



UNIVERSITY COLLEGE OF ENGINEERING TINDIVANAM
(A CONSTITUENT COLLEGE OF ANNA UNIVERSITY)
MELPAKKAM – 604001

Department of Computer Science & Engineering
UCE- Tindivanam

Address:

University College of Engineering Tindivanam,
Melpakkam, Tindivanam,
Villupuram (District),
Tamilnadu -604 001.



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Dr. P. VIJAYAKUMAR
Assistant Professor & Former Dean

1. Research Area

1. Computer Networks
2. Cloud security
3. Security in Multicast Communication
4. Security in VANETs
5. Security in e-Health environments
6. Data Structures

2. Educational Qualifications

Qualification	College and University	Year (From - To)
Ph.D (Computer Science and Engineering)	College of Engineering Gindy (CEG), Anna University.	2010-2013
M.E (Computer Science and Engineering)	Karunya Institute of Technology, Anna University.	2003-2005
B.E (Computer Science and Engineering)	R.V.S College of Engineering and Technology, M.K. University	1998-2002
H.S.C (Biology & Mathematics)	Govt.Higher Secondary School, T.Vadipatti	1997-1998
S.S.L.C (General)	Govt.Higher Sec. School, T.Vadipatti	1995-1996



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3. Experience

Name of Company / Institutions	Designation of Post	From	To	Experience in Year
University College of Engineering Tindivanam	Assistant Professor	03-08-2018	Till Date	-
University College of Engineering Tindivanam	Dean (i/c)	16-02-2015	03-08-2018	3yr, 6m
University College of Engineering Tindivanam	Assistant Professor	20-08-2008	15-02-2015	6yr, 6m
All Nations University, Koforidua, Ghana	Senior Lecturer	01-08-2007	19-08-2008	1yr
All Nations University, Koforidua, Ghana.	Lecturer	01-02-2007	31-07-2007	6m
Sethu Institute of Technology, Kariapatti, Virudhunagar	Lecturer	24-03-2005	23-01-2007	1yr, 10m



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Inlott Technology Pvt Ltd, Chennai	Data Base Maintenance	01-07-2002	30-06-2003	1yr
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4. Awards

1. Received “**Best Paper Award**” for the research paper entitled “An Effective Key Distribution Protocol for Secure Multicast Communication”, in the Second International Conference on Advanced Computing (ICoAC) held at MIT, Anna University Chennai in 2010.
2. Received “**Best Consumer Protection Forum Award**” from the District Collector, Villupuram in the year 2014.
3. “**Best Education and Research Award**” was given in the year 2016 by Karunya Deemed to be University, Coimbatore.
4. “**Best Administrator Award**” was given in the year 2017 by the District Collector, Villupuram.
5. “**Best NSS Unit Award**” for University College of Engineering Tindivanam was given by Anna University Chennai in the year 2017.
6. **Received appreciation certificate from the District Collector**, Villupuram for co-ordinating the promotion of Handicraft items of Tamilnadu Women Development Society in Colleges.

5. Additional / Academic Responsibilities at University

Sl. No.	Post Held	Function	Duration
1.	Dean i/c	Heading the College	16-02-2015 to 03-08-2018
2.	Zonal Co-ordinator	To monitor the exam activities in Zone V	25-03-2015 to



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			02-04-2018
3.	Warden	University College of Engineering Tindivanam	15.02.2015 To 03-08-2018
4.	Member	Board of Studies, Department of Information and Communication Engineering – For Regulation 2017	From the academic year 2016-2017 to till date
5.	Executive Committee Member	Anna University Sports Board	From the academic year 2016-2017 to till date
6.	Chairman	Anti-ragging committee	15.02.2015 To 03-08-2018
7.	AISHE Nodal Officer	Collecting the statistics about students and staffs and entering the details in the website http://aishe.gov.in/aishe/home	2013 to Till Now
8.	Head of the Department, CSE	Heading the Department	01-05-2014 to 15-12-2014
9.	Camp Officer	Conducting Valuation for Anna University Theory Exam Paper Correction	2012-2013
10.	Consumer Protection Co-ordinator	Educating Public and Students to know about Consumer Rights	2008 to 2014
11.	EDUSAT Co-ordinator	To provide virtual Teaching environment to students and staffs.	2011 To 2015
12.	Class Advisor	Two batches of students	2008-2012 batch 2010-2014 batch
13.	Head of the Department, CSE, All Nations University.	Heading the Department	01-02-2007 to 30-05-2008



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14.	Deputy Controller of Examinations, All Nations University.	To Provide Transcripts to the Students	6 Months
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6. Publications

a. Books

Title of the Book	Authors	Co-Authors	Name of the Publisher / Month, Year	ISBN
Cryptography and Network Security	S.Bose	P.Vijayakumar	Pearson Education, 2015	978-93-325-4364-5
Data Structures	P.Vijayakumar	Nil	All Nations University Publication, Koforidua, Ghana, 2007	9988-6622-35
System Software	A.S.Raja	P.Vijayakumar	Anuradha Publication, Chennai, 2006	81-89638-40-8
Computer Networks	R.Sukumar	Mr.Y.Arockia Jesuraj, P.Vijayakumar	Dharsan Publication, Chennai, 2007	Nil

b. International Journals

1. P. Vijayakumar, M. Azees, A. Kannan, L. Jegatha Deborah, “Dual Authentication and Key Management Techniques for Secure Data Transmission in Vehicular Ad-hoc Networks”, **IEEE Transactions on Intelligent Transportation Systems**, Vol.17, No.4, pp. 1015 - 1028, 2015.

[Impact Factor =6.319]

<http://www.ieeeexplore.ws/xpl/articleDetails.jsp?reload=true&arnumber=7327222&filter>



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2. M. Azees, P. Vijayakumar, L. Jegatha Deborah, “EAAP: Efficient Anonymous Authentication with Conditional Privacy Preserving Scheme for Vehicular Ad-hoc Networks”, **IEEE Transactions on Intelligent Transportation Systems**, Vol.18, No.9, pp. 2467 – 2476,2017. **[Impact Factor =6.319]**

<http://ieeexplore.ieee.org/document/7840036/?reload=true>

3. P Vijayakumar, Mohammad Obaidat, Maria Azees, Sk Hafizul Islam, Neeraj Kumar, “Efficient and Secure Anonymous Authentication with Location Privacy for IoT-based WBANs”, Accepted for publication, **IEEE Transactions on Industrial Informatics**, DOI: 10.1109/TII.2019.2925071, 2019. **[Impact Factor =9.112]**

<https://ieeexplore.ieee.org/document/8746610>

4. SK Hafizul Islam, Pandi Vijayakumar, Md Zakirul Alam Bhuiyan, Ruhul Amin, M. Rajeev Varun, Balamurugan Balusamy, "A Provably Secure Three-factor Session Initiation Protocol for Multimedia Big Data Communications", **IEEE Internet of Things Journal**, Vol. 5, No.5, pp. 3408 - 3418, 2018 **[Impact Factor= 9.936]**.

<http://ieeexplore.ieee.org/document/8010815/>

5. Bighnaraj Naik, Mohammad Obaidat, Janmenjoy Nayak, Danilo Pelusi, P Vijayakumar, Sk Hafizul Islam, “Intelligent Secure Ecosystem based on Meta-heuristic and Functional Link Neural Network for Edge-of-Things” Accepted for publication, **IEEE Transactions on Industrial Informatics**, DOI: 10.1109/TII.2019.2920831, 2019. **[Impact Factor =9.112]**

<https://ieeexplore.ieee.org/document/8730422>

6. Arijit Karati, SK Hafizul Islam, G.P. Biswas, Md Zakirul Alam Bhuiyan, Pandi Vijayakumar, Marimuthu Karuppiah, "Provably Secure Identity-based Signcryption Scheme for Crowdsourced Industrial Internet of Things Environments", **IEEE Internet of Things Journal**, Vol.5, No.4, pp. 2904 – 2914, 2018. **[Impact Factor=9.936]**.

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7. Xinghua Li, Yunwei Wang, Pandi Vijayakumar, Debiao He, Neeraj Kumar, Jianfeng Ma, “Blockchain Based Mutual-Healing Group Key Distribution Scheme in Unmanned Aerial Vehicles Ad-Hoc Network”, **IEEE Transactions on Vehicular Technology**, Accepted for publication, DOI: 10.1109/TVT.2019.2943118, 2019. **[Impact Factor=5.379]**.
<https://ieeexplore.ieee.org/abstract/document/8846098>
8. Shen Jian, Dengzhi Liu, Xiaofeng Chen, Jin Li, Neeraj Kumar, Pandi Vijayakumar, “Secure Real-time Traffic Data Aggregation with Batch Verification for Vehicular Cloud in VANETs”, **IEEE Transactions on Vehicular Technology**, Accepted for publication, DOI: 10.1109/TVT.2019.2943118, 2019. **[Impact Factor=5.379]**.
<https://ieeexplore.ieee.org/document/8865391>
9. Chao Lin, Debiao He, Neeraj Kumar, Xinyi Huang, Pandi Vijayakumar, and Kim-Kwang Raymond Choo, “HomeChain: A Blockchain-Based Secure Mutual Authentication System for Smart Homes”, **IEEE Internet of Things Journal**, Accepted for publication, DOI: 10.1109/JIOT.2019.2944400, 2019. **[Impact Factor=9.936]**.
<https://ieeexplore.ieee.org/document/8852713>
10. Cong Peng, Jianhua Chen, Mohammad S. Obaidat, Pandi Vijayakumar, Debiao He, “Efficient and Provably Secure Multi-receiver Signcryption Scheme for Multicast Communication in Edge Computing”, **IEEE Internet of Things Journal**, Accepted for publication, DOI: 10.1109/JIOT.2019.2949708. **[Impact Factor=9.936]**.
<https://ieeexplore.ieee.org/document/8883208>
11. Md Arafatur Rahman, A. Taufiq Asyhari, Mohammad S. Obaidat, Ibnu Febry Kurniawan, Marufa Yeasmin Mukta, P. Vijayakumar, “IoT-Enabled Light Intensity-Controlled Seamless Highway Lighting System”, **IEEE Systems**



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- Journal, IEEE**, Accepted for Publication. DOI: 10.1109/JSYST.2020.2975592, 2020. [**Impact Factor=3.987**].
<https://ieeexplore.ieee.org/document/9034202>
12. Fan Wu, Xiong Li, Lili Xu, Pandi Vijayakumar, Neeraj Kumar, “A novel three-factor authentication protocol for wireless sensor networks with IoT notion”, **IEEE Systems Journal, IEEE**, Accepted for Publication, DOI: 10.1109/JSYST.2020.2991168, 2020. [**Impact Factor=3.987**].
<https://ieeexplore.ieee.org/document/9080583>
13. Xiong Li, Tian Liu, Mohammad S. Obaidat, Fan Wu , Pandi Vijayakumar, Neeraj Kumar, “A Lightweight Privacy-Preserving Authentication Protocol for VANETs”, **IEEE Systems Journal, IEEE**, Accepted for Publication. DOI: 10.1109/JSYST.2020.2991168, 2020. [**Impact Factor=3.987**].
<https://ieeexplore.ieee.org/document/9099433>
14. Daya Sagar Gupta, SK Hafizul Islam, Mohammad S. Obaidat, Pandi Vijayakumar, Neeraj Kumar and YoHan Park, “A Provably Secure and Lightweight Identity-based Two-party Authenticated Key Agreement Protocol for IIoT Environments”, **IEEE Systems Journal, IEEE**, Accepted for Publication. 2020. [**Impact Factor=3.987**].
15. Xinghua Li, Mengfan Xu, Pandi Vijayakumar, Neeraj Kumar, Ximeng Liu, “Detection of Low-frequency and Multi-stage Attacks in Industrial Internet of Things”, **IEEE Transactions on Vehicular Technology**, Accepted for publication, 2020. [**Impact Factor=5.379**].
<https://ieeexplore.ieee.org/document/9096621>
16. Fushan Wei, Sherali Zeadally, P. Vijayakumar, Neeraj Kumar and Debiao He, “An Intelligent Terminal Based Privacy-Preserving Multi-Modal Implicit Authentication Protocol for Internet of Connected Vehicles”, **IEEE Transactions on Intelligent Transportation Systems**, Accepted for Publication, 2020. [**Impact Factor =6.319**]
17. Tianqi Zhou, Jian Shen, Debiao He, Pandi Vijayakumar and Neeraj Kumar, “Human-in-the-Loop-aided Privacy-preserving Scheme for Smart



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18. Yudi Zhang, Debiao He, Mohammad S. Obaidat, Pandi Vijayakumar, Kuei-Fang Hsiao, “Efficient Identity-Based Distributed Decryption Scheme for Electronic Personal Health Record Sharing System”, **IEEE Journal on Selected Areas in Communications, IEEE**, Accepted for Publication, 2020.
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19. Fushan Wei, Jian Shen, P.Vijayakumar, Qi Jiang, Ruijie Zhang, “A Mobile Intelligent Terminal Based Anonymous Authenticated Key Exchange Protocol for Roaming Service in Global Mobility Networks”, **IEEE Transactions on Sustainable Computing**, Vol.5 , No.2 , pp. 268 – 278, 2020.
<https://ieeexplore.ieee.org/document/8320857/>
20. G.S.Mahalakshmi, G. Muthu Selvi, S.Sendhilkumar, P.Vijayakumar, Yongxin Zhu, Victor Chang, “Sustainable Computing Based Deep Learning Framework for Writing Research Manuscripts”, **IEEE Transactions on Sustainable Computing**, Vol.4, No.1, pp.4-16, 2019.
<https://ieeexplore.ieee.org/document/8344521>
21. P.Vijayakumar, Victor Chang, L. Jegatha Deborah, Balamurugan Balusamy, P.G.Shynu, “Computationally Efficient Privacy Preserving Anonymous Mutual and Batch Authentication Schemes for Vehicular Ad Hoc Networks”, **Future Generation Computer Systems**, Elsevier, Vol.78, pp.943-955, 2018.
<http://dx.doi.org/10.1016/j.future.2016.11.024> **[Impact Factor =6.125]**
<http://www.sciencedirect.com/science/article/pii/S0167739X1630663X>
22. P.Vijayakumar, S.Milton Ganesh, L.Jegatha Deborah, and Bharat S.Rawal, “A new SmartSMS protocol for secure SMS communication in m-health environment”, **Computers & Electrical Engineering, Elsevier**. Vol. 65 , pp. 265-281, 2018. **[Impact Factor =2.663]**
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24. Fushan Wei, P.Vijayakumar, Jian Shen, Ruijie Zhang, Li Li, “A Provably Secure Password-Based Anonymous Authentication Scheme for Wireless Body Area Networks”, **Computers & Electrical Engineering, Elsevier**, Vol.65, PP.322-331, 2018. **[Impact Factor =2.663]**
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25. P. Vijayakumar, S. Bose, A. Kannan, “Centralized Key Distribution Protocol using the Greatest Common Divisor Method,” **Computers & Mathematics with Applications, Elsevier**, Vol. 65, No.9, pp.1360–1368, 2013. **[Impact Factor=3.370]**
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26. Anxi Wang, Jian Shen, Pandi Vijayakumar, Yongxin Zhu, Li Tian, “Secure big data communication for energy efficient intra-cluster in WSNs”, **Information Sciences, Elsevier**, Volume 505, December 2019, Pages 586-599. **[Impact Factor =5.910]**
<https://www.sciencedirect.com/science/article/pii/S0020025519307042?dgcid=coauthor>
27. SK Hafizul Islam, Mohammad S. Obaidat, Pandi Vijayakumar, Enas Abdulhay, Fagen Li, M Krishna Chaitanya Reddy, “A Robust and Efficient Password-based Conditional Privacy Preserving Authentication and Group-Key Agreement Protocol for VANETs”, **Future Generation Computer Systems, Elsevier**, Vol.84, PP. 216-227, 2018 **[Impact Factor =6.125]**
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Balamurugan Balusamy, “Time efficient secure DNA based access control model for cloud computing environment”, **Future Generation Computer Systems, Elsevier**, Vol.73, pp.90-105, 2017. **[Impact Factor =6.125]**

<http://www.sciencedirect.com/science/article/pii/S0167739X17300572>

29. Chang Wang, Yongxin Zhu, Weiwei Shi, Victor Chang, P. Vijayakumar, Bin Liu, Yishu Mao, Jiabao Wang, Yiping Fan, “A Dependable Time Series Analytic Framework For Cyber-Physical Systems Of Iot-Based Smart Grid”, **ACM Transactions on Cyber-Physical Systems, ACM**, Vol. 3, No.1, 2019.

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30. Youngju Cho, Wei Kong, Jian Shen, P.Vijayakumar, Victor Chang, “A Practical Group Blind Signature Scheme for Privacy Protection in Smart Grid”, **Journal of Parallel and Distributed Computing, Elsevier**, Vol. 136, pp. 29-39, 2020. **[Impact Factor =2.296]**

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31. SK Hafizul Islam, Prosanta Gope, Prosanta Gope Prosanta Gope, Prosanta Gope, P.Vijayakumar, “Anonymous and Expeditious Mobile User Authentication Scheme for GLOMONET Environments”, **International Journal of Communication Systems, Wiley**, Vol. 31, No. 2, pp.1-18, 2018. **[Impact Factor= 1.319]**.

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<https://link.springer.com/article/10.1007/s10586-017-0848-x>

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- Raymond Chooe, “A Novel Proxy-oriented Public Auditing Scheme for Cloud-based Medical Cyber Physical Systems”, **Journal of Information Security and Applications, Elsevier**, Volume 51, 102453, April 2020, **Impact Factor=2.327**.
<https://www.sciencedirect.com/science/article/abs/pii/S2214212619307926>
34. Zhiyan Xu, Debiao He, Pandi Vijayakumar, Kim-Kwang Raymond Choo, Li Li, “Efficient NTRU Lattice-Based Certificateless Signature Scheme for Medical Cyber-Physical Systems”, **Journal of Medical Systems, Springer**, Vol.44, No.92, 2020, **Impact Factor= 3.058**.
<https://link.springer.com/article/10.1007/s10916-020-1527-7>
35. P.Vijayakumar, R.Naresh, L. Jegatha Deborah, SK Hafizul Islam, “Computation Cost Efficient Group Key Agreement Protocol for Secure Peer to Peer Communication”, **Security and Communication Networks, Wiley**, Vol.9, No.17, pp.3952–3965, 2016 [**Impact Factor=1.288**]
<http://onlinelibrary.wiley.com/doi/10.1002/sec.1578/abstract>
36. P.Vijayakumar, R.Naresh, SK Hafizul Islam, L. Jegatha Deborah “An Effective Key Distribution for Secure Internet Pay-TV using Access Key Hierarchies”, **Security and Communication Networks, Wiley**, Vol. 9, No. 18, pp.5085-5097, 2016. [**Impact Factor=1.288**]
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38. P. Vijayakumar, S. Bose, A. Kannan, “Chinese Remainder Theorem based Centralized Group Key Management for Secure Multicast Communication,” **IET Information Security**, Vol.8, No.3, pp.179–187, 2014. [**Impact**



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39. Pandi Vijayakumar, S. Milton Ganesh, Lazarus Jegatha Deborah, SK Hafizul Islam, Mohammad Mehedi Hassan. Abdulahmeed Alelaiwi, Giancarlo Fortino, “MGPV: A novel and efficient scheme for secure data sharing among mobile users in the public cloud”, **Future Generation Computer Systems, Elsevier**, Vol.95, pp.560-569, 2019. **[Impact Factor =6.125]**

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40. R.Karthika, L. Jegatha Deborah, P. Vijayakumar, “Intelligent e-learning system based on fuzzy logic”, **Neural Computing and Applications, Springer**, Vol.32, pp. 7661–7670 , 2020. **[Impact Factor =4.774]**.

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69. P. Vijayakumar and L.Jegatha Deborah, “A Detailed Survey on Secure Multicast Group Key Management Schemes” **International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)**, Vol. 2, No. 10, 2015.

70. L.Jegatha Deborah and P.Vijayakumar, “Detailed Analysis of Feature Subset Selection Techniques for Classification Algorithms”, **International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)**, Vol. 2, No. 9, 2015.

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c. International Conferences

1. P. Vijayakumar, M. Azees and L. Jegatha Deborah, “CPAV: Computationally Efficient Privacy Preserving Anonymous Authentication Scheme for Vehicular Ad Hoc Networks” 2nd IEEE International Conference on Cyber Security and Cloud Computing, New York, USA, pp. 62 – 67,2015.
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2. P. Vijayakumar, S. Bose, A. Kannan, “Key Distribution for Pay-TV System with Reduced Computation Cost Using XOR Operation”, International Conference on Advanced Computing, Networking and Security (ADCONS’ 11), LNCS-Springer, Vol.7135, pp. 477–484, 2012.
http://link.springer.com/chapter/10.1007/978-3-642-29280-4_56#page-1
3. P. Vijayakumar, S Bose, A. Kannan, P.H Himesh, “Key Distribution Protocol for Secure Multicast with Reduced Communication Delay,” International Conference on Active Media Technology, LNCS-Springer, Vol. 6890, pp. 312-323,2011.
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4. S. Milton Ganesh, Vijayakumar Pandi, L. Jegatha Deborah, Md. Zakirul Alam Bhuiyan, “Attacks on the Anti-collusion Data Sharing Scheme for Dynamic Groups in the Cloud”, SpaCCS 2017: Security, Privacy, and Anonymity in Computation, Communication, and Storage, Lecture Notes in Computer Science book series (LNCS-Springer) volume 10658, pp 457-467, 2017.
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5. Shangde Gao, Xin Liao, Sujin Guo, Xiong Li, P. Vijayakumar, “Forensic Detection for Image Operation Order: Resizing and Contrast Enhancement”, SpaCCS 2017: Security, Privacy, and Anonymity in Computation, Communication, and Storage, Lecture Notes in Computer Science book series



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(LNCS-Springer) volume 10658, pp 570-580, 2017.

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6. Rajendran Karthika, Lazarus Jegatha Deborah, Pandi Vijayakumar, Sivaraman Audithan, “Grouping Users for Quick Recommendations of Text Documents Based on Deep Neural Network”, SpaCCS 2017: Security, Privacy, and Anonymity in Computation, Communication, and Storage, Lecture Notes in Computer Science book series (LNCS-Springer) volume 10658, pp 617-626, 2017.
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7. Niranchana Radhakrishnan, Marimuthu Karuppiah, Vijayakumar Pandi, Md Zakirul Alam Bhuiyan “A Lightweight Authentication Scheme with User Untraceability”, SpaCCS 2017: Security, Privacy, and Anonymity in Computation, Communication, and Storage, Lecture Notes in Computer Science book series (LNCS-Springer) volume 10658, pp 489-496, 2017.
https://link.springer.com/chapter/10.1007/978-3-319-72395-2_45
8. P. Vijayakumar, S. Bose, A. Kannan, V. Thangam, M. Manoji, M. S. Vinayagam, “Error Detection and Correction for Secure Multicast Key Distribution Protocol,” International Conference on Advances in Computing and Information Technology, CCIS-Springer, Vol.198,pp. 308-319,2011.
http://link.springer.com/chapter/10.1007/978-3-642-22555-0_32
9. P.Vijayakumar, S.Bose, A.Kannan, S.Siva Subramanian, “A Secure Key Distribution Protocol for Multicast Communication,” International Conference on Logic, Information, Control & Computation, CCIS-Springer, Vol.140, pp.249-257,2011.
http://link.springer.com/chapter/10.1007/978-3-642-19263-0_30
10. P.VijayaKumar, L.Jegatha Deborah and R.Seshadhri, “Efficient Key Management Scheme for securing data in Cloud”, International Conference on Intelligent Information Technologies, Department of IST, Anna University Chennai, Accepted for Publication, 2014.



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11. P.Vijayakumar, S. Bose, A. Kannan, S.Siva Subramanian, “An Effective Key Distribution Protocol for Secure Multicast Communication,” Second International Conference on Advanced Computing (ICoAC), IEEE Explorer, pp. 102 - 107, 2010.
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12. L.Jegatha Deborah and P.Vijayakumar, “Dynamic Ontology Alignment Framework based on Linguistics, Summary”, Eighth International Conference on Data Mining and Warehousing (ICDMW-2014), 25 – 27 July 2014 - Accepted for Publication in Elsevier Proceedings.
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13. P.Vijayakumar, “Efficient Data Storage and Security in Cloud Computing”, Fourth International Conference on Futuristic Trends in Electronics Engineering (ICFTEE2015), TCET, 7-8 March 2015.
14. P.Vijayakumar, “A Detailed Survey of Security Issues in Cloud Computing”, Second International Conference on Advanced Research in Engineering and Applied Sciences, S.R.I College of Engineering and Technology, 21-23 March 2015.
15. Pandiaraja Perumal and Vijayakumar Pandi, “Efficient Multikeyword Search Over Encrypted Data In Untrusted Cloud Environment”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in IEEE Xplore.
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16. R Kanniga Devi, G Murugaboopathi and P Vijayakumar, “Graph-based Mathematical Model for an Efficient Load Balancing and Fault tolerance in Cloud Computing”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in IEEE Xplore.



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17. Milton Ganesh, Pandi Vijayakumar and Jegatha Deborah, “A Secure Gesture Based Authentication Scheme to Unlock the Smart Phones”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in <https://ieeexplore.ieee.org/document/8057526>
18. Akshat Pradhan, Marimuthu Karuppiah, Niranchana Radhakrishnan and Vijaykumar P, “Secure protocol for Subscriber Identity Module”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in IEEE Xplore.

d. National Conferences

1. L.Jegatha Deborah, P. Vijayakumar, “Enhanced Detection of Learners Learning Styles for E-Learning”, National Conference on Computing Techniques (ncct'15), University College of Engineering Villupuram, 2015.
2. B. Sivaranjani and P. Vijayakumar, “A technical survey on various VDC request embedding techniques in Virtual Data Center”, National Conference on Parallel Computing Technologies (PARCOMPTECH), IEEE Xplore, pp.1-6, 2015.
3. P. Vijayakumar, L.Jegatha Deborah, “Tree based key management scheme for secure multimedia multicast” National Conference on Computing and Applications (NACCA 06), National Engineering College, Kovilpatti, Tamilnadu, Feb 24, 2006.
4. P. Vijayakumar, S.Benson Edwin Raj, “Key Distribution for secure multicast via media dependent channel”, National Conference on Recent Advances & Future Trends in IT, Bharat Institute of Higher Education and Research, Chennai, India, Feb 1-2, 2005.



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7. Professional Activities

1. Guest Lectures Delivered

1. A seminar on “Data Warehousing” was given to the students at the KLN Memorial Polytechnic College, Madurai on 27.07.2005.
2. Delivered a Guest Lecture on “Emerging Trends in Information Security” in the Department of CSE at Prist University-Kumbakonam Campus on 12-08-2011.
3. Delivered a Guest Lecture on “Information Security” in the Conference ICFTEE (International Conference on Futuristic Trends in Electronics Engineering) at TCET on 28-01-2012.
4. Given a guest lecture on “Network Security” in the department of Computer Science and Engineering, IFET College of Engineering on 19-07-2012.
5. Handled two sessions in the Faculty Development Programme conducted on “Artificial Intelligence” on 03-12-2012 in the department of Computer Science and Engineering, University College of Engineering Tindivanam.
6. Handled two sessions in the Faculty Development Programme conducted on “Cryptography and Network Security” on 05-12-2012 and 06-12-2012 in the department of Information Science and Technology, Anna University Chennai.
7. Handled two sessions in the Faculty Development Programme conducted on “Cryptography and Network Security” on 06-12-2012 in the department of Information Science and Technology, Anna University Chennai.
8. Handled two sessions in the Faculty Development Programme conducted on “Cryptography and Network Security” on 24.06.2013 and 25-06-2013 in the department of Computer Science & Engineering, College of Engineering Guindy, Anna University Chennai.
9. Handled a session on “Group Theory and Its Applications” in the Faculty Development Programme conducted on “Discrete Mathematics” on 27-06-2013 in the Department of Maths, University College of Engineering, Tindivanam.
10. Given a guest lecture on “Cryptography and Network Security” in the Department of CSE at M.R.K Institute of Technology, on 26-07-13.



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11. Handled two sessions in the TEQIP sponsored Faculty Development Programme on “Research Trends in Network Security” on 07-08-2013 in the Department of Information Technology at Anna University Tiruchirappalli, BIT Campus.
12. Handled a session on “Detecting & Preventing Password & SQL Injection Attacks” in the Ethical Hacking & Counter Measures training course on 12-08-2013 in the department of Computer Science & Engineering, CEG, Anna University Chennai.
13. Given a guest lecture on “Network Security” in the Department of CSE and IT, Idhaya Engineering College for Women(IECW), Chinnasalem - 606 201 on 30-09-13.
14. Given a guest lecture on “Machine Intelligence through Logic & Reasoning” in the department of Computer Science and Engineering, IFET College of Engineering on 04-02-2014.
15. Given an invited talk in the national conference “Advanced Methodologies in Information and Communication Engineering (NCAMICE 14)” in the IT department at Mailam Engineering College on 22-03-2014.
16. Delivered a Guest Lecture on “Research Issues in Multicast Security” in the Department of Computer Science and Engineering at Pondicherry Engineering College on 18-11-2014.
17. Handled two sessions on “Key Management Techniques for Internet Security” in the DST sponsored workshop “Recent Techniques in Web Services and Internet Security” conducted at DIST, CEG on 19-02-15.
18. Delivered a Guest Lecture on “Cryptography and Network Security” in the Conference ICFTEE (International Conference on Futuristic Trends in Electronics Engineering) at TCET on 07-03-2015.
19. Delivered a Guest Lecture on “Cryptography and Network Security” in the Conference “Advanced Research in Engineering and Applied Sciences” at S.R.I College of Engineering and Technology on 21-03-2015.



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20. Given an invited talk on “Computer Networks and Security” in the National Conference “Ncct 15” at University College of Engineering Villupuram on 31-03-2015.
21. Given an invited talk on “Secure Document Access from Cloud” in the National Conference “NCSCA 15” at University College of Engineering Tindivanam on 30-04-2015.
22. Handled two sessions in the AICTE sponsored 2 week Summer Winter School “Use of Mathematical Complexity and Advanced Cryptographic Techniques in Network Security” on 19-05-2013 in the Department of Computer Science & Engineering, Adhiparasakthi Engineering College, Melmaruvathur.
23. Handled two sessions in the Faculty Development Programme conducted on “Cryptography and Network Security” on 25-05-2015 in the department of Computer Science & Engineering, Anna University Chennai.
24. Handled two sessions in the Faculty Development Programme conducted on “MA 6566 Discrete Mathematics’ on 26-05-2015 in the Department of Mathematics, University College of Engineering Villupuram.
25. Handled two sessions in the Faculty Development Programme conducted on “Cryptography and Network Security” on 27-05-2015 in the department of Computer Science & Engineering, Anna University Chennai.
26. Given an invited talk on “Recent Trends in Network Security” in at Aksheyaa College of Engineering, on 31-07-2015.
27. Delivered a lecture on the topic “Formulation and Solution of Research Problems” in the FDP conducted by Arunai Engineering College on 12.01.2016.
28. Given a lecture in the FDP on “Cryptanalysis & Internet Security” conducted by Dept. of CSE of Sri Sairam Institue of Technology, Chennai on 27.06.2016.
29. Given the key note address in the IEEE Sponsored International Conference on Algorithms, Methodology, Models and Applications in Emerging



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Technologies (ICAMMAET) in Bharath Institute of Higher Education and Research on 16.02.2017.

30. Given a guest lecture on the topic “Advanced Research in Engineering & Applied Sciences (ICARES’ 17) in the 4th International Conference conducted by S.R.I. College of Engineering & Technology, Vandavasi on 22.03.2017.
31. Delivered a keynote address in the International Conference on “Newer Engineering Concepts and Technology (ICONNECT2K17) on 28.03.2017 and 29.03.2017 in K.Ramakrishnan College of Technology, Trichy.
32. Delivered a guest lecture on “Network Performance Analysis” in the Departments of CSE and IT of Arunai Engineering College on 19.01.2018.
33. Delivered a keynote address in the Dept. of Bio Technology Ministry of Science & Technology, Govt. of India sponsored eight days National Workshop on Modernization in Bioinformatics and Bigdata (MIBAB-16) conducted by Dept. of Computer Applications, Anna University BIT Campus, Tiruchirappalli.

2. Training Programs Conducted

S.No.	Name of the Program	Start Date	End Date
01.	FDP program on “Artificial Intelligence and Cryptography” at Sethu Institute of Technology.	23.01.2006	23.01.2006
02.	FDP program on “Artificial Intelligence” at UCET.	03.12.2012	09.12.2012
03.	FDP program on “Programming and Data Structures II” at UCET.	08.06.2015	14.06.2015



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04.	FDP program on “Mobile Computing” at UCET.	24.11.2016	30.11.2016
05.	National Level Technical Symposium, TECHNOVATION at UCET.	19.08.2011	19.08.2011
06.	National Level Technical Symposium, SERVIDOR2k12 at UCET.	28.09.2012	28.09.2012
07.	Intra College Technical Symposium, UCETROX'13 at UCET.	11.02.2013	11.02.2013
08.	National Level Technical Symposium, INNOVAZZ 13 at UCET.	27.09.2013	27.09.2013
09.	National Level Technical Symposium, Cetana Ranya'14 at UCET.	12.09.2014	12.09.2014
10.	A seminar on “Web Services and its Applications” was conducted in the CSE department at UCET.	16.03.2015	16.03.2015
11.	FDP program on “Computer Networks” at UCET.	04.12.2017	10.12.2017
12.	First International Conference On Recent Trends and Challenges In Computational Models (ICRTCCM'16)	11.02.2016	13.02.2016
13.	Second International	03.02.2017	04.02.2017



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	Conference On Recent Trends and Challenges In Computational Models (ICRTCCM'17)		
14.	Co-ordinated Two Weeks Employability Skill Building Programme jointly organized by CUIC, Anna University, Chennai.	06.02.2017	20.02.2017

3. Other Participation Programs

S.No	Name of the Program	Nature of Participation	Date /Month / Year of Participation
01.	National Level Technical Symposium, V.R.S. College of Engg & Technology, Arasur, Villupuram.	Jury	22.09.2010
02.	National Level Technical Symposium, IFET College of Engineering and Technology, Villupuram.	Jury	28.08.2011
03.	National Level Technical Symposium, University College of Engineering Villupuram, Villupuram.	Jury	Feb 2012
04.	International Conference, Thiruvalluvar College of Engineering and technology, Vandavasi.	Jury	03.03.2013
05.	National Level Conference, IFET College of Engineering and Technology, Villupuram.	Jury	06.03.2013
06.	Intra Department Project Contest, V.R.S. College of Engg &	Jury of the Project Contest	04.04.2013



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	Technology, Arasur, Villupuram		
07.	Department Technical Association Valediction Function, Mailam College of Engineering and Technology, Mailam	Chief Guest	30.04.2013
08.	Department of CSE and IT, Idhaya Engineering College for Women(IECW), Chinnasalem - 606 201	Delivered a lecture on “Network Security”	30-09-2013
09.	Conducted by Thiagarajar College of Engineering, Madurai	Attended and completed Python Training	27.11.2017
10.	Exhibition on Education, Science, Technology and Innovation (EESTI- 2016) at Anna University, Chennai	Participated	24.01.2016 to 26.01.2016
11.	Valedictory function for the association “SAIT-2012” at Mailam Engineering College	Chief Guest	30.04.2012
12.	Science & Technology Project Exhibition (GENERIC 2014), Mailam Engineering College.	Jury	29.03.2014
13.	National Level Technical Symposium (MITILENCE’ 14) in the Dept. of CSE, Manakula Vinayagar Institute of Technology, Puducherry	Jury	06.02.2014
14.	4 th International Conference on Advanced Methodologies in Information and Communication Engineering at Mailam Engineering College,	Chief Guest	22.03.2014
15.	College Day Celebrations, Rangaboopathi Engineering College	Chief Guest	30.03.2017



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16.	Paper presentation of the National Conference – TECHCON'13, IFET College of Engineering, Villupuram	Jury	06.04.2013
17.	Project Expo for SCIMIT 2015, Manakula Vinayagar Institute of Technology	Jury	28.02.2015
18.	Paper presentation for the ITECHEFEST' 09, Dept. of CSE, IFET College of Engineering	Jury	11.09.2009
19.	National Level Technical Symposium "SAHANA – The Battle of Technocrat" organized by CSI Student Branch, Dept. of CSE, Cape Institute of Technology in association of Computer Society of India	Attended	12.09.2009

8. Editor Positions

1. Associate Editor of *International Journal of Communication Systems*, **Wiley** (IJCS).
2. Associate Editor of *International Journal of Organizational and Collective Intelligence*, **IGI Global** (IJOIC).
3. Associate Editor of *International Journal of Security and Privacy*, **Wiley**.
4. Associate Editor of **PLOS ONE** *International Journal*.
5. Associate Editor of *Journal of Surveillance, Security and Safety*, **OAE Publisher**.
6. Lead Guest Editor for Future Generation Computer Systems, **Elsevier**
(<https://www.journals.elsevier.com/future-generation-computer-systems/call-for-papers/special-issue-on-key-management-and-key-distribution-for-sec>)
7. Guest Editor for The Online Journal of Distance Education and e-Learning (**TOJDEL**)
8. Guest Editor for International Journal of Internet Technology and Secured Transactions, **Inderscience**.



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9. Lead Guest Editor for The Intellinget Networks And Systems Society (INASS)
10. Guest editor in the Journal of Secure Data Communication and Intelligent Data Processing for Electronic Governance, **Inderscience**
11. Holding reviewer position in many SCI-indexed journals like IEEE Transactions, Elsevier, Springer, etc...

9. Citation Details

S.No.	Criteria	Value
1.	No. of Citations	1116
2.	h-index	16
3.	i10-index	28

10. Countries Visited

Countries Visited	Duration of visit		Purpose of visit
	From	To	
China	19.05.2018	26.05.2018	Delivered an invited talk at Xidian University, China
USA	01.11.2017	10.11.2017	Presented a Research Paper at Colombia University, New York, USA
USA	02.11.2015	07.11.2015	Presented a Research Paper at New York Institute of Technology (NYIT), New York, USA
JEJU, South Korea	12.12.2011	13.12.2011	Presented a Research Paper in JEJU, South Korea
Ghana, West Africa	26-01-2007	05.05.2008	To Work as a lecturer in All Nations University

11. Membership of Scientific and Professional Societies

- 1) Lifetime Membership in CSI (Computer society of India)



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2) Annual Membership in The India Science Congress Association.

12. Ph.D. Research work Completed

S.No	Name of the Research Scholar & Register No.	Status	Date	Title of the Research Work
1.	Mr.M.Azees (Full Time) – 1014499711	Ph.D. Completed	Completed Viva-Voce on 11.01.2017	Efficient privacy preserving authentication and key management techniques for providing secure communication in Vehicular Adhoc networks.
2.	Mr.R.Sathiyaseelan (Part-Time) – 2011114071	Ph.D. Completed	Completed Viva-Voce on 26.04.2017	Secure and energy efficient protocols for improving the performance of sensor networks
3.	Mr.R.Naresh (Part Time) – 1413499101	Ph.D. Completed	Completed Viva-Voce on 20.12.2017	Trust and efficient group key management techniques for secure group communication in distributed networks.
4.	Mr.P.Pandiaraja (Part-Time) – 2011174081	Ph.D. Completed	Completed Viva-Voce on 28.02.2018	Efficient data access and task scheduling approaches for secure communication in cloud



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13. Ph.D. Research Projects (Ongoing)

1. Doctoral Committee Member

S.No.	Name of the University	No. of Candidates
1.	Anna University, Chennai	8
2.	VIT University, Vellore	6
3.	VIT University, Chennai	5
4.	Prist University	1
5.	Sathyabama University	2
6.	SRM University	1

2. Sponsored Research Activities

1. Project Name : Computational And Storage Efficient Key Management For Secure Multicast Communication

Duration : 1 year

Role : Principal Investigator

Agency : Centre For Technology Development and Transfer,
Anna University, Chennai

Amount : Rs.50,000/-

2. Project Name : Computationally Efficient Privacy Preserving Anonymous Authentication Scheme for Vehicular Adhoc Networks (Approved but fund not released).



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Duration : 2 Years
Role : Principal Investigator
Agency : University Grants Commission
Amount : Rs.80,000/-

14. List of Seminar / Short Term Course /FDP/ Workshop attended: (Within India)

- a. Workshop (2005), "Networking Technologies & Security ", organized by Dept. of CSE, Kamaraj College of Engineering & Technology during 30.08.2005 to 31.08.2005. (2 days)
- b. DRDO sponsored Three days workshop (2008) on "Image Processing Applications in Remote Sensing and Surveillance"-IPRO'08 organized by P.S.R. Engineering College from 12-06-2008 to 14-06-2008. (03 days)
- c. D.S.A. sponsored Workshop (2009), "Challenges in Intelligent Web Applications", organized by Dept. of CSE, CEG, at Anna University, Chennai during 09.03.2009 to 10.03.2009. (2 days)
- d. Workshop (2010), "Cryptography", organized by University College of Engineering Tindivanam, Tindivanam. During 08.10.2010 to 09.10.2010. (2 days)
- e. Training Programme (2010), "Rational Application Development", organized by IBM Academic Initiative India and Anna University of Technology at Anna University of Technology, CPT Campus, Tharamani, Chennai-113. during 28.10.2010 to 31.10.2010. (4 days)
- f. Workshop (2011), "Grid Computing – WGC 2011", organized by Department of Science & Technology, New Delhi at Department of Computer Technology, MIT campus, Chennai-44 during 07.02.2011 to 11.02.2011. (5 days)
- g. Faculty Development Programme (2011), "Ripple 2011", organized by Cognizant and Anna University of Technology, Chennai at Cognizant Academy, Chennai during 17.02.2011 to 18.02.2011. (2 Days)



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- h. Faculty Development Training Programme (2011), "CS2402- Mobile & Pervasive Computing ", organized by Centre for Faculty Development, Anna University, Chennai-25 during 30.05.2011 to 05.06.2011. (7 Days)
- i. Workshop (2011), "Simulation of Advanced Networks Using NS-2", organized by Department of Information Technology, MIT campus, Chennai-44, during 02.12.2011 to 03.12.2011. (2 days)
- j. Faculty Development Training Programme (2011), "IT 2352 Cryptography & Network Security ", organized by Centre for Faculty Development, Anna University, Chennai-25 at MIT campus, Anna University, Chennai-44. during 17.12.2011 to 23.12.2011. (7 Days)
- k. National Mission on Education through ICT (MHRD)sponsored Workshop (2012), " Writing Effective Conference Papers ", organized by Conducted by IIT Bombay (MHRD), during 18.02.2012 to 19.02.2012. (2 days)
- l. Faculty Development Training Programme (2012), "CS 2301 Software Engineering", organized by Centre for Faculty Development, Anna University, Chennai-25. during 07.05.2012 to 13.05.2012. (7 Days)
- m. International Symposium (Short term course) (2014), "First International Symposium on Big data and Cloud Computing Challenges (ISBCC)", organized by School of Computing Sciences and Engineering at VIT Chennai. during 27.03.2014 to 28.03.2014. (2 days)
- n. Workshop (2014), " Cyber Security ", organized by ISTE Sponsored workshop under the National Mission on Education through ICT (MHRD, Govt. of India) conducted by IIT Bombay at M.I.T, Anna University, during 10.07.2014 to 20.07.2014. (11 days)
- o. Workshop (2014), "Big Data Analytics", organized by Department of Information Technology, MIT campus, Chennai-44 at M.I.T, Anna University, during 21.11.2014 to 22.11.2014. (2 days)
- p. DST-PURSE Sponsored Workshop (2015), " Recent Techniques in Web services and internet security ", organized by Dept. of Information Science and



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Technology, CEG, Anna University, Chennai, during 18.02.2015 to 19.02.2015. (2 days)

- q. Faculty Development Programme (2017), “Context-Aware Recommender System in Cloud Environment ”, organized by Dept. of CSE, TCE, Madurai, during 20.11.2017 to 03.12.2017. (14 Days)
- r. Faculty Development Programme (2017), “Smart Grid and Clean Energy Technologies (SGCET-2017 ”, organized by Dept. of EEE, PEC, during 11.12.2017 to 22.12.2017. (12 Days)
- s. Short Term Course (2018), “Application of Micro Grid in Distributed Generation Together with Clean Energy Technology (MGCET – 2018)”, organized by Dept. of EEE, Pondicherry Engineering College, Puducherry, during 29.01.2018 to 02.02.2018. (5 Days)
- t. Faculty Development Programme (2018), “Entrepreneurship Development ”, organized by Organized by Centre for Entrepreneurship Development (CED), Centre for Intellectual Property Rights (CIPR) in association with Entrepreneurship Development & Innovation Institute (EDII-TN) CEGAIN – CEG Alumni Incubator & I.N.D.I.A Trust at Anna University, Chennai, during 13.02.2018 to 23.02.2018 (11 Days).

15. International Conferences Participated

- 1. P. Vijayakumar, M. Azees and L. Jegatha Deborah, (2015), “CPAV: Computationally Efficient Privacy Preserving Anonymous Authentication Scheme for Vehicular Ad Hoc Networks” **2nd IEEE International Conference on Cyber Security and Cloud Computing**, organized by **New York Institute of Technology (NYIT), New York, USA** during 02.11.2015 to 07.11.2015.
<https://ieeexplore.ieee.org/document/7371460/>
- 2. N.Deepa, P.Vijayakumar, Bharat S Rawal, B.Balamurugan (2017), “An extensive review and possible attack on the privacy preserving ranked multi-keyword search for multiple data owners in cloud computing” organized by **Colombia University, New York, USA** during 01.11.2017 to 10.11.2017.



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<https://ieeexplore.ieee.org/document/8118433/>

3. Pandiaraja Perumal and Vijayakumar Pandi, (2017), “Efficient Multikeyword Search Over Encrypted Data In Untrusted Cloud Environment”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17) during 03.02.2017 to 04.02.2017.

<http://ieeexplore.ieee.org/document/8057544/>

4. R Kanniga Devi, G Murugaboopathi and P Vijayakumar, “Graph-based Mathematical Model for an Efficient Load Balancing and Fault tolerance in Cloud Computing”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in IEEE Xplore.

<http://ieeexplore.ieee.org/document/8057523/>

5. Milton Ganesh, Pandi Vijayakumar and Jegatha Deborah, “A Secure Gesture Based Authentication Scheme to Unlock the Smart Phones”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in IEEE Xplore.

<http://ieeexplore.ieee.org/document/8057526/>

6. Akshat Pradhan, Marimuthu Karuppiyah, Niranchana Radhakrishnan and Vijaykumar P, “Secure protocol for Subscriber Identity Module”, Second International Conference on Recent Trends and Challenges in Computational Models (ICRTCCM '17), 3rd-4th February 2017 – Accepted for Publication in IEEE Xplore.

<http://ieeexplore.ieee.org/document/8057564/>

7. P.Vijayakumar, S.Bose, A.Kannan, S.Siva Subramanian, “A Secure Key Distribution Protocol for Multicast Communication,” International Conference on Logic, Information, Control & Computation, CCIS-Springer, Vol.140, pp.249-257,2011. [ANNEXURE – II]



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http://link.springer.com/chapter/10.1007/978-3-642-19263-0_30

8. P.VijayaKumar, L.Jegatha Deborah and R.Seshadhri, “Efficient Key Management Scheme for securing data in Cloud”, International Conference on Intelligent Information Technologies, Department of IST, Anna University Chennai, Accepted for Publication, 2014.
9. P.Vijayakumar, S. Bose, A. Kannan, S.Siva Subramanian, “An Effective Key Distribution Protocol for Secure Multicast Communication,” Second International Conference on Advanced Computing (ICoAC), IEEE Explorer, pp. 102 - 107, 2010.

<http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5725367&url=http://ieeexplore.ieee.org/iel5/5723180/5725350/05725367.pdf%3Farnumber%3D5725367>