

Dr. K. Kalimuthu

Associate Professor

Department of ECE,

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Academic Profile:

1. Completed Ph. D in Communication System from SRM IST, Chennai in 2014.
2. Completed M.Tech in Communication System from SRM IST, Chennai in 2007.
3. Completed B.E in ECE from MIT, Anna University, Chennai in 2003

Experience:

1. Working as Associate Professor from 1st January 2018 to till date in SRM IST
2. Worked as Assistant Professor(S.G) from 1st August, 2017 to 31st December 2017 in SRM IST
3. Worked as Assistant Professor(Sr.G) from 1st July, 2012 to 31st July 2017 in SRM IST
4. Worked as Assistant Professor (O.G) from 1st July, 2009 to 30th June 2012 in SRM IST
5. Worked as Lecturer from 13th September 2003 to 30th June 2009 in SRM IST

Number Ph. D students Guiding: 06

Research Publication:

1. **Kalimuthu**, Sabitha Gauni, C. T. Manimegalai, and V. Malsawmdawngliana. "Ambient noise analysis in underwater wireless communication using laser diode." Optics & Laser Technology 114 (2019): 135-139 **Elsevier Publication, (SCI Indexed IF 3.319)**.
2. Vaibhav Jain, Tanay, Saranesh Gangele and K.Kalimuthu, "Driver Assistance System using in-vehicle Traffic Lights and Signs", International Journal of Engineering & Technology, [S.I.], v. 7, n. 2.24, p. 527-530, Apr. 2018. **(Scopus Indexed)**

3. Arunapriya V, Praveen Kumar S, Kalimuthu K, "LiFi for Medical care using Visible Light Communication, ", International Journal of Engineering & Technology, [S.l], v. 13, n.11, p. 9273-9276, Mar. 2018. **(Scopus Indexed)**
4. Das, Abhijit, K. Kalimuthu, and S. S. Biswas. "IoT Based Circuit Breaker Monitoring & Control." International Journal of Applied Engineering Research 13.10 (2018): 7806-7810.
5. Sabitha, Manimegalai, Kalimuthu and M.Anjanasree, " Detection of breathing and heartrate using a simple vital radio system" International Journal of Engineering & Technology, [S.l], v. 7, n. 2.8, p. 311-314, Mar. 2018 **(Scopus Indexed)**
6. Gauni S., Manimegalai C.T., Kalimuthu K., Kaushik V.C.S., Rama Rao T. (2018) Optical Channel Analysis of Turbo Coded MIMO-OFDM System for Visible Light Communication. Optical And Microwave Technologies. Lecture Notes in Electrical Engineering, vol 468. Springer, Singapore. Nov. 2017, pp 161-174**(Scopus Indexed)**
7. Deepika, Bethireddy Navya, and K. Kalimuthu, "Fluffy Logic Based Energy Efficient Routing Protocol For Wireless Sensor Networks",International Innovative Research Journal of Engineering and Technology, Vol. 2, Issue 4, June 2018.
8. C. T. Manimegalai, Sabitha Gauni, K. Kalimuthu, "Smart traffic management using a building integrated photovoltaic (BIPV) powered Li-Fi system on IoT ", Electronic Government an International Journal, Vol.8, no.36, Jan 2018. **(Scopus Indexed)**
9. Atchutananda Surampudi and K.Kalimuthu, "An energy efficient spectrum sensing in cognitive radio wireless sensor networks", International Journal of Computers, Communications and Control, Vol -, I -, B --E -, <https://arxiv.org/pdf/1711.09255.pdf> **(SCI Indexed)**
10. C.T. Manimegalai , Sabitha Gauni , K. Kalimuthu, "Efficacy analysis of LDPC coded APSK modulated differential space-time-frequency coded for wireless body area network using MB-pulsed OFDM UWB technology," Technology and health care, Sept 2017. **(SCI Indexed)**
11. C. T. Manimegalai, Sabitha Gauni, K. Kalimuthu and R. Kumar, "Enhanced Power Control Algorithm in Cognitive Radio for Multimedia Communication." Indian Journal of Science and Technology 9.25,2016. **(Scopus Indexed)**

12. Manimegalai, C. T., Sabitha Gauni, K. Kalimuthu, and R. Kumar. "Energy Efficient Cooperative Communication with Grouped Relay in MB-OFDM for UWB Systems." Indian Journal of Science and Technology 8, no. 36, 2015(**Scopus Indexed**)
13. M.K.Srilekha, N.R. Shankar and K.Kalimuthu, "Review of reconfigurable antenna for cognitive radio", International Journal of Control Theory and application, Vol9, issue 25, pp 489-496, September 2016(**Scopus Indexed**)
14. Jayasri, M., K. Kalimuthu, and P. Vijaykumar. "Fading Environmental in Generalised Energy Detector of Wireless Incant.", International Journal of Scientific Engineering and Research, Vol. 2, Issue 4, April 2014(**Scopus Indexed**)
15. **K. Kalimuthu**, R. Kumar, "Capacity maximization in spectrum sensing for Cognitive Radio Networks thru Outage Probability", International Journal of Electronics and Communications (AEU), 2012, **Elsevier Publication, (SCI Indexed)**
16. K. Kalimuthu, R. Kumar, "An Improved Spectrum Sensing for Cognitive Radio Networks with Rayleigh Fading Channel", International Journal of Wireless communication, pp 630-634, June 2011
17. K.Kalimuthu and R.Kumar, "Cluster based spectrum sensing technique for Cognitive Radio Networks using Fuzzy Logic Controller", Int. Journal of advanced research in computer science and software engineering, July 2013
18. C. T. Manimegalai, Sabitha Gauni, K. Kalimuthu, R. Kumar, "Energy Efficient Cooperative Communication with Grouped Relay in MB-OFDM for UWB Systems", Indian Journal of Science and Technology, Volume 8, Issue 36, December 2015 (**Scopus Indexed**)
19. Surampudi, Atchutananda, and K. Kalimuthu. "An adaptive decision threshold scheme for the matched filter method of spectrum sensing in cognitive radio using artificial neural networks." Information Processing (IICIP), 2016 1st India International Conference on. IEEE, 2016
20. K.Kalimuthu and R.Kumar, "A study analysis of Cooperative spectrum sensing in Cognitive Radio Networks" International Conference on Communication and Electronics System Design(ICCESD'13), Proc. of SPIE Vol. 8760, pp. 876026-1-7, January 2013 (**Scopus Indexed**)
21. Dayana, K.Kalimuthu and R. Kumar, "Fuzzy Spectrum management in cognitive radio networks", Int. conference on Computing Techniques, Embedded systems and Drives (ICCED'12), Vol. 3, pp. 59-63, March 2012

22. Rohini, M.P., Sumith Babu, S.B., Kalimuthu, K., "Synchronization in Collaborative CDMA using Chaotic Sequences generated by 1-D Chaotic Map", In: 2015 IEEE 2nd International Conference on Knowledge Collaboration in Engineering (ICKCE), Coimbatore, India, March 27-28, 2015
23. Allam Rajkumar, K.Kalimuthu and, R.Kumar, "An Efficient Spectrum Sensing Using Compressive Measurements in Cognitive Radio", 3rd International Conference on Signal Processing, Communications and Networking (ICSCN 2015) Madras Institute of Technology, Anna University, Chennai, India March 26-28, 2015
24. Allam Rajkumar, K.Kalimuthu and, R.Kumar, "An Efficient Spectrum Sensing In Relay Based Cognitive Radio Using Compressive Measurements", 1st International Conference on Nano-electronics, Circuits & Communication Systems (NCCS-2015) 9-10th May 2015 at ARTTC BSNL Ranchi-835217 Jharkhand India, Organized by IETE, Ranchi
25. K.Kalimuthu and Navya Deepika, 'An Energy Efficient Wireless Sensor Networks using Rumor Routing Protocol', International Conference on Nextgen Electronic Technologies – Silicon to Software – ICNETS2-2017, VIT, Chennai
26. C. T. Manimegalai, Sabitha Gauni, K. Kalimuthu, "Optical Channel Analysis of Turbo coded MIMO-OFDM system for Visible Light Communication", International Conference on Nextgen Electronic Technologies – Silicon to Software – ICNETS2-2017, VIT, Chennai
27. Kalaiarasi. D, K.Kalimuthu, and R. Kumar, "An Efficient Spectrum Sensing in Cognitive Radio Using Random Matrix Theory", National Conference on Microwave & Optical Communication-NCMOC2011, held at Alagappa Chettiar College of Engineering and Technology, Karaikudi, pp.337-340, March-2011
28. V. Elango, K.Kalimuthu, and R. Kumar, "An Efficient Spectrum Sensing in Cognitive Radio and Optimizes the no Of Sensing Devices", National conference on Emerging Trends in Engineering, Management & Computer Applications" held at Anna University- Tiruchirappalli on April 2011
29. R. Padmanaban, K.Kalimuthu and R. Kumar, "An Efficient Spectrum Sensing in Cognitive Radio Using Cluster Based Architecture", National Conference on Communication networks and sensor technology (NCCNS) " held at Hindustan University, Chennai on 18 April, 2011
30. S.Prakash, K.Kalimuthu and R. Kumar, "Joint Design of Sensing and Access Policies by opportunistic Spectrum Access", 3rd National Conference on Signal Processing,

Communications and VLSI Design(NCSCV'11) held at Anna University, Coimbatore,
pp.679-684,6th & 7th May, 2011

Patents

Patent Reference	Brief Description
201841037196	An Optical Wireless Charging And Data Transfer Apparatus
202041017742	Wireless In-Transit Milk Parameters Monitoring System

Award

Received Best Performance Teaching Award-2008, from SRM University

Roles and Responsibilities

Department Level

Department Coordinator for Institution's Innovation Council

Department Time table Coordinator from 2015-16 to 2018-19.

Academic Advisor for 2019 Batch ECE students

Application Development Centre (ADC) Coordinator

Core-Committee Member in Choice Based Credit System implementation Team

Core Committee member in the Accreditation like ABET, NAAC and NBA

Conducted and acted as Core Committee member for various Conference, Workshop, STTP and Faculty Development Program conducted in the department.

Supporting member in developing Curriculum

Institution Level

Active Core Committee member in **Institution's Innovation Council (IIC, MHRD)**,

Acted as Central Valuation Camp Officer for University End Semester Examination

Acted as Flying Squad Member for University Examination

Acted as Center Coordinator for SRM Engineering Entrance Examination

Core-Committee member in the Anti-Ragging Committee

Core Committee member in Convocation

Core Committee member in Admission- Counseling

Funded Projects:

1. Received a Funded project title Studies on “Disaster-resilient management and Bi-directional Multiband signal transmission using Double-clad Fibers in Radio-Over-Fiber Systems Under DST” for Rs.32.7 lakhs (2018-2021) : Role: Mentor
2. Received a fund of Rs 40,000, for a duration of 4 months on Jan. 2020 from Unnat Bharat Abhiyan- Delhi IIT for the Project Titled: Gesture based automatic hand sanitiser system integrated with contactless thermometer. under the scheme Project noted below in the UBA adopted village under COVID19 subcategory SEG.
Principal investigator: Dr.K Kalimuthu- ECE, Team: Dr C.T.Manimegalai,Dr.Sabitha Gauni, Mr.Joseph,PL
3. Received a fund of Rs 2 Laks for a duration of one year June 2019- 2020 from SRM Innovation and Incubation Center(SIIC)-NewGen IEDC of SRM Institute of Science and Technology for the Inhouse Project Titled: Development of Low cost Enhanced Ultrasound Transducer for Medical applications". Role: Mentor

Professional Body Membership

IEEE Membership Number: 93859044

IETE Membership Number: M234411

IEI Membership Number: M-160021-9

OSI Membership Number: 1466

ISCA Membership Number: A6233