


Sri Sai Ram Engineering College
Department Of Humanities And Sciences

Name : Dr. V. SUMATHI	
Designation :	Associate Professor
Qualification :	M.Sc., M.Phil., Ph.D., SET Qualified
Area of Specialization:	Wavelet Analysis
Experience	Teaching : UG : 15 yrs, 6 months PG : 2
	Industry : Nil
No. of Workshop / Conferences / FDP attended:	50
Publication : 8 ; Patents Published :6	Journal National : 1 International : 5
	Conference National : 5 International : 2
Research Guidance :	Nil
Book Publication: 2 (Two)	<p>(i) Published text book entitled “ Probability and Queueing Theory” ISBN NO: 978-93-5625-128-1, Year 2022.</p> <p>(ii) Author for the book titled “ Fundamental of Fluid Dynamics” Published by AGPH Books with “ISBN -978-93-95936-02-6”, Year 2023.</p>

<p>Staff Achievements</p>	<ol style="list-style-type: none"> 1. Achieved by performing cent percent results in two departments in Maths I & Maths II at Sri Sairam Engineering College in the Academic year 2013-2014. Achieved 100% result in TPDE in 2015. 2. Achieved by Performing 100% Pass percentage in Probability and Queueing Theory in 2016 at our college.
<p>Honor by AICTE</p>	<p>Appointed as a Regional Co-ordinator for the Southern Region as a Volunteer in Universal Human Values by NCC-IP of AICTE on 29th November 2021.</p>
<p>FDP- Local Program Coordinator</p>	<p>Took Initiative and Got approval to conduct Five days Offline Face-to-Face UHV-II FDP sponsored by AICTE and I was appointed as the Local Program Coordinator to conduct UHV-II FDP at Sri Sai Ram Engineering College during July 26 to July 30, 2022. Received the reimbursement amount of Rs.2,07,399/- from AICTE.</p>
<p>As a Resource Person for UHV -Outside World</p>	<p>(i) Acted as a Resource Person of the Event - One day Faculty Development Program on “The role of Universal Human Values in Education” organized by Department of Science and Humanities, Hindustan College of Engineering and Technology, Coimbatore held on 29th August 2022.</p> <p>(ii) As a Session Speaker for One day workshop on “ Inauguration of UHV cell and Implementation of SIP on 5th November 2022 at Kingston Engineering College, Vellore.</p> <p>(iii) Honored as a Resource Person for Students’ Induction Programme at PSNA College of Engineering & Technology UHV-Talk on “Aspirations and Concerns” on 8th November 2022.</p> <p>(iv) Inaugurated Value Education Cell at SRM institute of Science and Technology, Kattankulathur branch, Chennai on 4th February 2023.</p> <p>(i) As a speaker on “Role of Education of</p>

As a Resource Person in UHV at Sairam	<p>Universal Human Values” for the Orientation Program in the department of M.Tech., Computer Science and Engineering on 16th September 2022.</p> <p>(ii) Invited as a Guest Speaker to give Lecture on Holistic development on UHV-II on 23rd September 2022 in the department of Electronics and Instrumentation Engineering.</p> <p>(iii) As a Expert Talk on Universal Human Values(UHV) in the department of Artificial Intelligence and Data Science on 26th September 2022.</p> <p>(iv) As a Guest Speaker on UHV-II - Holistic Perspective of Life in the department of Civil Engineering on 14th October 2022.</p>
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Educational Qualification:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc.	Mathematics	1998	AU	Annamalai University	60%	I
PG	M.Sc.	Mathematics	2001	AU	Annamalai University	61%	I
	M.Phil.	Mathematics	2004	MKU	Madurai Kamaraj University	51%	II
Ph.D.	Ph.D.	Wavelet Analysis	2022	S.D.N.B. Vaishnav College for Women	Madras University	-	-

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Mailam Engineering College	Lecturer	01.06.2006	30.04.2010	3	10	-
Sri Sai Ram Engineering College	Assistant Professor	06.06.2011	31.08.2022	11	2	25
Sri Sai Ram Engineering College	Associate Professor	01.09.2022	Till date		5	27
Total				15	6	12

PUBLICATIONS

Journals:

1. Published my research paper titled “ The Taylor wavelets method for the numerical solution of nonlinear coupled reaction-diffusion equation in chemical engineering” in the journal of AIP Conference Proceedings 2464, 050002(2022): <https://doi.org/10.1063/5.0083902>
Published Online: 26 May 2022.
2. Published my research paper titled “ Brain tumor image classification using brain tumor in the context of medical image processing” in the journal of Bulletin of Environment, Pharmacology and Life Sciences, Vol 11[5] April 2022:50-55 Online ISSN 2277-1808.
3. Published my research paper titled ‘A comparative study of two dimensional Legendre and

Chebyshev wavelet with an extended case' in the Journal of Physics Conference series 1377 (2019) 01.2009

4. "Numerical Solution of PDE using two dimensional Chebyshev wavelet collocation Method" was published in the International Journal of Innovative Technology and Exploring Engineering (IJITEE); ISSN: 2278-3075, Volume-8 Issue-4, February 2019.
5. "Application of Two-Dimensional Legendre wavelet collocation method for solving PDE's" was published in the International Journal of Pure and Applied Mathematics in the Volume 119, No.13 2018, 61-69 ISSN:1314-3395 (on-line version).
6. "A New legendre wavelet in solving Falkner skan Equation" was published in the International Journal of Pure & Applied Mathematics Volume 114No.5 2017, 21-30, ISSN: 1311-8080 (printed version), ISSN : 1314-3395 (online version) .
7. "Wavelet based spectral method to Non- linear BVP in immobilized Glucoamylase Kinetics was published on International Journal of Advanced Research in Computer Science - Volume 8, No.6 July 2017 ISSN No. 0976-5697.
8. Published my research paper "Wavelet based solution for certain Non-Linear Boundary value Problems" in Global Journal of Pure and Applied Mathematics (GJPAM)ISSN 0973 - 1768 Volume12, Number2(2016).

Patents Published:

1. Published Application Patent on IOT Module with AI Based Mathematical Model for curve fitting for sensory data on 30th December 2022., Application No. 202241071546 A. (Date of filing:12/12/2022)
2. Published Patent on Parallel algorithms for solving ordinary differential equation on 30th September 2022. (Date of filing: 21/09/2022)
3. Published Patent on Optimization of thermal conductivity and viscosity of refrigerants on 25th March 2022. (Date of filing: 09/03/2022)
4. Published Patent on Embedded system based sensing of flow behaviour of Biocompatible Titanium alloy Ti-6Al-7Nb at higher elevated temperature on 15th October 2021.(Date of filing: 22/09/2021)
5. Published Patent on A device for Turning operation in Monel K-500 with a Tungsten Carbide Tool Thereof on 06th August 2021.(Date of filing: 29/07/2021)
6. Published Patent on Multi-Rotor Horizontal Wind Turbine on 06th November 2021.(Date of filing: 05/10/2021)

Conferences:

1. Presented my research paper in the International Conference on Mathematical Analysis and Its Applications (ICMAA-2019) from December 14-16 at South Asian University, New Delhi.
2. Presented my research paper in the National conference on progress in mathematics towards industrial application at SRM Institute of science and Technology, Ramapuram campus on 27 and 28 of Sep 2019.
3. Presented my Research paper "Numerical Solution of PDE Using Two Dimensional Chebyshev Wavelet Collocation Method". At Loyola Research Institute of Mathematics and Computing Sciences (LIMCOS) held during November 16-17, 2018.
4. Presented my research paper "Application of Two-Dimensional Legendre wavelet collocation method for solving PDE.,’s at SRM university, Vadapalani campus in February 2018.
5. Presented my research paper "Wavelet based spectral method to Non- linear BVP in immobilized Glucoamylase Kinetics" in July 2017 at Sri Padmavati Mahila Visvavidyalayam: Tirupati.
6. Presented my research paper "A New legendre wavelet in solving Falknerskan Equation" at SRM University, Vadapalani campus in February 2017.
7. Presented my research paper Wavelet based solution for certain non-linear boundary value Problems" in 2016 at SRM, Vadapalani campus on February 2016.

Workshops:

1. Attended online workshop successfully "How to conduct the student induction program" Conducted by AICTE on 20th September 2021.
2. Attended online ATAL-AICTE training on Learning Management System from March 15 2021, March 19, 2021.
3. Attended online ATAL-AICTE training on Blended Learning and Flipped Classroom from January 18, 2021 to January 22, 2021.
4. Attended online ATAL-AICTE training on Ethics, Moral Values, Behavioral Science and Attitude from October 12, 2020 to October 16, 2020.
5. Attended online ATAL-AICTE training on Sustainability Engineering from August 17, 2020 to August 21, 2020.
6. Attended Online Workshop Mathematical Sciences for CSIR-NET/SET//GATE conducted by Sree Narayana Guru College from 11.05.2020 to 15.05.2020.
7. Attended National Seminar on Algebra & Analysis-Gateway to Technology on 29th and 30th January 2013 at Meenakshi College for Women, Kodambakkam, Chennai.

8. Attended one-day workshop on Fuzzy Logic & Queueing Theory on 20.04.2012 at Sri Sairam Institute of Technology.
9. Attended one-day workshop on Art of Journal and Thesis Writing on 19th January 2012.
10. Three days Workshop on Engineering Mathematics at Krishnasamy college of Engg., on 2006.
11. Attended two days Quality Management System and Audit training program during 11th & 12th October 2011.
12. Two days Instructional Workshop on Graph Theory and Discrete Mathematics held at Sri Sairam Institute of Technology, Chennai on 20th & 21st August 2015.
13. Participated in Global Initiative of Academic Networks (GIAN) From Subdivision to Wavelets and Fractals at IIT, Madras from 4th to 11th December 2017.
14. Attended Quality Management System and Audit Training ISO 9001:2015 during June 2018.

FDP:

1. Completed successfully 6 days online FDP on UHV-II organized by AICTE from 23rd May to 28th May 2022.
2. Completed successfully 6 days online FDP on Part-2 “UHV Refresher 1 organized by AICTE from 17th January, 2022 to 22nd January, 2022.
3. Completed successfully 5 days online FDP on Part-1 “UHV Refresher1” FDP organized by AICTE from 30th August 2021 to 4th September 2021.
4. Completed successfully 5 days online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by AICTE from 8 March,2021 to 12 March 2021.
5. Attended Faculty Development Programme Conducted by NPTEL-AICTE (funded by the Ministry of HRD, Govt. of India) on “Descriptive Statistics with R Software” on Feb-Apr 2021.
6. Attended Online One Week National Level Online FDP on hands on training in R Language conducted by Auxilium College, Gandhi Nagar, Vellore from 13.05.2020 to 20.05.2020.
7. Attended Online Applications and Techniques in Mathematics conducted by Sri Sairam Institute of Technology from 20-7-2020 to 24-7-2020.
8. Attended Online Digital Teaching Techniques conducted by ICT Academy from 29.06.2020 to 04.07.2020
9. Attended Faculty Development Programme Conducted by NPTEL-AICTE (funded by the Ministry of HRD, Govt. of India) on “Advanced Engineering mathematics” on Jan-Apr 2019
10. Attended Faculty Development Programme Conducted by NPTEL-AICTE (funded by the Ministry of HRD, Govt. of India) on “Introduction to Abstract and Linear Algebra during August – October 2018.

11. Attended SDP at Mailam Engineering College on Fuzzy Logic and its Applications on 2009.
12. Attended FDP at Sowdambika College of Engineering for 15 days on Probability and Random processes on 2007.
13. Attended FDP at Mailam Engineering College on Discrete Mathematics from 14th to 26th May 2007.

ONLINE COURSES:

1. Successfully completed Module 1: Orientation towards technical education and curriculum aspects of National Initiative for Technical Teachers Training by AICTE on July 2022.
2. Successfully completed Module 5: Technology enabled learning and Life –Long Self Learning of National Initiative for Technical Teachers Training by AICTE on July 2022.
3. Successfully completed Module 6: Student Assessment and Evaluation of National Initiative for Technical Teachers Training by AICTE on July 2022.
4. Successfully completed Module 7: Creative problem solving, Innovation and Meaningful R&D of National Initiative for Technical Teachers Training by AICTE on July 2022.
5. Successfully completed Module 2: Professional Ethics and Sustainability of National Initiative for Technical Teachers Training by AICTE on September 2021.
6. Applied NPTEL Online Certification and awarded Elite for successfully completing the course on “Descriptive Statistics with R Software” on Feb-Apr 2021 Funded by the Ministry of HRD, Govt. of India
7. Successfully Completed Covid-19: What you need to know (CME eligible) (Coursera) [Osmasis.org](https://www.coursera.org/learn/osmasis) on 04.05.2020.
8. Successfully Completed Spreadsheets for beginners using Google sheets Coursera project network on 05.05.2020.
9. Successfully Completed Data Science Math Skills Conducted by Duke University on 16.05.2020.
10. Successfully Completed Mathematics for Machine learning-Linear algebra (Coursera) Conducted by Imperial College. London on 22.05.2020.
11. Successfully Completed Create your first python program conducted by coursera project net work on 22.05.2020.
12. Successfully Completed Introduction to Psychology conducted by Yale University 21.05.2020
13. Successfully Completed COVID - 19 Contact tracing conducted by Johns Hopkins University 01.06.2020

14. Successfully completed a crash course in data science conducted by Johns Hopkins University 04.07.2020.
15. GUVI- Successfully completed Step into Robotic Process Automation during Guvi's RPA SKILL-A-THON 2020 on 01/06/2020.
16. Applied NPTEL Online Certification and awarded Elite for successfully completing the course on "Advanced Engineering mathematics" on Jan-Apr 2019 Funded by the Ministry of HRD, Govt. of India .
17. Applied NPTEL Online Certification and awarded Elite for successfully completing the course "Introduction to Abstract and Linear Algebra" Funded by the Ministry of HRD, Govt. of India during August- October 2018.
18. Applied NPTEL Online Certification and awarded certificate for successfully completing the course "Introduction to Probability and Statistics" Funded by the Ministry of HRD, Govt. of India during August- September 2018.

Webinar:

1. Introduction to Graphs from Algebraic Structures G.T.N ARTS COLLEGE, Dindigul on 22.05.2020.
2. Secret to get unshakeable confidence at Easwari Engineering College on 16.05.2020.
3. Leadership Talk with Dr. Pramod Chaudhari & Dr. Abhay Jere MHRD's Innovation Cell on 16.5.2020
4. Key Issues in Research Methodology G.T.N ARTS COLLEGE, Dindigul on 03.06.2020
5. Webinar on CSIR NET/SET in Mathematical Sciences at Urumu Dhanalakshmi College, Trichy on 27.05.2020.
6. Application of Fourier series and Laplace equation at Kaamadenu Arts and Science College on 30.04.2020.
7. A Comprehensive Roadmap to pursue Academic Research at SRMIST on 29.05.2020.
8. Effective Virtual classroom teaching for Teachers at Sri Sairam Engineering College on 19.06.2020.
9. Mathematical Modeling in Biological Networks at Sri Malolan College of Arts & Science on 18.06.2020.
10. Healthy Womenhood during COVID-19 at Sri Sairam Engineering College on 04.07.2020.
11. Resilience and Emotional Well being at Sri Sairam Engineering College on 07.07.2020.
12. Yogamum Magalir Manbum at Sri Sairam Engineering College on 11.07.2020.
13. Home Gardening For Beginners at Sri Sairam Engineering College on 18.07.2020.
14. Leadership talk with Ms.Ashwini Deshpande MHRD Innovation cell on 06.06.2020.

15. Mathematical Modeling on Infectious Diseases: application to COVID 19 at Patrician College of Arts and Science on 27.05.2020.
16. India First Leadership Talk webinar with Prof D.P. Singh MHRD'S Innovation Cell on 09.05.2020.
17. India's First Leadership Talk with Shri Shashi Shekhar MHRD'S Innovation Cell on 11.07.2020
18. Graphs In Life At Don Bosco College of Arts And Science on 29.05.2020
19. International Webinar on Emerging Trends in Graph Theory at Sacred Heart College during 14.05.2020 -16.05.2020
20. Imparting Quality Education in HEIs-NAAC Perspective at Amrita College of Engineering & Technology on 17.06.2020
21. Decision Making with the Application of Data Mining at Ramakrishnan College of Technology, Trichy on 05.06.2020
22. National Webinar series on "Multi-Wavelength Astronomy: From Ground and Space on 24th November 2021, organized by NMSS Vellaichamy Nadar College, Madurai.