

## FACULTY PROFILE

Name	: S. Sasirekha	
Date of Birth	: 07.03.1983	
Date of Joining	: 06.12.2007	
Designation	: ASP	
Highest Qualification	: PhD	
SSN ID	: sasirekhas@ssn.edu.in	
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AICTE ID	: 1-456875463	
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Phone	: 9962534272	
Blood Group	: O + ve	

### Academic Performance :

(High School to Highest Qualification)

Standard / Degree	Institution	Year of Completion	Class / Division
ASLC	Sacred Heart Convent Higher Secondary School, Villupuram.	1998	First/ Distinction
HSC	Sacred Heart Convent Higher Secondary School, Villupuram.	2000	First/ Distinction
B. E	SSN College of Engineering, Kalavakkam	2004	First
M. E	Mahendra Engineering College, Namakkal	2007	First
PhD	Anna University, Chennai	2017	-

### Work Experience

S.No.	Designation	Name and Address of the Institution	From	To	Total No. of Years
1.	Associate Professor	SSN College of Engineering, Kalavakkam	01/01/2018	Till Date	5.10 yrs
2.	Assistant Professor (Grade II)	SSN College of Engineering , Kalavakkam	01/10/2012	31/12/2017	5.2 yrs
3.	Assistant Professor (Grade I)	SSN College of Engineering , Kalavakkam	01/11/2009	30/09/2012	2.11 yrs
4.	Lecturer	SSN College of Engineering , Kalavakkam	06/12/2007	31/10/2009	1.10 yrs
5.	Lecturer	Sri Venkateswara College of Engineering, Sriperambatur	07/06/2007	30/11/2007	0.6 yrs
6.	Software Engineer	e-Logistics Private Limited	13/06/2004	15/02/2005	0.8 yrs

### PUBLICATION OF PAPERS IN REFEREED JOURNALS:

1. J. L. P. Ignatius, **S. Selvakumar**, K. G. J. L. Paul, A. B. Kailash, S. Keertivaas et al., "Histogram Matched Chest X-Rays-Based Tuberculosis Detection Using CNN," Computer Systems Science and Engineering, vol. 44, no.1, pp. 81–97, 2023.
2. J. L. Paul Ignatius and **S. Selvakumar**, "Enhanced Distributed Storage System Using Lower Triangular Matrix-Luby Transform Codes," Intelligent Automation & Soft Computing, vol. 33, no.3, pp. 1941–1959, 2022.
3. Ignatius, J. L. P., **Selvakumar, S.**, JSN, S., Govindarajan, S. (2022). Data Analytics and Reporting API – A Reliable Tool for Data Visualization and Predictive Analysis. Information Technology and Control, 51(1), 59-77. <https://doi.org/10.5755/j01.itc.51.1.29467>
4. K. Srividhyasaradha, I. Joe Louis Paul, and **S. Sasirekha**, "RFID and PIR Motion Sensor based Automated Attendance System for Educational Institutions", International Journal of Recent Technology and Engineering (IJRTE), Vol. 8, Issue. 2S8, August 2019, pp. 1275-1279.

5. I. Joe Louis Paul, **Sasirekha Selvakumar**, A safety system for school children using GRAG, International Journal of Computer Aided Engineering and Technology, 11(4/5), 2019, pp. 527-542.
6. **Sasirekha Selvakumar**, and Sankaranarayanan Swamynathan. "Cluster-chain mobile agent routing algorithm for efficient data aggregation in wireless sensor network." Journal of Communications and Networks vol. 19, no. 4, Sept 2017, pp. 392-401. [IF: 1.4]
7. **Sasirekha S**, Swamynathan S 2017, "Fuzzy Rule Based Environment Monitoring System for Weather Controlled Laboratories using Arduino", International Journal of Intelligent Information Technologies, vol. 13, no. 1, 2017, pp. 50-66, ISSN: 1548-3657. (Web of Science Emerging Sources Citation Index)
8. Joe Louis Paul, **S. Sasirekha**, S. Jesu Iswarya, R. Praveen Chandru, "Fruit Freshness Monitoring System during Transportation - An RFID and WSN based Monitoring System", Pakistan Journal of Biotechnology, Vol. 13 special issue II, pp. 29 – 34, March 2017. (Web of Science Emerging Sources Citation Index).
9. **S. Sasirekha**, S. Swamynathan, "Service provisioning middleware for wireless sensor network", Journal of Advances in Intelligent Systems and Computing, Vol. 404, 2016.
10. **S. Sasirekha**, S. Swamynathan, "A Comparative Study and Analysis of Data Aggregation Techniques in WSN" is published in Indian Journal of Science and Technology, Vol. 8 (26), Oct 2015.
11. **S. Sasirekha**, I. Joe Louis Paul, B. Prasanth, M.R. Pravinkumar, K.H. Srijish, S. Swamynathan "Automatic Wireless Sensor Network Based Railway Safety System" Australian Journal of Basic and Applied Sciences, ISSN:1991-8178, Vol. 9 No. 20, pp.313-317, June 2015 [IF: 0.425]
12. A. B. Prashanth, P. Jeny Ton Nielsina, **S. Sasirekha**, A Study on IoT Based Applications, International Journal of Applied Engineering Research, Print ISSN 0973-4562, Special Issue Volume.34, 2015, pp.27284-27285.
13. Ramya P, **Sasirekha S**, "Text Mining System for Non-Expert Miners", International Journal of Computer Science and Information Security, Vol.12, No.5, May 2014, ISSN 1947-5500, (pp. 14-18).
14. S. Amudaria , **S. Sasirekha** , "Design of Content-Oriented Information Retrieval by Semantic Analysis" **International Journal of Computer Science and Information Security (IJCSIS)** Vol. 9 No. 1, January 2011 ISSN 1947-5500.(pp 92-97)

#### **PUBLICATION OF PAPERS IN CONFERENCES:**

1. Sundareswaran, N., **Sasirekha, S.** (2022). Packet Filtering Mechanism to Defend Against DDoS Attack in Blockchain Network. In: Suma, V., Fernando, X., Du, KL., Wang, H. (eds) Evolutionary Computing and Mobile Sustainable Networks.

Lecture Notes on Data Engineering and Communications Technologies, vol 116. Springer, Singapore. [https://doi.org/10.1007/978-981-16-9605-3\\_14](https://doi.org/10.1007/978-981-16-9605-3_14)

2. Dr. I. Joe Louis Paul, ASP, and Dr. S. Sasirekha, ASP presented a paper titled "SSN-IT Chatbot" in the International Conference on Intelligent Computing, Smart Communication and Network Technologies- ICICSCNT2021 in Virtual Mode organized by the Departments of CSE, ECE and IT, R.M.K. Engineering College, Chennai on March 26, 2021.
3. N. Sundareswaran, **S. Sasirekha**, T. Shanmugapriya, I. Joe Louis Paul, and Sonal Sharma, "Secure banking transaction using Blockchain", AIP Conference Proceedings 2336, 040008 (2021) <https://doi.org/10.1063/5.0045780>
4. M. Oviyaa, P. Renvitha, R. Swathika, I. J. L. Paul and **S. Sasirekha**, "Arduino based Real Time Drowsiness and Fatigue Detection for Bikers using Helmet," 2020 2nd International Conference on Innovative Mechanisms for Industry Applications (ICIMIA), Bangalore, India, 2020, pp. 573-577.
5. N. Sundareswaran, **S. Sasirekha**, I. J. Louis Paul, S. Balakrishnan and G. Swaminathan, "Optimised KYC Blockchain System," 2020 International Conference on Innovative Trends in Information Technology (ICITIIT), 2020, pp. 1-6, doi: 10.1109/ICITIIT49094.2020.9071533.
6. I. Joe Louis Paul, **S. Sasirekha**, S. Mohanavalli, C. Jayashree, P. Moohana Priya and K. Monika, "Smart Eye for Visually Impaired-An aid to help the blind people," 2019 International Conference on Computational Intelligence in Data Science (ICCIDS), Chennai, India, 2019, pp. 1-5.
7. Joe Louis Paul I., **Sasirekha S.**, Uma Maheswari S., Ajith K.A.M., Arjun S.M., Athesh Kumar S. (2019) Eye Gaze Tracking-Based Adaptive E-learning for Enhancing Teaching and Learning in Virtual Classrooms. In: Fong S., Akashe S., Mahalle P. (eds) Information and Communication Technology for Competitive Strategies. Lecture Notes in Networks and Systems, vol 40. Springer, Singapore. [https://doi.org/10.1007/978-981-13-0586-3\\_17](https://doi.org/10.1007/978-981-13-0586-3_17).
8. Sasirekha S., Swamynathan S., Suganya S. (2018) An ECC-Based Algorithm to Handle Secure Communication Between Heterogeneous IoT Devices. In: Kalam A., Das S., Sharma K. (eds) Advances in Electronics, Communication and Computing. Lecture Notes in Electrical Engineering, vol 443. Springer, Singapore. [https://doi.org/10.1007/978-981-10-4765-7\\_37](https://doi.org/10.1007/978-981-10-4765-7_37)
9. **Sasirekha S.**, Swamynathan S., Keerthana S. (2018) A Generic Context-Aware Service Discovery Architecture for IoT Services. In: Venkataramani G., Sankaranarayanan K., Mukherjee S., Arputharaj K., Sankara Narayanan S. (eds)

Smart Secure Systems – IoT and Analytics Perspective. ICIIT 2017. Communications in Computer and Information Science, vol 808. Springer, Singapore

10. **S. Sasirekha**, I. J. L. Paul and S. Swamynathan, "An API Centric Smart Kitchen Application," 2018 International Conference on Computer, Communication, and Signal Processing (ICCCSP), Chennai, India, 2018, pp. 1-6, doi: 10.1109/ICCCSP.2018.8452850.
11. I. Joe Louis Paul, **S. Sasirekha**, S. Jesu Iswarya, R. Praveen Chandru, "Fruit Freshness Monitoring System during Transportation - An RFID and WSN based Monitoring System", Pakistan Journal of Biotechnology, Vol. 13 special issue II, pp. 29 – 34, March 2017. (Web of Science Emerging Sources Citation Index)
12. Sundararaman D., Ravichandran G., Jagadeesh R., **Sasirekha S.**, Joe Louis Paul I., Swamynathan S. "Customizable Vehicle Tracking with Intelligent Prediction System". In: Kar A. et al. (eds) Digital Nations – Smart Cities, Innovation, and Sustainability. I3E 2017. Lecture Notes in Computer Science, vol 10595. Springer, Cham, 2017
13. **S. Sasirekha**, S. Swamynathan , "A Dual Protocol Stack for Intelligent Traffic Monitoring System" , Second International Conference on Smart Trends for Information Technology and Computer Communications, SmartCom2017, Supported by College of Engineering Pune(COEP), Pune, August 18-19, 2017.
14. **Sasirekha S**, Swamynathan S, "Identifying an Efficient Semantic Data Representation Format for Heterogeneous Streams of Data", Proceedings of the International Conference on Computing Technologies, Sivakasi, India, 2017.
15. Joe Louis Paul, **S Sasirekha**, R Aishwarya, M Gowri Chandrika, "A Safety System for School Children using GRAG – (GPS, RFID And GSM)" , International Conference on Innovative Systems (ICIS 2016), Inventive Research Organization (IRO), Bangalore, 2017.
16. I. Joe Louis Paul, **S. Sasirekha**, S. Jesu Iswarya, R. Praveen Chandru published a paper titled "Fruit Freshness Monitoring System during Transportation - An RFID and WSN based Monitoring System" in the proceedings of IEEE Sponsored International Conference on Engineering and Technology (ICET'16) organized by Department of ECE, Karpagam College of Engineering, Coimbatore, Vol. 4, pp. 1-6, December 16-17, 2016, ISBN: 978-1-5090-3212-9.
17. **S. Sasirekha**, S. Swamynathan, S. Suganya, "An ECC Based Algorithm to Handle Secure Communication between Heterogeneous IoT Devices", 1st Springer International Conference on Emerging Trends and Advances in Electrical

Engineering and Renewable Energy (ETAERE-2016), Sikkim during 17th – 18th Dec, 2016. - Published in LNEE

18. **Sasirekha S**, Joe Louis Paul I, Swamynathan, S, Gokul, Y, Kirthana P 2016, 'Smart Helmet with Emergency Notification System – A Prototype', Proceedings of the 3rd International Conference on Wireless Communication and Sensor Network, China. Published in Advances in Computer Science Research, Atlantis Press (2017), vol. 44, pp.50-56.
19. **S. Sasirekha**, S. Swamynathan, S. Chandini, K. Keerthana, "Analysis of Application Layer Protocols in Internet of Things" International Conference on Advances in Computing and Data Sciences (ICACDS 2016), Ghaziabad (UP) India on November 11-12, 2016 - Published in Springer CCIS Proceedings
20. **Sasirekha S**, Swamynathan S 2016, 'Collaboration of IoT Devices Using Semantically Enabled Resource Oriented Middleware', Proceedings of the Third International Symposium on Computer Vision and the Internet, ACM, New York, USA, pp. 98-105.
21. **S. Sasirekha**, S. Swamynathan, "Service Provisioning Middleware for Wireless Sensor Network" was published in the Proceedings of the 4th International Conference on Frontiers in Intelligent Computing: Theory and Applications (FICTA) 2015, Vol. 404 of the series Advances in Intelligent Systems and Computing, pp 329-343
22. **S. Sasirekha**, S. Swamynathan, "A Comparative Study and Analysis of Data Aggregation Techniques in WSN", was published in the International Conference on Recent Advances in Engineering, Science & Technology – ICON'15 on April 17th, 2015 at Noorul Islam University, Kumaracoil, Kanyakumari.
23. A. B. Prashanth, P. Jeny Ton Nielsina, **S. Sasirekha**, A Study on IoT Based Applications "National Conference on Information Technology - NCIT 2K15" organized by the Department of IT, SSN College of Engineering, March 2015
24. Ramya P, **Sasirekha S**, Mohanavalli S, " Knowledge Extracting System for Non-Expert Miners", International Conference on Communication and Network Technologies (ICCNT '14), Mepco Engineering College, December, 2014
25. **S. Sasirekha**, S.Swamynathan, " Arduino Powered Environment Monitoring System for Weather Controlled Laboratories" , International Conference on Intelligent Information Technologies(ICIIT' 2014), Anna University ,December 2014

26. M.S.Aravindh , **S.Sasirekha**, “A Fault Tolerant Method To Provide Reliable And Secured Orchestration Service For WSN” Fourth National Conference on Advanced Computing Applications and Technologies (NCACAT-2K14), Easwari Engineering College, May 2014.
27. S. Amudaria , **S.Sasirekha**, “Improving the Precision Ratio Using Semantic Based Search”, IEEE sponsored International Conference on Signal Processing, Communication, Computing and Networking Technologies ICSCCN 2011, at Noorul Islam College of Engineering, Kumarakoil, Thuckalay held during 21st and 22nd July 2011.
28. Velavan M, **S.Sasirekha**, “published a paper entitled ‘Enhancing the performance of Large Scale Numerical Application on a Global Grid/Cluster Platform’, in the National Conference on Signal Processing Communication and Microelectronics (NCSCM’10) conducted by Jaya Engineering College.
29. S.Sangheethaa, **S.Sasirekha** & R. Swathika, “Critical File Access in Wireless Networks using Multifactor Authentication”, Proceedings of International Conference on "Mobile and Pervasive Computing" at Vellammal Engineering College, Chennai in August 2008.
30. **S.Sasirekha**, Dr. P. Seethalakshmi, “Reliability Enhancement on Interactive Video on Demand System Using Service Oriented Architecture” , International Conference on Soft Computing Techniques in Engineering at Avinashilingam University for Women, Coimbatore in January 2007.

#### **PATENTS FILED:**

APPLICATION NUMBER	202141010949
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	15/03/2021
APPLICANT NAME	<b>Sri Sivasubramaniya Nadar College of Engineering</b>
TITLE OF INVENTION	REAL TIME DROWSINESS AND FATIGUE DETECTION FOR BIKERS USING HELMET

#### **BOOKS PUBLISHED: NIL**

**ANNA UNIVERSITY PHD/MS SUPERVISOR RECOGNITION: Yes/No**

**IF Yes, SUPERVISOR RECOGNITION NO: 3140057**

**PHD/MS SCHOLARS GUIDED – COMPLETED/ONGOING**

<b>SNo.</b>	<b>Name of the scholar</b>	<b>Full time/Part time</b>	<b>Year of registration</b>	<b>Status</b>
1.	Sundareswaran N	Full time	2019	Confirmation Completed
2.	Kalai Selvi T	Part time	2021	Course Work

**HONOURS AND AWARDS RECEIVED:**

<b>Sl.No.</b>	<b>Name of Award</b>	<b>Name of Organization</b>	<b>Year</b>
1.	Best Teacher Excellence Award	SSN Institution	2010-2011
2.	Best Teacher Excellence Award	SSN Institution	2014-2015
3	1st prize Winner - Best Innovative Project On Real Time Parking Management System (RPMS)	Hewlett-Packard -Hackathon Conducted By Great Indian HP Code Off @ GIDS 2015	2015-2016
4.	Best Teacher Excellence Award	SSN Institution	2016-2017

**SPONSORED/CONSULTANCY PROJECTS – COMPLETED/ONGOING:**

<b>Title</b>	<b>Cost in lakhs</b>	<b>Duration (Years)</b>	<b>Funding Agency</b>	<b>Role</b>	<b>Status</b>
Developing a Computer-Assisted Reading Comprehension Test	0.40	2019-2020	SSN Trust	Co- PI	Completed
Designing a listening test for the English classroom	1.50	2018-2019	SSN Trust	Co- PI	Completed
SSN – Indoor navigation system (SSN-INS)	3	2018-2020	SSN Trust	PI	Completed



Speech-Enabled Interactive Enquiry System in Tamil	9.52	2016-2017	Tamil Virtual Academy (TVA), Chennai	Co- PI	Completed
Disaster management system-Next generation	3.05	2015 - 2017	SSN Trust	Co- PI	Completed

## **ADDITIONAL INFORMATION, IF ANY**

### **1. External Recognition – Invited Talks**

<b>Sl.No.</b>	<b>Topic handled</b>	<b>Date</b>	<b>Venue</b>
1.	SOA support in .NET	21.10.13	Department of IT,G.K.M College of Engineering
2.	SOA support in J2EE and .NET	10.10.14	Department of IT,G.K.M College of Engineering
3.	SOA support in J2EE and .NET	07.09.15	Department of IT,G.K.M College of Engineering, Chennai
4.	Hadoop Programming	08.09.2016	Department of Information Technology at Tagore Engineering College, Chennai
5.	Enterprise Application Integration and SOA	27.09.2016	Department of IT,G.K.M College of Engineering, Chennai
6.	REST based design for Web of Things in Smart Environments	18.07.2018	Department of IT, Mahendra Engineering College, Salem
7.	Internet of Things (IoT) Frameworks for SMAC	08.02.19	Emerging Trends and Future Technologies for Social, Mobile, Analytics and Cloud - SMAC 2019, SSN I
8.	Data Management in IoT	24.03.2018	Information Technology - Research Colloquium - A special focus on IoT, SSN I
9.	IoT Data Management– Techniques Research Focus	17.03.2021	AICTE Sponsored FDP on IoT Applications with Blockchain Techniques at the department of

			CSE, Mahendra Engg College, Namakkal Dt
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### Others Activities

- Participated in Smart India Hackathon 2017 (SIH 2017), the 36 hours World's Biggest Hackathon Organized by Ministry of HRD & AICTE under the Ministry of Civil Aviation, Allahabad. The six member team under my guidance was nominated as one among top 8 out of 64 problem statements. My team has been invited to submit a project proposal for converting their idea into a prototype by the Ministry of Civil Aviation.
- Invited as a jury member for the OPEN DATA GOV HACKATHON organized by National Informatics Centre (NIC), in association with IAMAI & StartUp India, 2017.
- Participated in Smart India Hackathon 2018 (SIH 2018), the 36 hours World's Biggest Hackathon Organized by Ministry of HRD & AICTE under the Ministry of Environment, Forest and Climate Change, Coimbatore. The six member team under my guidance was nominated as one among top 15 out of 64 problem statements. My team has been given an Internship opportunity in Altuis Technologies, Coimbatore and Tournament OS, Chennai.
- Dr. S. Sasirekha, ASP, acted as an External Examiner for B.Tech IT Project viva-voce at SRM Institute of Science & Technology, Kattankulathur, conducted through Online Mode on 31.05.21 & 01.06.21
- Doctoral Committee Member for Mr.Naveen Kumar PC2113004013006 (Part time External.), pursuing Ph.D. in the Department of Electronics & Communication Engineering, under the guidance of C. T. Manimegalai, Associate Professor, SRM, Chennai.

**SIGNATURE**