## Dr. P. KUPPUSAMY, B.E(CSE)., M.E(CSE)., Ph.D (CSE).,

Member IEEE, ISTE, IACSIT, IAENG.,

Associate Professor,

School of Computer Science and Engineering,

VIT-AP University,

Amaravati, Andhra Pradesh, India.

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# **BIO DATA**

## **Professional Experience**

**Total Experience** : 18 Years

**Teaching Experience** : 17 Years

Industry Experience : 1 Year

## **Area of Interest**

- > Artificial Intelligence
- ➤ Machine Learning
- Deep Learning
- ➤ Internet of Things
- ➤ Image Processing

## **Education**

Course	Specialization	Name of the Institution	Board / University	Marks Secured	Year of Completion
Ph.D.	CSE (ICE)	Anna University, Chennai			2014
ME	CSE	AMS Engineering College, Namakkal	Anna University, Chennai	78 % with Distinction	2007
BE	CSE	Dr. M.G.R Engineering College, Chennai	Madras University	70%	2002

# **Teaching Experience: 17 Years**

Sl. No.	Name of the Institution	Designation	Duration	Experience (Years)
1	VIT-AP University	Associate Professor	04.05.2021 – till date	0.11
2	Madanapalle Institute of Technology & Science	Professor	05.05.2017 – 30.04.2021	4.0
3	Gnanamani College of Technology	Professor & HoD	16.06.2014 – 30.04.2017	2.11
4	King College of Technology	Associate Professor	04.06.2012 – 13.06.2014	2.00
5	Vivekanandha College of Engineering for Women	Assistant Professor	18.06.2007 – 30.04.2012	4.11
6	PGP College of Engg. and Technology	Lecturer	24.07.2003 – 06.09.2005	2.01

## **Industry Experience: 1 Year**

23.05.2002 to 09.06.2003 - Network & System Engineer, CCS Infotech Limited, Chennai.

# **Research Details**

<b>Particulars</b>	Google Scholar	Scopus
Citations	298	92
h-index	8	5
i-10 index	8	-
International Jour	35	
International Cor	10	
National Confere	11	
Book Publication	02	
Patent Publicatio	01	

## Patent Published - 01

❖ Systems and Methods for Consumption and Generating Power through the Flow of Water / App. NO: 201941005201 A / Pub. Date. 15/02/2019

### **International Collaboration**

- ❖ Dr. Chi-Len Hung, Professor, Providence University, Taiwan.
- ❖ Dr. Chih-Hung Chang, Department of Computer Science and Communication Engineering, Providence University, Taichung, Taiwan.
- **❖** Visited Providence University, Taiwan on December 2018 (2 Weeks).

#### **National Collaboration**

- Dr Deepak Garg, Director leadingindia.ai. Professor and Chair, CSE, Bennett University. Director, NVIDIA-Bennett Research Centre for Artificial Intelligence, UP
- Sridhar Swaminathan. Assistant Professor, Consultant for Research, Projects & Personal Learning (AI/ML/DL). Bennett University, UP

#### **Resource Person**

- Two days' Workshop on "**Data Science Using Python**", MITS, Madanapalle, 7 & 8.1.2020.
- Workshop on "An overview on AI and Machine Learning", Besent Theosophical College, Madanapalle, 2.11.2019.
- "Dynamic Programming and Greedy Techniques", Winter Session FDP, sponsored by Anna University in Tagore Institute of Engineering and Technology, Attur, December 2016.
- "CS6703-Grid and Cloud Computing", Summer Session FDP, sponsored by Anna University in Kongunadu College of Engineering & Technology, Thottiam, June 2016.
- One-day workshop **Realization of Automotive Sensors Using Arduino Controller** workshop organized by Dept. of EEE, Gnanamani College of Engineering, Namakkal, 25.02.2016.
- One-day workshop on **Smart Applications using sensors and IoT** on 18.02.2016.
- "Greedy Technique", Winter Session FDP, sponsored by Anna University in Kongunadu College of Engineering & Technology, Thottiam, 2014.
- "Security issues on adhoc networks", AICTE sponsored FDP at Vivekanandha College of Engineering for Women on 2009.

### Conference / Seminar / Workshop Organized

- ❖ Two-days' workshop on "Data Science Using Python" at Madanapalle Institute of Technology & Science, Madanapalle from 7.1.2020 to 8.1.2020 as MITS is a collaborator with Bennet University under leadingindia.ai Program
- one-day workshop on "An Overview on AI and Machine Learning" at Besant Theosophical College, Madanapalle on 02-11-2019, as MITS is a collaborator with Bennet University under leadingindia.ai Program
- Symposium on 02.04.2019 in Madanapalle Institute of Technology & Science, Madanapalle
- ❖ Workshop on Cloud Computing, 15.07.2016
- Organized & Resource Person in Smart Applications using sensors and IoT on 18.02.2016.
- ❖ Symposium on 2014, 2015 & 2016 in Gnanamani College of Technology
- ❖ National Conference on 2014, 2015 & 2016 in Gnanamani College of Technology
- ♦ 6 day ISTE STTP on Introduction to Design of Algorithms, from 25.05.2015 to 30.05.2015
- ❖ Two days National Level Android & Apps Development workshop on October 2014.
- Symposium on 2013 in King College of Technology
- ❖ Convener for the International Conference of "ICRATEMS-2012" on March2012.
- ❖ Organized Secretary for the International Conference of "ICRATEMS-2011" on March 2011.

## Journal Papers Published - 35

- 1. **P. Kuppusamy,** S. Venkatraman, C.A. Rishikeshan, YCA Padmanabha Reddy, Deep learning based energy efficient optimal timetable rescheduling model for intelligent metro transportation systems, Physical Communication (Elsevier), Volume 42, pp.1-10, https://doi.org/10.1016/j.phycom.2020.101131, October 2020. ((**SCIE & Scopus**) **I.F. 1.594.**
- P. Kuppusamy, C. Harika, Human Action Recognition using CNN and LSTM-RNN with Attention Model, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-8 June, pp. 1639-1643, 2019. (Scopus). SNIP – 0.055
- P. Kuppusamy, R. Kalpana & P. V. Venkateswara Rao, Optimized traffic control and data processing using IoT, Springer Cluster Computing, pp. 1-10, February 2018. (SCIE & Scopus). https://doi.org/10.1007/s10586-018-2172-5. IF. 3.458
- 4. S. Sumiya Sultana, **P. Kuppusamy**, Privacy Preserving Procedure for Reporting Region Based Activity Summaries, International Journal of Scientific Research in Computer Science, Engineering and Information Technology, Volume 2, Issue 5, pp. 814 819, 2017. **SJIF 6.135**

- P.Kuppusamy, B. Divya, "A Survey of Retina Based Disease Identification Using Blood Vessel Segmentation", ICTACT Journal on Image and Video Processing, Vol. 7, Issue 2, pp. 1357-1361, Nov 2016. Cosmos IF: 6.547
- P. Kuppusamy, B. Kalaavathi, A. Muralikrishna, Smart Traffic Control Framework Based on Internet of Things Using Genetic Algorithm, International Journal of Printing, Packaging & Allied Sciences, Vol. 4, No. 1, pp. 209-222, December 2016. IF – 0.886
- 7. **P.Kuppusamy,** B. Kalaavathi, "A Novel Authentication based Framework for Smart Transportation using IoT and Memetic Algorithm", Asian Journal of Research in Social Sciences and Humanities, Volume 6, Issue 10, pp. 674-690, Oct 2016. **SJIF 7.615**
- 8. **P.Kuppusamy**, "Smart Home Automation Using Sensors and Internet of Things", Asian Journal of Research in Social Sciences and Humanities, Vol. 6, Issue 8, pp. 2642-2649, Aug 2016. **SJIF 7.615**
- 9. Anu B. Nair, R. Umamaheswari, **P. Kuppusamy,** "A Machine Learning-based State-of-the-art Approach to Identifying the Person behind an E-mail ID", International Journal of Computer Applications, Vol. 136, No.5, pp. 1-4, Feb 2016.
- 10. P Mageswari, R Umamaheswari, P Kuppusamy, Secure and Privacy Method in M-Healthcare Emergency Monitoring Frame Work Using Smart Phone, International Journal of Current Trends in Engineering & Research, Volume 2, Issue 6, pp. 109 – 113, June 2016.
- 11. S. Poongodi, P. Murugan, **P. Kuppusamy**, Shared Authority Based Privacy-Preserving Authentication Protocol in Cloud Computing, International Journal of Emerging Technology in Computer Science & Electronics, 19(1), pp. 41-43, 2015.
- 12. P. Sathya, S. Gopinath, **P. Kuppusamy**, A Privacy-Preserving Access Control with Robust Data Authenticity for Cloud Group, International Journal of Emerging Technology in Computer Science & Electronics, 19(1), pp. 35-40, 2015.
- 13. R. Suganya, S. Lalitha, **P. Kuppusamy**, Intelligent Transport System Communication Using Security Privacy Data With Wi-Max, International Journal of Infinite Innovations in Engineering and Technology, 2(6), pp. 26-30, 2015.
- 14. P. Iswarya, R. Umamaheswari, **P. Kuppusamy**, A Channel-Related Attack Detection and Localizing Multiple Adversaries in RN, Computational Intelligence 2 (1), 2015.
- 15. M.Selvi, S.Gopinath, **P. Kuppusamy**, Adaptation for Improved Lifetime in Wireless Sensor Networks with Graph Factorization, International Journal of Infinite Innovations in Engineering and Technology, 2(6), pp. 6-10, 2015.

- 16. R. Ramesh, S. Vidhushavarshini, **P. Kuppusamy**, High Communication Energy Efficient Target Tracking in WSNs Using Constrained Flooding, International Journal of Scientific and Computational Intelligence 2 (1), 12-14, 2015.
- 17. M.Tamilselvi, S.K Murugaraja, **P. Kuppusamy**, A Dynamic Data Distribution on Demand Service in Cloud Datacenters Using Virtual Resources, International Journal of Infinite Innovations in Engineering and Technology, 2(6), pp. 19-25, 2015.
- 18. Indhumathi Kumaravel, R.Umamaheswari, **P. Kuppusamy**, An Features Effectiveness of Online Banking Security Using Image Processing, International Journal of Infinite Innovations in Engineering and Technology, 2(6), pp. 58-67, 2015.
- 19. M Sowmya, S Lalitha, P Kuppusamy, Cluster Based Load Balancing And Mimo Channel Allocation in MANET, Journal of Recent Research in Engineering and Technology Volume 2, Issue 11, pp. 55-60, 2015.
- 20. M.S. Sabari, S.Gopinath, P. Kuppusamy, "Geographic Routing Based Adaptive Location Update for Mobile Ad Hoc Networks", International Journal of Infinite Innovations in Engineering and Technology, Vol. 2 Issue. 6, Oct 2015.
- 21. K. Harini, P. Kuppusamy, "An Optimizing Unit Commitment in Grid Reliability with Big Data Information Sharing", International Journal of Infinite Innovations in Engineering and Technology, Vol. 2 Issue. 6, Oct 2015.
- 22. AnishyaSivaram, **P.Kuppusamy**, "Fingerprint combination based on different quality sparse representation core authentication", International journal of Emerging technology in computer science & electronics(IJETCSE), 14(1), 87-92, 2015.
- 23. Sathishkannan.R, **P.Kuppusamy**, "A novel evaluation of Civic Suggestion in Civil Project work completion using android IoT devices", International journal of innovative research in computer and communication engineering, 3(5), 4482-4487, 2015.
- 24. Priya, P Murugan, **P Kuppusamy**, Enhanced ICTCP to Avoid Congestion Control in Wsn, International Journal of Scientific and Computational Intelligence 2 (1), 37-42, 2015.
- 25. P. Kuppusamy, B. Kalaavathi, S. Chandra "Optimal Data Replacement Technique for Cooperative Caching in MANET", ICTACT Journal of Communication Technology, Page(s): 995-999, 2014. Cosmos Impact Factor 6.957
- 26. K. Meena, **P. Kuppusamy**, "Identification of inference attacks on private information from social networks" International Journal of Research for Science Technologies and Engineering, Vol 1(2), November 2014.

- 27. G. Mallika, **P. Kuppusamy**, "Protected Records Rescue for Decentralized Disruption Tolerant Networks", International Journal of Science and Engineering Research, Vol. 2(10), October 2014.
- 28. T. Elayaperumal, **P.Kuppusamy**, S. Chandra, "An Acknowledgement based Intrusion Detection System using ECDSA for Detecting Malicious Node in MANET", International Journal of Computer Applications, 87(16), pp. 1-5, 2014.
- 29. B. Vanmathi, P.Kuppusamy, S. Chandra, "Detection of Malicious Relays in Cooperative Wireless Communications", International Journal of Modern Communication Technologies & Research, Volume-2, Issue-3, 2014.
- 30. **P. Kuppusamy**, B. Kalaavathi, "Cluster Based Data Consistency for Cooperative Caching over Partitionable Mobile Ad hoc Network", American Journal of Applied Sciences, 9, 1307-1315, 2012. (**Scopus**). **IF 0.52**
- 31. **P. Kuppusamy**, B. Kalaavathi, "A Novel Cache Update Algorithm for Consistency Maintenance over Cluster Based MANET", International Journal of Computer Science & Engineering Technology, 3, 235-242, 2012.
- 32. **P. Kuppusamy**, B. Kalaavathi, "Energy Efficient Cluster Cooperative Caching for Mobile Ad-Hoc Networks", International Journal on Computer Science and Technology, 3, 545-549, 2012.
- 33. **P. Kuppusamy,** B. Kalaavathi, K. Thirunavukkarasu, "Cluster Based Cooperative Caching Technique in Mobile Adhoc Networks", European Journal of Scientific Research, Vol.69 No.3, pp. 337-349, 2012. (**Scopus**)
- 34. **P. Kuppusamy**, B. Kalaavathi, K. Thirunavukkarasu, "A Review of Cooperative Caching Strategies in Mobile Adhoc Networks", International Journal of Computer Applications, 2011.
- 35. **P. Kuppusamy**, B. Kalaavathi, K. Thirunavukkarasu, "Scenario Based Performance Evaluation of DSR and AODV Routing Protocols", International Journal of Computer Science Engineering and Technology, 2011.

#### **International Conference - 08**

1. **P. Kuppusamy,** M. Mehfooza, C. L. Hung, Retinal Blood Vessel Segmentation using Random Forest Algorithm with Gabor and Canny Edge Features, IEEE International Conference on Smart Technologies and Systems for Next Generation Computing (ICSTSN), March 2022. (**Scopus**)

- 2. **P. Kuppusamy,** C. L. Hung, "Enrich the Multi-Object Detection using Convolutional Neural Network in Macro-Images", IEEE International conference on computer communication and informatics, January 27, 2021. (**Scopus**)
- 3. **P. Kuppusamy,** P. Kamarajapandian, M. S. Sabari, J. Nithya, Design of Smart Traffic Signal System Using Internet of Things and Genetic Algorithm", Advances in Big Data and Cloud Computing, Rajsingh, E.B., Veerasamy, J., Alavi, A.H., Peter, J.D. (Eds.) Advances in Intelligent Systems and Computing Book Series Springer, (**Scopus**), doi.org/ 10.1007 / 978-981-10-7200-0\_36, pp. 395 403, April 2018. **Book Chapter**
- 4. Presented paper titled "Survey and Challenges of Li-Fi with Comparison of Wi-Fi" IEEE International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET) on March 2016. (Scopus)
- 5. Presented Paper titled "Cluster based cooperative caching approach through mobility prophecy in MANET", IEEE sponsored ICECT on April 2012. (Scopus)
- 6. Presented Paper titled "A study and comparison of OLSR, AODV and TORA routing protocols in ad hoc networks", IEEE sponsored ICECT on April 2011. (Scopus)
- 7. Presented paper titled "Performance Analysis of Route Cache in Dynamic Source Routing Protocol", ICETES on March 2010.
- 8. Presented paper titled "A Study of Route Caching in Dynamic Source Routing Protocol for MANET", ICCBN on March 2010.
- 9. Presented paper titled "Improve the Data Availability by Hybrid Caching in Distributed IntelligentAd hoc Network", Arunai Engineering College, Tiruvannamalai on August 2008.

#### **National Conference - 11**

- R. Sudhakar, P. Kuppusamy, P. V. Venkateswara Rao, Fast Motion Estimation using Modified Unsymmetrical Cross Multi-Hexagon Grid Search Algorithms for Video Coding Techniques, National Conference on Advances in Data science and Engineering Applications, ISBN: 978-93-88805-06-3, pp. 1685-1690, Feb 8 - 9, 2019.
- 2. K. Jayalakshmi1, C. Himavathi, **P. Kuppusamy**, Application of Machine Learning for Weather Forecasting using Artificial Neural Networks, National Conference on Advances in Data science and Engineering Applications, ISBN: 978-93-88805-06-3, pp. 1691 1698, Feb 8 9, 2019.
- 3. Presented paper titled "Integration of Network Coding with Dynamic Source Routing Protocol", Velalar College of Engineering & Technology on March 2011.

- 4. Presented paper titled "Performance Analysis of Mobile Adhoc Routing Protocols Based on Energy Conservation", NCCTS, Muthayammal Engineering College, 2011.
- 5. Presented paper titled "Enhancement of DSR with Network Coding and Link Management Model", N3CT-2011 at Surya Engg. College on March 2011.
- 6. Presented paper titled "Light Weight Authenticated Encryption in Networks", NCCT 2K10 at Sengunthar Engineering College on April 2010.
- Presented paper titled "Ontology Based Fuzzy Document Clustering Scheme", N3CT-2010 at Surya Engineering College on March 2010.
- 8. Presented paper titled "Exploiting on-Demand Caching for Efficient Routing in Mobile Ad Hoc Networks", Paavai Engineering College on March 2009.
- 9. Presented paper titled "Maintain High Consistency by Data Replication in MANET", NCICT-08 at Mahendra College of Engineering on April 2008.
- 10. Presented paper titled "Cross Layer Approach to improve QoS in MANET", Vivekanandha College of Engineering For Women on March 2008.
- 11. Presented paper titled "Efficient Information Dissemination in Partitionable MANET", PSNA College of Engineering and Technology on March 2007.

### **Book Publication -02**

- 1. Computer Programming ISBN: 978- 93 80170 39 8, May 2014 & 2015.
- 2. Programming & Data Structures, ISBN: 978-81-90879-50-7, November 2016.

#### **Editorial Member, Reviewer**

- ❖ Editorial Member in International Journal of Advances in Engineering & Scientific Research.
- ❖ International Journal of Transportation Science and Technology (IJTST-D-20-00171)
- ❖ International Journal of Intelligent Networks (IJIN-D-20-00003)
- **❖** IEEE Access (Access-2017-04202)
- ❖ Wireless Personal Communications (WIRE 19-763, WIRE-D-18-01731)
- \* Reviewer in International Journal of Web Services Research (IJWSR)
- ❖ American Journal of Applied Science (5182) 2016
- ❖ Pervasive and Mobile Computing (PMC-D-15-00053) 2015

- ❖ Journal of Computer Science from Science Publications (4397-JCS)
- ❖ International Conference on Electronics, Communications and Networks (CECNet 2021), Beijing, China (CNT2737, CNT2752).
- ❖ ICSTCEE, Reva University, Bengaluru 2020
- ❖ ICRTAC2020, VIT, Chennai 2020
- ❖ 5<sup>th</sup> International Conference on Fuzzy Systems and Data Mining (FSDM 2019), Kitakyushu City, Japan.
- ❖ 2nd IEEE International Conference on Applied and Theoretical Computing and Communication Technology (iCATccT 2016).
- ❖ 5th International Conference on Electronics, Communications and Networks (CECNet 2015) (Paper id CNT1795)
- ❖ Doctoral Committee member for Research Scholars, Anna University

#### Seminar & FDP Attended - 25

- 1. One Week online Training Programme titled "**NBA Accreditation Process**" organized by NITTTR, Chennai from 06.12.2021 to 10.12.2021.
- 2. Online Training Programme titled "NAAC Accreditation" organized by NITTTR, Chennai from 22.11.2021 to 24.11.2021.
- 3. AICTE Training and Learning (ATAL) Academy sponsored Online FDP on "Machine Learning Frontiers in Healthcare" from 26-7-2021 to 30-7-2021 Organized by NIT Delhi.
- 4. AICTE Sponsored One Week STTP titled "Predictive Analytics Using Artificial Intelligence (STTP-PAUAI)", held during 14-19, December 2020, Organized by NRI Institute of Technology, Agiripalli, Krishna Dt., Andhra Pradesh.
- AICTE Training and Learning (ATAL) Academy sponsored Online FDP on "Artificial Intelligence and Machine Learning Applications in Biomedical Engineering" from 21-9-2020 to 25-9-2020 at University BDT College of Engineering.
- 6. APSSDC sponsored Online FDP on **Python Programming** from 18.5.2020 to 30.5.2020.
- 7. Two Weeks AICTE sponsored FDP on **Embedded with Wireless for IoT** (EW-IoT-2019) from 2.12.19 to 14.12.19 in MITS, Madanapalle.
- 8. NPTEL (MOOC) FDP on **Python for Data Science** from October 2019 to November 2019.
- 9. One Week FDP on Machine Leaning Techniques for Image Processing and Computer Vision, NIT Warangal, 6.5.19 to 11.5.19.

- 10. NPTEL (MOOC) FDP on **Machine Learning for Engineering and Science Applications** from January 2019 to April 2019.
- 11. One Week Quality Improvement Programme on **Instructional Design and Delivery System** Supported by Ministry of Human Resource Development, Govt. of India organized by NITTTR, Chennai from 25-6-2018 to 29-6-2018.
- 12. One Week FDP on "Ann and Deep Learning" Supported by Ministry of Electronics & Information Technology (Meity), Govt. of India, Organized by Electronics and ICT Academy: NIT Warangal from 11-6-2018 to 15-6-2018
- 13. One day FDP on "**Big Data HDFS, Map Reduce Programming in Hadoop**", G. Pulla Reddy Engineering College, Kurnool, 06 January 2018.
- 14. Two days seminar on "Emerging Trends in Cognitive technology and its Applications", Madanapalli Institute of Technology and Science, 11 & 12 October 2017.
- 15. One day Seminar on "Effective Writing Project Proposal in Engineering and Management Disciplines", Nehru Institute of Engineering and Technology on 4<sup>th</sup> March 2015.
- 16. One day FDP on "NS2 and its implementation in networking" conducted by DJ Academy for Managerial Excellence, Coimbatore on September 2011.
- 17. Two days international seminar on "Challenges in knowledge based discovery" AICTE sponsored program conducted by Vivekanandha College of Engg.for women on September 2011.
- 18. One-day FDP on "Academic Excellence" conducted by Vivekanandha Institute of Engineering and Technology on August 2011.
- 19. 13 days AICTE sponsored SDP on "Research Issues and challenges in wireless and sensor networks" conducted by Vivekanandha College of Engg for women, May 2011.
- 20. Two days AICTE sponsored seminar on "Emerging Trends in Wireless Technologies" conducted by Paavai Engineering College on April 2010.
- 21. One-day seminar on "Research Methods in Information and Communication Engineering", at Dr. Mahalingam College of Engineering & Technology, January 2010.
- 22. 13 days SDP on "Computer Network Design, Security and Management" AICTE-ISTE sponsored program conducted by Vivekanandha College of Engg. for women on June 2009.
- 23. Two days seminar on "Recent Research Trends & Issues in Public key Cryptosystem and Digital Signatures" conducted by National Engineering College on February 2009.
- 24. Two days seminar on "Free Open Source Softwares" conducted by Sri Krishna College of Engineering and Technology on September 2008.

- 25. Five days FDP Program on "**Data Warehousing and Data Mining**" AICTE-ISTE sponsored program conducted by AMS Engineering College on June 2008.
- 26. One-day seminar on "Cisco Systems and Networking" conducted by Anna University, Chennai on October 2007.
- 27. Two days Faculty Development Program on "Teaching, Training, Research and Administration Methodology "conducted by Vivekanandha Institute of Management and Information Studies on August 2007.

#### Workshop Attended - 14

- 1. 12 Hour online Workshop on Embedded System Technologies for Deep Learning and Approximate Computing from 29.05.2021 to 06.06.2021, conducted by IIT, Delhi.
- 2. Two Days Online Workshop on **Intellectual Property Rights** from 10.4.2020 to 11.4.2020, conducted by Pandit Deendayal Petroleum University, Gujarat.
- 3. Three Weeks Immersion Programme on **IoT and Artificial Intelligence** @ Providence University, Taiwan from 16.12.2018 to 03.01.2019.
- 4. Two Day Workshop on **Outcome Based Learning in NBA/NAAC Evaluation** @ Madanapalle Institute of Technology from 30.11.2018 to 01.12.2018.
- 5. Participated in 14th **India Innovation Summit 20**18 INDIA.AI @ Bangalore organized by Confederation of Indian Industry [CII] during 12 13 July 2018.
- Participated in Analytics in Markets (AIM 2018) @ MUMBAI Organized by TICKER PLANT LTD In association with ISI Kolkata & Dhirubhai Ambani Institute on 7 July 2018
- 7. Three days Workshop on "Artificial Intelligence and Deep Learning", Conducted by leadingIndia.ai, a nationwide initiative by Bennett University, Greater Noida, India held at Madanapalle Institute of Technology & Science, Madanapalli from 21-6-2018 to 23-6-2018.
- Two days CSIR Sponsored Workshop titled "Recent Internetworking Technologies in Distributed Systems" conducted by Kongunadu College of Engineering & Technology, 10.02.17 & 11.02.17.
- 9. Three days UGC sponsored workshop on "Big Data Mining and Search" conducted by Anna University, Chennai between 03.12.2014 to 05.12.2014.
- 10. Two days workshop on "QualNet Simulator" conducted by Kongu Engineering College on December 2010.
- 11. One-day workshop on "Advanced Networking Using Network Simulator" conducted by DJ Academy for Managerial Excellence, Coimbatore.

- 12. One-day workshop on "Security Issues in Modern Computing Era" conducted by Computer Society of India, Coimbatore.
- 13. Two days workshop on "**Network Simulators**" conducted by Sri Krishna College of Engineering and Technology on June 2009.
- 14. Two days workshop on "**Xml and Web Services**" conducted by PSNA College of Engineering and Technology, October 2007.
- 15. Two days workshop of Anna University Coimbatore on "Audit Policy & Conduct of Internal and External Audit" conducted by Vivekanandha Institute of Engineering and Technology on July 2008.

## **Professional Society Membership**

IEEE (95486507), Life Time Member of ISTE (LM 99030), IAENG and IACSIT (80340293), ISCE.