List of Publications:

Journals:

1. R.G.Sangeetha, V.Chandra and D.Chadha, "Optical Interconnection Reverse Data Vortex Network: Performance Analysis", 2013, Photonics Network Communication, Springer, Vol.25, no.2, 79-88 (Impact Factor: 1.203)
2. R.G.Sangeetha, V.Chandra, D.Chadha, "Optical Interconnection Bidirectional Data Vortex Network: Performance Analysis", 2013, , IEEE Journal of Light wave Technology, Vol.31, no.8, 1283-1294 (Impact Factor: 3.652)
3. R.G.Sangeetha, V.Chandra, D.Chadha," Bi-directional data vortex optical interconnection network: BER performance by hardware simulation and evaluation of Terminal Reliablity, 2014, IEEE Journal of Light wave Technology, Vol.32, no.19, 3266-3276(Impact Factor: 3.652)
4. *Ishu Jaiswal,* R.G.Sangeetha, Suchetha.M, "Performance of M-ary QAM based OFDM for FSO Transmission",2016, IET Optoelectronics, Vol.10, no.4, 1-7, (Impact Factor: 1.149)
5. *Jayaraj, Vandana, C. Hemanth, and R. G. Sangeetha, "A survey on hybrid MAC protocols for vehicular ad-hoc networks." Elsevier, Vehicular Communications 6 (2016) pp. 29-36, (Impact Factor: 1.149)* (Impact Factor: 4.25)
6. *K. Anbarasi, C.Hemanth, Sangeetha R.G, "A review on channel models in free space optical communication systems." Elsevier, Journal of Optics and Laser Technology* 9(2017), pp. 161-171(Impact Factor: 4.25)
7. *Abhilasha Sharma, Sangeetha R.G, "Comparative Study of Optical Interconnection Architectures in Data Center Networks", Journal of Optical Communication,* https://doi.org/10.1515/joc-2017-0074
8. *D.Anand kumar, Sangeetha R.G, "Emulation of free space optical link in weak atmospheric turbulence." Journal of Microwave and Optical technology letters 60(5)(2018), pp.1085-1092* (Impact Factor: 0.585)
9. *Shivam Mishra, Vikas Yadav, Hemanth.C, Sangeetha R.G, "Hardware implementation of optical switching node for data center networks", Journal of Microwave and Optical technology letters, DOI: https://doi.org/10.1002/mop.31630* (Impact Factor: 0.585)

International Conferences: (Peer Reviewed)

10. A. Sharma and R. G. Sangeetha, "Time Dependent Network Reliability Analysis of Optical Data Center Network", The International Conference on Fiber Optics and Photonics 2018, 12-15 Dec, 2018.
11. Anbarasi.K, Hemanth.C, Sangeetha R.G, "BER Performance of Free Space Optical Communication System in the presence of Timing Jitter", The International Conference on Fiber Optics and Photonics 2018, 12-15 Dec, 2018.
12. A. Sharma and R. G. Sangeetha, "Performance analysis of high speed low-latency torus optical network," *2018 10th International Conference on Communication Systems & Networks (COMSNETS)*, Bengaluru, 2018, pp. 488-491.
13. R. G. Sangeetha and C. Hemanth "Performance Analysis of Chained K-ary Data Centre Networks", IEEE Photonics, IIT Kanpur, Dec. 4- 8 2016.
14. R. G. Sangeetha and C. Hemanth "Benes Network: Estimation of Blocking Probability for a Fault Tolerant Routing Model", IEEE CRALT, Conference on Recent Advances in Lightwave Technology 21-23 September 2016.
15. R.G.Sangeetha, D. Chadha, and Vinod Chandra, "4x4 Optical Data Vortex Switch Fabric: Component Reliability Analysis", 2014, Conf. Rec. 2014, International Conference on signal processing and Communications, IISC., Bangalore

16. R.G.Sangeetha, D. Chadha, and Vinod Chandra, “4x4 Optical Data Vortex Switch Fabric: BER Analysis”, 2013, The National Conference on Communications, IIT Delhi, India, pp.1-5
17. R.G.Sangeetha, D. Chadha, and Vinod Chandra, “4x4 Optical Data Vortex Switch Fabric: Fault tolerance and Terminal Reliability Analysis”, 2012, International Conference on Fibre Optics and Photonics, OSA Technical Digest (online) (Optical Society of America, 2012), paper WPo.34. http://www.opticsinfobase.org/abstract.cfm?URI=Photonics-2012-WPo.34
18. R.G.Sangeetha, D. Chadha, and Vinod Chandra, “Studies on Hardware Simulation of Optical Interconnection Reverse Data Vortex Network”, 2012, International Conference on Fibre Optics and Photonics, OSA Technical Digest (online) (Optical Society of America, 2012), paper W2C.2. http://www.opticsinfobase.org/abstract.cfm?URI=Photonics-2012-W2C.2
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20. R.G.Sangeetha, D.Chadha and Vinod Chandra, “Optical Interconnection Reverse Data Vortex Network: Study of BER Characteristics”, 2010, Proc, International Conference on Fiber Optics and Photonics 2010, Guwahati, India.
21. R.G. Sangeetha, Vinod Chandra, D. Chadha, “Optical Interconnection Reverse Data Vortex Network”, 2010, Conf. Rec. 2010, International Conference on signal processing and Communications, Bangalore, pp. 1-5. 10.1109/SPCOM.2010.5560564
22. R.G.Sangeetha, Neha Sharma, D. Chadha and Vinod Chandra, “4X4 Optical Data Vortex Switch Fabric: A Fault Tolerance Study”, 2008, Proc. of the conference, Photonics 2008, Dec17-20.

National Conferences:

23. Sangeetha R.G., “Design of Small Size Wide Bandwidth Microstrip Patch Antenna with Omni-directional Pattern”, 2006, Conf. Proc., National Conference for Research Scholar, Bannariyamman Institute of Technology, Sathyamangalam, Tamil Nadu, Feb 2006.
24. Sangeetha R.G., “Design and Implementation of Microstrip Patch Antenna with Omni-directional Pattern” 2005, Conf. Proc., National Conference for Research Scholar on Applications of Emerging Technologies, Adhiyamaan College, Hosur, Tamil Nadu , March 2005.

Patents Granted:

- Sangeetha R.G, Vinod Chandra, D.Chadha “A method and assembly for bidirectional data flow through an optical vortex network” US Patent 9,031,407B2, May 12, 2015.

Patents Filed:

- Sangeetha R.G, Hemanth.C, Nithin.V, Vikas.Y, Shivam.M “Control logic design for optical bi-directional packet switching network” Indian Patent Application Number 201941008671 date of filing 05.03.2019
- Sangeetha R.G, Neha Sharma, Vinod Chandra, D.Chadha, “An optical qxq switch for fault tolerant routing of data Communication” Indian Patent Application Number 1801/DEL/2011 Publication Date(U/S 11A) 28/12/2012
- Sangeetha R.G, Vinod Chandra, D.Chadha “A method and assembly for bidirectional data flow through an optical vortex network” Indian Patent Application Number 3831/DEL/2011 Date of filing 27.12.2011

Funded Project:

1. *Title:* "Test Bed for Hardware Implementation of All Optical Bi-Directional Switching Node
   Funding Organization: Science Engineering Research Board, Department of Science and Technology, Government of India.
   Scheme: Young Scientist Scheme (YSS/2015/000986)
   Duration/ Start Date: 3 years / April 2016
   Status: On-going
   Amount: Rs.18,45,200

Books and Monographs:

- Sangeetha R.G, "Microstrip Patch Antenna Array with Omnidirectional Pattern Design & Implementation" LAP Lambert Academic Publishing (2015-03-03), ISBN-13- 978-3-659-42893-7
- Gnanagurunathan, Gnanam, R. G. Sangeetha, and K. Usha Kiran (Editors), "Optical and Microwave Technologies." Lecture Notes in Electrical Engineering, Springer 2018 ISBN: 978-981-10-7293-2.

Workshop conducted:

- National Level one day workshop on "Frontiers in Photonics" & "Inauguration of IEEE Photonics Chapter-Chennai Section" Technically co-sponsored by IEEE Photonics Society April 18th, 2015
- National Level one day workshop on "Brain Sense" 28th March 2015
- Certification Program on "RSoft OptSIM" A software for Optical communication and Networks Technically Co-sponsored by Synopsys – OSG / FOS February 2nd and 3rd, 2018
- Design of Photonic Integrated Circuits – Lumerical Workshop dated 23.03.2019

Research Guidance: (3)

1. Research Scholar: **Abhilasha Sharma**
   Title: Performance Analysis of a Novel Routing Algorithm for Data Center Networks
   Year of Award: June 2019
   Journal Publications:
   - Abhilasha Sharma, Sangeetha R.G, "Comparative Study of Optical Interconnection Architectures in Data Center Networks", Journal of Optical Communication, https://doi.org/10.1515/joc-2017-0074
   - Abhilasha Sharma, Sangeetha R.G, "Performance Analysis of BORA : A Novel Routing Algorithm for Data Center Networks",IEEE/ACM Transaction on Networking, (Under Review)

   International Conferences: (Peer Reviewed)
   - A.Sharma and R. G. Sangeetha, "Time Dependent Network Reliability Analysis of Optical Data Center Network", The International Conference on Fiber Optics and Photonics 2018, 12-15 Dec, 2018.

- A. Sharma and R. G. Sangeetha, "Performance analysis of high speed low-latency torus optical network," 2018 10th International Conference on Communication Systems & Networks (COMSNETS), Bengaluru, 2018, pp. 488-491.

2. Research Scholar: **Anand Kumar D.**
   Title: Performance Analysis of Signal Modulation in turbulent channel for Free Space Optical Communication
   Year of Award: June 2019
   Journal Publications:
   - D.Anand kumar, Sangeetha R.G, “Emulation of free space optical link in weak atmospheric turbulence.” Journal of Microwave and Optical technology letters 60(5)(2018), pp.1085-1092 (Impact Factor: 0.585)

3. Research Scholar: **Anbarasi K.**
   Title: Performance Analysis of Free Space Optical Communication for Various Channel Models
   Co-Guide: Hemanth C.
   Year of Award: December 2019
   Journal Publications:
   - K. Anbarasi, C.Hemanth, Sangeetha R.G, “A review on channel models in free space optical communication systems.” Elsevier, Journal of Optics and Laser Technology 9(2017), pp. 161-171(Impact Factor: 4.25)

   International Conferences: (Peer Reviewed)
   - Anbarasi.K, Hemanth.C, Sangeetha R.G, “BER Performance of Free Space Optical Communication System in the presence of Timing Jitter”, The International Conference on Fiber Optics and Photonics 2018, 12-15 Dec, 2018