Dr. S. PONMALAR

Associate Professor
Computer Science and Engineering
Velammal College of Engineering and Technology, Madurai
e-Mail Id: sponmalar1976@gmail.com
Website Address:- ponmalar.gnomio.com
Web of Science ResearcherID : AAV-3084-2020

Educational Qualification:

Degree obtained	Year	University/Institute	Any other details
Ph.D	Sep. 2013	Anna University/ Thiagarajar College of Engineering, Madurai.	
M.E CS	2004	Anna University, Chennai	First Class
B.E ECE	1997	University of Madras/ St. Peter's Engineering College, Chennai	First Class

Experience in Years: 20 years and 01 month

Employment History:

Position held	Employer	Date/s (From-To)
Associate Professor	Velammal College of Engineering and Technology, Madurai	05.07.2022 - tilldate
Professor & HoD	NPR College of Engineering & Technology, Natham	01.10.2021 – 27.06.2022
Assistant Professor	Thiagarajar College of Engineering, Madurai	01.12.2009 – 31.05.2020
Lecturer	Thiagarajar College of Engineering, Madurai	15.07.2005 – 30.11.2009
Part Time Lecturer	Thiagarajar College of Engineering, Madurai	March, 2001 – July, 2002
Project Associate Grade I	Industrial Consultancy & Sponsored Research Electrical Engineering Department, IIT-Madras, Chennai	May, 1999 – Nov., 2000
Junior Project Associate	Institute of Remote Sensing, Anna University	June, 1997 – March, 1999

Research and Development:
PhD Supervisor Details:
- ✓ Name of the University as a Recognized Supervisor : **Anna University**
- ✓ Supervisor Recognition No.: **2340227**
- ✓ No. of Research Scholars Registered: Supervisor: 1
- ✓ Joint Supervisor: 3
- ✓ No. of Research Scholars Completed: 3 (Joint Supervisor)

Scholar Name	Supervisor/ Joint Supervisor	Joining	Status	Thesis Title
Anusooya V 1524479301	Supervisor	2015	Thesis Submitted in June 2022	Design and Simulation of all-optical logic gates for high speed optical communication networks
Duraichi N 2012140005	Joint Supervisor	2012	Completed 20.12.2019	Implementation Of Channel Selection Algorithm In MIMO Based Wireless Multihop Sensor Networks For Optimal Data Transfer Rate And Power Allocation
Shanthy K.R 2012140004	Joint Supervisor	2012	Completed 05.08.2020	Energy-Efficient Power Allocation In Sensing Based Spectrum Sharing Cognitive Radio Networks With Imperfect CSI
Chitra Sudhakaran 1525479160	Joint Supervisor	2015	Completed 03.09.2020	A Novel Approach to Maximize Coverage and Re-establish Connectivity in Cognitive Radio Adhoc based Emergency Communication

Web of Science ResearcherID : AAV-3084-2020

Scopus Author ID: 9636617100

Research Papers Published in SCI/SCIE/Scopus indexed Journals:

Sl No	Author(s)	Title of the paper	Name of the journal	Year	ISSN Number	Impact Factor
1.	**S.Ponmalar** S.Sundaravaduvelu	Design of Ultra Fast polymer Electro-Optic waveguide Switch for Intelligent Optical Networks	Journal of Scientific and Industrial Research (**Web of Science, Scopus indexed**)	Vol. 70 pg.36-40, Jan, 2011	00224456	0.729
2.	**S.Ponmalar** S.Sundaravaduvelu	Design of Reconfigurable multi-channel optical add drop multiplexer for intelligent optical network	Optical Review, (**Web of Science, Scopus indexed**)	Vol.18, No. 4, Pg. 305-310, Aug. 2011	1340-6000	0.868
3.	S. Spartagus **S. Ponmalar**	All-Optical XOR and NOT Logic Gate Using Beam	International Journal of	Vo. 10 No.20	09734562	0.18

		Interference in 2D Photonic Crystal	Applied Engineering Research **(Scopus Indexed)**	Pg. 16641, 2015		
4.	S. Spartagus **S. Ponmalar**	Magnetic Fluid Photonic Crystal Based Sensor	International Journal of Applied Engineering Research **(Scopus Indexed)**	Vol. 10, No. 2 Pg. 1317-1321, 2015	09734562	0.18
5.	S. Spartagus **S. Ponmalar**	Integrated All-Optical OR Logic Gate Using Constructive Beam Interference in 2D Photonic Crystal	Journal of Engineering and Applied Sciences **(Scopus Indexed)**	Vol. 8, No. 10, Pg. 3721 May, 2015	18196608	0.18
6.	Harisaravanan R, **Ponmalar S**	Performance Improvement In MIMO Visible Light Communication System	International Research Journal of Engineering and Technology	May, 2018	23950056	7.529 Scientif ic Journal Impact factor
7.	Vince Leona. V, Abirami.M, Niriksha Sathianathan, Dr. S. Ponmalar	Tungsten DiSulphide FBG Sensor for Temperature Monitoring in Float Glass Manufacturing	Journal of Information Technology and Digital World	Vol.02/ No. 04 Pages: 191-200, 2020	2582-2012	
8.	V.Anusooya S. Ponmalar M.S.K. Manikandan	Photonic-crystal-based design and FDTD simulation of all-optical NAND and NOR gates with improved contrast ratio	Laser Physics IOP Publications (**Web of Science**, **Scopus Indexed**)	32 016202 (8pp) (2022	1054-660X (print); 1555-6611 (web) .)	1.366

Book Chapter:

1.	**S. Ponmalar** J.J. Shiny	Performance of Dc Biased Optical Orthogonal Frequency Division Multiplexing in Visible Light Communication.	AI and IOT based Intelligent Automation in Robotics **(Scopus book chapter)**	2021

Conference Publications:

S. No	Authors	Title	Name of the Conferences	Year
1.	L.R.D.Suresh Dr.S.Sundaravaduvelu S.Ponmalar	Analysis Of Optical Grating Filter For Optical Wireless Communication	International Conference on Signal Processing and Communication **(Web of Science, Scopus**	Dec 2004

			indexed)	
2.	L.R.D.Suresh Dr.S.Sundaravaduvelu S.Ponmalar	Beam Propagation Method for the Analysis of Photonic Antenna Structures for Optical Wireless Communication	International Conference on Optics and Optoelectronics	2005
3.	L.R.D.Suresh Dr.S.Sundaravaduvelu S.Ponmalar	Analysis of Optical Waveguide Structure Using Beam Propagation Method for Optical Wireless Communications	IEEE conference on wireless and optical communication networks (**Web of Science, Scopus indexed**)	Dec 2006
4.	S.Ponmalar Dr.S.Sundaravaduvelu L.R.D.Suresh	Analysis and evaluation of various optical waveguide grating couplers for integrated optics,	IEEE conference on wireless and optical communication networks (**Web of Science, Scopus indexed**)	Dec 2006
5.	S.Ponmalar Dr.S.Sundaravaduvelu	Design of high speed optical switches for intelligent optical networks	IEEE international conference on communication, computing and networks (**Web of Science, Scopus indexed**)	Dec 2008
6.	S.Ponmalar Dr.S.Sundaravaduvelu	Analysis of 3×3 Trapezoidal Grating Reconfigurable Wavelength Add drop multiplexer	IEEE International Conference on Computational Intelligence and Computing Research ICCIC'11	Dec 2011
7.	S.Ponmalar Dr.S.Sundaravaduvelu	Analysis of 3×3 Polymer Electro-optic Trapezoidal Grating Waveguide Switch for High Speed Intelligent Optical Network	IEEE International Conference on Computational Intelligence and Computing Research , ICCIC'11	Dec 2011
8.	S. Spartagus S. Ponmalar	Magnetic fluid based novel tunable mid-IR filter	International conference on emerging materials: characterization and application,	Dec, 2014
9.	M. Kavitha B. Kalaiselvi	Design of Photonic Crystal sensor for detection of Hemoglobin concentration in blood	IEEE international Conference on innovations in Information, Embedded and Communication Systems	Mar 2015
10.	S. Ponmalar S.Kannan & A.Mohammed Imran	Implementing OCDM Technique in Passive Optical network for Signal Monitoring	International conference on Electrical, Electronics and Computer Engineering	Mar 2016
11.	G.Nivetha Dr.S. Ponmalar	A Fiber Bragg Grating (FBG) Optical Sensor For Detecting Corrosion, Temperature and Stress	International conference on Electrical, Electronics and Computer Engineering	Mar 2016
12.	S.Ponmalar, D.Pon Sheila, M.Raja Gomathi S.T.Susmeena	Temperature Monitoring in Oil Immersed Transformer using PMMA based Fibre Bragg Grating Sensor	International Conference on Instrumentation and Control Engineering (*ICECON - 2019*).	Dec, 2019

13.	S. Ponmalar J.J. Shiny	Performance Analysis of Visible Light Communication using OFDM-NOMA	International Conference on Instrumentation and Control Engineering (*ICECON - 2019*).	Dec, 2019
14.	S. Ponmalar J.J. Shiny	Performance of Dc Biased Optical Orthogonal Frequency Division Multiplexing in Visible Light Communication	International Conference on Science and Innovative Engineering. (ICSIE2020)	Mar 2020
15.	V.Anusooya S. Ponmalar	Design and simulation of all-optical passive components using two dimensional photonic crystals	Virtual International Conference on Innovations in Interdisciplinary Research	June, 2020
16.	M. Muthu Vignesh, R.Vignesh, V.Manoj Kumar, S. Ponmalar	Design of tire pressure monitoring system with vehicle to vehicle communication	Virtual conference on smart computing and advanced communication,	May 2022

Organization of Industry supported Courses:

Programme	Duration	Period	No. of Participants	Nature of Involvement
Industry supported course in the curriculum on **"Data science and machine learning"**	2 months	May 2020 – June 2020 (online)	60	Involved in forming syllabus along with CTS and coordinated the programme. Resource Person: **Mr. Shanthababu Pandian,** **Sr. Data & Analytics Technical** **Delivery Manager (Projects), CTS**

Guest Lectures Delivered

TOPIC	DELIVERED AT	PERIOD
Hunting an Off-Campus Internship? Tips to Success	Velammal College of Engineering and Technology	10.04.2021
Recent trends in Optical Network	Vaigai College of Engineering	09-03-2017
High speed Optical Networks and Switches	Alaggappa Chettiyar College of Engineering and Technology	31-08-2016
High speed optical switching	Alaggappa Chettiyar College of Engineering and Technology	09-12-2014
Recent trends in Optical Network	Sudharsan College of Engineering	16-05-2013

Seminars / Conferences Organized:

1. Workshops on "VLSI implementation of trans receivers", 2017
2. Workshop on "Open source Hardware platform", 2017

3. Workshop on "R & D in Internet of Things (IoT) using NETSIM", 2018
4. Seminar on "Significance of Research – In the current scenario", 2022
5. Seminar on "Motivation towards and Innovation and Technology Transfer", 2022
6. Workshop on "Influence of Artificial Intelligence in Business and its opportunities", 2022
7. Organized Internal Hackathon for smart India Hackathon 2022 on Mar 28, 2022.
8. Seminar on "3D Printing Technology", Apr 2022

Online Courses like COURSERA, MOOC, NPTEL, etc., qualified and Details:

- Coursera certification on "Neural Network and Deep Learning", Professor Andrew Ng, Deep Learning org., 2020.
- Coursera Certification on "Covid19 Data Analysis using Python", a guided Project Course, 2020.
- Coursera Certification on "AI for everyone", Professor Andrew Ng, Deep Learning org., 2020.
- Coursera Certification on "Introduction to Data Science in Python", University of Michigan, 2020.
- Certification on "Digital Transformation in teaching Learning Process", conducted by IIT Bombay, Apr, 2020.
- Certificate Course on Effective Patent Search and Drafting - 2019 (PAT DRAFT - 2019) conducted by Centre for Intellectual Property Rights (CIPR), Anna University.
- NPTEL certification on "Joy of computing using python", Elite Gold, 90%, 2018
- NPTEL certification on "Introduction to IOT", 87%, 2018
- NPTEL certification on "Programming, data structure and algorithms using Python", 74%, 2018
- NPTEL certification on "Technical English for Engineers", 73%, 2019
- NPTEL certification on "Blockchain Technology and its Application, Apr 2022.
- MOOCs certification on Foundation Program in ICT for Education (FDP 101x) conducted by IIT Bombay, during Sep 2018
- MOOCs certification on Pedagogy for online and Blender Teaching Learning Process (FDP201x) conducted by IIT Bombay during Oct., 2018
- Short term course on "C++ programming and data structures", conducted by IIT Kharagpur during Dec 26-31, 2016.
- Short term course on "Optical Communication and Networks", IIT, Kharagpur, Jun 22-Jul 03, 2009

Workshops/Seminars/FDPs/STTPs/Conference attended: 44

Sl. No	Title of the conference/Short term courses	Period	Venue/Conducted by
1.	IEEE Conference on Wireless and Optical Communication Networks	Apr 11-13, 2006	Bangalore

2.	Workshop on Recent trends in wireless and optical communication networks	Mar 30-31, 2007	College of Engineering, Guindy, Chennai
3.	FDP programme on "Four Year curricula-and how to raise the bar of competency for students"	Nov 30, 2007	Dept. of Computer Science Thiagarajar college of Engineering, Madurai
4.	Workshop on optical communication and Network Design and Modelling	Feb 4, 2008	Coimbatore Institute of Technology, Coimbatore
5.	Workshop on "advanced Communication Systems"	Mar 13-14, 2008	Alagappa Chettiar College of Engineering and Technology, Karaikudi
6.	Workshop on "Mission-10x High impact Learning" conducted by Wipro	Apr 21-25, 2008	Thiagarajar college of Engineering, Madurai
7.	Workshop on "Software Testing"	2008	Thiagarajar college of Engineering, Madurai
8.	Workshop on "photonic Microsystems" Conducted by centre for continual education	May 5-9, 2008	Indian Institute of Science, Bangalore
9.	International conference on communication, computing and networks (ICCCN 08)	Dec 18-20, 2008	Chettinad Engineering College, Karur
10.	Short term course on "Evolutionary optimization algorithm: application and research issues"	Jun 1-6, 2009	Thiagarajar college of Engineering, Madurai
11.	Short term course on "optical Communication and Networks"	Jun 22 – Jul 3, 2009	IIT, Kharagpur
12.	IEEE Conference on Computational Intelligence and Computing Research, ICCCIC'11.	Dec 2011	Kanyakumari
13.	IARCS supported course on "Rigorous software engineering"	Aug, 2011	Thiagarajar college of Engineering, Madurai
14.	FDP on LTE	Nov, 2012	Thiagarajar college of Engineering, Madurai
15.	ISTE workshop on "Computer Programming"	June 16-21, 2014	IIT, Bombay
16.	TEQIP Sponsored course on "Outcome based Education",	Nov, 2014	Thiagarajar college of Engineering, Madurai
17.	TEQIP Sponsored two days training programme on "Management of Quality Circles for Effectiveness of Educational Institutions",	Aug, 2016	Thiagarajar college of Engineering, Madurai
18.	Short term course on "C++ programming and data structures"	Dec 26-31, 2016	IIT, Kharagpur
19.	TEQIP-III sponsored workshop on "Effective Assessment for PG programme",	Aug 17, 2017	Thiagarajar college of Engineering, Madurai
20.	TEQIP Sponsored Programme on "Organization Development"	2 days, Jan 2018	Thiagarajar college of Engineering, Madurai
21.	Course on "Convex optimization of 5G wireless communication- Theory and Practice"	June 21 – 23, 2018	Thiagarajar college of Engineering, Madurai
22.	NPTEL course on "The Joy of Computing	Jul-Oct,	IIT Madras

		2018	
23.	NPTEL course on "Programming, Data structures and Algorithms using Python"	Aug-Sep, 2018	IIT Madras
24.	NPTEL-AICTE FDP on "Introduction to IOT"	Jul-Oct, 2018	AICTE and IIT Madras
25.	Workshop on "Mentoring Skills"	Nov 2, 2018	Thiagarajar college of Engineering, Madurai
26.	FDP101x certification – Foundation program in ICT for education	Sep 13 – Oct 18, 2018	IIT Bombay
27.	FDP201x certification - Pedagogy for online and Blender Teaching Learning Process	Oct 30 – Dec 13, 2018	IIT Bombay
28.	AICTE Short Term course on "5G wireless communication"	Jan 28 – Feb 10, 2019	Thiagarajar college of Engineering, Madurai
29.	IUCEE International Engineering Educators Program	Apr 1-3, 2019	TCE, Thiagarajar college of Engineering, Madurai
30.	TEQIP III sponsored Faculty Development Program on "The Art of Writing Winnable Project Proposals"	Aug 10, 2019	Thiagarajar college of Engineering, Madurai
31.	TEQIP III sponsored Faculty Development Program on "Intellectual Property Rights and Innovations"	Aug 9, 2019	Thiagarajar college of Engineering, Madurai
32.	NPTEL-AICTE FDP on "Technical English for Engineers"	July-Sep, 2019	AICTE and IITM
33.	Workshop on CDIO based curriculam Design"	Aug, 2019	Thiagarajar college of Engineering, Madurai
34.	Certificate Course on Effective Patent Search and Drafting - 2019 (PAT DRAFT - 2019)	Nov 25-29, 2019	Centre for Intellectual Property Rights (CIPR)
35.	Certification on "Digital Transformation in teaching Learning Process"	Apr 6 – 22, 2020	IIT-Bombay on Swayam
36.	Participation in, SPOCOTHON- an event on content augmentation in NPTEL	May 17, 2020	NPTEL
37.	Coursera Certification on "Neural Network and Deep Learning" by Professor Andrew Ng	2020	Deep Learning org.,
38.	Coursera Certification on "Covid19 Data Analysis using Python", a guided Project Course, 2020.	2020	COURSERA
39.	Coursera Certification on "AI for everyone", by Professor Andrew Ng	2020	Deep Learning org.,
40.	Coursera Certification on "Introduction to Data Science in Python",	2020	University of Michigan
41.	Workshop on "Signal Processing for Machine learning: Medical and Speech	Jan 6-8 2022	Thiagarajar College of Engineering, Madurai

	Prespective		
42.	ATAL FDP on "SCILAB and XCOS – FOSS Alternatives for MATLAB and SIMULINK"	Feb 7-11, 2022	AICTE Training and Learning Academy (CMR institute of Technology, Bengaluru)
43.	FDP on "Wireless Sensor Networks"	Mar 7- Mar 16, 2022	NIT Trichy and E&ICT Academy, NIT Warrangal
44.	Workshop on "Influence of Artificial Intelligence in Business and its opportunities"	Mar 5, 2022	NPR College of Engineering & Technology

Distinctions and Awards received:

- Secured 90% in FDP101x certification on Foundation Program in ICT for Education conducted by IIT Bombay, Sep13-oct 27, 2018
- Secured 95% in FDP201x certification on Pedagogy for online and Blender Teaching Learning Process, Oct 30 to Dec 13, 2018 conducted by IIT Bombay
- NPTEL certification on Joy of computing using python, Elite Gold, 90%
- Reviewer in International Journal for Light and Electron Optics
- Reviewer in IEEE Wireless Communication Magazine
- Reviewer in Proceedings of the National Academy of Sciences, Physical Sciences,(springer)
- Reviewer in Optical and Quantum Electronics (Springer journal)

Membership of Professional Bodies:

Professional Body	Type of Membership	Position Held
IAENG	Life Member (No. 62632)	Member