



E.G.S. PILLAY ENGINEERING COLLEGE
(An Autonomous Institution, Affiliated to Anna University,
Chennai)

NAGAPATTINAM - 611002

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



FACULTY PROFILE



Name : Dr. S. Senthilkumar
Designation : Assistant Professor
Department : Electronics and
Communication
Engineering
Specialization : Digital system design, Renewable
energy, Solar photovoltaic, IoT
Qualification : B.E., M.Tech., Ph.D.,
Date of Birth : 07-12-1989
Date of Joining : 03-06-2013

ACADEMIC QUALIFICATION

Doctoral Degree

Degree and Specialization : Ph.D and Information and Communication Engineering

Year of Passing : 2023
Institution Name : Anna University, Chennai

Postgraduate Degree

Degree and Specialization : M.Tech., and Nanoelectronics

Year of Passing : 2013
Percentage/CGPA : 7.2
Institution Name : SASTRA University
Affiliation : SASTRA University

Institute/University:

Undergraduate Degree

Degree and Specialization : B.E and Electronics and Communication Engineering

Year of Passing : 2011
Percentage/CGPA : 69.1
Institution Name : Anjalai Ammal Mahalingam Engineering College

Affiliation : Anna University, Chennai

Institute/University:

WORK EXPERIENCE AND POSITIONS HELD

Total Experience

Teaching **9 years 9 months**

Industry Experience -

Research Experience -

PUBLICATIONS

PATENT:

1. “IoT and AI driven metropolitan cities transportation management system”, IPR Patent office, Government of India, 202241038707, 15/07/2022 (**Published**).

INTERNATIONAL JOURNAL PUBLICATIONS:

SCI:

1. V. Mohan & **S. Senthilkumar**, “IoT based fault identification in solar photovoltaic systems using an extreme learning machine technique”, [Journal of Intelligent & Fuzzy Systems, vol. 43, no. 3, pp. 3087-3100, 2022. 10.3233/JIFS-220012, 2022.](#)
2. **S. Senthilkumar**, V. Mohan , S. P. Mangaiyarkarasi & M. Karthikeyan, “Analysis of Single-Diode PV Model and Optimized MPPT Model for Different Environmental Conditions”, International Transactions on Electrical Energy Systems, Volume 2022, Article ID 4980843, 17 pages, 2022, <https://doi.org/10.1155/2022/4980843>.

SCOPUS:

1. **S. Senthilkumar**, Moazzam Haidari, G. Devi, A. Sagai Francis Britto, Rajasekhar Gorthi, Hemavathi, M. Sivaramkrishnan, “Wireless Bidirectional Power Transfer for E-Vehicle Charging System”, [2022 International Conference on Edge Computing and Applications \(ICECAA\)](#), IEEE, 13-15 October 2022. [10.1109/ICECAA55415.2022.9936175](https://doi.org/10.1109/ICECAA55415.2022.9936175). (**IEEE Explore/Scopus**)
2. **S. Senthilkumar**, **K. Udhayanila**, V. Mohan, T. Senthil Kumar, D. Devarajan & G. Chitrakala, “Design of microstrip antenna using high frequency structure simulator for 5G applications at 29 GHz resonant frequency”, International Journal of Advanced Technology and Engineering Exploration, vol. 9, no. 92, PP. 996-1008, 2022. [10.19101/IJATEE.2021.875500](https://doi.org/10.19101/IJATEE.2021.875500) (**Scopus**)
3. **S. Senthilkumar**, V. Mohan, T. Senthil Kumar & G. Chitrakala, “Soliton propagation in colloidal suspension: Numerical simulation and modulation in- stability”, Neuro Quantology”, vol. 20, no. 7, pp. 2277-2284, 2022. [10.14704/nq.2022.20.7.NQ33295](https://doi.org/10.14704/nq.2022.20.7.NQ33295). (**Scopus**)
4. A. Asuvaran & **S. Senthilkumar**, “Low delay error correction codes to correct stuck-at defects and soft errors”, 2014 International Conference on Advances in Engineering and Technology (ICAET), 2014. doi:[10.1109/icaet.2014.7105257](https://doi.org/10.1109/icaet.2014.7105257) (**IEEE Explore/Scopus**)
5. **Senthilkumar Selvaraj**, “Semi-Analytical Solution for Soliton Propagation In Colloidal Suspension”, International Journal of Engineering and Technology, vol, 5, no. 2, Apr-May 2013. (**Scopus**)

OTHERS JOURNALS:

1. G. Krithiga, V. Mohan, **S. Senthilkumar**, “A Brief Review of the Development Path of Artificial Intelligence and its Subfields”, International Journal of Engineering Technologies and Management Research, vol. 10, no. 6, pp. 1-12, 2023. <https://dx.doi.org/10.29121/ijetmr.v10.i6.2023.1331>
2. B. Lakshanya Sri, V. Mohan, **S. Senthilkumar**, “An Efficient Optimized MPPT for PV System Under Extremely Fast Changing Irradiance – Hybrid Honey Badger Optimizer” *International*

- Journal of Research - GRANTHAALAYAH*, vol. 11, no. 5, pp. 9–22. doi: 10.29121/granthaalayah.v11.i5.2023.5161, 2023.
3. K. Nandakumar, M. Aravind., S. Dinesh, A. John Milton, S. Manikandan, **S. Senthilkumar**, “The efficacy of ultraviolet radiation for germicidal purposes”, *International Journal of Research -GRANTHAALAYAH*, vol. 11, no. 4, pp. 13–19, 2023. <https://doi.org/10.29121/granthaalayah.v11.i4.2023.5121>. (CrossRef, Google Scholar)
 4. **S. Senthilkumar**, N. Prathap, T. Senthilkumar, V. Parthasaradi, D. Devarajan, “Energy Saving Solar Powered LED Street Lights with Automatic Intensity Control”, *Iconic Research And Engineering Journals*, vol. 6, no. 10, pp. 1-4, 2023. (Google Scholar)
 5. **Senthilkumar, S.**, V. Mohan, R. Deepa, M. Nuthal Srinivasan., T. Senthilkumar., Thanikanti, S. B., & N. Prathap, “a review on MPPT algorithms for solar PV systems”, *International Journal of Research -GRANTHAALAYAH*, vol. 11. No. 3, pp. 25–64, 2023. <https://doi.org/10.29121/granthaalayah.v11.i3.2023.508>. (CrossRef, Google Scholar)
 6. Akbar Ali, R. Harish Kumar, R. Dheenathalayan, N. Prasanth, V. Parthasaradi, **S. Senthilkumar**, T. Senthil Kumar, “ Audio Streaming Using Li-FI Communication”, *Irish Interdisciplinary Journal of Science & Research*, vol. 7, no. 1, pp. 1-7, 2023. DOI: <https://doi.org/10.46759/IJSR.2023.7101> (CrossRef, Google Scholar)
 7. Senthilkumar, T, Mohan. V, and **Senthilkumar, S**, “Energy Efficient Transmission Using Optical Access Network: Issues and Challenges”, *International Journal of Engineering Science Technologies*, vol. 7, no. 1, pp. 43–51, 2023. doi: 10.29121/IJOEST.v7.i1.2023.462. (CrossRef, Google Scholar)
 8. **S. Senthilkumar**, V. Mohan, G. Krithiga, “Brief review on solar photovoltaic parameter estimation of single and double diode model using evolutionary algorithms”, *International Journal of Engineering Technologies and Management Research*, vol. 10, no. 1, pp. 64–78, 2023. <https://doi.org/10.29121/ijetmr.v10.i1.2023.1291>. (CrossRef, Google Scholar)
 9. G. Krithiga, V. Mohan, G. Chitrakala & **S. Senthilkumar**, “Optimization of switching angles for selective harmonic elimination in cascaded h-bridge multilevel inverters employing artificial intelligence techniques – A mini review”, *International Journal of Engineering Technologies and Management Research*, vol. 10, no. 1, pp. 1–16, 2023. [10.29121/ijetmr.v10.i1.2023.1278](https://doi.org/10.29121/ijetmr.v10.i1.2023.1278) (CrossRef, Google Scholar)
 10. **S. Senthilkumar**, V. Mohan, T. Senthil Kumar, G. Chitrakala, L. Ramachandran & D. Devarajan, “Solar Powered Pesticide Sprayer with Mobile Charger and LED Light”, *International Journal of Innovative Science and Research Technology*, vol. 7, no. 4, pp. 205-210, 2022. (Google Scholar)
 11. **S. Senthilkumar**, V. Mohan & G.Chitrakala, “Evolutionary Algorithms for Solar Photovoltaic Parameters Estimation - A Review”, *International Journal of Future Generation Communication and Networking*, vol. 13, no. 2, pp. 348 – 360, 2020. (ESCI)
 12. **S. Senthilkumar**, R. Nithya, P. Vaishali, R. Valli, G. Vanitha, & L. Ramachandran, “Autonomous navigation robot”, *International Research Journal of Engineering and Technology*, vol. 4, no. 2, 2017. (Google Scholar)
 13. **S. Senthilkumar**, C. Nivetha, G. Pavithra, G. Priyanka, S. Vigneshwari, L. Ramachandran, “Intelligent solar operated pesticide spray pump with cell charger”, *International Journal For Research & Development In Technology*, vol. 7, no. 2, pp. 285-287, 2017. (Google Scholar)
 14. D. Nathangashree, L. Ramachandran, **S. Senthilkumar** & R. Lakshmirekha, “PLC based smart monitoring system for photovoltaic panel using GSM technology”, *International Journal of Advanced Research in Electronics and Communication Engineering*, vol. 5, no. 2, pp.251-255, 2016. (Google Scholar)
 15. **Senthilkumar. S**, Lakshmi Rekha, Ramachandran. L & Dhivya. S, “Design and Implementation of secured wireless communication using Raspberry Pi”, *International Research Journal of Engineering and Technology*, vol. 3, no. 2, pp. 1015-1018, 2016. (Google Scholar)

16. A. Renuka Devi, **S. Senthilkumar**, L. Ramachandran “Circularly Polarized Dualband Switched-Beam Antenna Array for GNSS” International Journal of Advanced Engineering Research and Science. vol. 2, no. 1, pp. 6-9; 2015. (**Google Scholar**)
17. **S. Senthilkumar**, L. Ramachandran, R. S. Aarthi, “Pick and place of Robotic Vehicle by using an Arm based Solar tracking system”, International Journal of Advanced Engineering Research and Science, vol. 1, no. 7, pp. 39-43, 2014. (**Google Scholar**)
18. S. Suganya, R. Sinduja, T. Sowmiya & **S. Senthilkumar**, “Street Light Glow on Detecting Vehicle Movement Using Sensor”, International Journal for Advance Research in Engineering and Technology, ICIRET-2014. (**Google Scholar**)

INTERNATIONAL CONFERENCE PUBLICATIONS:

1. Smart medicine assistant by using raspberry PI, ETCVSP'22.
2. An PSO based sleep and wakeup scheduling algorithm for wireless sensor networks, ICETSSST – 2018.
3. A Multiple Target Tracking Method with Optical Flow and Multi hypothesis Kalman Filter, IICIRES'2017.
4. Design of secured wireless communication using GPRS and Raspberry PI, ICIRES'2016.
5. Improved circularly polarized dual band switched – beam antenna array for GNSS, ICAESM 2015.
6. Power balancing approach based on cluster-based routing protocol for Delay tolerant Mobile Networks, ICAESM 2015.
7. Performance evaluation of optimal beam forming of fixed gain AM MIMO relaying on asymmetric fading on asymmetric fading channels – GMSK - ICAESM 2015.
8. Robust railway crack detection using IR LED-Photodiode assembly, ICAESM 2015.
9. An arm based solar tracking system for pick and place robotic vehicle, IEEE-ICAET 2014.
10. Improved routing algorithm between nodes enabling RIPNG and OSPFV3 in IPV6 wide area network, IEEE-ICAET 2014.
11. Street light glow on detecting vehicle movement using sensor, ICIRET 2014.
12. A novel approach for detection of moving object from dynamic scenes using HMI:OL, ICIRET 2014.

NATIONAL CONFERENCE PUBLICATIONS:

1. Robotic Assistance for the Visually Impaired and Elderly People, NCIR 2015.
2. Face Scanner System for Identifying and Authenticating Student Attendance, NCIR 2015.
3. An emergency rescue dispatch system for road vehicles using block box, NCIR 2015.

BOOK PUBLICATIONS:

1. Digital System Design – GCS publishers, India, **ISBN number:** 978-93-94304-58-1, September 2022.
2. Introduction to PIC Microcontroller - Notion Publications, India, **ISBN number:** 979-888733948-1, June 2022.
3. Lab Manual for Digital Electronics – A.L.R Publications, India, 2015.

AWARDS RECEIVED:

1. ‘Young researcher award 2022’ from **Institute of Scholars (InSc)**, Bengaluru-560091, Karnataka, India.

EDITORIAL BOARD MEMBER:

1. Irish Interdisciplinary Journal of Science & Research (IIJSR)
2. Green Intelligent Systems and Applications (GISA)

REVIEWER IN THE FOLLOWING JOURNALS:

1. IEEE access
2. Advanced Engineering Forum (AEF)
3. International Journal of Research Publications
4. Journal of Next Generation Technology
5. Recent Advances in Electrical & Electronic Engineering
6. INSC International journal of Electronics, Electrical and Communication Engineering (IJEECE)
7. International Journal of Engineering Research in Africa (JERA)
8. Irish Interdisciplinary Journal of Science & Research (IIJSR)
9. Journal of Energy Systems

MEMBERSHIP IN PROFESSIONAL BODIES:

- ✓ India Society for Technical Education (ISTE) – Life member (LM 94057) from 2013
- ✓ Institution of Electronics and Telecommunication Engineers (IETE) – Life member (AM-236970) from 2014
- ✓ International Association of Engineers (IAENG) - Life member (161459) from 2015
- ✓ All India Council Technical Skill Development (AICTSD) – (AICTSD/PROFESSOR/57488) from 2021.
- ✓ InSC International Publishers (IIP)
- ✓ Computer Science Teachers Association (CSTA)

**RESEARCH PROJECTS/ CONSULTANCIES/ SEMINAR/ WORKSHOP/ SYMPOSIUM
PROPOSAL SUBMITTED:**

Sl. No.	Title	Agency	Period / Date	Amount Requested (Rs.)	Status
1	Design of Automatic Lighting system during night hours	Venture India private Limited	2013 – 2014	18,000/-	Submitted
2	Intelligent Smart Bus Using RFID And GIS Techniques	E.G.S. Pillay Engineering College, Nagapattinam	2014 – 2015	25,000/-	Submitted
3	One Day National Level Technical Symposium (FREQUERTZ'2k18)	Tamilnadu State Council for Science and Technology (TNSCST), DOTE Campus, Guindy, Chennai – 600 025.	05. 02. 2018	56,400/-	Submitted
4	One day seminar on “IoT platforms for Engineering	Science & Engineering Research Board (SERB),	10. 02. 2018	21,000/-	Submitted

	Applications”	New Delhi			
5	One day workshop on “IoT platforms for Engineering Applications”	Department of Information Technology (DIT), 6 CGO complex, Lodi road New Delhi – 110 003	09. 03. 2018	33,500/-	Submitted

SPONSORED FDP/ WORKSHOPS ATTENDED:

S. No	Title	Organized by	Sponsored by	Duration
1	CS 6304 – Analog and Digital Communication	Adhiyaman Engineering College (Autonomous), Osur	Centre for faculty development, Anna University – Chennai	12.06.2014 to 18.06.2014
2	IT6502 – Digital Signal Processing	E.G.S. Pillay Engineering College, Nagapattinam	Centre for faculty development, Anna University – Chennai	23.11.2017 to 29.11.2017
3	IoT Platforms for Emerging Engineering Applications	E.G.S. Pillay Engineering College, Nagapattinam	AICET	01.12.2017 & 02.12.2017
4	Smart Grid and Clean Energy Technologies (SGCET-2017)	Pondicherry Engineering College, Puducherry	AICET	11.12.2017 to 22.12.2017
5	Emerging Trends in Autonomous Mobile robots	E.G.S. Pillay Engineering College, Nagapattinam	AICET	04.06.2018 to 09.06.2018
6	Solar forecasting and its integrated energy storage	E.G.S. Pillay Engineering College, Nagapattinam	CSIR	21.06.2018 & 22.06.2018.
7	Bloom Box – The future of energy in India	Karpagam College of Engineering, Coimbatore	CSIR	27.09.2018 & 28.09.2018
8	Solar photovoltaic system design and MPPT implementation	National Institute of Technology, Trichy	National Institute of Technology, Trichy	25.01.2020 to 27.01.2020 & 01.02.2020 to 02.02.2020
9	Inculcating Universal Human Values in Technical Education	AICET	AICET	03.01.2022 to 07.01.2022
10	Emerging Issues in Indian Financial System	Global Institute of Management, Bhuvaneshwar, Odisha.	AICET-ISTE	20.01.2022 to 25.02.2022

ATAL FDP'S COMPLETED:

S. No	Title	Organized by	Duration
1	Green Technology & Sustainability Engineering	Gautam Buddha University	19.01.2021 to 23.01.2021
2	Internet of Things (IoT)	Mizoram University	01.02.2021 to 05.02.2021
3	Team-building and Coordination	Gandhi Institute Of Technology and Management – GITAM	15.02.2021 to 19.02.2021
4	Distributed and Cloud Technology	E.G.S. Pillay Engineering College	16.08.2021 to

			20.08.2021
5	Energy Engineering	Periyar University, Salem	07.11.2022 to 18.11.2022

NPTEL WORKSHOPS ATTENDED:

S. No	Title	Organized by	Sponsored by	Date
1	NPTEL Workshop	Rajiv Gandhi College of Engineering and Technology, Pondicherry	NPTEL (IIT Madras)	11. 01. 2016
2	NPTEL Workshop	K. Ramakrishna College of Technology, Trichy	NPTEL (IIT Madras)	27. 07. 2018

NPTEL COURSES COMPLETED:

1. Digital Circuits (July – Oct – 2018)
2. Microprocessors and Microcontrollers (January – April – 2019)
3. Control Engineering (January – April – 2019)
4. Solar Photovoltaics : Principles, Technologies & materials (January – March – 2020)
5. NBA Accreditation and Teaching – Learning in Engineering (NATE) – (January – April – 2020)
6. Effective Engineering Teaching In Practice (January – March – 2023)
7. Optical Wireless Communications for Beyond 5G Networks and IoT (January – April – 2023)

NPTEL COURSE MENTOR CERTIFICATE:

- ✓ Microprocessors and Microcontrollers
- ✓ Digital Circuits (2)

FDP/CONFERENCE/WORKSHOPS/SEMINAR/SYMPOSIUM ORGANIZED:

S. No	Title	Organized by	Duration
1	IEEE International Conference on Advances in Engineering and Technology (ICAET-2014)	E.G.S. Pillay Engineering College, Nagapattinam	02.05.2014 & 03.05.2014
2	International Conference on Innovative Research in Engineering and Technology (ICIRET-2014)	E.G.S. Pillay Engineering College, Nagapattinam	02.05.2014 & 03.05.2014
3	National level technical Symposium (FREQUERTZ-2k14)	E.G.S. Pillay Engineering College, Nagapattinam	13.09.2014
4	Two Days Hands on workshop in software defined Radio using NI USRP	E.G.S. Pillay Engineering College, Nagapattinam	01.08.2015 & 02.08.2105
5	National level technical Symposium “YANTRAA-2k18”	E.G.S. Pillay Engineering College (Autonomous), Nagapattinam	17. 02. 2018
6	Impact of outcome based education for engineering students	E.G.S. Pillay Engineering College (Autonomous), Nagapattinam	18.01.2019 & 19.01.2019

FDP / WORKSHOPS ATTENDED:

S. No	Title	Organized by	Duration
1	Build your own Embedded Systems	Saranathan Engineering College, Trichy	18.03.2015 & 19.03.2015
2	Autonomous Process	E.G.S. Pillay Engineering college, Nagapattinam	03.06.2017
3	Research methodologies and Funding Opportunities	E.G.S. Pillay Engineering college, Nagapattinam	24.06.2017
4	Intellectual Property Rights	Technology (TNSCST) & E.G.S. Pillay Engineering college (Autonomous)	04.01.2018 & 05.01.2018
5	Sensitizing higher education institutions to promote quality assurance for nation building-opportunities and challenges	Sri Venkateswara University College of Engineering, Tirupati	09.11.2019 & 10.11.2019
6	Wimax on Free Space Optical Communication (FSOC)	Technology (TNSCST) & E.G.S. Pillay Engineering college (Autonomous)	09.11.2018
7	Implementation & Assessment of Outcome Based Education	Technology (TNSCST) & E.G.S. Pillay Engineering college (Autonomous)	02.02.2019 & 03.02.2019
8	Outcome-based education	Sathyabama Institute of Science and Technology	07.05.2020 to 09.05.2020
9	Secrets to get quickly published as a scientific author & hasten your PhD research writing	Aristocrat research	10.05.2020
10	Grid connected and stand-alone solar plant design using Homer-PRO	St. Joseph's Institute of Technology, Chennai	14.05.2020
11	Opportunities for Research with DRDO	A.V.C. College of Engineering	29.05.2020
12	Antenna and Microwave Engineering	K. Ramakrishna College of Technology	08.06.2020 to 13.06.2020
13	MATLAB Onramp	Mathworks training services	11.12.2021
14	International workshop on energy technology and sensor systems TENSYS-2021	Universiti Malaya	21.12.2021 & 22.12.2021

DELIVERED LECTURES:

1. **“Presentation Skills in Examinations”** for First year students at E.G.S Pillay Engineering College (Autonomous) on 08. 01. 2018.
2. **“Electronics Waste Management System”** for B.E - ECE students at E.G.S Pillay Engineering College (Autonomous) on the occasion of Electronics Week sponsored by IETE dated on 31. 01. 2018.

RESPONSIBILITIES IN PRESENTLY WORKING COLLEGE:

- ✓ E.G.S. Pillay Engineering College Competitive Exams convener from 05.07.2023.
- ✓ E.G.S. Pillay Engineering College NPTEL coordinator from 20.07.2022.
- ✓ Department IQAC & NAAC coordinator from January 2021.
- ✓ Responsible person for course files in institution level 2018.
- ✓ ISTE convener from August 2017.
- ✓ Exam cell coordinator from June 2014 to May 2015.

- ✓ Department NAAC coordinator from December 2014 to August 2017
- ✓ Central Library committee member since July 2013.
- ✓ Embedded System lab in-charge since July 2013.
- ✓ Department library in-charge since July 2013.

SUCCESSFULLY FACED VISITS:

- ✓ NBA : 3
- ✓ NAAC : 1
- ✓ Autonomous : 1

PERSONAL WEBSITE:

https://sites.google.com/d/1UfAqJFSU6cqpQXLpTt8KH8J6Skzex92l/p/1tNT27M5Fc_V8hicoFojJFTUuFL_Q07f5/edit

RESEARCH PROFILES:

- ✓ Web of Science : <https://www.webofscience.com/wos/author/record/CAJ-2574-2022>
- ✓ Scopus : <https://www.scopus.com/authid/detail.uri?authorId=55752738900>
- ✓ Google Scholar : https://scholar.google.com/citations?user=jR_cYdYAAAAJ
- ✓ Orcid : <https://orcid.org/my-orcid?orcid=0000-0002-1552-3475>
- ✓ Kudos : <https://www.growkudos.com/hub/512428/publications>
- ✓ Researchgate : <https://www.researchgate.net/profile/Senthilkumar-Selvaraj>

[Vidwan : https://vidwan.inflibnet.ac.in/profile/275526](https://vidwan.inflibnet.ac.in/profile/275526)