

Name:	Dr. M. BASKARAN			
Designation:	Professor			
Qualification:	M.E., Ph.D.			
Area of specialization:	RF and Photonics			
Experience :	Industrial Experience		Teaching Experience	
	Nil		20 Year	
Number of workshop / FDP attended:	Number of Workshops		Number of FDPs	
	12		15	
Publications:	Conference		Journal	
	National	International	National	International
	5	20	4	13
Patents:	National		International	
	02		-	
Professional Body Membership:	Life Member in ISTE – LM 90542 Fellow of IETE- F-504119 Life Fellow in Optical Society of India (OSI) – LF 727 IEEE Senior Member - 93090939			
Educational Qualifications:	Course/Degree	Board/University/College		Class
	Ph.D Spl: Optical Communication	Anna University, Chennai.		NA
	M.E. Spl: Optical Communication	CEG Campus, Anna University, Chennai.		First
	B.E. (ECE)	Arulmigu Kalasalingam College of Engg. Srivilliputhur. (MKU)		First

Achievements:

➤ **Eligible Gate Score valid up to March 2023.**

➤ **Under My Guidance:**

1. Project titled "Live Video Streaming on Free Space Optics" won Second Prize in **National Festive of Science and Engineering Schools (NFSES)** organized by IEEE India Solid State Circuit & Systems (SSCS) Chapter on 2nd March 2012.
2. Project titled "Live Video Streaming on Free Space Optics" won First Prize in **Project Display Competition** held at hotel Le Royal Meridian on 7th March 2012 in connection with Science Day celebration.
3. Project titled "Multiplexed data transmission through Free Space Optics" **winner of Phase-I in TI India Analog Design Contest 2012-2013**, Bangalore.
4. **Best Poster** titled "Free Space Optic Data Transmission System" organized by IEEE Antennas and Propagation Society (AP-S), Madras Chapter in association with TEQIP, Thiagarajar College of Engineering (TCE), Madurai, on 4th April 2015.
5. **Best Poster** titled "Design of 4 x 4 Ultra wide band Antenna Array for Breast Cancer Detection" organized by IEEE Antennas and Propagation Society (AP-S), Madras Chapter, PSG College of Technology, Coimbatore, on 18th August 2017.
6. **Best Poster** titled "Photonic generation of triangular shaped microwave pulses using polarization property" in Doctoral Summer School NANOPHOTONICS AND METAMATERIALS at **ITMO University, Russia**, during May 28-June 01, 2018.
7. **Best Paper** titled "Photonic Carrier Generation with Frequency Octupling" in NCRTIC-2018, held during 28th of March 2018 at Bharath Institute of Higher Education and Research.
8. **Best Paper** titled "Monopole Antenna with defected ground structure for UWB application" in ICRTSEM-2019, held during 22nd & 23rd of March 2019 at Karpaga Vinayaga College of Engineering and Technology.
9. **SIH 2022 Finalist** titled "Breast Cancer Detection using Antenna" PS Code: SM957, held during 25-29, August 2022 at MIT-ADT, Pune, India.

- Centre for Research, Anna University, Chennai recognized as a Supervisor (Ref. No: 4040012) for guiding Ph.D. and M.S.(By Research) scholars of this university under the Faculty of Information & Communication Engineering in the field of Photonics & Optical Communication, Antennas, RF & Microwave Engineering and Wireless Communication.

Funded Research Project:

- Principal and Project Investigator – Department of Science and Technology (DST), Govt. of India “FIST Program - 2021” - Ref. SR/FST/COLLEGE-/2021/1093, Date: 02nd March 2022 with Rs.1.47 Crores budget for RF and Photonics Communications.
- Project titled “Free Space Optic Networking System” was sponsored by Tamil Nadu State Council of Science & Technology (TNSCST), Chennai – Ref. Project code: ECE 07, 2011-12.

Publications:

International Journals:

1. Jeyapiriya K. and Baskaran M., 2025. Optimisation of optical frequency comb (OFC) generation using advanced modulation techniques: A comparative analysis. *Opto-Electronics Review*, 33 (2025).
2. Kavitha S and Baskaran M, “A review of optical beam steering technologies in LiDAR photonic chips”, *International Journal of Analog Integrated Circuits and Signal Processing*, Springer, May (2025).
3. Jeyapiriya K and Baskaran M, “Generation of 103 ultra-flat broadband optical frequency comb lines using cascaded amplitude modulator and single drive Mach-Zehnder modulators”, *Journal of Optoelectronics and Advanced Materials*, Vol.26, 9-10, Sep-Oct, 2024, pp. 368-375 (2024).
4. Baskaran M and M Samayaraj Murali Kishanlal, “A novel DWDM-based comb source for future optical network” *Journal of Nonlinear Optical Physics & Materials*, Vol. 33, No. 05 (2024).
5. Baskaran M, Sevagan S and Sivasakthi T, “A Filterless Frequency 16-Tupling based Optical Millimeter-Wave Signal Generation Using Cascaded Polarization Modulators” *IETE Journal of Research*, March (2023).
6. Baskaran M, Jeyapiriya K, Prasath Kumar S and Sevagan S, “Cascade configuration of two dual parallel polarization modulators with frequency 16 tupling for photonic signal generation”, *Optoelectronics and Advanced Materials - Rapid Communications*, Vol.16, 7-8, July-August 2022, pp.281-286 (2022).
7. Baskaran M, Jeyapiriya K and Gayathri S, “U-shaped Monopole Antenna design with Defected Ground Structures for UWB Applications” *International Journal of Disaster Recovery and Business Continuity*, Vol. 12, No. 1, (2021), pp. 527-532.
8. Vijayakumar K, Baskaran M, Gayathri V and Gayathri P “Design of 4 x 4 Antenna Array for Breast Cancer Detection” *International Journal of Analog Integrated Circuits and Signal Processing*, Springer, August (2020).
9. Baskaran M and Vijayakumar K, “Optical Milli-Meter Wave Signal Generation using Frequency Octupling without an Optical Filter”, *International Journal of Engineering and Advanced Technology*, October (2019), Vol.No.9, pp.168-171.
10. Baskaran M, Prabakaran R and Santhoshi Gayathri T, “Photonic generation of frequency 16-tupling Millimeter wave signal using polarization property without an optical filter”, *Optik - International Journal for Light and Electron Optics*, Vol. No.184, pp. 348-355, Elsevier, April (2019).

11. Baskaran M and Prabakaran R "Optical millimeter wave signal generation with frequency 16-tupling using cascaded MZMs and no optical filtering for radio over fiber system," Journal of the European Optical Society 14, Springer, April (2018).
12. Baskaran M and Ganesh Madhan M "Photonic Millimeter-wave generation using Stimulated Brillouin Scattering (SBS) for Radio over Fiber (RoF) systems" International Journal of Applied Engineering Research, (2015), Vol. 10 Pages: No.66-68.
13. Baskaran M and Ganesh Madhan M "A novel approach for simultaneous Millimeter wave generation and high bit rate Data transmission for Radio over Fiber (RoF) systems" International Journal for Light and Electron Optics, 125 (2014), Pages:6347-6351, Elsevier.

National Journals:

1. Amarthiya Sai E M, Naveen Prakash V, Nithin P and Baskaran M, "Self-Learning Braille Application for Visually Impaired People", Ilkogretim Online - Elementary Education Online, 2021; Vol 20 (Issue 1): pp. 5109-5114.
2. Baskaran M, Vijayakumar K and Govindaraj, "Optical Millimeter Wave Generation via Frequency 32 tupling for Radio over Fiber", International Journal of Engineering, Applied and Management Sciences Paradigms, (2019).
3. Ishwarya T, Priya G, and Baskaran M," Radio Over Fiber Transport System With Tunable Optical Flat Comb Source", i-manager's Journal on Communication Engineering and Systems, Vol. 8 No. 2 February - April 2019, DOI:10.26634/jcs.8.2.16745.
4. Baskaran M., Ethiraj, S. and Gokulakrishnan, T., 2012. Eliminating the effects of fog and rain attenuation for live video streaming on free space optics. International Journal of Systems, Algorithms & Application (IJSAA), 2, pp.48-52.

International Conferences & Seminars:

1. Baskaran M and Jeyapiriya K, "Optical Frequency Comb-Based Photonic Millimeter-Wave Chaos Generation for High-Capacity Wireless Networks," *2025 Photonics & Electromagnetics Research Symposium - Spring (PIERS-Spring)*, Abu Dhabi, United Arab Emirates, 2025, pp. 1-6, doi: 10.1109/PIERS-Spring66516.2025.11276310.
2. Kavitha S and Baskarn M, "Performance Analysis of LiDAR Target Detection System Under Weather and Noise Constraints," *2025 IEEE Wireless Antenna and Microwave Symposium (WAMS)*, Chennai, India, 2025, pp. 1-5, doi: 10.1109/WAMS64402.2025.11158434.
3. H. Madamanchi and Baskaran M, "The Influence of Environmental Parameters on Optical Signal Attenuation in Underwater Wireless Communication Systems," *2025 Photonics & Electromagnetics Research Symposium - Spring (PIERS-Spring)*, Abu Dhabi, United Arab Emirates, 2025, pp. 1-6, doi: 10.1109/PIERS-Spring66516.2025.11276588.
4. Baskaran M, H. Madamanchi, N. A, K. S and L. S, "Performance Analysis of Modulation Techniques for Underwater Wireless Optical Communication Across Diverse Water Conditions," *2025 IEEE Wireless Antenna and Microwave Symposium (WAMS)*, Chennai, India, 2025, pp. 1-5, doi: 10.1109/WAMS64402.2025.11158893.
5. M. Baskaran, L. Ramkumar, H. Meghaa, J. Brindha and A. Vijay Kumar, "Demonstration of Bone conductive Hearing Device," *2024 International Conference on Communication, Computing and Internet of Things (IC3IoT)*, Chennai, India, 2024, pp. 1-4, doi: 10.1109/IC3IoT60841.2024.10550329.
6. Baskaran M. Soman V, Gandhi K.K, "Analysis and Design of a Two stage Telescopic OTA using SCL

180nm CMOS Technology”, EEE International Conference on Networking and Communications 2023, ICNWC 2023.

7. S. Gayathri, K. Jeyapiriya, Baskaran M, S. Rajesh; Communicative guiding system for physically challenged person. *AIP Conf. Proc.* 30 August 2022;30016. <https://doi.org/10.1063/5.0103245>.
8. Baskaran M, Jeyapiriya K and Gayathri S, “Implementation and Investigation of rectenna for microwave Applications” IEEE - International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICES-2021), Sep-2021, India.
9. Baskaran M, Sevagan S and Vijaykumar M, “Photonic Generation of Triangular Shaped Microwave Pulses Using Stimulated Brillouin Scattering (SBS)”, ICASSET-2021, EAI, European Union Digital Library, DOI: 10.4108/eai.16-5-2020.2304194.
10. Baskaran M, and Prabakaran, R, 2016, ‘Photonic Generation of Microwave Pulses Using Stimulated Brillouin Scattering (SBS)-Based Carrier Processing and Data Transmission for Radio over Fiber (RoF) Systems’, International Conference of Wireless Communications and Signal Processing and Networking- (IEEE -WISPNET’16) Mar-2016, pp. 372-375. SSN College of Engineering, Chennai.
11. Charitra Sree, S, and Baskaran, M, 2016 “Design of Radio-over-Fiber Passive Optical Network for Wireless and Wireline Access” International Conference on Communication and Signal Processing (IEEE ICCSP’16), pp. 1864-1867 April 6-8, 2016, India.
12. Esakki Muthu, K, Sivanantha Raja, A, Baskaran, M and Prabakaran, R, 2016, ‘A Full duplex Radio over Fiber Transmission based on 16-tupled Optical Millimeter wave Generation’, TEQIP-II Sponsored International Conference on Emerging Trend in Electrical, Electronics and Communication Systems-(ICEECS-16) Sep-2016, Anna University, Tiruchirappalli.
13. Baskaran, M, Prabakaran R, and Santhoshi Gayathri, T, 2018, ‘Optical millimeter wave signal generation employing cascaded Polarization modulators’, Optical Society of India – International Symposium on Optics- (OSI-ISO 2018) Sep-2018, pp. 239-241. IIT Kanpur.
14. Baskaran M, and Santhoshi Gayathri, T, 2018, ‘Photonic 16 tupling generation using two dual parallel polarization modulators in a cascade configuration’, International conference on Fiber Optics and Photonics- (PHOTONICS 2018) Dec-2018, pp. No.156, ISBN 978-93-88653-41-1, IIT Delhi.
15. Santhoshi Gayathri,T, and Baskaran M, 2019, ‘Frequency 16 Tupling Technique with the use of Four Parallel Polarization Modulators’, International Conference of Wireless Communications and Signal Processing and Networking- (IEEE -WISPNET’19) Mar-2019, pp. 282- 286. SSN College of Engineering, Chennai.
16. Baskaran M and Vijayakumar K, “Optical millimeter wave signal generation using frequency 32-tupling without an optical filter” ICRMR-2019, GOA University, Goa.
17. Baskaran M and Prabakaran R “Millimeter wave generation based on Stimulated Brillouin Scattering (SBS)and high bit rate Data transmission for Radio over Fiber (RoF) systems” Advances in Photonics, held at IIT-Kharagpur, 2015.
18. Baskaran M, S.Ethiraj and T.Gokula Krishnan “Eliminating the effects of Fog and Rain Attenuation for Live video streaming on Free Space Optics” Proc. of International Conference on Applied Sciences and Engineering ICASE 2012, Hyderabad, India, July 2012, ISBN: 978-81-923541-0-8.
19. Baskaran M and S.Ethiraj “Free Space Optic Networking System” Proc.of International Seminar on Wireless Communication, Mobile Computing and Emerging Technologies WICOMET 2011,Ernakulam, Kerala,India, September 2011.

20. Baskaran M and S.Sevagan "Generation of Millimeter-Wave using four wave mixing" Proc. Of International Conference on Computer Communication and Power Systems ICCPS 2020, Chennai, India, May 2020.

National Conferences:

1. Baskaran M and Gunasekaran N "Analysis and Dimensioning of Switchless Single Layer Optical Network" Proc. of National Conference on ADELCO 2004 organized by National Engineering College at Kovilpatti.
2. S.Ethiraj, Baskaran M and Anusha Meenakshi "Reflective semiconductor Optical Amplifier Model used as a Modulator in Radio over Fiber Systems" Proc. of National Conference on Communication Control and Energy System 2011, Chennai, Pages:138-140, ISBN:978-93-80624-41-9.
3. Baskaran M and T.Vennila "Optimized Optical Wireless Transmission Systems" Proc. of National Conference on Communication Systems and Technologies (NCCST'13) organized by University VOC College of Engineering at Thoothukudi.
4. Baskaran M, S.Abishake and M.Magesh "Free Space Optic Networking System" Poster session on Emerging Antenna Technologies & Applications organized by IEEE Antennas and Propagation Society (AP-S), Madras Chapter in association with TEQIP, TCE - Madurai.
5. Baskaran M and Vijayakumar K, "Optical millimeter wave signal generation using frequency octupling without an optical filter" National Conference on Communication Systems (NCOCS-2019), NIT Puducherry, Karaikal on September 2019.

Patent:

1. Baskaran M, Ramkumar L and Meghaa H "Boneid-A Jaw Bone Conductive Hearing" published on 19.01.2024.
2. Baskaran M, Nivedita S, Priya Dharshini R A and Abinaya M, "Ultra-wideband Dual Polarized Vivaldi Antenna Arrays for High Resolution Synthetic Aperture Radar" filled on 06.02.26.

Conferences Organized:

- First International Conference on Computer Communication and Power Systems (**ICCCPS 2020**) on 29-30, May 2020, at Sri Venkateswaraa College of Technology, Sriperumbudur-602105.
- Second National Conference on Recent Trends in Engineering and Technology (**NCRJET 2015**) on 10th April 2015, at St. Joseph's Institute of Technology, Chennai-119.
- First National Conference on Recent Trends in Engineering and Technology (**NCRJET 2014**) on 5th April 2014, at St. Joseph's Institute of Technology, Chennai-119.

Faculty Development Training Programme & Workshops Organized:

- 6-Days Online - Professional Development Program (PDP) "**Advanced Design and Optimization Techniques for Next-Generation Antennas**", 03.11.2025 to 08.11.2025.
- One Day Special Webinar on "**Tech Talk on Optics & 5G Technology**" in connection with

celebration of International Day of Light (IDL) on 16th May, 2020 at Sri Venkateswaraa College of Technology, Vadakal, Sriperumbudur.

- Two Days webinar on “**Apache Spark Fundamentals**” on 30th April & 1st May, 2020 at Sri Venkateswaraa College of Technology, Vadakal, Sriperumbudur.
- National Level workshop on “**Green Communication**” on 4th September 2014 at St. Joseph’s Institute of Technology, OMR, Chennai.
- ISTE-SRM University sponsored Short-Term Training Programme (STTP) on “**RF Engineering for Wireless Networks**” during 6th to 11th May, 2013 at Valliammai Engineering College, Chennai.
- Anna University, Chennai sponsored 7 Days Faculty Development Training Programme on “**Electromagnetic Fields**” from 28th November 2011 to 4th December 2011 at Valliammai Engineering College, Chennai.
- One Day workshop on “**Signal and Image Processing**” on 9th March 2007 at Sudharshan Engineering College, Pudukkottai.

Guest Lecture and Seminar Presentations:

- Delivered a talk at International Seminar on Wireless Communication Mobile Computing and Emerging Technologies on 27th September 2011, titled “**Free Space Optic Networking System**” at TOC H Institute of Science and Technology, Ernakulam, Kerala.
- Delivered a Lecture in Anna University, Chennai Approved 7 Days Faculty Development Training Programme titled “**EC6702-Optical Communication and Networks**” on 5th June 2017 at Sri Sairam Engineering College, Chennai.
- Delivered a Lecture titled “**5G-Technology**” on 12th September 2020 at Sri Venkateswaraa College of Technology, Chennai.
- Delivered a Lecture titled “**Sensors, Digital Communication and Machine Learning**” on 04th June 2024 at SRM Valliammai Engineering College, Chennai.
- Delivered a Lecture in IEEE sponsored FDP titled” **Metamaterial-Based Sensor for Microwave Imaging in Breast, Lung and Brain Cancer Detection**” on 11th December 2025 at St. Joseph’s Institute of Technology, Chennai.
- Delivered a Lecture on” **Substrate Integrated Waveguide (SIW) Technology for Compact 5G-Enhanced/6G Communication Devices**” on 07th January 2026, CIET, Coimbatore.
- Acted as a Session Chair at International Conference on Advanced Scientific Innovation in Science Engineering and Technology (**ICASSET 2020**) on 15th May 2020, Bharath Institute of Higher Education, Chennai.
- Acted as a Session Chair at International Conference on Smart Automation in Computer, Electrical, Electronics and Communication Engineering (**ICSA 2021**) on 10th April 2021, SRM Valliammai Engineering College, Chennai.
- Acted as a Session Chair at International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (**ICSSES 2021**) on 25th September 2021, St. Joseph’s Institute of Technology, Chennai.
- Acted as a Session Chair at IEEE Sponsored International Conference on Advances in Computing, Communication and Applied Informatics (**ACCAI 2022**) on 29th January 2022, St. Joseph’s College of Engineering, Chennai.

- Acted as a Technical Program Chair at IEEE Sponsored International Conference on Communication, Computing and Internet of Things (**IC3IoT 2022**) on 10-11, March 2022, Sri Sai Ram Engineering College, Chennai.
- Acted as Technical Program Committee member for the International Conference on Advances in Computational Intelligence and Communication (**ICACIC 2023**), held on 7th & 8th December 2023, Puducherry Technological University Puducherry 605014, India.

Additional Details:

1. Reviewer for Journal of IET Circuits, Devices and Systems.
2. Reviewer for Journal of Optik – Light and Electron Optics.
3. Reviewer for Journal of Applied Computational Electromagnetics Society.
4. Reviewer for Journal of Concurrent Engineering.
5. Reviewer for Journal of Wireless Personal Communication.