

## List of Publications

### International Journal

1. Padmalaya Nayak, V. Bhavani, "Energy Efficient Clustering Algorithm for Multi Hop Wireless Sensor Network using Type 2 Fuzzy Logic" **IEEE SENSOR JOURNAL**, Vol. 17, Issue 14, July 15 2017, pp: 4492-4499 (**Impact Factor (1.987)**).
2. **Padmalaya Nayak**, D. Anurag, "A Fuzzy Logic based Routing Protocol for WSN to extend the Network Lifetime" **IEEE SENSOR JOURNAL**, Vol. 16, No. 1, January 2016, pp. 137-144. **Impact Factor (1.987)** (DOI: 10.1109/JSEN.2015.2472970).
3. **Padmalaya Nayak**, Bhabani. V, "Impact of Random Mobility Models of Reactive Routing Protocols over MANET" International Journal of Simulations, Systems, Science and Technology (IJSSST), Vol. 17, Issue 34, pp. 13.1 to 13.9, October 2016.
4. **Padmalaya Nayak**, M. Shanti, "WSN Security Issues: A brief Review", International Journal of Research in Engineering and Technology, Vol. 5, Issue 5, PP. 12-16, 2016.
5. **Padmalaya Nayak**, Bhabani V, B. Labanya, "Impact of Black-hole and Sink-hole Attack on Routing Protocols for WSN" International Journal of Computer Applications (0975-8887), Vol. 116, No. 4, pp. 42-46, April 2015.
6. **Padmalaya Nayak**, B. Labanya, V Bhavani, "Analysis of DSR protocol for MANET under black-hole and sink-hole attacks using NetSim Simulator" International Journal of Electronics Communication and Computer Technology (IJECCCT) (ISSN:2249-7838), Vol. 5 Issue ICICC (May 2015), pp. 10-14.
7. **Padmalaya Nayak**, **Palavishree**, "Comparison of Routing protocols using NetSim Simulator: LEACH Vs LEACH-C" International Journal of Computer Applications (0975-8887), Vol. 106, No. 11 , pp. 1-6, Nov. 2014.
8. A.Rupesh, **PadmalayaNayak**, "Load Balancing theory in Peer to Peer for Content Distribution Network",IJRECS, Vol.-1, pp. 1-3, ISSN-2321-5484, 2014.
9. **Padmalaya Nayak**, Saraswati Bhakare, T. Nazia, "Comparative study ofDSR, AODV routing protocol for WPAN using NetSim Simulator", International Journal of Advanced Research in Computer Science, ISSN: 0976-5697, pp. 254-257, Vol.-5, No. 4, May 2014.
10. **Padmalaya Nayak**, G. Ramamurthy, "Constrained based Path selection QoS Routing Algorithms – MCP and MCOP Problems", BioInfo. Journal of Information Systems and Communications (JOISAC), (Peer reviewed), ISSN: 0976-8742, Vol. 4, Issue-1, pp. 384-390, **Impact Factor Value: 4.57**, April 2013.
11. Sujeethananda, **Padmalaya Nayak**, and G. Ramamurthy, "QoS Routing in cognitive Wireless sensor networks", Bonfring International Journal of Networking Technologies and Applications (Peer reviewed), ISSN: 2277-5048, Vol.2, No. 1, PP. 1-9, March 2013.
12. **Padmalaya Nayak**, Tata Jganatha, G. Ramamurthy, "Optimal, Secure Cluster Head Placement on Sensor field through Source Coding" Submitted to International journal of IE (Springer Series-B), November 2013 ( 2<sup>nd</sup> Review over)
13. **Padmalaya Nayak**, G. Ramamurthy, "Utilization of Novel Overlap Functions in Wireless Sensor Fusion", Sensors and Transducers Journal, ISSN 1726-5479, Vol. 94, Issue 7, PP. 139-149, July-2008.

## International Conference

1. **Padmalaya Nayak**, Ch. Praneeth, “Monitoring Water Quality: Raspberry Pi and Arduino using Fuzzy Logic” in proceedings of IEEE EECCMC, to be conducted on 28<sup>th</sup> and 29<sup>th</sup> January 2018. (IEEE explorer)
2. **Padmalaya Nayak**, Uma Shuseela, Veena Trivedi, “A Review on DoS Attack: Defense and Detection Mechanism” in proceedings of Int. Conference on Energy, Communication, Data Analysis and soft Computing (ICDECDS) Aug. 2017, Chennai. (IEEE explorer)
3. **Padmalaya Nayak**, V. Bhabani, “A Genetic Algorithm based Clustering Algorithm for Wireless Sensor Network to enhance the Network Lifetime” in IEEE CONFLUENCE 2017, Amity University, Delhi, 12<sup>th</sup> and 13<sup>th</sup> Jan 2017. (IEEE explorer)
4. **Padmalaya Nayak**, V.Bhabani, M. Shanti, “ A fuzzy Logic based Dynamic Channel Allocation Scheme for Cellular Networks to Optimize the frequency Reuse” in Proc. of IEEE TENCON 2016, Singapore, on 22<sup>nd</sup> -25<sup>th</sup> November 2016. (IEEE explorer)
5. **Padmalaya Nayak**, M. shanti, “Wireless Sensor Network Security Issues – A brief Review” in proc. of International Conference on Innovations and Advancements (ICIAC-2016) 18<sup>th</sup>-19<sup>th</sup> March, 2016, pp. 40-45, Gitam University, Hyderabad
6. **Padmalaya Nayak**, Pallavishree, “Analysis of Random way point and Random walk Mobility Model for Reactive Routing Protocols using NetSim Simulator” in proc. of 3<sup>rd</sup> International Conference On Artificial Intelligence, Modelling and Simulations (AIMS 2015), pp. 427-432, UMS, Malaysia, Dec. 2-5, 2015 (IEEE explorer)
7. D.V.Puspalatha, **Padmalaya Nayak**, “A Clustering algorithm for WSN to optimize the Network Lifetime by using Type-2 Fuzzy Logic” Accepted in 3<sup>rd</sup> International Conference On Artificial Intelligence, Modelling and Simulations (AIMS 2015), pp. 53-58, UMS, Malaysia, Dec. 2-5, 2015 (IEEE explorer)
8. **Padmalaya Nayak**, M Sowmya and Pranaya J “Integration of Sensor Node with Raspberry-Pi for Health Care Monitoring Application” in Proc. of International Conference on Advances in Electronics and Computer System (IAECS-2015), pp. ECS-048—ECS-052, ISSRD, Bangalore, India
9. **Padmalaya Nayak**, Pallavishree, “Comparision of two reactive routing protocols with random walk and random way mobility model using NetSim Simulator” in Proc. of International Conference of Communications and Informatics (ICCI-2015), (ieec explorer) Coimbatore, India.
10. **Padmalaya Nayak**, B. Labanya, V Bhavani, “Analysis of DSR protocol for MANET under black-hole and sink-hole attacks using NetSim Simulator” in Proc. of International conference on Innovations in Computing and Communications” (ICICC-2015), pp-25-30, BVRIT, Hyderabad .

11. **Padmalaya Nayak**, D. Anurag, V.V.N.A Bhargavi, “ Fuzzy based method Super Cluster Head election for Wireless Sensor Network with Mobile Base Station (FM-SCHM)”, in Proc. of 2<sup>nd</sup> International Conference on Advanced Computing Methodologies” pp. 422-427, GRIET, Hyderabad, 2013.
12. Sujeethananda, **Padmalaya Nayak**, G. Ramamurthy “A Novel Approach to Routing Protocol for WSNs-QoS Provisioning” in proc. of the International Conference on Advances in Computing and Communications, (ICACC), pp. 38-41, 9-12<sup>th</sup> August 2012, Cochin, Kerala, India.
13. **Padmalaya Nayak**, G. Ramamurthy, and A.K.Banerjee “A Novel approach to Energy Aware Routing protocol in WSNs” in proc. of International Conference on Systemics, Cybernetics and Informatics (ICSCI) Vol. 1 and 2, pp. 496-499, Jan 2010.
14. **Padmalaya Nayak**, Akil Goel and G. Ramamurthy “Modified Priority Assignment with Soft Reservation Medium Access Control Protocol for Mobile Ad hoc Networks” in Proc. of 10th International Symposium on Wireless Personal Multimedia Communications, WPMC, (Jaipur, India), pp. 1059-1063, Dec 2007.
15. G. Ramamurthy and **Padmalaya Nayak** “Novel Overlap Functions: Wireless Sensor Fusion” in Proc. of International Conference of Sensors and Related Networks, SENNET’07, pp. 461-466 (Vellore, India.) Dec., 2007.

### **National Conference**

1. **Padmalaya Nayak**, D. Anurag “Performance enhancement of LEACH Protocol for WSN with Mobile Base station” in Proc. of National Conference on Innovation, Advancements and Computing, Gitam University, 28<sup>th</sup> - 29<sup>th</sup> March 2014.
2. **Padmalaya Nayak**, Saraswati Bhakare, Nazia Tabassum, “Comparative analysis of AODV and DSR routing protocol for PAN using NetSim Simulator” Accepted in National Conference on Innovation, Advancements and Computing, Gitam University, 28<sup>th</sup>- 29<sup>th</sup> March 2014.

### **Book Chapters**

1. **Padmalaya Nayak**, “Internet of Things Issues, Challenges and Applications” in the book of Handbook of Research on Advanced WSN Applications, Protocols and Architecture, IGI GLOBAL ISSN- 2327-3305, EISSN 2327-3313, 2016, pp. 353-368 .
2. **Padmalaya Nayak** “Impact of Cloud Gaming on Health Care, Education, and Entertainment Services” in the book of Emerging Technologies and Applications for cloud based Gaming, IGI GLOBAL, ISSN: 2327-929X, EISSN: 2327- 9303, pp. 261-283

### **Book**

1. **Padmalaya Nayak**, “Wireless Network and Mobile Communication: An Novel Approach to OBE System” (Under Review)

## **Research Grants**

1. Project Title : **MODROB:(Modernization of Computer Networks and Mobile Computing Lab)**

Sponsored Agency: **AICTE**

Amount : Rs 8, 50,000/

Project Status : Completed

2. Project Title : **Minimization of Energy Consumption for Mobile Wireless Sensor Network by Using Fuzzy Clustering Algorithm**

Sponsored Agency: UGC

Amount: Rs 2,00,00/-

Project Status: On going

## **Awards**

1. National Scholarship from 1986-1989.
2. Gold Medal from University of Madras for ME in 2002.
3. Received Young Women Scientist Award by Dr. Kalam Educational Trust, Chennai, in 2016
4. Received Bharat Vidya Ratan Award by International Business Council, Delhi in 2017
5. Received Bharat Vikas Award by Institute of Self Reliance, Bhubaneswar, in 2017
6. Received best research effort Award using NetSim Simulator from TETCOS, Pvt. Ltd. in 2016
7. Received appreciation from IEEE SENSOR COUNCIL for top 25 papers out of 5000 papers in IEEE SENSOR JOURNAL in consecutive Years 2016 and 2017