronics and Communication Engineering (IOSR-JECE), Vol.5, Issue 1 (Jan. - Feb. 2013), PP 52-59.
- ❖ Kalyanasundaram.P, Dr.T.Gnanaskaran, S.Dineshkumar, “Evaluation Of 3D Network-On-Chip Architectures By Using Layers”, ISSN: 2278 – 0211 (Online), Journal of Innovative Research & Development, Vol. 2, Issue.5, May, 2013.
- ❖ Kalyanasundaram.P, Priyadharshini.M, Dr.Gnanasekaran.T, “The Unceasing Detection of Adjoining Nodes, Its Connectivity, Weakness Impact on Wireless Sensor Networks and Actor Networks”, International Journal of Innovative Research in Science, Engineering and Technology, Vol.3, Special Issue.1, February 2014, PP 1346-1362.
- ❖ Kalyanasundaram.P , Kiruthika.S , Dr. Gnanasekaran.T, “Mobile Sink approach in energy efficient Wireless Sensor Network with Pairwise Key generation for Smartgrid Environment,” International Journal of Applied Engineering Research (IJAER) Vol.10, Number 2 (2015), Special Issues Pp.1998-2002. (Impact factor:0.18)

- ❖ Kalyanasundaram.P , M.Sowbhakyawathi, Dr. Gnanasekaran.T , “Dynamic Key Generation and Prevent Link from Adversary in Wireless Communication”, International Journal of Advanced and Innovative Research (2278-7844) / # 135 / Vol.4 Issue 3, March2015, Pp.135-138.
- ❖ Kalyanasundaram P, Nirmal Kumar K, Dr.T.Gnanasekaran, “Energy Optimal Cog-Mac for Controlling WLAN Coexistence Interference in Sensor Networks”, International Journal of Advanced and Innovative Research (2278-7844) , Vol. 4, Issue 10, October 2015, PP 143-159.
- ❖ Kalyanasundaram P, NirmalKumar K ,Dr.T.Gnanasekaran, “Adaptive Cog-Mac Scheme for Coexistence of IEEE 802.15.4 with other Interfering Systems”, International Journal of Advanced Research Trends in Engineering and Technology (IJARTET),Vol. 3, Special Issue 24, April 2016,pp.25-41.
- ❖ P.Kalyanasundaram, Dr.T.Gnanasekaran, “A Novel method for Optimizing Maximal Lifetime Coverage (OMLC) Scheduling of nodes in Wireless Sensor Networks”, Institute of Integrative Omics and Applied Biotechnology (IIOAB), Vol. 7,Issue. 9,pp. 404-410- ISSN: 0976-3104.2016. (Impact factor: 0.23) **(SCI)**
- ❖ P.Kalyanasundaram, Dr.T.Gnanasekaran, “A Multi-Hop Dynamic Path-selection (MHDP) Algorithm for the augmented lifetime of Wireless Sensor Networks”, Circuits and Systems, Vol.7, pp.3343-3353,2016. (Impact factor: 0.63)
- ❖ P.Kalyanasundaram , Dr. T. Gnanasekaren and C.Saranya, “Hole detection and cluster based algorithm in wireless sensor network”, International Journal of Intellectual Advancements and Research in Engineering Computations (IJIAREC), Vol.5 Issue-1, ISSN:2348-2079,2017 . (Impact factor: 4.2)
- ❖ Dr.P.Kalyanasundaram, Dr.M.Anto Bennet, Giridhar Reddy, “Lifi Based Audio Communication for Coal Mine Parameter Monitoring and Automatic Control”, International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277–3878, Vol.8, Issue:2S5, pp.238-241, July 2019.**(Scopus Indexed)**
- ❖ Dr.P.Kalyanasundaram, Dr.S.Markkandeyan, U.Muthaiah, “Research of Novel Web Page Classifiers and Feature Selection Methods”, International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Vol.8, Issue:11S, pp.51-56,September 2019. **(Scopus Indexed)**
- ❖ Dr.P. Kalyanasundaram, Dr.P. Thirumoorthy, S. Karupusamy , S. Prabhu, “Energy Efficient Routing in WSNs Using Delay Aware Dynamic Routing Protocol”, Journal of Critical Reviews, Vol 6, Issue 6, 2019. **(Scopus Indexed)**
- ❖ Dr.P.Kalyanasundaram, Dr.M.Anto Bennet, K.GiridharReddy, “Sensor Based Automatic Irrigation for Computer Crops Water Requirements using Robotic Technology”, International Journal of Control and Automation, Vol. 13, No. 4, pp. 298 – 304.2020

- ❖ Dr.P.Kalyanasundaram, Dr.S.Markkandeyan, D.Silambarasan, Dr.P.Suresh, “Design and Implementation of War Simulation through Multiplayer Virtual Reality in Serious Gaming”, International Journal of Advanced Science and Technology Vol. 29, No. 4, pp. 5402- 5409,2020
- ❖ Dr.P.Kalyanasundaram, S.Chaitanya Kumar, “Analysis on Line Follower Object Detecting Robot”, International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 02, 2020.
- ❖ Dr.P.Kalyanasundaram, S.Chaitanya Kumar, “Design and Implementation of Line Follower Mobile Robot”, Journal of Critical Reviews, Vol 7, Issue 14, 2020
- ❖ P. Kalyana Sundaram, G. Nikhil Sai, “Assistive Device to Prevent the Accident for Visually Impaired”, Test Engineering & Management, Page No. 4086-4090, May-June 2020
- ❖ Dr. P. Kalyana Sundaram, G. Nikhil Sai, “Third Eye for Visually Impaired People”, International Journal of Advanced Science and Technology, Vol. 29, No. 5, pp. 9182-9186,2020.
- ❖ Dr. P. Kalyana Sundaram, Pettari Shanmugam Reddy,”Plan of Beach Wastage Cleaning Machine utilizing IoT”, International Journal of Advanced Science and Technology,Vol. 29, No. 5, pp. 9187-9191, 2020.
- ❖ Dr.P.Kalyanasundaram, M.Udaya Bhanu, “ Breast Cancer Detection using Machine Learning Algorithm”, International Journal of Advanced Science and Technology, Vol. 29, No. 5, pp. 9148-9154, 2020.
- ❖ Dr.P.Kalyanasundaram, M.Udaya Bhanu, “ Breast Malignant Growth Identification Utilizing Machine Learning Algorithm”, International Journal of Advanced Science and Technology, Vol. 29, No. 5, pp. 9155-9160,2020.
- ❖ Dr.P.Kalyanasundaram, M.Upendra, “IOT Applications for Monitoring Industrial Parameters,”International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 03, 2020.
- ❖ Dr.P.Kalyanasundaram, M.Upendra,” IOT Applications For Observing Modern Parameters,”Journal of Critical Reviews ,ISSN- 2394-5125, VOL 7, ISSUE 15, 2020.
- ❖ Dr. P.Kalyanasundaram, M.Viswanath Reddy, “ Accident Detecting Accelerometer Sensor based Threats on Smart Devices,” Test Engineering & Management, Page No. 12703 - 12707 ,May-June 2020
- ❖ Dr. P.Kalyanasundaram, M.Viswanath Reddy, “ Identifying Threats on Smart Devices by usingAccelerometer Sensor,” Journal of Critical Reviews , ISSN- 2394-5125 , VOL 7, ISSUE 15, 2020. **(Scopus Indexed)**

- ❖ Thirumoorthy, P., P. Kalyanasundaram, R. Maheswar, P. Jayarajan, G. R. Kanagachidambaresan, and Iraj S. Amiri. "Time-critical energy minimization protocol using PQM (TCEM-PQM) for wireless body sensor network." *The Journal of Supercomputing* 76, no. 8 (2020): 5862-5872. **(Web of Science)** (Impact factor:2.157)
- ❖ Kalyanasundaram P, Suchithra, M., M. Baskar, J. Ramkumar, and B. Amutha. "Invariant packet feature with network conditions for efficient low rate attack detection in multimedia networks for improved QoS." *Journal of Ambient Intelligence and Humanized Computing* (2021): 1-7. **(Web of Science)** (Impact factor:7.104).
- ❖ P. Kalyanasundaram, Baskar, M., R. Renuka Devi, J. Ramkumar, M. Suchithra, and B. Amutha. "Region centric minutiae propagation measure orient forgery detection with finger print analysis in health care systems." *Neural Processing Letters* (2021): 1-13. **(Web of Science)** (Impact factor: 2.891)
- ❖ P. Kalyanasundaram, Karthik, P. C., J. Sasikumar, M. Baskar, E. Poovammal, "Field equations for incompressible non-viscous fluids using artificial intelligence." *The Journal of Supercomputing* 78, no. 1 (2022): 852-867. **(Web of Science)** (Impact factor: 2.157)
- ❖ Jahnavi, P., and Dr P Kalyanasundaram. "Innovative Irrigation Using Humidity and Soil Moisture for Efficient Usage of Water in Agriculture Field Compared to Drip Irrigation." *Journal of Agriculture Science*, Vol 36, Issue.1 (2021). **(Web of Science - ESCI)**
- ❖ Mishra, Divyendu Kumar, Aby Thomas, Jinsa Kuruvilla, P. Kalyanasundaram, K. Ramalingeswara Prasad, and Anandakumar Haldorai. "Design of mobile robot navigation controller using neuro-fuzzy logic system." *Computers and Electrical Engineering* 101 (2022): 108044. **(Web of Science)** (Impact factor: 4.7927)
- ❖ Kanisha, B., V. Mahalakshmi, M. Baskar, K. Vijaya, and P. Kalyanasundaram. "Smart communication using tri-spectral sign recognition for hearing-impaired people." *The Journal of Supercomputing* 78, no. 2 (2022): 2651-2664. **(Web of Science)** (Impact factor: 2.474)
- ❖ Markkandeyan, S., P. Kalyanasundaram, U. Muthaiah, Nilavu Niza, and P. Gnanapriya. "Application of different feature selection and machine learning techniques in web page classification." In *AIP Conference Proceedings*, vol. 2405, no. 1, p. 030020. AIP Publishing LLC, 2022 **(Scopus Indexed)**
- ❖ Dinesh, Paidipati, and P. Kalyanasundaram. "Medical Image Prediction for Diagnosis of Breast Cancer Disease Comparing the Machine Learning Algorithms: SVM, KNN, Logistic Regression, Random Forest, and Decision Tree to Measure Accuracy." *ECS Transactions* 107, no. 1 (2022): 12681. **(Scopus Indexed)**
- ❖ Reddy, Raghavendra, and P. Kalyanasundaram. "Novel Detection of Forest Fire Using Satellite Observation with Improved Accuracy in Comparison with Human Observation." *ECS Transactions* 107, no. 1 (2022): 12795 **(ESCI)**

- ❖ Dr P. Kalyanasundaram, M. Baskar, V. Anbarasu, A. Balaji, R. Thiagarajan and T. S. Arulananth, "Energy efficient congestion free and adaptive mechanism for data delivery in underwater wireless sensor networks using 2H-ACK," Springer - Optical and Quantum Electronics- 21 July 2022. **(Web of Science)** (Impact factor: 2.7).
- ❖ Dr P Kalyanasundara, P Raghavendra Reddy, "Novel Detection of Forest Fire using Temperature and Carbon Dioxide Sensors with Improved Accuracy in Comparison between two Different Zones," IEEE Explore - Proceedings of the 3rd International Conference on Intelligent Engineering and Management (ICIEM),2022 **(Scopus Indexed)**
- ❖ Dr P Kalyanasundaram, H Senthil Kumar, S Markkandeyan, N Sengottaiyan, J Vijayakumar," Fall Detection and Activity Recognition using Hybrid Convolution Neural Network and Extreme Gradient Boosting classifier," IEEE Xplore, DOI: 10.1109/ICSES55317.2022.9914322, Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022. **(Scopus Indexed)**
- ❖ Dr P Kalyanasundaram, H Senthil Kumar, S Markkandeyan, N Sengottaiyan, J Vijayakumar," An Intelligent stacking Ensemble-Based Machine Learning Model for Heart abnormality," IEEE Xplore, DOI: 10.1109/ICSES55317.2022.9914250, Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022. **(Scopus Indexed)**
- ❖ Dr P Kalyanasundaram, H Senthil Kumar, S Markkandeyan, N Sengottaiyan, J Vijayakumar," Maximize the Production Process by Using a Novel Hybrid Model to Predict the Failure of Machine," IEEE Xplore, DOI: 10.1109/ICSES55317.2022.9914172, Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022 **(Scopus Indexed)**
- ❖ Dr Kalyanasundaram, P and Reddy, R., "Novel Detection of Forest Fire Using Satellite Observation with Improved Accuracy in Comparison with Human Observation. ECS Transactions, 107(1), p.12795. 2022. **(ESCI Indexed)**
- ❖ Dr Kalyanasundaram, P., Mishra, D.K., Thomas, A., Kuruvilla, J., Prasad, K.R. and Haldorai, A., 2022. Design of mobile robot navigation controller using neuro-fuzzy logic system. Computers and Electrical Engineering, 101, p.108044. **(Web of Science)** (Impact factor: 4.89)
- ❖ Dr P. Kalyanasundaram, Mahesha, C. R., Mritha Ramalingam, S. Sujith, N. B. Soni, G. Nalinashini, S. Suresh Kumar, Ravishankar Sathyamurthy, and V. Mohanavel. "Sustainable cooling and heating in smart cities using solar energy system planning." Elsevier - Energy Reports 8 (2022): 826-835. **(Web of Science)** (Impact factor: 4.937)

- ❖ P. Kalyanasundaram, Markkandeyan¹, N Sengottaiyan, J.Vijayakumar, H.Senthil Kumar, "A Efficient Image Watermarking Approach based on Modified DWT Method to Improve the Performance", International Conference on Advances in Science, Engineering and Technology, ICASET-2022
- ❖ P Kalyanasundaram , S.Markkandeyan, N Sengottaiyan , J.Vijayakumar , H.Senthil Kumar, "Comparison of Various Ensemble Machine Learning Techniques to Recognize the Instantaneous Internet of Things Assault", International Conference on Advances in Science, Engineering and Technology, ICASET-2022
- ❖ P. Kalyanasundaram, R. Gurusamy, V. Rajmohan, N. Sengottaiyan and S. M. Ramesh, "Comparative Analysis on Medical Image Prediction of Breast Cancer Disease using Various Machine Learning Algorithms," 2023 4th International Conference on Electronics and Sustainable Communication Systems (ICESC), Coimbatore, India, 2023, pp. 1522-1526. doi: 10.1109/ICESC57686.2023.10193635. **(Scopus Indexed)**
- ❖ P. Kalyanasundaram, N. Sengottaiyan, S. M. Ramesh, R. Gurusamy and V. Rajmohan, "Design of Novel Rectangular Microstrip Patch Antenna with Improved Gain and Performance Analysis," 2023 International Conference on Sustainable Computing and Smart Systems (ICSCSS), Coimbatore, India, 2023, pp. 1377-1382, doi: 10.1109/ICSCSS57650.2023.10169317. **(Scopus Indexed)**
- ❖ P. Kalyanasundaram, S. M. Ramesh, R. Gurusamy, V. Rajmohan and S. Hamsanandhini, "Internet of Things based Innovative Irrigation System for the evaluation of Sand Quality with Security measures for Agriculture Land using Wireless Sensor Network," 2023 Second International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT), Trichirappalli, India, 2023, pp. 01-06, doi: 10.1109/ICEEICT56924.2023.10157473. **(Scopus Indexed)**
- ❖ P Kalyanasundaram, S.M.Ramesh , Ravikumar Gurusamy, Sengottaiyan N and V.Rajmohan, "Improvement in Bandwidth using T-Shaped Slotted Multiple Input and Multiple output MicrostripPatch Antenna design and performance comparison with Double Slotted Microstrip Patch Antenna," presented in 2023 IEEE International Conference on Nanoelectronics, Nanophotonics, Nanomaterials, Nanobioscience and Nanotechnology (5NANO 2023), VISAT Engineering College, Ernakulam, Kerala, 27th - 28th April 2023 (accepted)
- ❖ P Kalyanasundaram, V.Rajmohan, Sengottaiyan N, S.M.Ramesh , Ravikumar Gurusamy, "Fabrication of Energy Efficient Single Junction Photovoltaic Cell with Nanostructured Zinc Oxide (ZnO) based Antireflection Coating and performance Comparison with Indium Tin Oxide (ITO) based Antireflection Coated Cell", Presented in The 14th International Conference on Computing, Communication and Networking Technologies (ICCCNT) · July 6th - 8th, 2023. IIT - Delhi, Delhi. (accepted).

Research Author ID:

- ❖ **Scopus ID** : 57211338919
- ❖ **ORCID ID** : 0000-0002-6724-6393
- ❖ **Google Scholar** : <https://scholar.google.com/citations?user=puqSEAsAAAAJ&hl=en>
- ❖ **Web of Science Researcher ID**: ABH-3626-2020

Journal Reviewer:

- ❖ Microprocessors and Microsystems (Elsevier)
- ❖ Wireless Personal Communications (Springer Nature)
- ❖ Journal of Ambient Intelligence and Humanized Computing (Springer Nature)
- ❖ Pattern Recognition Letters (Elsevier)
- ❖ Complex & Intelligent Systems (Springer Nature)
- ❖ Neural Processing Letters (Springer Nature)
- ❖ Contrast Media & Molecular Imaging (Hindawi)
- ❖ Concurrent Engineering: Research and Applications (Sage Journals)
- ❖ Soft Computing (Springer Nature)
- ❖ Personal and Ubiquitous Computing (Springer Nature)

Patents:

S.no	Patent	Application Number / Date of Publication
1	Automatic Sensor based Antipyretic Testing Device	201841006901 / 26.02.2018
2	Sensor based Coconut Shell Removal Tool	201841017270 / 08.05.2018
3	Design of Folded Bag Based Robot for the Rescue of Child from Bore Well	202041010622A / 12.03.2020
4	Automatic Food Plate Dispatching Machine Using IoT	20214101060449 / 07.01.2022
5	Temperature Monitoring System	Design Number. 362535-001 Date of registration: 13.04.2022

Number of Events:

Organized : 39
Attended : 62

Responsibilities held:

- ❖ Head of the Department (Dept of Robotics, Saveetha School of Engineering, SIMATS)
- ❖ NBA coordinator (Sri Shanmugha college of Engg & Tech, Nandha Engineering College)
- ❖ Member Secretary and Manager - Technology Business Incubator (Nandha Engg. College)
- ❖ In-charge of Innovation Club (Nandha Engg. College)
- ❖ Timetable coordinator for the college (Nandha Engg. College)
- ❖ Coordinator for Autonomous preparation (Nandha Engg. College)
- ❖ Computer centre in-charge (Bannariamman Institute of Technology)
- ❖ Department Time Table in-charge (Bannariamman Institute of Technology)
- ❖ Dept ISO Coordinator (Bannariamman Institute of Technology)
- ❖ Dept Library in-charge (Bannariamman Institute of Technology)
- ❖ Mentor (BIT, NEC, SSE)

Professional body Membership:

- ❖ Life member in Indian Society for Technical Education-ISTE (LM 27357)
- ❖ Fellow member in Institution of Electronics and Telecommunication Engineers(FIETE) F-236494 .
- ❖ Life member in Indian Society of Systems for Science & Engineers –ISSE (LM 05470)
- ❖ HAM Radio Operator Call sign: VU3LLL License No: 36663
- ❖ Member in International Association of Engineers (IAENG) Member Number: 214891

DECLARATION

I hereby declare that all the details furnished above are correct and true to the best of my knowledge.

(Dr.P.Kalyanasundaram)