

## **FACULTY PROFILE**

Name (Capital Letters)                      Dr.J.ROSELIN  
Designation                                      Assistant Professor  
Department                                      Computer Science and Engineering  
Mail Id    roselin.js@auttv1.ac.in

Education Qualification                      :

<b>Degree</b>	<b>Specialization</b>	<b>University</b>	<b>Awarded Year</b>
BE	Computer Science and Engineering	Bharadhidasan University, Trichy	1999
ME	Computer Science and Engineering	Anna University, Chennai	2008
Ph.D	Information and Communication Engineering	Anna University, Chennai	2016

Professional Experience:

<b>Name of the Company / Institutions</b>	<b>Designation</b>	<b>Duration</b>		<b>Experience in Years</b>
		<b>From</b>	<b>To</b>	
M.A.M College of Engineering, Trichy	Lecturer	Dec 1999	Jan 2002	2.1
National Engineering College, Kovilpatti	Lecturer	Jun 2003	Jun 2009	6.0
National Engineering College, Kovilpatti	Senior Lecturer	Jun 2009	Aug 2009	0.2
Anna University Regional Campus -Tirunelveli	Assistant Professor	Aug 2009	Till date	11.3

Area of Specialization:

- Wireless Sensor Networks, Artificial Intelligence, Evolutionary Computation, Internet of Things (IoT) , Deep Learning and Mobile Computing.

Academic / Additional Responsibilities:

1. Faculty In charge Research & Consultancy Projects (December 2020 to till date)
2. Head of the Department (July 2011 to June 2012)
3. Deputy Warden Girls Hostel (August 2013 to July 2016)
4. Anna University Zone XX Valuation - CSE Board Chairman
5. Chief Superintendent - Anna University Examinations (Nov / Dec 2014, April / May 2015)
6. RED RIBBION CLUB Coordinator (Nov 2009 to Nov 2014)

Committee Member: (Representation in any Committee)

1. Anna University affiliation committee member
2. Anna University Representative for smooth conduct of Exams
3. Anna University Vigilance Squad member for smooth conduct of Exams

4. Anti-Ragging Committee member
5. Review Committee member of UG/PG projects
6. Class Committee Chair person/Member
7. Regulation Ratification Committee member of M.Tech ( 5 Years Integrated Programme)

Professional Membership:

- ISTE Life Member LM 45616

Research Guidance (mention the total count in each)

- i. PG : 26
- ii. Ph.D : 1

Publications (National/International):

International Journal

1. **Roselin, J**, Latha, P & Benitta, S 2017, 'Maximizing the wireless sensor networks lifetime through energy efficient connected coverage', *Ad Hoc Networks.*, vol.62, pp.1-10.
2. **Roselin, J** & Latha, P 2017, 'Prioritized Mobile Node Deployment to Enhance the Lifetime of Wireless Sensor Network', *Wireless Personal Communications*, vol.96, no 3, pp.3693–3711.
3. Sanoob, AH, **Roselin, J** & Latha, P 2016, 'Smartphone Enabled Intelligent Surveillance System', *.IEEE Sensors Journal*, vol. 16, no. 5, pp. 1361-1367.
4. **Roselin, J**, Latha, P & Poornima, S 2015, 'A survey on deployment strategies for Wireless Sensor Networks', *International Journal of Applied Engineering Research*, vol.10, no 77, pp.102-116.
5. **Roselin, J** & Latha, P 2015, 'A survey on scheduling algorithms for Energy Efficient Coverage in Wireless Sensor Networks', *International Journal of Applied Engineering Research*, vol.10, no 77, pp.133-156.
6. Poornima, S, **Roselin, J** & Latha, P 2014, 'Enhancing Point coverage in Mobile Wireless Sensor Network using Computational Geometric Approach' *International Journal of Emerging Technology and Advanced Engineering*, vol.4, no.2, pp 81-87.
7. Aadhil, MM & **Roselin, J** 2014 'Maximizing Coverage problem using Genetic Algorithm in Wireless Sensor Network' *International Journal of Emerging Technology and Advanced Engineering*, vol. 4, no. 2, pp 65-70.
8. **Roselin, J** & Latha, P 2013, 'Energy balanced dynamic deployment optimization to enhance Reliable Lifetime of Wireless Sensor Network', *International Journal of Engineering and Technology*, vol.5, no.4, pp.3450-3460.
9. Rygan, SR & **Roselin, J** 2013, 'Lifetime Maximization in WSN using Residual Energy Sleep Scheduling' *International Journals of Engineering Trends and Technology*, vol.4, no.5, pp 2044-2049.
10. Kavitha, SJ, **Roselin, J** & Latha, P 2012, 'QoS Localized Routing for Guarantee Reliability in Wireless Sensor Networks using Data Fusion Method with Different Data Traffic Types', *Data Mining and Knowledge Engineering*, vol.2, no.12.

11. ÁJenose, AA & **Roselin, J** 2011, 'Minimum Energy with Desired Reliable Data Fusion in Wireless Sensor Networks', *Wireless Communication*, vol.3, no.10, pp.738-744.
12. Selvi, M **Roselin, J** &Kavitha, V 2010, 'A Hybrid Image Enhancement Technique forNoisy Dim Images Using Curvelet andMorphology' *International Journal of Engineering Science and Technology*, vol. 2, no.7, pp. 2997-3002.
13. Victor, A, **Roselin, J** &Kavitha, V 2010, 'Preferential Image Segmentation Using J Segmentation Based on Color, Shape and Texture' *International Journal of Engineering and Technology*, vol.2, no.2, pp.131-135.

#### National Journal

1. **Roselin, J**&Latha, P 2016, 'Energy Efficient Coverage Using Artificial Bee Colony Optimization in Wireless Sensor Networks', *Journal of Scientific and Industrial Research*, vol.75, no.01, pp. 19-27.
2. Sandhiya, C, **Roselin,J**&Latha, P 2013, 'Deployment optimization of mobile nodes to improve coverage in Wireless Sensor Network', *National Journal of Technology*, vol.9, no.3, pp 19-27.

#### Conferences (National/International)

##### International Conference

1. S.UmaMaheswari, J.Roselin, Dr.P.Latha, Maximal Coverage Optimization in Wireless Sensor Networks", in Proceedings of International Conference on Emerging Trends in Information and Communication Engineering(ICEIC\_13) on 6<sup>th</sup> April 2013 PP 69-75
2. Kavitha S.J ,Roselin J, Dr.P.Latha, " QoS Localized Routing for Guarantee Reliability in Wireless Sensor Networks using Data Fusion Method with Different Data Traffic Types" in proceedings of International Conference on Computing and Control Engineering (ICCCE 2012)ISBN 978-1-4675-2248-9 12<sup>th</sup> and 13<sup>th</sup> April 2012.
3. R.S.N Magdena, J.Roselin , "Energy Efficient Coverage of WSN using Improved Ant Colony Optimization Algorithm" in proceedings of International Conference on Modeling Optimization and Computing (ICMO 2012) on 10<sup>th</sup> and 11<sup>th</sup> April 2012pp 71-83
4. Akila Victor, J.Roselin,"Segmentation Based on Fast Level Line Transform" in Proceedings of 2<sup>nd</sup> International Conference on Intelligent Science and Technology on 18<sup>th</sup> and 19<sup>th</sup> March 2010

##### National Conference

1. Benita S, Roselin J, ' Energy efficient coverage and connectivity in wireless sensor networks using load balanced cover trees' in 6<sup>th</sup> International Conference on Emerging Trends in Engineering & Technology (ICETET'16) jointly organized by Cape Institute of Technology, Tirunelveli, and Multimedia University, Malaysia.
2. Benita S, Roselin J, 'Survey on Wireless Sensor Networks' in 12<sup>th</sup> National conference on High Performance Computing (VISION'16)organized by Government College of Engineering,

Tirunelveli.

3. Sylvia Francy Mary K, Roselin J, 'Finding Optimal Placement for Efficient Target Coverage in Mobile Sensor Networks' in 6<sup>th</sup> International Conference on Emerging Trends in Engineering & Technology (ICETET'16) jointly organized by Cape Institute of Technology, Tirunelveli, and Multimedia University, Malaysia.
4. KaviyaElalkkiya M, Roselin J, Latha P, " Fish Swarm Optimized Balanced Coverage for Wireless Sensor Networks" in National Conference on Computing and Communication NCCC'15" on 4<sup>th</sup> and 5<sup>th</sup> Ma 2015, ISBN: 978-93-5212-781-8, pp.241-247.
5. Poornima S, Roselin J, Latha P, "Balanced Point Coverage in Wireless Sensor Network using Nature Inspired Firefly Algorithm" in National Conference on Computing and Communication NCCC'15" on 4<sup>th</sup> and 5<sup>th</sup> May 2015, ISBN: 978-93-5212-781-8, pp. 309- 314.
6. Mahadevan P, Roselin J "Coverage and Connectivity Preserved Scheduling to Maximize Lifetime of the Wireless Sensor Network" in National Conference on Computing and Communication NCCC'15" on 4<sup>th</sup> and 5<sup>th</sup> May 2015, ISBN: 978-93-5212-781-8, pp 343-347.
7. Sanoob H, Roselin J "Intelligent Surveillance System using Smartphone and PIR Motion Sensor" in National Conference on Computing and Communication NCCC'15" on 4<sup>th</sup> and 5<sup>th</sup> May 2015, ISBN: 978-93-5212-781-8, pp 331-336.
8. Poornima S, Roselin J, Latha P, "Distributed Deployment Strategy for Increased Point Coverage in Heterogeneous Wireless Sensor Network using MW-Voroni Diagram" in National Conference on Computing and Communication" 3<sup>rd</sup> -4<sup>th</sup> April 2014, ISBN: 978-93- 5156-842-1 pp 18-24.
9. Jeyanthi R, Roselin J, Dr.Platha, "Extending the Lifetime of Wireless Sensor Network through Card Tower Optimization Algorithm" in National Conference on Computing and Communication" 3<sup>rd</sup> -4<sup>th</sup> April 2014, ISBN: 978-93-5156-842-1pp 29-34.
10. Mohamed Aadhil M, Roselin J "Maximizing Coverage Problem using genetic algorithm in Wireless Sensor Network" in National Conference on Computing and Communication" 3<sup>rd</sup> - 4<sup>th</sup> April 2014, ISBN: 978-93-5156-842-1 pp 74-79.
11. Ramya R, Roselin J "Development of Energy Efficient and Reliable Routing Protocol for Wireless Sensor Network" in National Conference on Computing and Communication" 3<sup>rd</sup> - 4<sup>th</sup> April 2014, ISBN: 978-93-5156-842-1 pp 63-70.
12. Deepak S.P, Roselin.J, "Neighbor Position Verification in MANET" in National Conference on Computing and Communication" 3<sup>rd</sup> -4<sup>th</sup> April 2014, ISBN: 978-93-5156-842-1pp 160- 164.
13. A.Asaithambi, J.Roselin, "GSPN Reliable Routing Protocol in Wireless Sensor Networks" in National Conference on Innovations and Research Areas(NCIRACA'13) on 29<sup>th</sup> July 2013, pp

128-131.

14. A.SujinBabu, J.Roselin, “Improving the Quality of Service in Monitoring the ECG of patients using WSN” in National Conference on Innovations and Research Areas(NCIRACA’13) on 29<sup>th</sup> July 2013,pp 137-141.
15. C.SandhiyaJ.RoselinDr.P.Latha, “Deployment Optimization of Mobile Nodes to Improve Coverage in Wireless Sensor Networks” in PSG-ACM National Conference on Intelligent Computing on 26-27 April 2013,PP 119-124.
16. J.DeviDayalVinayaki, J.Roselin, Dr.P.Latha, “Maximizing the Lifetime of Heterogeneous Wireless Sensor Networks by Energy Efficient Coverage: An Ant Colony Approach” in National Conference on Computing Techniques’13 on 05<sup>th</sup> April 2013, pp. 38, ISBN: 978- 93-80609-13-3.
17. A.Asaithambi, J.Roselin, “Transmission Service Routing Protocol in Wireless Sensor Networks” in National Conference on Emerging Trends and Applications on 29<sup>th</sup> January 2013, pp 379-382.
18. R.S.N. Magdena, J.Roselin, Dr.P.Latha,“Increased Network Lifetime Based on Hybrid ACO and PSO Algorithms” in Proceedings of National Conference on Computer Vision and Communication Systems(NCCVCS’12) on 27<sup>th</sup> April 2012.
19. R.S.N.Magdena, J.Roselin,Dr.P.Latha, ”Energy Efficient Coverage and prolongs Network Life time of WSN using IACO Algorithm” in proceedings of National Conference on Information Science and Engineering(NCISE-2012), on 21<sup>st</sup> March 2012,pp 71-75
20. Kavitha.S.J, Roselin.J, Dr.P.Latha, “ Localized Qos Routing Protocol based on Data Traffic types for Wireless Sensor Networks” in Proceedings of National conference on Emerging Trends in Electronics, Instrumentation and Control (ETEIAC’12) pp 157-162.
21. S.J.Kavitha, J.Roselin, Dr.P.Latha, “Data Traffic types in Qos Localized routing protocol Wireless Sensor Networks”, in Proceedings of the National Conference on Communication Technology(GNEESIC’12), pp 693-698.
22. S.J.Kavitha, J.Roselin, Dr.P.Latha, ”QoS Guarantee of Reliability in Wireless Sensor Networks Using Different Data Traffic Types” in Proc of National Conference on Intelligent Techniques(NCIT’12) on March 2012.
23. V.P.Ashwin Kumar, J.Roselin, “Efficient and Reliable Routing Protocol for Fixed-Power Sensor Networks”, in Proceedings of National Conference on Emerging Technologies(NACET’2011) on 6<sup>th</sup> May 2011, Anna University of Technology, Tirunelveli.
24. A.AntonyJenose , J.Roselin, “Distance Reliant Clustering Mechanism for Energy Competance in Wireless Sensor Networks” in Proceedings of seventh National Conference on High Performance Computing (Vision’11) on 16<sup>th</sup> March 2011, pp 111.

25. A.AntonyJenose ,J.Roselin, “Energy Efficient Clustering in WSN under Joint Routing and Coverage Constraint” in Proceedings of the National Conference on Crypt Analysis Techniques in Computer Hacking ( Catch ’11), on 18<sup>th</sup> and 19<sup>th</sup> February 2011, pp64-68.
26. I.MuthuSelvi, J.Roselin, Dr.V.Kavitha “A Hybrid Technique for Noisy Dim Image Enhancement using Curvelet Transform and Morphological Reconstruction” in proceedings of National Conference on Emerging Technologies and Advancements NCETAC’2010 on 13<sup>th</sup> May 2010, pp 98-101
27. Kamala Devi S, Roselin J, “Incremental Performance of Load Balancing in Structured Peer to Peer Networks”, in National Conference on Emerging Trends in Advanced Computing (NCETAC’2010) on 3-4May 2010 ,pp 64-69.
28. Akila Victor, J.Roselin,“J Segmentation Based Image Segmentation for Object Recognition” in National Conference on Explorations and Innovations in Advanced Computing(ENIAC’2010) on 8<sup>th</sup> and 9<sup>th</sup> April 2010.
29. Kamala Devi S, Roselin J, “Performance of Load Balancing in Structured Peer to Peer Networks”, in National Conference on Recent Advances in Computer Vision & Information Technology (NCVIT ’2010) on 7<sup>th</sup> March 2010, pp205-208.
30. I.MuthuSelvi, J.Roselin,“Background Detection of low lighting Images using Contrast Enhancement” on National Conference on Advanced Image Processing and Networking (NACIPAN’2010) on 5<sup>th</sup> and 6<sup>th</sup> March 2010 pp48-55.
31. I.MuthuSelvi, J.Roselin, “The Innovative Contrast Enhancement methods for Improving Poor light Images” National Conference on Computer Science and Applications(NACSSA 2010) on 3<sup>th</sup> March 2010 pp 106-110.
32. Kamala Devi S, Roselin J, “On zone Balancing of Peer to Peer Network” in National Conference on Emerging Trends in Information Technology (NCETIT 1.0) on 23<sup>rd</sup> February 2010.
33. I.MuthuSelvi, J.Roselin, “A New approach for Bakground detection due to Contrast Enhancement of poor light Images” in National Conference on Data Mining and Image Processing (NCDMIP’10) on 19<sup>th</sup> February 2010 pp 169-174.
34. Kamala Devi S, Roselin J, “Moving virtual Server from Peer to Peer based on Load” in National Conference on Networks,Intellegence and computing Systems (NCNICS’ 2010) on 5<sup>th</sup> February 2010.
35. J.Roselin, V.Gomathi, National Conference on Computing Technologies (MEPCONCT’08) in MepcoSchelnkEngineering College, Sivakasi on March 07, 2008 titled “EER: Energy Efficient Routing For Qos Guarantee Of Reliability In Wireless Sensor Networks”.

#### Book / Chapter:

1. **Roselin, J**, (2019). Lifetime Maximization of Target-Covered WSN Using Computational Swarm Intelligence. In *Handbook of Research on the IoT, Cloud Computing, and Wireless Network Optimization* (pp. 383-425). IGI Global.

#### Expert Lecture Delivered:

1. Delivered Expert Lecture on “Latest trends in computing and communication ” in SACOESIUM 2018 organized by Department of Information Technology, Dr.Sivanthi Aditanar College of Engineering, Tiuchendur on 02.02.2018.
2. Delivered Expert Lecture on “Introduction to Clocks, events and process states, Synchronizing physical clocks, Logical time and logical clocks and Global states” in Anna University Sponsored Faculty Development Training Programme on CS6601- Distributed Systems at Anna University, Regional Campus-Tirunelveli on 01-12-2017.
3. Delivered Expert Lecture on “Parallel program design, Performance, Scalability, Data Races, Synchronization Primitives” in Anna University Sponsored Faculty Development Training Programme on CS6801-Multicore Architectures and Programming at Anna University, Regional Campus-Tirunelveli on 02-12-2016
4. Delivered Expert Lecture on “Routing in Ad hoc Network” in Anna University Sponsored Faculty Development Training Programme on Mobile & Pervasive Computing in Regional Centre of Anna University, Tirunelveli on 05.06.2013.

#### Short Term Courses, Seminars, Workshop

##### Organized :

1. CSIR Sponsored National Conference on Computing and Communication NCCC'15 on 4<sup>th</sup> - 5<sup>th</sup> May 2015 at Regional Centre, Anna University Tirunelveli Region, Tirunelveli.
2. National Conference on Computing and Communication NCCC'14 on 3<sup>rd</sup> -4<sup>th</sup> April 2014 at Regional Centre, Anna University Tirunelveli Region, Tirunelveli.
3. National Conference NACET 2011 on 6<sup>th</sup> May 2011 at Anna University of Technology, Tirunelveli
4. AICTE sponsored 2 day National level Seminar on “Current Research Issues and Latest Trends in mobile and Wireless Networks” during 12<sup>th</sup>& 13<sup>th</sup> November 2007, at National Engineering College, Kovilpatti
5. National Level Technical Symposium COMPONEC'09 during 11<sup>th</sup> and 12<sup>th</sup> Feb 2008, at National Engineering College, Kovilpatti
6. TCS sponsored National Level Technical Symposium COMPONEC'08 during 7<sup>th</sup> and 8<sup>th</sup> Feb 2008, at National Engineering College, Kovilpatti

## NPTEL Online Certification Received

1. NPTEL-Elite Twelve Week Faculty Development Programme on “Introduction to Internet of Things” during July-October 2018.
2. NPTEL-Elite Eight Week Faculty Development Programme on “Wireless Ad Hoc and Sensor Networks” during Feb-March 2018.
3. NPTEL Twelve Week Faculty Development Programme on “Deep Learning for Visual Computing” during Jan-April 2018.

### Attended :

1. Anna University sponsored Two-Week Faculty Development Training Programme on “EC - 6403 Electromagnetic Fields” during 3<sup>rd</sup> to 15<sup>th</sup> December 2018 at Anna University Regional Campus, Tirunelveli
2. AICTE approved Faculty Development Training Programme on “FDP 301x Mentoring Educators in Educational Technology” Conducted by Indian Institute of Technology Bombay, from May 17, 2018 to July 05, 2018.
3. Indian Institute of Remote Sensing, Indian Space Research Organization and Department of Space, Government of India organized course on “ Geoinformatics for forest fire management” from April 02 to April 07 2018.
4. AICTE approved Faculty Development Training Programme on “FDP 201x Pedagogy for Online and Blended Teaching-Learning Process” Conducted by Indian Institute of Technology Bombay, from September 14, 2017 to October 12, 2017.
5. Centre for Faculty Development, Anna University, Chennai sponsored two days ‘Hands-on Workshop on Python Programming’ during 21<sup>st</sup> and 22<sup>nd</sup> August 2017 at Anna University Regional Campus, Tirunelveli.
6. AICTE approved Faculty Development Training Programme on “FDP 101x Foundation Program in ICT for Education” Conducted by Indian Institute of Technology Bombay, from August 3, 2017 to September 7, 2017.
7. Anna University sponsored Faculty Development Training Programme on “CS6801- Multicore Architectures and Programming” during 1<sup>st</sup> to 5<sup>th</sup>, 9<sup>th</sup> & 10<sup>th</sup> December 2016 at Anna University Regional Campus, Tirunelveli
8. ISTE Workshop on “Signals & Systems” conducted by Indian Institute of Technology Kharagpur on 2<sup>nd</sup> to 12<sup>th</sup> January 2014.
9. Seminar on “Importance of Free Open Source Software” Conducted by Indian Institute of Technology Bombay on 22<sup>nd</sup> October 2013.
10. Anna University sponsored Faculty Development Training Programme on “Mobile & Pervasive



Computing” during 4<sup>th</sup> to , 10<sup>th</sup> June 2013 at Regional Centre, AnnaUniversity, Tirunelveli Region, Tirunelveli

11. ISTE Workshop on “Database Management Systems” Conducted by Indian Institute of Technology Bombay on 21<sup>st</sup> to 31<sup>st</sup> May 2013.
12. NEPTEL Workshop Conducted by IIT Madras on 20 April 2013 at Regional Centre, AnnaUniversity, Tirunelveli Region, Tirunelveli.
13. Workshop on “Hands on Approach to Wireless Network Simulator using NS2” on 4<sup>th</sup>& 5<sup>th</sup> Dec 2012 at Regional Centre, AnnaUniversity, Tirunelveli Region, Tirunelveli
14. ISTE Workshop on “Aakash for Education” Conducted by Indian Institute of Technology Bombay on 10<sup>th</sup>& 11<sup>th</sup> November 2012.
15. Workshop on “Recent Trends in Wireless Sensor Networks” on 28<sup>th</sup>&29<sup>th</sup> November 2011 at Madras Institute of Technology, Anna University Chennai-600 044.
16. Workshop on “Industry Academia Interaction” on 14<sup>th</sup> April to 19<sup>th</sup> April 2008 at Honeywell Technology Solutions Lab Pvt. Ltd, Madurai.
17. Workshop on “Network Simulator(NS-2)” during 22<sup>nd</sup>& 23<sup>rd</sup> February 2008 at National Engineering College,Kovilpatti
18. IBM Community Edition Workshop during 25<sup>th</sup>& 26<sup>th</sup>, October 2007 at National Engineering College, Kovilpatti
19. AICTE sponsored National Seminar on “Pervasive Computing” during 20<sup>th</sup>& 21<sup>st</sup> , April 2007 at National Engineering College, Kovilpatti
20. Workshop on “Research Motivation” 10<sup>th</sup>&11<sup>th</sup> November 2006 at National Engineering College, Kovilpatti
21. Workshop on “Software Engineering Concepts”, 28<sup>th</sup> to 30<sup>th</sup> April 2005 at National Engineering College, Kovilpatti
22. Workshop on “Mentors Development Programme “ during 11<sup>th</sup>& 12<sup>th</sup> ,Sep 2004 at National Engineering College, Kovilpatti

Research Projects (ongoing/completed provide details in separate table):

Name of the Project	Low Cost Energy Efficient Street Light Automation and Fault Diagnosis System
Funding Agency	District Rural Development Agency, Tirunelveli
Amount Sanctioned	Rs.3,95,600/-(Rupees Three Lakhs Ninety Five Thousand Six hundred only)
Duration of the Project	10.10.2018 to 07.01.2019 (Ninety days)