

Name of the Teaching Staff	P. Rajalakshmy			
Designation	Associate Professor and Head of the Department			
Department / School	Robotics Engineering/School of Engineering and Technology			
Date of Joining the Institution	13.06.2005			
Qualification with Class / Grade	UG	PG	Ph.D	
	B. E (Instrumentation & Control Engg)	M.E (Control & Instrumentation Engg.)	Electronics & Instrumentation Engineering	
Area of Specialization	Sensor Technology, Signal Processing, Soft Computing, Rehabilitation Robotics			
Research Interests	Rehabilitation Robotics, System Modeling and Simulation			
Subjects Teaching	Under Graduate		Post Graduate	
	<ul style="list-style-type: none"> • Robot Kinematics and Dynamics • Industrial Robots and Material Handling Systems • Introduction to Robotics and Automation • Electrical Circuit Analysis • Electron Devices • Sensors and Transducers • Microprocessors and Microcontrollers • Signals and Systems • Digital Signal Processing • Neural Networks and Fuzzy Logic 		<ul style="list-style-type: none"> • Transducer Engineering • Digital Signal Processors • Soft Computing • Robotics: System and Analysis 	
Total Experience in Years	Teaching	Industry		Research
	21	-		11
Papers Published	National	10	International	22
Papers Presented in Conference	National	12	International	12
Conferences / Symposiums / Seminars / Workshops Participated	National	15	International	5

FDP / STTP / MDP / Summer / Winter School attended	9			
M.Phil. / Ph.D. Guide ship	Field		University	
	Robotics, Automation, Modeling and Control		Karunya	
Ph.D. Projects Guided	Ph.D.	4	Project at Masters Level	15
Professional Memberships	Life Member, ISTE Life Member, BMESI Life Member, TRS			
Consultancy Activities				
Awards & Honours	<ul style="list-style-type: none"> • Best Teacher, 2013 • Guided a Foreign Intern and completed the project titled “Development of an EMG based Arm Exoskeleton with Virtual Reality Interface for Rehabilitation” • Successfully completed the following Online Courses <ul style="list-style-type: none"> ➤ NPTEL Online Certification Course 1) Automatic Control Systems 2) Microprocessors and Microcontrollers 3) Signals and Systems 4) Industrial Automation 5) Automatic Control 6) Introduction to IoT 7) The Joy of Computing using Python 8) Introduction to Industry 4.0 and Industrial Internet of Things ➤ Course era Certification Courses 1) AI for Everyone 2) Advanced Manufacturing Enterprises ➤ Self Paced Matlab Onramp Training ➤ Teaching with Matlab ➤ RPA Developer Foundation by Uipath ➤ RPA Design and Development v1.0 Educator Readiness Program 			

Grants Fetched	<ul style="list-style-type: none"> Received a grant of Rs. 9.37 Lakhs for the project titled “Development of Electronic Speed Control for Actuators with feedback mechanism” under the RSQR scheme of DEBEL, DRDO as Co-PI, 2020 Received funding from Jasmin InfoTech Pvt. Ltd, Chennai for a sum of Rs. 1,00,000/- under CSR Scheme for the project titled, “Design and Development of Health Monitoring System for pregnant Women in Rural Areas”, 2019 As Co-Investigator, received a project titled, “Fetal ECG Monitoring device in Rural Areas” to Boston Child Hospital, Harvard Medical School, USA for Rs. 1 lakh, 2018 KSTG worth Rs.29,500 for the project titled “Implementation of Breath Walk Aware System, 2015. KSTG worth Rs. 25,000 for the project titled “Design of Physiotherapy Assistive Device for human hand using continuous estimation of sEMG signals”, 2018 								
Interaction with Professional Institutions	Initiated Student Chapter of The Robotic Society Life member of ISTE								
Educational Details	B.E. (Instrumentation & Control Engineering) -1998 M.E (Control & Instrumentation Engineering) - 2005 Ph.D (Electronics & Instrumentation Engineering) - 2017								
Experience	Name & Address of the Institution / Concern	Positions held	From	To	Total Years of Service		Accredited by NAAC / NBA		Equ Exp
	TamilNadu College of Engineering	Lecturer	28.12.1998	21.10.2003	4	10	No		
	Karunya Institute of Technology and Sciences	Lecturer	13.06.2005	31.10.2009	4	4	Yes		4
		Assistant Professor (AGP6000)	01.11.2009	31.03.2013	3	4			3
		Assistant Professor (AGP8000)	01.04.2013	07.07.2017	4	3			4
Contact Details	Ph: 9843015750 Email: rajalakshmy@karunya.edu raji.starr@gmail.com								

**Papers
Published**

- Jegan, R., Jose, P.S.H., Rajalakshmy, P. Kanmani, H.J., Nimi, W.S., "Methodological Role of Mathematics to Estimate Human Blood Pressure through Biosensors", International Journal of Integrated Engineering, 2021, 13(1), pp. 240–248
- Jegan. R., Ashwin.VH, **Rajalakshmy. P**, Subha Hency Jose, (2020), "EEG based Internal Stress Observation: An Overview of Methods involved from EEG acquisition to system design", Journal of Critical reviews, Volume 7, Issue 9, 2020, Pp. 947 – 952.
- P. Subha Hency Jose, **P. Rajalakshmy**, P. Manimegalai, (2019), "A Novel Methodology for the design of a Portable Ventilator", International Journal of Innovative Technology and Exploring Engineering. Vol. 9, Issue 1, 2019, Pp. 4785-4789.
- P. Subha Hency Jose, **P. Rajalakshmy**, Jerome Thomas, (2019), "Design and Development of Stable PID controller for a Quadruple Tank System ", Indian Journal of Environmental Protection. 39(5), Pp. 472-478.
- AnanthaChristuRaj, **Rajalakshmy.P**, Subha Hency Jose, Comparison of Controller Performance for the analysis of Superficial Cancer Therapy, Journal of Complimentary Medicine Research, Vol,11, No.1, 2020.
- Rajalakshmy, P., Subha Hency Jose, P., Thilagavathy, B., "Development of magnetic levitation system ", International Journal of Innovative Technology and Exploring Engineering, 2019.
- Rajalakshmy, P., Dharmalingam, S., Subha Hency Jims, P., "Development of reduced order model for a 500 mw utility boiler in a thermal power plant ", Indian Journal of Environmental Protection, 2018.
- Abisha, P., Rajalakshmy, P., "Embedded implementation of a wearable food intake recognition system ", Proceedings of IEEE International Conference on Innovations in Electrical, Electronics, Instrumentation and Media Technology, 2017
- Rajalakshmy, P., Dharmalingam, S., Jayakumar, J., "A Novel Approach to Develop the Lower Order Model of Multi-Input Multi-Output System", IOP Conference Series: Materials Science and Engineering, 2017.
- Sivakumar, L, Rajalakshmy. P, " A heuristic approach to modeling the furnace of a utility boiler" International Journal of Applied Engineering Research, ISSN 0973-4562 Volume 10, Number 12, 2015

- Rajalakshmy.P, Dharmalingam.S, Jayakumar,J, "Development of detailed mathematical model of a 500 MW utility boiler based on chemical and thermodynamic equations", International Journal of Chemtech Research, Volume 10, Number 6, 2017.
- Elizabeth Amudhini Stephen, Mercy Shanthi, P.Rajalakshmy, Melbern Parthido, 'Application of Fuzzy logic Control in Thermal Comfort', in the International Journal of Computational and Applied Mathematics, Vol.:5 No.:3 2010 Page .: 289 to 300,ISSN 1819-4966, Five year Impact Factor: 1.356, Original Impact Factor: 1.29
- Joseph Davis, Rajalakshmy, Brema, "Increasing The Plant Metabolism In Polyhouse Farming Using Colour Filters", International Journal of Innovative Research and Advanced Studies, Vol.4, Issue 5, 2017.
- Narmadha, Rajalakshmy, "Breath walk Aware System Based on Embedded Design; International Journal of Advanced Research Trends in Engineering and Technology", Vol. II, 2015.
- Athullya, Rajalakshmy, "Chaotic Ant Swarm Optimized Fractional Order PID Controller for DC-DC Boost Converter", International Journal of Engineering Research and Technology, Vol.3, Issue 4, 2014.
- Simi Simon, Rajalakshmy, "Speed Control of DC Motor using PSO based Fuzzy Logic Controller", International Journal of Engineering Research and Technology, Vol.3, Issue 2, 2014.
- Indu Suresh, Rajalakshmy, "Implementation of Breath Walk Aware System", International Journal for Research in Applied Sciences and Engineering Technology, Vol.2, Issue 4, 2014.
- Soumya, P Rajalakshmy, 'Modelling and Position control of Geared Dc Motor Using Sliding Mode Control'; Journal of Emerging Technologies, Electrical Engineering;Vol:1, No:1,2013
- Bhavana, P Rajalakshmy, 'Gain Scheduling Adaptive PI Controller of Hybrid Stepper Motor'; Journal of Emerging Technologies, Electrical Engineering;Vol:1, No:1, 2013
- Velmurugan, P. Rajalakshmy, "Ultrasonic Flow meter using cross correlation technique" in the International journal of computer applications, Vol. 66, No. 10, March 2013, 2013.

	<ul style="list-style-type: none"> • Jacob, P., Rajalakshmy, P., “Calibration of U-tube manometer using frequency estimation technique in LABVIEW ”, 3rd International Conference on Electronics Computer Technology, 2011. • Vijila, C.K.S., Kanagasabapathy, P., Johnson, S., Rajalakshmy, P., “Efficient implementation of adaptive interference cancellation in fetal ECG using ANFIS ”, Proceedings of the Second IASTED International Multi-Conference on Automation, Control, and Information Technology - Signal and Image Processing, 2005.
<p>Papers presented in conferences</p>	<ul style="list-style-type: none"> • Anila Mathew, Rajalakshmy, Surface electromyogram based techniques for upper and lower extremity rehabilitation therapy - A comprehensive review, 2021 3rd International Conference on Signal Processing and Communication, ICPSC 2021, Pages 26 – 30, 2021 • Kumar, R.R., Rajalakshmy, P., Saranya, M.D., Elwin, J.G.R., Marichamy, S., "Process automation through internet of things on copper coating process of stainless steel", Materials Today: Proceedings, 2021, 45, pp. 2354–2356 • Sudha, R., Rajalakshmy, P., Shankar, M.S.S., ...Raj, P.A.C., Vijayakumar, P., “IoT based smart machinability system and performances of MRR on Haynes alloy”, Materials Today: Proceedings, 2021, 45, pp. 2528–2530 • Rajalakshmy, P., Jayanthi, G., Khan, J.M.F., ...Rani, S.S., Jose, P.S.H., , “Role of sensor technology in liquid level measurement of molten metal”, Materials Today: Proceedings, 2021, 45, pp. 2524–2527 • Rajalakshmy.P, Jayakumar. J, Dharmalingam. S, “An Investigation on Identification and Modeling approaches of a Multi-Input Multi-Output System”, ICRAAE, Karunya University, Coimbatore on 2nd and 3rd March 17. • Rajalakshmy, and Celyn ‘Measurement and Diagnosis of Neuromuscular Diseases using Neural Networks’, International Conference on Thermal Energy and Environment, held at Kalasalingam University, Virudhunagar, during 24th & 26th March 2011 • Rajalakshmy and ‘Capacitance Level Sensor using Neural Networks and ANFIS’, International Conference on Thermal Energy and Environment, held at Kalasalingam University, Virudhunagar, during 24th & 26th March 2011.

- Rajalakshmy, 'Calibration of U Tube Manometer using Frequency Estimation Techniques' (ICCOS), held at Karunya University on 17th March 2011.
- Rajalakshmy, 'Model reference Adaptive controller for Pressure Control', International Conference on Emerging Technological Trends in Advanced Engineering Research (ICETT-2012), Baseliros Mathews II College of Engineering, kollam, Kerala , from 20/02/2012 to 21/02/2012
- Rajalakshmy, Monisha, "Comparative Evaluation of Performance of Sliding Mode Controller and a Conventional Controller on a DC-DC Boost convertor", International Conference on Emerging Technological Trends in Advanced Engineering Research (ICETT-2012), Baseliros Mathews II College of Engineering, Kollam, Kerala , from 20/02/2012 to 21/02/2012
- Rajalakshmy, Lincy, "Multiplexed Model Predictive Controller for an inverted Pendulum" , International Conference on Futuristic Trends in Electronics Engineering (ICFTEE 2012), Thiruvalluar College of Engineering, Vadavasi , from 28/01/2012 to 29/01/2012
- Rajalakshmy, Celin, "Detection of Arrhythmia Using Heart Rate Variability Signal in LabVIEW", International Conference on Computing and Control Engineering ICCCE – 2012, MGR University, Chennai, from 12/04/2012 to 13/04/2012
- Rajalakshmy, Shannon, "Embedded Implementation of Positioning Algorithm Using 3-Axis Accelerometer" in the 4th International conference on Intelligent systems and control (ISCO-2010) held at Karpagam University Coimbatore during 4-5 February,2010
- Rajalakshmy, Soumya, "Modelling and Position control of Geared Dc Motor Using Sliding Mode Control" in the International conference on Global Challenges and Strategies in Engineering management and Disaster Management organized by Noorul Islam University, Kumarakoil, Tamil Nadu, 8th and 9th March, 2013
- Rajalakshmy, Bhavana, "Speed control of Stepper motor using Advanced control technique", in the International conference on Innovations in Intelligent Instrumentation, Optimization & Signal Processing organized by Karunya University, Coimbatore, 1st -2nd March 2013.

	<ul style="list-style-type: none"> • Rajalakshmy, Soumya “Modelling of Geared DC motor & Position Control using Sliding mode Controller &fuzzy Sliding Mode controller”, in the International conference on Innovations in Intelligent Instrumentation, Optimization & Signal Processing organized by Karunya University, Coimbatore, 1st -2nd March 2013.
Patents	<ul style="list-style-type: none"> • Filed a Patent titled “Novel Volume Measurement System for an Irregular Shaped Tank”, Patent No: 201941048984 dated 28.11.2019.
Books /Book Chapters	<ul style="list-style-type: none"> • Published a book titled, “Automotive Electrics and Instrumentation” , Education Publishers, 978-1-5457-2971-7 • A heuristic approach to modeling the furnace of a utility boiler, in ‘Advanced Engineering Research Applications’ Research India Publications. • Estimation of Elbow Joint Angle from sEMG signals using ANFIS”, Lecture Notes in Computational Vision and Biomechanics, Springer Publications, 2018.