


Dr.P.VIJAYAKUMARI					
Designation:	Professor				
Qualification:	Ph.D ,(PDF)				
Area of specialization:	UNDERWATER OPTICAL COMMUNICATION SYSTEMS				
Experience : (As On DEC 2021)	Industrial Experience		Teaching Experience		
	7 Months		24 Years&9 months		
Number of workshop / FDP attended:	Number of Workshops		Number of FDPs		
	10		19		
Publications:	Conference		Journal		
	Nation al	International	SCI	Scopus	Others
	3	17	5	4	25
Patents:	National		International		
	6		4		
Professional Body Membership:	IAENG Society of Computer Science. - MEMBERSHIP ID: 239490 IAENG Society of Imaging Engineering- MEMBERSHIP ID: 239490 CSTA-Computer science Teachers Association-198358002769 IMRTC-International Management Research and Technology Consortium ITEEA- International Technology and Engineering Educators Association IFERP- Institute for engineering research and publication -PM48713590 Member – IEEE -98262057.				

Staff Achievements:	<p>1.Received “ACADEMIC EXCELLENCE AWARD” from Royal Science Forum Award 2023 Ceremony held virtually on 28-02-2023.</p> <p>2.Received “FACULTY EXCELLENCE AWARD” from,ICETSEM-2023 Award 2023 Ceremony held at International journal of MC square Scientific Research,Chennai,Tamilnadu,on JAN-21-23,2023.</p> <p>3.Received from National faculty award 2020-2021, Novel Research Academy-Puducherry for the award of “AWARD OF EXCELLENCE IN RESEARCH “on November 24th.</p> <p>4.Received from International Award Ceremony on Star Performers in Engineering, Arts and Management - SPEAM 2022, Research Academy-Coimbatore, for the award of “BEST FACULTY AWARD “on APRIL 24th.</p>			
Workshop Details:	Sl. No.	Title	Venue	Month/Year
	1.	Underwater optical communication & modeling of photonic & photovoltaic devices	SRM University	JULY 2018
	2.	Recent developments in photonics &optical communication using optsim software	IFET Engineering College	NOVEMBER 2018
	3.	Energy audit-case studies and best practices	MNM Jain College	APRIL 2017
	4.	Design of smart antennas using HFSS & ADS	Jeppiaar Maamallan Engineering College	MARCH 2017
	5.	Effective way of writing research papers for journals, conferences & Submission of project proposals for funding agencies	Pallavan college of Engineering	JANUARY 2017
	6.	Photonics & photovoltaic devices	SRM university	August 2014
	7.	Emerging Trends in Optical Network Technologies	MIT Chennai	January 2012

	8.	Micro system packaging	Saveetha University	July 2009
	9.	Embedded systems & Application	TPGIT, Vellore	November 2006
FDP Details:	Sl. No	Title	Venue	Month/Year
	1.	Recent trends in 5G communication, Design & Technologies	Rajalakshmi Engineering College, Chennai	JULY/2022
	2.	Emerging Application in Image Processing	Rajalakshmi Engineering College, Chennai	MARCH /2022
	3.	Mathematical modelling and controller design for nonlinear process	SVNC, Tirupathi	DECEMBER/2021
	4.	Training for social connectedness and inspiration	SVCE, Chennai	DECEMBER/2020
	5.	5G Theory to practice and its applications	Sri Sairam Institute of Technology, Chennai	JUNE/2019
	6.	Wireless Networks	Easwari Engineering College, Chennai	DECEMBER/2018
	7.	RF&Microwave Engineering	Adhi college of Engineering & Technology, Kanchipuram.	JUNE/2018
	8.	Electro Magnetic Fields	Adhi college of Engineering & Technology, Kanchipuram. Rajalakshmi	NOVEMBER /2017 MAY/2017

9	Optical communication & Networks	Engineering College, Chennai	
10	Modern teaching and learning methodologies for competency development	Jeppiaar Maamallan Engineering College, Chennai	MAY/2017
11	Data Acquisition for real time applications using ARDUINO	Satyabhama university, Chennai.	AUGUST/2016
12	Microcontroller		
13	Discrete Time System & Signal processing	Jeppiaar Maamallan Engineering College	NOVEMBER/2016
14	Optical Networks	SKR Engineering college, Chennai	DECEMBER /2011
15	Neural Computing	MIT, Anna University, and Chennai	NOVEMBER/2003
16	Professional Ethics	Anna University, Chennai.	JULY/2003
17	Medical Electronics	Anna University, Chennai.	JUNE/2003
18	Professional Ethics	Anna University, Chennai.	JUNE/2003
19	Re Engineering Communication Skills	Anna University, Chennai.	JUNE/2003

Publication Details:

1. **P.Vijayakumari**, M. Raja, Shaik Rahamtula, P. Sree Lakshmi, P. Janardhan Saikumar Hybrid Quantum Deep Convolutional Generative Adversarial Networks for Channel Prediction and Performance Enhancement in Large-Scale MIMO-OFDM Systems , International journal of communication system Mar2025. ,Impact factor 2.81(SCI) .
2. **P.Vijayakumari.**, Trabelsi, Y., A., S. et al. Modulation instability induced supercontinuum generation in Barium Zinc Borate glass doped with Praseodymium based photonic crystal fiber. Opt Quant Electron 55, 1087 (2023). <https://doi.org/10.1007/s11082-023-05272-z> “, **Impact factor 3 (SCI)**
3. Md. Nazmul Hossen , **Vijayakumari Panneerselvam** , Deepika Koundal , Kawsar Ahmed, Francis M. Bui, and Sobhy M. Ibrahim , "Federated Machine Learning for Detection of Skin Diseases and Enhancement of Internet of Medical Things (IoMT) Security” (2022)IEEE Journal of Biomedical and Health Informatics (J-BHI). **VOL 27,FEB 2023,IEEE TRANSACTION,Q1 JOURNAL, Impact factor7.7(SCI)**
4. **Vijayakumari P**, and Sumathi (2019) “Physical Implementation of underwater optical wireless system using spatial mode laser sources with optimization of spatial matching components”, Results in Physics, ISSN: 2211-3797 (Print), July 2019 Elsevier, **Impact Factor 5.3**, vol 14. (Science Citation Index). **(SCI)**
5. Udaiyakumar.R, **Vijayakumari P**, Manirajan.M. S, Mani.B(2018), “Combined influence of third order dispersion (TOD) and intra-pulse Raman scattering (IRS) on initially phase imparted solitons”, Optik, International Journal for Light and Electron Optics, Elsevier, **ISSN: 0030-4026**, Feb 2018. **Impact Factor 3.1**, Vol.164 **(SCI)**.

International Journals (SCOPUS)

1. **P Vijayakumari**, Ribu Mathew, Dhinakaran Vijayalakshmi, R. Sivakmar,” Dual elliptical core based photonic crystal sensor for detection of ultralow level bioethanol concentration” Journal of Optics. Published: 04 February 2022,Impact factor 2.077(**Scopus**).
2. **Vijayakumari P**, and Sumathi (2019) “Design and Parameter Analysis of Underwater Wireless Optical Communication with Different Water Samples”, 2019, Journal of Optical Communications. **ISSN: 2191-6322. (Scopus)**.
3. Rashed, A.N.Z., Tabbour, M.S.F., **Vijayakumari P**. “Numerical Analysis of Optical Properties Using Octagonal Shaped Photonic Crystal Fiber”, 2019, Journal of Optical Communications. **ISSN: 2191-6322. (Scopus)**.
4. **Vijayakumari P**, and Sumathi (2018), “Free space optical communication using SIM technique”, Journal of Advanced Research in Dynamical & Control Systems, **ISSN:1943-023X**, Vol. 10, 13- Special Issue, page.no:1174-1183, 2018. **(Scopus)**

International Conference(INDEXED IN SCOPUS)

1. Eethamakula Kosalendra; K. Krishnamoorthi; S. Diwakaran; **P. Vijayakumari**; P.G. Kuppusamy, ",Experimental Design of a Robotic Ventilator to Support Covid-19 and Related Pandemic Situations" Proceedings of the International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering, ICECONF 2023 , pp. 1-5, Doi: 10.1109/ICONSTEM56934.2023.10142510. (**Scopus Indexed**).
2. P. G. Kuppusamy; Eethamakula Kosalendra; K. Krishnamoorthi; S. Diwakaran; **P. Vijayakumari**, "Detection of Lung Nodule using Novel Deep Learning Algorithm based on Computed Tomographic Images," Proceedings of the International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering, ICECONF 2023 , pp. 1-5, Doi: 10.1109/ICONSTEM56934.2023.10142876. (**Scopus Indexed**).
3. Diwakaran, S., **Vijayakumari, P.**, Kuppusamy, P.G., Kosalendra, E., Krishnamoorthi, K., " A Safe and Reliable Digital Fingerprint Recognition Method for Internet of Things (IoT) Devices," Proceedings of the International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering, ICECONF 2023 , pp. 1-5, Doi: 10.1109/ICECONF57129.2023.10083840 (**Scopus Indexed**).
4. **Vijayakumari, P.**, Kuppusamy, P.G., Kosalendra, E., Krishnamoorthi, K., Diwakaran, S., "Real-time scanning and tracking of health records through a centralized ecosystem based on Internet of Things and fog computing," Proceedings of the International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering, ICECONF 2023 , pp. 1-5, Doi:10.1109/ICECONF57129.2023.10083790 (**Scopus Indexed**).
5. Krishnamoorthi, K., Diwakaran, S., **Vijayakumari, P.**, Kuppusamy, P.G., Kosalendra, E., "A Robust and Improved sparrow search algorithm for optimization in wireless sensor network," Proceedings of the International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering, ICECONF 2023 , pp. 1-5, Doi: 10.1109/ICECONF57129.2023.10083538 (**Scopus Indexed**).
6. P. Vijayakumari, , "Digital filter design on high speed communication with low power criteria "on , *2022 IEEE International Conference* -(**Scopus Indexed**)
7. P. Vijayakumari, , "Sewage pipe inspection robot for block detection and clearance on 2022 IEEE International Conference - AIP Conference Proceedings 2519,050050 (2022),<https://doi.org/10.1063/5.0109718>. (**Scopus Indexed**).
8. P. Vijayakumari, K. Chandrasekaran, J. K, N. P and R. Thandaiah Prabu, "BIT Error Rate Analysis of Various Water Samples in Underwater Wireless Optical Communication System," *2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI)*, 2022, pp. 1-5, doi: 10.1109/ACCAI53970.2022. 9752642. (**Scopus Indexed**).
9. R. ThandaiahPrabu, P. Vijayakumari, K. Chanthirasekaran, K. Jayamani and P. Nirmala, "An Efficient and Secured Multiple Keyword Cloud Data Searching Scheme with Dynamic Encryption Procedure," *2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI)*, 2022,

- pp. 1-6, doi: 10.1109/ACCAI53970.2022.9752586. **(Scopus Indexed)**.
- 10 N. P, R. ThandaiahPrabu, P. Vijayakumari, K. Chanthirasekaran and J. K, "Internet of Things based Smart and Secured Health Record Preservation Scheme using Smart Sensors," *2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI)*, 2022, pp. 1-7, doi: 10.1109/ACCAI53970.2022.9752507. **(Scopus Indexed)**.
 - 11 J. K, N. P, R. T. Prabu, P. Vijayakumari and K. Chanthirasekaran, "A Compact Coupled Band-Pass Frequency Selective Surface for Examination of Human Body Part Using Ultrasonography," *2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI)*, 2022, pp. 1-4, doi: 10.1109/ACCAI53970.2022.9752563.. **(Scopus Indexed)**.
 - 12 K. Chanthirasekaran, J. K, N. P, R. ThandaiahPrabu and P. Vijayakumari, "Threshold based Adaptive Scheduling for Multi-User MIMO Networks," *2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI)*, 2022, pp. 1-6, doi: 10.1109/ACCAI53970.2022.9752523. **(Scopus Indexed)**.
 - 13 **Vijayakumari P**, Ramakrishna Guttula, Sirisha, Josephine Selvi Balamourougane, Addis Engidayehu, Sakthisudhan," Wearable transceiver with composite test-beds for breast cancer diagnosis" *Materials Today, Proceedings, Elsevier Doi.org/10.1016/j.matpr.2020.12.206*, Volume 45, Part2,2021, Pages 3120-3123. **(Scopus)**.
 - 14 Amirthalakshmi, T.M., Ramkumar., **Vijayakumari, P.**, Samuthirapandi, V. "Effective control of nonlinear parameters using artificial intelligence"2016IEEEInternational Conference on Computational Intelligence and Computing Research, ICCIC 2016. **(Scopus Indexed)**.
 - 15 Amirthalakshmi, T.M., **Vijayakumari, P.**, Shakthimurugan, K.H, Ayyadurai, M., "Design of SDCA using RSSI for mid-Air collisions", 2016 IEEE International Conference on Computational Intelligence and Computing Research, ICCIC 2016. **(Scopus indexed)**.
 - 16 **Vijayakumari, P.**, Sumathi, M. "Study of performance factors of underwater Wi-Fi optical communication link" 2015 International Conference on Control Instrumentation Communication and Computational Technologies, ICCICCT 2015. **(Scopus Indexed)**.
 - 17 Premalatha, J., **Vijayakumari, P.** (2016) "Catching target mobile node using time-of- arrival measurement in Wireless Sensor Networks", Proceedings 2015 - IEEE International Conference on Innovation, Information in Computing Technologies, ICICT 2015. **(Scopus Indexed)**.

International Conference

- 18 **Vijayakumari, P.** "Survey on Analysis of BER in the design of underwater optical communication" 14& 15 March 2019, Fifth International Conference on Science Technology Engineering & Mathematics (ICONSTEM'19), at Jeppiaar Engineering College.

- 19 **Vijayakumari, P.** “Implementation & Evaluation of visible light communication-based audio transformation using LI-FI technology” 14&15 March 2019, Fifth International Conference on Science Technology Engineering & Mathematics (ICONSTEM’19), at Jeppiaar Engineering College.
- 20 **Vijayakumari, P.** “Survey on performance analysis of full duplex free space optical communications over NOMA based single and double gamma fading channels” 14& 15 March 2019, Fifth International Conference on Science Technology Engineering & Mathematics (ICONSTEM’19), at Jeppiaar Engineering College.
- 21 **Vijayakumari, P.** “Survey on Underwater Optical Communication with Different types of Water” 9 th March 2018, Third International Conference on Innovative and Emerging Trends in Engineering and Technology (ICIETET’18), at Priyadarshini Engineering College, Vaniyambadi.
- 22 **Vijayakumari, P.** “Wireless Power Transfer for Medical Microsystems using IOT” 28&29th January 2018, International Conference on Electrical, Electronics, Computers, Communication, Mechanical and computing (EECCMC), at Priyadarshini Engineering College, Vaniyambadi.
- 23 **Vijayakumari, P.** “An Intramural Startup circuit with thermal yielding source for pacemaker using the boost converter” 6 th may 2017, second International Conference on Recent Trends in Engineering & Technology, at St. Joseph institute of Technology, Chennai.

National Conference

1. National level conference on “**Design of an automated dam safety and deformation monitors system**” in AAVISHKAAR’18 held at Veltech high tech Dr. Rangarajan Dr. Shakuntala Engineering College on 2nd April 2018.
2. National level conference on “**Design of low complexity adjustable filter bank for personalized hearing aid solution**” in held at Jeppiaar Maamallan Engineering College on 31th March 2017.
3. National conference on “**Design of Monitoring system for Grain Storage**” in NCMESP’16, held at Velammal Engineering College, Chennai, India (24th March 2016).

Online Courses details

Sl. No	Title	Certification Authority	Month/Year
1	Teaching & Learning in Engineering	NPTEL	Jan-April 2019
2	Effective Engineering Teaching in Practice	NPTEL	Feb-Mar 2018.
3.	Biomedical nano Technology	NPTEL	Aug-Sep 2018
4.	“ Satellite Communication ”	NPTEL (MENTOR)	July-Dec 2017.

