

RESEARCH PROFILE

I. PERSONAL

Name : K.VALARMATHI
Date of Birth/Age : 02.05.1972
Father Name : V.K. Krishnasamy
Marital Status : Married
Nationality : Indian
Permanent Address : 9A12/1, Sudharsan Garden,
Rajiv Gandhi
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II. EDUCATIONAL QUALIFICATIONS (Starting from Graduation onwards):

Sl. No.	Institution / University	Qualification	Subject/ Specialization	Year
1	Anna University, Chennai	Ph.D	Intelligent techniques for system identification and controller tuning	2008
2	Regional Engineering College, Trichy	M.Tech	Process Control and Instrumentation	2000
3	Thiyagarajar College of Engineering, Madurai	B.E	Electronics and Communication	1993

III. ACADEMIC EXPERIENCE

Sl. No.	Institution/Place	Position	From (Date)	To (date)
1	P.S.R.Engineering College	Professor	01.06.2013	Till date
2	Kalasalingam University	Professor and Head	01.01.2011	30.04.2013

3	Kalasalingam University	Associate Professor	01.01.2009	31.12.2010
4	Kalasalingam University	Assistant Professor	01.01.2008	31.12.2008

5	Arulmigu Kalasalingam College of Engineering	Senior lecturer	01.07.2005	31.12.2007
6	Arulmigu Kalasalingam College of Engineering	Lecturer	18.12.2000	30.06.2005
7	Kalasalingam Polytechnic College	Lecturer	31.07.1995	17.08.1999

IV. RESEARCH

Google Scholar

H index 8

I10 index 6

No of citations: 285

Scopus

Author ID 15926511600

H-index 7

No of citations: 193

Research Interest

- Process Control
- System Identification
- Biomedical Instrumentation
- Image Processing
- Soft Computing
- Wireless Network
- Cloud Computing
- Machine Learning.

Student Research guidance – Doctoral Degrees

PhD Guided -2 (under Anna University)

PhD Guided -5 (under Kalasalingam University)

PhD pursuing-8

Under Anna University

Sl. No	Name of the Candidate	Reg. No	Year/ Session	Area of Research	Progress Details
1	Mr.Erana VeerappaDinesh	1614489301	2016 /JAN	Mobile Computing	Confirmation completed
2	Mr.P.DineshKumar	1614489383	2016 /JAN	Artificial Intelligence,Wireless Sensor Network	Confirmation completed
3	Ms.B.Indira (Full Time)	16234897447	2016 /JUL	AI, Networks	PhD awarded
4	Ms.S.Jeevitha	16244897309	2016 /JUL	Bio medical and Image Processing	Confirmation completed
5	Ms.M.Rajashanthi (Full Time)	17234891382	2017/ JAN	Mobile Adhoc Networking	Confirmation completed
6	Ms.M.Swarnasudha	17234891501	2017/ JAN	Data analytics	Confirmation completed
7	Ms. Meenalakshmi M	20234891205	2020/ JAN	Bio medical and Image Processing	Course Work
8	Karthikeyan S	1414489829	2014/ JUL	Industrial Automation, Wireless Sensor Networks	Confirmation completed
9	Vinola C	1424489199	2014/ JAN	Emotional Intelligence, Image Processing	PhD awarded September 2020
10	Ravikumaran P	1514489952	2015/ JUL	Computer Networks	Course Work

Under Kalasalingam University

S. No	Name of the Candidate	Date of Registration	Topic of Research	Progress Details
1	Mr.G.Petchinathan Sairam Engineering Collge, Chennai	10.8.2009	Computational intelligence in process industries	PhD awarded
2	Mr. K.Asan Moideen P.S.N Engineering Collge, Thirunelveli	22.2.2010	Intelligent Techniques for hybrid tank system	PhD Awarded
3	Mr.G.Saravanakumar Kalasalingam University	10.6.2010	Non Linear system identification and control design	PhD awarded
4	Mr.C.Karthick Kalasalingam University	02.01.2012	Control applications in paper process.	PhD awarded
5	Mr.Gobi DRDO,Hydrabad	01.07.2012	Magnetic pressure sensor	PhD awarded

M.Tech Thesis Guided - 23

V. PUBLICATIONS

Papers in International Journals:

1. Erana Veerappa Dinesh, S., Valarmathi, K., “A novel energy estimation model for constraint based task offloading in mobile cloud computing”, Journal of Ambient Intelligence and Humanized Computing, 2020, 11(11), pp. 5477–5486. **Impact factor 3.42.**
2. Swarna Sudha, M., Valarmathi, K., Keerthana, U., “Machine learning approach for sustainable safeguarding electronic patient record”, Journal of Green Engineering, 2020, 10(10), pp. 9763–9778.
3. EVD Subramaniam, V Krishnasamy, “Energy aware smartphone tasks offloading to the cloud using gray wolf optimization”, Journal of Ambient Intelligence and Humanized Computing, pp,1-9,2020. **Impact factor 3.42.**
4. Indira, B., Valarmathi, K., “A perspective of the machine learning approach for the packet classification in the software defined network”, Intelligent Automation and

- Soft Computing, 2020, 26(4), pp. 795–805. **Impact factor 1.276.**
5. Rajashanthi M, Valarmathi K, “Energy-efficient multipath routing in networking aid of clustering with OGFSO algorithm”, Soft Computing – Springer, DOI: [10.1007/s00500-020-04710-4](https://doi.org/10.1007/s00500-020-04710-4), Jan 2020. **Impact factor 2.784**
 6. Mariappan Shanthi, Valarmathi K, “A Secure Trusted Multipath Routing and Optimal Fuzzy Logic for Enhancing QoS in MANETs”, Wireless Personal Communications, 2019, <https://doi.org/10.1007/s11277-019-07016-3>. **Impact factor 0.929**
 7. Indira.B, Valarmathi.K. and Devaraj.D, ‘An approach to enhance packet classification performance of software-defined network using deep learning’, Soft Computing – Springer, Vol. 23, No. 18, pp. 8609-8619, DOI:10.1007/s00500-019-03975-8, 2019. **Impact factor 2.784**
 8. Karthikeyan, S., Vimala Devi, K., Valarmathi, K., “Design and implementation of CfoTS networks for industrial fault detection and correction mechanism” Journal of supercomputing, 2019. <https://doi.org/10.1007/s11227-019-02993-5> Sep 2019.
 9. Gobi, K., Kannapiran, B., Devaraj, D., Valarmathi, K., “Design, performance evaluation and analysis of the inlet tube of pressure sensor for chamber pressure measurement” Sensor Review 39 (4) June 2019 **Impact Factor-1.566.**
 10. Gobi, B Kannapiran, D Devaraj, K Valarmathi, “Design, development and performance evaluation of pressure sensor using eddy current displacement sensing coil”, Sensor Review, Vol.38, Issue 2, pp.248-258, 2018. **Impact Factor-1.070.**
 11. K Gobi, B Kannapiran, D Devaraj, K Valarmathi ,” Design, Development and Performance Evaluation of Eddy Current Displacement Sensor Based Pressure Sensor with Target Temperature Compensation”, Defence Science Journal, Vol. 68, No. 2, pp. 203-209, March 2018, DOI : 10.14429/dsj.68.11765@2018, DESIDOC. **Impact Factor-0.51.**
 12. Eranna Veerappa Dinesh,**Dr.K.Valarmathi** “A Survey on Mobile Task Offloading and Scheduling Techniques”, Journal of Advanced Research in Dynamical and Control Systems, Volume 10, Issue 13, 2018. (**Scopus**)
 13. Erna veerappa Dinesh.S, **K.Valarmathi**, “EDTOS: Energy-Aware Dynamic Mobile Task Offloading and Scheduling Model in Mobile Cloud Computing”, International Journal of Advanced Research Trends in Engineering and Technology, Vol 4, Special Issue 1, 2017.

14. Petchinathan, G., Valarmathi, K., Radhakrishnan, T.K., "Optimal tuning of fractional order PI controller using particle swarm optimization for pH process", International Journal of Applied Engineering Research ,12(Special Issue 1), pp. 1-7
15. Karthik.C. and Valarmathi.K, "Support vector regression and model reference adaptive control for optimum control of nonlinear drying process", TAPPI Journal, Vol.15 (2), pp.111-126, 2016 **Impact Factor-0.752.**
16. G. Saravanakumar, K. Valarmathi, M. Pallikonda Rajasekaran, "Tuning Of Multivariable Decentralized PID Controller Using State Transition Algorithm", Studies in Information and Control, Vol.24 , Issue 4 , pp.367-378, 2015. **Impact Factor-0.605.**
17. G. Saravanakumar, K Valarmathi, Willjuice Iruthayarajan, Seshadhri Srinivasan, "Lagrangian based State Transition Algorithm for tuning multivariable decentralized controller", International Journal of Advanced Intelligence Paradigms,Vol 8, Issue 3, 2015.
18. P Govindamoorthi, K Valarmathi "Classification of Faults in DTC Induction Machine using Wavelet Decomposition Method", Indian Journal of Science and Technology, Vol. 8 (26), 2015.
19. Valarmathi,K., Arundevi,M and Mahendran, R., "Real Coded Genetic Algorithm Based Improvement of Efficiency in Interleaved Boost Converter", International Journal of Power Electronics and Drive Systems (IJPEDS) 5 (4),pp.529-540,2015.
20. Radha, K. and Valarmathi, K.," Fuzzy based Self Transforming robot", ARPN Journal of Engineering and Applied Sciences, Vol. 10, No. 7, pp. 2876-2881, 2015.
21. Karthikeyan, S., Vimala Devi, K. and Valarmathi, K., "Online Monitoring And Counting of Voting Using Zigbee Protocol And Cloud Computing", International Journal of Applied Engineering Research, Research India Publications ISSN 0973-4562 Vol.10, No.5, pp. 12915-12928,2015.
22. Karthik.C., Suresh.K and Valarmathi.K, "Model based control for moisture in paper making process", Advances in Intelligent Systems and Computing, Vol.324, pp. 257- 264,2015.
23. Asan,K., Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., "Improved Transient Performance of a Fuzzy Modified Model Reference Adaptive Controller for an

Interacting Coupled Tank System Using Real-Coded Genetic Algorithm”, International Journal of Chemical Engineering, Vol. 2014, Article ID 351973, 1-9, <http://dx.doi.org/10.1155/2014/351973>.

24. Asan, K., Valarmathi, K. and Radhakrishnan, T.K., ‘Differential Evolution Algorithm for System Identification and Tuning of a Fuzzy Modified Model Reference Adaptive Controller for a Coupled Tank Level Process’, International Journal of Engineering and Technology (IJET), Vol. 6, No. 3, pp.1530-1549, Jun-Jul 2014.
25. Petchinathan, G., Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., ‘Local Linear Model Tree and Neuro-Fuzzy System for Modelling and Control of Experimental pH Neutralization Process’, Brazilian Journal of Chemical Engineering, Vol. 31, No. 02, pp. 483 - 495, April - June, 2014, **Impact factor 0.571**.
26. Asan, K., Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., ‘Real-coded Genetic Algorithm for system identification and tuning of a modified Model Reference Adaptive Controller for a hybrid tank system’, Applied Mathematical Modelling, Elsevier Science, Vol.37, Iss 6, pp. 3829–3847, 2013, **Impact factor 1.579**.
27. Karthik, C., Valarmathi, K., Rajalakshmi, M., ‘Nonlinear Modeling of Moisture Control of Drying Process in Paper Machine’, *Procedia Engineering*, vol. 38 2012. pp. 1104-1111, ISSN: 1877-7058 DOI: 10.1016/j.proeng.2012.06.139, Elsevier Science.
28. Valarmathi, K. Kanmani, J. Devaraj, D. and Radhakrishnan, T.K., ‘Swarm intelligence based system identification and controller tuning’, Int. J. Computer Aided Engineering and Technology, Vol. 3, Nos. 5/6, pp. 443-457, 2011.
29. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., ‘Cascaded Genetic algorithm for system identification and Controller tuning in pH Process’, International Journal of Information, Intelligent and Knowledge, Vol. 2, Issue 2, pp 91-108, 2010.
30. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., ‘Real Coded Genetic Algorithm for system Identification and Controller Tuning’, Applied Mathematical Modelling, Elsevier Science, Vol.33, Issue 8, pp.3392-3401, August 2009. **Impact factor 1.579**.

31. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., 'Intelligent System Identification and Control for pH Process', Brazilian Journal of Chemical Engineering, Vol. 26, No. 01, pp. 99 - 111, January - March, 2009. **Impact factor 0.571.**
32. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., 'Enhanced Genetic Algorithm based Proportional Integral controller tuning for pH process', Instrumentation Science & Technology, Taylor and Francis Publishers, Vol.35, No.6, pp.619-635, November 2007. **Impact factor 0.423.**

Papers in International Conferences:

1. B.Indira, **K.Valarmathi** and D.Devaraj "A Trie based IP Lookup Approach for High Performance Router/Switch", 2019 IEEE International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS), 11-13 April 2019, Kalasalingam University, Krishnan koil, Tamilnadu, India, India
2. S Vedhanayaki, R Madavan, Sujatha Balaraman, S Saroja, S Ramesh, K Valarmathi, "Fuzzy Logic-Based Decision Making for Selection of Optimized Liquid Insulation Blend", Soft Computing in Data Analytics pp 547-555, Advances in Intelligent Systems and Computing springer book series (AISC, volume 758), 2019.
3. M.Rajashanthi, **K.Valarmathi**, "Distributed group Communications in Mobile AD HOC Networks:", "International conference on Recent Trends in Engineering Education" (ICRTEE 2K18), Oct 5, 2018, NITTTR Chennai.
4. B.Indira, **K.Valarmathi**, "IPv4 Packet Classification in Open Flow Network using Neural Network", "International conference on Recent Trends in Engineering Education" (ICRTEE 2K18), Oct 5, 2018, NITTTR Chennai.
5. M.Swarna Sudha, **K.Valarmathi**, "Data Mining Approach for Anomaly detection in Society Network Analysis", "International conference on Recent Trends in Engineering Education" (ICRTEE 2K18), Oct 5, 2018, NITTTR Chennai.
6. Sudha, M.S., Priya, K.A., Lakshmi, Priya, D.L., Valarmathi, K., "Data Mining Approach for Anomaly Detection in Social Network Analysis", Proceedings of the International

Conference on Inventive Communication and Computational Technologies ICICCT 2018, 20-21 April 2018, Coimbatore, India.

7. J.SivaSankari, **K.Valarmathi**, "A New Adaptive Low Frequency Noise Removal From ECG Signal", International Conference on Recent Trends in Multi-Disciplinary Research,2018.
8. Durgai Raja C, Balaji Prabhu P, Manikandan S and **K.Valarmathi**, "Class Attendance using face Recognition and GSM", International Conference on Recent trends in Electrical, Electronics and Communication Engineering (REECE -17), 16th -18th March, 2017 at P.S.R Engineering College, Sivakasi.
9. V.Muthu Rajalingam, **K.Valarmathi**, "Crack Detection and Measurement using Image Processing Technques", International Conference on Recent trends in Electrical, Electronics and Communication Engineering (REECE -17), 16th -18th March, 2017 at P.S.R Engineering College, Sivakasi.
10. B.Indira, **K.Valarmathi**, D.Devaraj, "A Software based IP Lookup Approach for high Performance Router/Switch", International Conference on Recent trends in Electrical, Electronics and Communication Engineering (REECE -17), 16th -18th March, 2017 at P.S.R Engineering College, Sivakasi.
11. M.Rajalakshmi, C.Karthik, **K.Valarmathi**, S.Jeyadevi, "Comparison of Evolutionary algorithm Modified Fuzzy MRAC for optimum Control to Industrial Drying Process" International Conference on Recent trends in Electrical, Electronics and Communication Engineering (REECE -17), 16th -18th March, 2017 at P.S.R Engineering College, Sivakasi.
12. R. P. Surya Sankar ; J. Nancy Gnana Greeta ; B. Kannapiran ; K. Valarmathi , "Mobile application for aqua-monitoring system",IEEE International Conference on Electrical, Instrumentation and Communication Engineering (ICEICE), 27-28 April 2017, Karur, India. DOI: 10.1109/ICEICE.2017.8191958
13. R. P. Surya Sankar ; J. Nancy Gnana Greeta ; B. Kannapiran ; K. Valarmathi , "Diagnosis of shrimp condition using intelligent technique", IEEE International Conference on Electrical, Instrumentation and Communication Engineering (ICEICE), 27-28 April 2017, Karur, India. DOI: 10.1109/ICEICE.2017.8191958.
14. G Saravanakumar, K Valarmathi, M Pallikonda Rajasekaran, "State Transition

- Algorithm (STA) based tuning of integer and fractional-order PID controller for benchmark system”, IEEE International Conference on Computational Intelligence and Computing Research (ICCIC), pp 1-5,2015.
15. C Karthik, A Ramalakshmi, K Valarmathi, “Support vector regression for Hammerstein- Wiener model identification“, International Conference on Computing Technologies and Intelligent Data Engineering (ICCTIDE'16), 7-9 Jan.2016, Kovilpatti, India. **DOI:** 10.1109/ICCTIDE.2016.7725370.
 16. Karthikeyan, S., Vimala Devi, K. and Valarmathi, K. “Internet of Things: Hospice appliances monitoring and control system “, IC-GET 2015 - Proceedings of 2015 Online International Conference on Green Engineering and Technologies
 17. Karthik.C, Valarmathi.K and Rajalakshmi.M, ‘Implementation of GA-MMRAC for moisture control in paper making process’, International Conference on Control, Instrumentation, Communication and Computational Technologies (ICCICCT-2014) 10th and 11th July 2014.
 18. Arundevi.M, Valarmathi.K and Mahendran.R, ‘Ripple current reduction in interleaved boost converter using Advanced PWM techniques’, Proceedings of 2014 IEEE International Conference on Advanced Communication, Control and Computing Technologies, ICACCCT 2014 ,7019291, pp 115-119.
 19. Saravanan.V, Arivoli.S. and Valarmathi.K, ‘Zigbee based monitoring and control of melter process in sugar Industry’, IEEE International conference on Electronics and Communication systems (ICECS’14), Vol. No.3, pp.430-433, Feb 2014.
 20. Umasankari.R, Valarmathi.K and Saravanakumar.G, ‘Temperature control of greenhouse system using evolutionary computation’, International conference on Energy Efficient Technologies for sustainability, pp. 814 - 820, 2013.IEEE Explore, 10.1109/ICEETS.2013.6533490.
 21. Asan Mohideen.K and Valarmathi. K, ‘Modified Model Reference Adaptive Controllers for improved regulatory performance’, International conference on Emerging trends in Computing, Communication and Nanotechnology (ICE-CCN), pp.194–198, Mar 25-26, 2013, IEEE Explore, 10.1109/ICE-CCN.2013.6528491.
 22. Asan Mohideen,K., and Valarmathi. K., ‘Fuzzy modified Model Reference

- Adaptive Controller for improved transient response', International Conference on Power, Energy and Control (ICPEC'13), pp.454-457, 2013, IEEE Explore:10.1109/ICPEC.2013.6527699.
23. Gobi.K, Valarmathi.K, Narmathabanu.R. 'Effect of dead volume of Pressure Sensor on Accuracy and Bandwidth of pressure Measurement in Aerospace Application', First International Conference on Instrumentation, Communication, Control and Automation, ICCICCA'13, 3rd -5th January, Department of ICE,Kalasalingam University,Krishnankoil.
24. Karthik.C , Valarmathi.K, Rajalakshmi.M, 'Intelligent identification of moisture control of drying process in paper machine' ,International Conference on Computing and Control Engineering (ICCCE 2012), 12th & 13th April, 2012, ISBN 978-1-4675-2248-9 © 2012 , Coimbatore Institute of Information Technology
25. Petchinathan, G., Saravanakumar, G., Valarmathi, K. and Devaraj, D., 'Hybrid PSO - Bacterial Foraging Based Intelligent PI Controller Tuning for pH Process' Proceedings on International Conference Information Systems Design and Intelligent Applications 2012 (INDIA-2012) on 5-7 January, 2012, published in Springer link-Advances in Intelligent and Soft Computing, 2012, Volume 132/2012, 515- 522, DOI: 10.1007/978-3-642-27443- 5_59
26. Saravanan. V. and Valarmathi. K., 'Model based controller design for melter process in sugar industry', International conference on computing, Communication and networking technologies (ICCCNT), pp.1-7, July 27 – 29, 2012, IEEE Explore, 10.1109/ICCCNT.2012.6395916.
27. Valarmathi, K. Karthik, C. and Prasanna, R. 'Modeling and Control of Complex chemical process in sugar process', International Conference on ICVCI – 2011, pp. 672-676. SAINTGITS College of Engineering, Kottayam, 2011.
28. Valarmathi, K. Karthik, C. and Prasanna, R. 'Intelligent PID tuning of chemical process in sugar industry', International Conference on ICST 2011, Coimbatore Institute of Information Technology, VelTech, Chennai. ISBN 978-1-4507-5567-2 © 2011
29. Valarmathi, K. Petchinathan, G. and Devaraj, D. 'Bacterial Foraging Based Proportional Integral Controller Tuning for pH Process', International Conference

- on Thermal Energy and Environment (INCOTEE 2011), March 24-26,2011.
30. Kanmani, J. Devaraj, D. and Radhakrishnan, T.K., 'Swarm intelligent based System Identification and Controller tuning', International Conference on Advance Manufacturing system and Automation(INCAMA'09), pp. 4- 6, Kalasalingam University,2009.
 31. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K., 'Combined Genetic Algorithm and Sugeno Fuzzy Logic based approach for on-line Tuning in pH process', IEEE Conference on Intelligent Systems, Bulgaria, 2008.
 32. Valarmathi, K., Kanmani, J., Devaraj, D., and Radhakrishnan, T.K., 'Real Time Intelligent System Identification and Control for pH Process', Proceedings of Trends in Industrial Measurement and Automation (TIMA 2007), NIT, Trichy, pp.302-307, 2007.
 33. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K. 'Adaptive Neuro Fuzzy Approach for System Identification and Control of pH Process', Proceedings of the International Conference on Modeling and Simulation (CITICOMS-2007), Coimbatore, pp.27-29, 2007.
 34. Valarmathi, K., Kanmani, J., Devaraj, D., and Radhakrishnan, T.K., 'Hybrid GA Fuzzy controller for pH process', IEEE Proceedings of Computer Society: International Conference on Computational Intelligence and Multimedia Applications (ICCIMA'07), Vol. 4, pp. 13- 18, 2007.
 35. Valarmathi, K., Devaraj, D. and Radhakrishnan, T.K. 'Particle Swarm Optimization based PI controller tuning for Fermentation Process', IEEE Proceedings of Computer Society: International Conference on Computational Intelligence for Modelling, Control and Automation (CIMCA'05), Vol. 2, pp. 1043- 1048, 2005.

Papers in National Conferences:

1. G.GanesaPandian, **K.Valarmathi**, "Lora based Traffic Violation Detection System", National Conference on Emerging Trends in Information and Communication Technology 2018.
2. P.Manikandan and **Dr.K.Valarmathi** "Automatic System To Totally Avoid Accident In Fire Works Using Raspberry Pi", National Conference on Engineering

Communication Trends(NCECT 16)

3. .Kirubarani.D and **K.Valarmathi** “Intelligent Techniques for Fault Detection And Classification In Gearbox”, National Conference on Engineering Communication Trends(NCECT 16)
4. K.Valarmathi G.Ponnupandi, V.Sabarinathan, E.Venkatnarayanan, R.P.suryasankar, “Path planing algorithm for mobile robot navigation in known Environment”, fifth National Conference on Intelligent Computing in Communication and Automation NCICCA – 2015.
5. Appulingam V., Ebenezer rathinaraj, D. and Valarmathi. K.,” Detecting and Warning System for Fireworks Warehouse Based On Wireless Sensor Networks”, National Conference on Emerging Communication Trends NCECT-15, March, 2015.
6. Abirami. M., Indhu. E., JebaBelsi. J and Valarmathi. K.,” Fault detection in DTC induction machine using discrete wavelet transform”, National Conference on Emerging Communication Trends NCECT-15, March, 2015.
7. Raja Gopalan. M., Venkatesh. R. and Valarmathi. K., “Embedded controller for optimized autonomous parking”, Fourth National Conference on Intelligent Computing in Communication and Automation,NCICCA-2014,Kalasalingam University, April, 2014.
8. Alagarsamy. R., Ashokkumar. S., Gunasekaran. R., and Valarmathi. K., “Multi sensor based on Wireless Patient Monitoring System”, Fourth National Conference on Intelligent Computing in Communication and Automation,NCICCA-2014,Kalasalingam University, April, 2014.
9. Suryashankar. R.P.and Valarmathi. K. “ Navigation of mobile robot using MPC” , Fourth National Conference on Intelligent Computing in Communication and Automation,NCICCA-2014,Kalasalingam University, April, 2014.
10. Murugaraj. C, Valarmathi. K, Ramesh. S, ‘Shell and Tube Heat Exchangers Optimization Using Genetic Algorithm and Genetic Algorithm and Particle Swarm Optimization’, National conference on Emerging trends in Materials Manufacturing and Design (ETMMD ’13), Mepco Schlenk Engineering College,

Sivakasi, 7th and 8th MAY 2013.

11. Karthik.C, Valarmathi.K, Rajalakshmi.M, 'Wireless monitoring for controlling dryers in paper machine', NCICCA-2012, Kalasalingam University, April 5th, 2012
12. Saravanan.V., Valarmathi. K, 'System identification based PID tuning for B-melter process in sugar industry', National conference on Emerging technologies, M. Kumarasamy college of Engineering, Karur, 25th, February 2012.
13. Saravanan.V.,Valarmathi. K., 'Design of IMC and IMC-PID controller for sugar industry process', NCICCA-2012, Kalasalingam University, April 5th, 2012.
14. Valarmathi, K. Karthik, C. 'Implementation of GA-PID Controller Tuning in Clarification Process of Sugar Cane Juice', National conference on NCICCA-2011, Kalasalingam University, April 8th, 2011.
15. D. Danish Vincy, K. Valarmathi and D. Devaraj, 'Neuro Fuzzy approach for system identification and control of pH process', NIT, Calicut, 4-7, pp.302-307, Jan 2007.
16. Krishnapriya, R. Valarmathi, K. and Godwin Anand, P.S. "Feasible Design of Fuzzy Logic Controller for Satellite Launch Vehicles", NCCT-06, Mepco Schelenk Engg. College, pp 310-314, March 2006.
17. Raja Rajeswari, S. Valarmathi, K. and Devaraj, D. 'Genetic Algorithm based PID tuning for four tank system', ETICT-2006, Sethu Institute of Technology, pp.1-7, March 2006.
18. Kanmani, J. Valarmathi, K. and Devaraj, D. 'Intelligent System Identification for pH process', NCCT-06, Mepco Schelenk Engg. College, pp 305-309, March 2006.
19. Valarmathi, K. Devaraj, D. and Radhakrishnan, T.K. 'Enhanced GA based pH Process', National Symposium On Instrumentation, Instrument Society of India, Indian Institute of Science, Bangalore, Dec 2005.
20. Sundari, G., Valarmathi, K., Devaraj, D. "Novel intelligent speed controller for industrial DC drives", NCCICA 2005, A.K.College of Engg, Krishnankoil, pp 475-479, Apr 2005.
21. Subathra, B. and Valarmathi, K. "Intelligent Computing of liquid level system", ACI – 2005, St. Joseph Engg College, Chennai, pp 11-16, Feb 2005.
22. Senthilkumar, B. and Valarmathi, K. "An adaptive control scheme for interacting two-tank system feed forward gain", NCCICA 2005, A.K.College of Engg,

Krishnankoil, pp 409- 412, Apr 2005.

VI. PROJECT DETAILS

- Sanctioned **Rs.14.2 lakhs** for Mixed Circuit Design Lab, AICTE- MODROBS Proposal. (2018-2019).
- Sanctioned **Rs.7.53 lakhs** for A Novel approach for the design and implementation of
- Wearable antennas by detecting the stages of Brain tumor, RPS –AICTE proposal (2019-2020)
- Research Coordinator: Received the Fund **Rs.65 lakhs** to strengthen the research facility in the department of Instrumentation and control Engineering, Kalasalingam University in the areas of **Process control lab and biomedical Lab** from DST-Fund for Improvement of Science and Technology Infrastructure (**FIST'10**).

Detail of patents:

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1.	Smart Cart with Automated Billing using Aadhar	Dr.P.Marichamy Dr.K.Valarmathi Dr.P.Karuppasamy Dr.P.Ranjith Kumar	201941001316 A	29.11.2019	The Patent Office, Government of India, Chennai, India	Published
2.	Bore well Rescue Robot	Dr.R.Vinoth Dr.R.Senthil Ganesh Mrs.K.Ramalakshmi	201941001317 A	29.11.2019	The Patent Office, Government of India, Chennai, India	Published
3.	Underwater Surveillance Robot	Mr.S.Balasubramanian Mr.G.Lingasamy	201941001318 A	15.11.2019	The Patent Office, Government of India, Chennai, India	Published
4.	Automatic Adjustment of Position of Microphone using Ultrasonic Sensor and RF module	Mr.R.Arunkumar Mr.N.S.YogaAnanth Mrs.P.Lingeswari Mrs.P.A.Mathina Mrs.M.Vimala	201941001319 A	15.11.2019	The Patent Office, Government of India, Chennai, India	Published

VII. AWARDS-HONOURS-RECOGNITIONS

- School Second, H.S.C, A.K.D.R.Hr.School, Rajapalayam.
- Best paper award, 'Modeling and control of chemical process in sugar industry', International Conference on VLSI communication and Instrumentation (ICVCI 2011), Saintgits college of Engg., Kottayam, pp. 672-676, 2011.
- Session Chair, Second International Conference on Advanced Manufacturing and Automation (INCAMA 2013), Kalasalingam University, Krishnankoil, 28th-30th, March 2013.
- Session Chair, International Conference on Power, Energy and Control (ICPEC'13), Dept. of EEE, PSNA college of Engineering and Technology, Dindigul, 7th Feb,2013.
- Chairperson, Seminar on IQAC and Research cell, V.V.Vanniaperumal College for women, Virudhunagar, 12th January,2010
- Advisory committee member, National conference on Recent advancement in control, communication and control Engineering, Dept. of ICE, Sethu Institute of Technology, Kariapatti, 1st April 2010.
- Chairperson, National conference on Recent Trends in communication systems, Dept. of ECE, Kalasalingam University, Krishnan koil, 12th March 2010.
- Session Chair, Second National conference on Power and Energy Systems (NPES'10), Dept. of EEE, Kalasalingam University, Krishnan koil, 20th March, 2010.
- Technical Committee member and Chairperson, National conference on Recent advancement in Instrumentation, Dept. of ICE, RVS College of Engineering, Dindigul, 4th December,2009.
- Session Chair, National level Technical symposium,I'Caliber'09, K.L.N.College of Engineering, Madurai, 25th February 2009.
- Convener, Editorial Committee, International Conference on INCAMA'09, Dept. of ICE and Dept. of Mechanical Engineering , Kalasalingam University, Krishnan koil, 9th April, 2010 on 26-29th March,2009.

VIII. PROGRAMS ORGANIZED

- Organizing Secretary, National Conference on Emerging Communication Trends (NCECT'15), Dept. of ECE, P.S.R Engineering College, Sivakasi, 27th and 28th, March 2015.
- Coordinator, Workshop on Artificial Neural networks and its applications, IEEE students section, P.S.R Engineering College, Sivakasi, 23rd, August 2014.
- Coordinator, Workshop on Advancement of research in image processing, IEEE students section, P.S.R Engineering College, Sivakasi, 19th, July 2014.
- Organizing Secretary, National Conference on Emerging Communication Trends (NCECT'14), Dept. of ECE, P.S.R Engineering College, Sivakasi, 21st and 22nd, March 2014.
- Coordinator, Technical events of IEEE students section CIENCIA'14, P.S.R Engineering College, Sivakasi, 1st, March 2014.
- Convener, International Conference (ICICCA'13), Dept. of ICE, Kalasalingam University, Krishnan koil, 3rd-5th Jan, 2013.
- Convener, National level Technical Symposium (Euphemoz '12), Dept. of ICE, Kalasalingam University, Krishnan koil, 28th Sep, 2012.
- Co-ordinator, Faculty developments programme on "Neural network and Fuzzy logic control", Dept. of ICE, Kalasalingam University, 25th – 29th, June 2012.
- Convener, National Conference (NCICCA'12), Dept. of ICE, Kalasalingam University, Krishnan koil, 5th April, 2012.
- Convener, National Conference (NCICCA'11), Dept. of ICE, Kalasalingam University, Krishnan koil, 8th April, 2011.
- Convener, National level Technical Symposium (Euphemoz '10), Dept. of ICE, Kalasalingam University, Krishnan koil, 9th April, 2010.
- Co-ordinator, Faculty Development Programme on "Industrial Instrumentation-1", Kalasalingam University adjoins with Anna University, Chennai, 23th-28th Nov, 2005.
- Co-ordinator, Faculty Development Programme on "Modern Control

System”, Kalasalingam University adjoins with Anna University, Chennai, 7th-12th Nov, 2005.

IX. PROGRAMS ATTENDED

- International seminar on “Cypher Physical Systems organized” by 5th and 6th January 2017
- Two day Faculty Development Training Programme on Advanced Embedded Processors organized by PSR Engg College, 17/11/2016 & 18/11/2016.
- Workshop on HTML and CSS organized by PSR Engg College, 12th and 13th August 2016
- Two days workshop on “Neural Network Approach for Image Processing” organized by IEEE student Branch, Kalasalingam University on 4th and 5th February 2011.
- IEEE sponsored two days workshop on “Soft Computing Techniques” at Kalasalingam University, Krishnankoil on 10th and 11th August 2007.
- ISTE programme on “Evolutionary Computation Techniques” organized by AKCE- ISTE Chapter on October 22nd, 2005.
- ISTE workshop on “Genetic algorithm for Engineering Optimization” organized by AKCE-ISTE Chapter on March 11th, 2005.
- Workshop on “Evolutionary Computation” Organized by Department of Electrical and Electronics Engineering, A.K.C.E on January 17, 2004.
- One Week Faculty Development Programme on “Transducer Engineering” organized by Anna University, Chennai from 24th to 29th November 2003.
- Workshop on “Computational Intelligent Techniques” Organized by Department of Electrical and Electronics Engineering, A.K.C.E on August 30, 2003.
- ISTE Fifth Annual Convention “E-Governance in Educational Perspective” hosted by Periyar Maniammai College of Technology for Women, Vallam on 12 October 2002.
- Workshop on “Image Processing: Concepts, Issues & Applications with MATLAB” conducted by School of Computer Science and Engineering, Anna University during 5th-7th, July, 2002.

- Workshop on “Intelligent Instrumentation” CSIR Campus, Taramani, Chennai during 23rd and 24th, February 2002.
- Pre Conference Tutorial, International Conference on Nanocomputing-Technology Trends, TIFAC-CORE in Advanced Computing & Information Processing, SASTRA, Thanjavur on December 16th 2001.
- Workshop on “Principles and Practical Implementation of Internetworking” organized by the Center for Professional Development Education, Anna University, Chennai during 22nd to 24th Oct 2001.
- Continuing Education Programme “Design of Laboratory Experiments for UG courses in Instrumentation and Control Engineering & Electronics and Instrumentation Engineering” Regional Engineering College, Tiruchirappalli during 11th to 15th June 2001.

X. GUEST LECTURES DELIVERED

- “Neural network and its applications”, EIE department, M.Kumarasamy College of Engineering, Karur on 28th Feb,2013
- “Fuzzy logic and its applications”, EIE department, M.Kumarasamy College of Engineering, Karur on 28th Jan,2013
- “Real coded Genetic algorithm for PID controller tuning”, IEEE section, Kalasalingam University, Krishnankoil on 2nd Feb,2013
- “Fuzzy optimization for image processing & control system applications” in National Level Workshop, ECE department, Sethu Institute of Technology, Madurai on 3rd Dec,2012
- “Computer control of process ”, EIE department, M.Kumarasamy College of Engineering, Karur on 17th Sep,2012
- “Research methodology” , IQAC and Research cell, V.V.Vanniaperumal College for women, Virudhunagar on 12th January,2010.
- “GA based PID Controllers” in the One day workshop on “Genetic Algorithm for Engineering Optimization” organized by ISTE/AKCE-Students Chapter on 11th March 2005.

XI. MEMBERSHIP IN PROFESSIONAL BODIES

- Life member in Indian Society for Technical Education (ISTE), New Delhi
- Member in Instrument Society of India (ISoI), Bangalore
- Member in IEEE

XII. REVIEWER:

- IEEE Transactions on Industrial Informatics.
- Journal of Instrumentation Science and Technology, Taylor and Francis.
- Optimal Control, Applications and Methods, Wiley publishers.
- Applied Mathematical Modelling, Elsevier Science.
- Applied Mathematics and Computation, Elsevier Science.