

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address: Dr. K. Kavitha,
Professor and Head, Department of ECE,
Velammal College of Engineering and Technology,
Madurai- 625009.
2. Email(s) and contact number(s) : kavi@vcet.ac.in, +91 8110022453
3. Institution : Velammal College of Engineering and Technology
4. Date of Birth : 27.06.1977
5. Gender (M/F/T) : Female
6. Category Gen/SC/ST/OBC : OBC
7. Whether differently abled (Yes/No) : No

8. **Academic Qualification (Undergraduate Onwards)**

S.No	Degree	Year	Subject	University/Institution	% of marks
1.	Ph.D.,	2016	Hyperspectral Image Classification	Anna University	-
2.	M. E	2000	Microwave and Optical Engineering	Madurai Kamaraj University	75
3.	B. E	1998	Electronics and Communication Engineering	Madurai Kamaraj University	72.75

9. Ph.D. thesis title : Some Studies on Hyperspectral Image Classification using Multi Resolution Transforms and Computational Intelligence.
- Guide's Name : Dr. S. Arivazhagan, M.E, Ph.D.,
- Institute/Organization/University : Mepco Schlenk Engineering College, Sivakasi / Anna University, Chennai
- Year of Award : 2016

10. **Work experience (in chronological order):**

S. No	Positions held	Name of the Institute	From	To	Pay Scale
1.	Professor	Velammal College of Engineering and Technology, Madurai	17.01.2019	Till date	6 th Pay Scale
2.	Associate Professor	Mepco Schlenk Engineering College, Sivakasi	01.08.2014	12.01.2019	6 th Pay Scale
3.	Assistant Professor (Senior Grade)	Mepco Schlenk Engineering College, Sivakasi	01.07.2013	31.07.2014	5 th Pay Scale
4.	Assistant Professor	Mepco Schlenk Engineering College, Sivakasi	01.07.2009	30.06.2013	5 th Pay Scale
5.	Senior Lecturer	Mepco Schlenk Engineering College, Sivakasi	01.08.2006	30.06.2009	5 th Pay Scale
6.	Lecturer	Mepco Schlenk Engineering College, Sivakasi	10.01.2001	31.07.2006	4 th Pay Scale
7.	Lecturer	A. K College of Engineering, Krishnankoil	01.06.2000	09.01.2001	4 th Pay Scale

11. **Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.**

S. No	Name of Award	Awarding Agency	Year
1.	Puthumai Bharathi	Agni Siragukal Arakkattalai, Krishnagiri	2019
2.	Best Article Cash	Centre for Development of Tamil in Engineering & Technology, Anna University, Chennai	2018
3.	Best Faculty Advisor Award for IE(I)Forum	Institute of Engineers (India), New Delhi	2018
4.	Received the best article cash award	Centre for Development of Tamil in Engg. & Technology, Anna University	2018
5.	Best Chapter Award for the academic year 2017-2018	Institute of Engineers (India), New Delhi	2018

12. **Publications (List of papers published in SCI Journals, in year wise descending order).**

S.NO	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Dr.K. Kavitha, K. Karthika, S.Sasikala, S.Aditya	Gain enhancement in octagonal shaped frequency reconfigurable antenna using metasurface superstrate	Frequenz	78(5)(6)	241-252	2024
2.	Dr.K. Kavitha, A. Sakthi Preetha	Revolutionizing healthcare with metamaterial-enhanced antennas: a comprehensive review and future directions	Frequenz	78(5)(6)	219-227	2024
3.	Dr.K. Kavitha, D. Sharmila Banu	Genetic Algorithm Framework for 3D Discrete Wavelet Transform based Hyperspectral Image Classification	Journal of the Indian Society of Remote Sensing	52(3)	645-657	2024

4.	Dr.K. Kavitha, K. Karthika	Design and Development of Self-Complementary DNA Structure-based Frequency Reconfigurable Antenna	Journal of Electrical Engineering and Technology	1(1)	1-12	2024
5.	Dr. K. Kavitha, R. Rajprabu	Tomato Maturity Enhancement and Classification with SRGAN and VGG-16: a Hybrid Approach	Journal of Environmental Protection and Ecology	24(7)	2267 - 2278	2023
6.	Dr. K. Kavitha, S. Naveena	Leaf Disease Identification in South Asian Agriculture: A Deep Convolutional Neural Network Approach	Journal of Data Acquisition and Processing	38 (3)	3659-3677	2023
7.	Dr. K. Kavitha, S.R. Vijay Gokul, S.Yazhini, J. M. Kanaka Durga, R. Keerthana	EBG Integrated Meta surface Antenna for SAR Reduction	Progress In Electromagnetics Research C	135	227-240	2023
8.	Dr. K. Kavitha, N. Suresh Kumar Natarajan, S.Vijay Gokul	SAR reduction techniques for WBAN and mobile applications	Frequenz	77	525-536	2023
9.	Dr. K. Kavitha, K. Karthika	Design and Development of Parasitic Elements Loaded Quadband Frequency and Pattern Reconfigurable Antenna	International Journal of RF and Microwave Computer-Aided Engineering	2023	1-10	2023
10.	Dr. K. Kavitha, S. Nishandhi, M. Gayathri	A Compact MIMO T Slot Microstrip Antenna Design for K-band Applications	Journal of Physics: Conference Series	2466(1)	012013	2023
11.	Dr. K. Kavitha, R. Gowri Manohari, R. Arun	Design of metamaterial zipper antenna for body centric wireless communication	GIS Science Journal	9(6)	146-155	2022
12.	Dr. K. Kavitha, P. J. Naveen Prasad, A. Prasanna Venkatesh	Design of metamaterial zipper antenna for body centric wireless communication	Asian Journal of Electrical Sciences	11(1)	39-45	2022
13.	Dr. K. Kavitha, N. Ragadharini, B. Abirami, S. Rajalakshmi	Reconfigurable Antennas for Advanced Wireless Communications: A Review	Wireless Personal Communication	120	2711-2771	2021
14.	Dr. K. Kavitha, T. S. Priyadharsini	Design of eight element mimo antenna array for wireless access points	Journal of Xidian University	14(8)	1127 - 1137	2020

15.	Dr. K. Kavitha, K. Seyatha	Metamaterial Superstrate Antenna Design with Gain Enhancement	International Journal of Applied and Engineering Research	1(1)	2272- 2277	2019
16.	Dr. K. Kavitha	Self-Complementary Frequency Independent Triple Band Sinuous Antenna Array For Wireless Applications	Progress In Electromagnetics Research Letters	78(1)	89-99	2018
17.	Dr. K. Kavitha, L. K. Balaji Vignesh	A Survey on Fractal Antenna Design	International Journal of Pure and Applied Mathematics	120 (8)	10942- 10958	2018
18.	Dr. K. Kavitha, K Karthika	Design of a Fork Shaped Frequency Reconfigurable Antenna for WLAN Applications	International Journal of Pure and Applied Mathematics	119 (15)	2503- 2511	2018
19.	Dr. K. Kavitha	Design of H-Shaped Microstrip Hybrid Patch Antenna for C-Band Applications	International Science and Technology Journal	7(3)	214- 219	2018
20.	Dr. K. Kavitha	Contourlet based Hyperspectral Image Classification	Journal of Remote Sensing GIS & Technology	4(1)	1-5	2018
21.	Dr. K. Kavitha, N. Kayalvizhi	Performance of various Wavelet Based Features on AVIRIS Data Classification	Journal of Remote Sensing GIS & Technology	4(1)	5-9	2018
22.	Dr. K. Kavitha	Design of Koch Fractal Bowtie Antenna for Multiband Applications	Journal of Communication Engineering and Its Innovations, Vol. No: 4, Issue No: 1; Page No.: 1- 6	4(1)	1-6	2018
23.	Dr. K. Kavitha	Design of a Sierpinski Gasket Fractal Bowtie Antenna for Multiband Applications	International Journal of Applied Engineering Research	13(9)	6865- 6869	2017
24.	Dr. K. Kavitha, W. Jenifa	PSO inspired Hyperspectral Image Classification	International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE)	4(12)	103- 108	2017
25.	Dr. K. Kavitha	Single Band MIMO Antenna For WLAN/Wi-MAX Application	International Research Journal of Engineering and Technology	3(1)	1686- 1689	2017

			(IRJET)			
26.	Dr. K. Kavitha, K. S. Anitha	CPW fed compact UWB fractal antenna design	EPRA International Journal of Research and Development (IJRD)	2(1)	100- 104	2017
27.	Dr. K. Kavitha	Design of Rounded Bowtie Antenna for Indoor Applications	International Journal of Science and Research	5(11)	1151- 1154	2017
28.	Dr. K. Kavitha, S. Arivazhagan	Hyperspectral Image Classification Using Support Vector Machine in Ridgelet Domain	National Academy Science Letters	38(6)	475- 478	2015
29.	Dr. K. Kavitha, S. Arivazhagan, S. Banu	Combined Feature based Spatial Composite Kernel Formation for Hyperspectral Image Classification	Journal of Innovative Research in Science, Engineering & Technology	4(5)	2902- 2910	2015
30.	Dr. K. Kavitha, S. Arivazhagan	Fuzzy Inspired Image Classification Algorithm for Hyperspectral Data using Three-Dimensional Log - Gabor Features	International Journal for Light and Electron Optics.	125 (20)	6236- 6241	2014
31.	Dr. K. Kavitha, S. Arivazhagan, B. Suriya	Classification of Pavia University Hyperspectral Image using Gabor Transform and SVM	International Journal of New Trends in Electronics & Communication (IJNTEC)	2(3)	9-14	2014
32.	Dr. K. Kavitha	An Ensemble Classification Algorithm for Hyperspectral Images	International Journal of Signal & Image Processing (SIPIJ)	5(2)	109- 118	2014
33.	Dr. K. Kavitha, S Arivazhagan, P. R. Dhivya, S. I. Kanaga	Role of Zernice Moments in Hyperspectral Image Classification	International Journal of Scientific Engineering & Technology	2(5)	383- 387	2013
34.	Dr. K. Kavitha, S. Arivazhagan	Performance Comparison of DWT and DTCWT in Hyperspectral Image Classification	International Journal of Image Video and Signal Processing (IJRIVSP)	1(1)	55-60	2012
35.	Dr. K. Kavitha, S. Arivazhagan, R. D. Priya	Hyperspectral Image Classification using M-Band Wavelet Transform	International Journal of Advances in Engineering & Technology,	3(1)	525- 533	2012

			(IJAET)			
36.	Dr. K. Kavitha, S. Arivazhagan, G. R. Breen Lentil	SVM Based Classification using MRF Features for Hyperspectral Images	International Journal of Applied Computing	2(1)	13-18	2011
37.	Dr. K. Kavitha, S Arivazhagan	A Novel Feature Derivation Technique for SVM based Hyper Spectral Image Classification	International Journal of Computer Applications	1(15)	27-39	2010

13. Detail of patents.

Sl. No	Patent Title	Agency/Country	Status
1.	Genetic Algorithm inspired Four Arm Sinuous Slot Antenna for X-band Applications	India	FER
2.	Complementary DNA Fibonacci Antenna for Frequency Reconfigurability	India	Published
3.	Multianalyte method and system for meat quality checking using hyperspectral imaging	India	Published
4.	System and method for detecting plant diseases using drone-borne multispectral cameras and deep learning	India	Published
5.	System for currency recognition and counterfeit detection for visually impaired individuals	India	Published
6.	Textile based Microstrip Patch Antenna Integrated with Metasurface and Electromagnetic Bandgap	India	Published

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Publisher	Year of Publication
1.	Design and Optimization of Wearable, Implantable, and Edible Antennas (Book)	IGI Global	2024 (in press)
2.	Fuzzy-inspired three-dimensional DWT and GLCM framework for pixel characterization of hyperspectral images (Book Chapters)	CRC Press	2023
3.	Optimization Algorithms for Reconfigurable Antenna Design A Review (Book Chapters)	CRC Press	2023

15. Any other Information

ONLINE COURSES:

COURSERA:

1. AI for Everyone, conducted by the Industry, "DeepLearning.AI" - 88.75%

NPTEL:

1. Medical Image Analysis- Elite Grade and Silver medal, October 2023
2. Emotional Intelligence- Elite Grade and Silver medal, March 2023
3. Design Thinking - A Primer- Elite Grade and Silver, March 2023

4. Patent Drafting for Beginners – Elite Grade with 72% - March 2022
5. Introduction to Machine Learning – Elite Grade and Silver - March 2022.
6. Remote Sensing Essentials- Grade Elite - April 2020
7. Modern Indian Political Thoughts- Grade Elite - October 2018
8. Digital Image Processing of Remote Sensing Data- Grade Elite - August 2017
9. Satellite Communication-Certified- September 2016

UDEMY:

- Introduction to Phased Array Antenna in 5G network –conducted by the Industry Rahsoft Antenna Engineering - Certified

Membership Details: ISTE, IETE

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- Instruction System Design for Radiating System (21CM204) with diary number 11772/2022-CO/L
- Instruction System Design for Satellite Communication with diary number 11243/2022- CO/L

COURSES ORGANISED:

Sl.No.	Date	Level	Type of Programme	Name of the Programme	Sponsor
1.	08/06/2020 – 11/06/2020	National	Webinar	Velammal Webinar Series on Revolutionary Challenges in Computational Intelligence and impact on COVID'19 Pandemic	Velammal Educational Trust
2.	03/06/2020 – 06/06/2020	National	Webinar	Velammal Webinar Series on Revolutionary Challenges in Antenna Research and Impact on COVID'19 Pandemic	Velammal Educational Trust
3.	27/05/2020 - 30/05/2020	National	Webinar	Velammal Webinar Series on Revolutionary Challenges in 5G Technologies and Impact on COVID'19 Pandemic	Velammal Educational Trust
4.	3/08/2019	National	Technical Seminar	Recent Trends in Communication Techniques (RETRIC '19)	Velammal Educational Trust
5.	13/05/2019- 17/05/2019	State	Internship	Velammal ECE Summer Internship	Velammal Educational Trust

FUNDED R & D PROJECTS

Sl.No.	Duration	Title of the Sponsored Research	Agency	Approved Amount in Rs.
1.		Design and development of an indigenous multi-analyte food adulteration detection device	MSME	15,00,000/-
2.	20.07.2020	Modernization of Image Processing and Remote Sensing Data Analysis Centre	AICTE, AQIS	16,57,940/-
3.	08.07.2016 to 07.07.2018	Design of a Multiband and Polarization Sensitive Smart Antenna using Support Vector Machine (SVM) based Direction of Arrival (DOA) estimation techniques and Genetic Algorithm based optimization for Indoor Positioning	ISRO-RESPOND	9,68,000/-
4.	03.09.2010 to 02.09.2011	Design of a Four Arm Sinuous Slot Antenna	MSME	5,83,600/-

Industry Interactions:

Sl.No.	Date	Event Detail	Interaction Detail
1	07/12/2012	Agilent's EEsof User Group Meet 2012, Chennai	Attended the User Group Meet and Presented a paper entitled, "Design & Simulation of a Triangular Fractal Antenna with Slit for IRNSS & GAGAN Applications" and discussed about SystemVue software
2	08/11/2011	Agilent EEsof User Group Meet 2011, Bangalore	Attended the User Group Meet Presented a paper entitled, "Design of a Multiband Metamaterial Antenna" and discussed about EMPro software
3	27/11/2009	Agilent User Group Meeting – EEsof 2009, Chennai	Attended the User Group Meet Presented a paper entitled, "Design and Simulation of Four – Arm Sinuous Slot Antenna using ADS" and discussed about ADS software

Guest Lectures Delivered:


Sl.No.	Date	Type of the Programme	Details of the Guest Lecture	Organized by
1.	19/12/23	ATAL FDP	Challenges and opportunities for Satellite Navigation systems	Department of ECE, Study World College of Engineering

Sl.No.	Date	Type of the Programme	Details of the Guest Lecture	Organized by
2.	17/12/18	FDP	Delivered a Guest Lecture in the topic, "Recent trends and research issues in Antenna design" in a Keysight and Ansys HFSS Sponsored Faculty Development Programme on Antenna Design and Training	Department of ECE, Mepco Schlenk Engineering College, Sivakasi
3.	28/09/18	Seminar	Delivered a Lecture on the Topic, "Recent Trends and Research Issues in Antenna Design" in Fourth National Seminar on Computer Communication Networks	Department of MCA, Mepco Schlenk Engineering College, Sivakasi
4.	10/09/18	Seminar	Acted as a chief Guest and Delivered a lecture on "Microwave Components and their Applications" in One Day Seminar on the topic "Microwave Engineering and its Applications"	Department of ECE, Sri Vidhya College of Engineering and Technology
5.	31/07/18	Seminar	Delivered an Expert Lecture on the topic, "Research Issues in Hyperspectral Image Classification" conducted by Computer Society of India, Sivakasi Chapter	Computer Society of India, Sivakasi Chapter
6.	26/04/18	Training	Delivered a lecture on "Metamaterial Antennas" at the training session conducted by ISRO, SHAR for their scientists	ISRO, SHAR
7.	01/12/17	FDP	Delivered a Lecture on the topic, "Design of Fractal Antennas" in a Keysight Technologies sponsored FDP on Research Issues in Antenna Design for Wireless Applications	Department of ECE, Mepco Schlenk Engineering College, Sivakasi
8.	27/11/17	FDP	Delivered a Lecture on the topic, "Challenges in Antenna Design" in a Keysight Technologies sponsored FDP on Research Issues in Antenna Design for Wireless Applications	Department of ECE, Mepco Schlenk Engineering College, Sivakasi
9.	18/03/17	Seminar	Delivered a Guest Lecture on "Research Issues in Hyperspectral Image Classification" in a National Seminar on Recent Trends in Digital Image Processing	Department of MCA, Mepco Schlenk Engineering College, Sivakasi
10.	20/12/16	FDP	Delivered a Lecture on the Topic "Fractal antenna Design" in an IEEE (MTTS) and IEEE (AP-S), Madras Chapter, Keysight	Department of ECE, Mepco Schlenk

Sl.No.	Date	Type of the Programme	Details of the Guest Lecture	Organized by
			(Agilent) Technologies, and Ansys HFSS sponsored One week FDP on “RF Circuits and Antenna Design	Engineering College, Sivakasi
11.	21/05/15	STTP	Delivered a Guest Lecture on “Semi Supervised Learning”, in an AICTE-ISTE-Sponsored Short Term Training Programme on Advanced Computational Intelligence and Optimization Techniques for Healthcare Diagnosis System (ACIOTHDS ‘15)	Department of ECE, Mepco Schlenk Engineering College, Sivakasi

Other Technical Accomplishments:

Formed a Start-up Company named **“Omnificent Solutions”** housed at VCET, Madurai (MSME Udyam Number of the Company: UDYAM-TN-32-0019888)



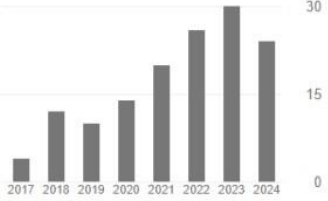
Kavitha K ✎

Professor and Head, [Velammal College of Engineering and Technology](#), (Autonomous), Madurai
 Verified email at vcet.ac.in
 Hyperspectral Image Proce... Antenna Design Optical System Design

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Citations	171	124
h-index	7	5
i10-index	4	1



<input type="checkbox"/> TITLE	CITED BY	YEAR
<input type="checkbox"/> Reconfigurable Antennas for Advanced Wireless Communications: A Review <small>KK K Kavitha Wireless Personal Communication</small>	34	2021
<input type="checkbox"/> A novel feature derivation technique for SVM based hyperspectral image classification <small>K Kavitha, S Arivazhagan International Journal of Computer Applications 1 (15), 25-31</small>	14	2010
<input type="checkbox"/> Wavelet based spatial—Spectral hyperspectral image classification technique using Support Vector Machines	11	2010