

PUBLICATIONS

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JOURNALS

1. Ajay Uppalapati, Prasad Naik Ramavath, Prabu Krishnan, "Analysis of M-QAM Modulated Underwater Wireless Optical Communication System for Reconfigurable UOWSNs Employed in River Meets Ocean Scenario,"IEEE Transactions on Vehicular Technology, 2020 (Accepted).
2. L. Bhargava Kumar, Prabu Krishnan, "Asymptotic bit error rate analysis of convergent underwater wireless optical communication-free-space optical system over combined channel model for different turbulence and weather conditions with pointing errors,"SPIE – Optical Engineering, vol. 59 (11), 116102, 2020.
3. L. Bhargava Kumar, Prabu Krishnan, "Multi-hop convergent FSO-UWOC system to establish a reliable communication link between the islands,"Elsevier – Optics Communications, vol. 474, pp. 126107, 2020.
4. PN Ramavath, SA Udupi, Prabu Krishnan, "Co-operative RF-UWOC link performance over hyperbolic tangent log-normal distribution channel with pointing errors,"Elsevier – Optics Communications, vol. 469, pp. 125774, 2020.
5. Abhishek Kumar, Prabu Krishnan, "Performance Analysis of RoFSO Links with Spatial Diversity over Combined Channel Model for 5G in Smart City Applications," Elsevier – Optics Communications, vol. 466, pp. 125600, 2020.
6. Divya shree M, Sangeetha A and Prabu Krishnan, " Analysis and optimization of uniform FBG structure for sensing and communication applications," Springer – Photonics Network Communications, vol. 39, pp. 223-231, 2020.
7. Ramavath, Prasad Naik, Shripathi Acharya Udupi, and Prabu Krishnan, "Experimental demonstration and analysis of underwater wireless optical communication link: Design, BCH coded receiver diversity over the turbid and turbulent seawater channels," Wiley – Microwave and Optical Technology Letters, 2020.
8. PN Ramavath, SA Udupi, Prabu Krishnan, "High-speed and reliable Underwater Wireless Optical Communication system using Multiple-Input Multiple-Output and channel coding techniques for IoUT applications,"Elsevier – Optics Communications, vol. 461, pp. 125229, 2020.

9. Prabu Krishnan, S. Gopikrishna, "Enhanced Optical Wireless Communication System for Bio signal Monitoring Applications," Springer – Wireless Personal Communications, vol. 110, pp. 1605-1617, 2020.
10. Divya shree M, Sangeetha A and Prabu Krishnan, "Design and Analysis of FBG sensor for explosive detection applications," Springer - Plasmonics, pp. 1-7, 2019.
11. Revathi Senthil, Anamika Soni, Kushagra Bir, Raghav Senthil and Prabu Krishnan, "Circular-Pattern Photonic Crystal Fiber for Different Liquids with High Effective Area and Sensitivity," Springer - Plasmonics, pp. 1 - 5, 2019.
12. R. Malavika, K. Prabu, "Design Optimization of a Highly Sensitive Spiral Photonic Crystal Fiber for Liquid and Chemical Sensing Applications," Elsevier – Optical Fiber Technology, vol. 51, pp. 36 - 40, 2019.
13. Malavika Rajeev, Geethu Anna Mathew and Prabu Krishnan, "Analysis of Beam Divergence on FSO Link using PolSK technique," SPIE – Optical Engineering, vol. 58, issue 4, pp. 046109, 2019.
14. Preeti Samhita Pati, Prabu Krishnan, "Modelling of OFDM based RoFSO system for 5G applications over varying weather conditions : A case study," Elsevier – Optik, vol. 184, pp. 313 - 323, 2019.
15. Prabu Krishnan, "Analysis of FSO Systems with SISO and MIMO Techniques," Springer – Wireless Personal Communications, pp. 1-9, 2019.
16. Prabu Krishnan, Gaurav Kumar Jha, Anubhav Walia, "Performance Enhancement of BPSK-SIM and DPSK-SIM based FSO Downlink over Atmospheric Turbulence using Aperture Averaging and Receiver Diversity," Springer – Photonics Network Communications, pp. 1-9, 2019.
17. Prabu Krishnan and Dhanashree Nasre, Design and analysis of a novel optical circulator based on photonic crystal for photonic integrated circuit applications, Springer – Plasmonics, pp. 1-7, 2019.
18. Prabu Krishnan, Malavika R, "Highly birefringent photonic crystal fibre with hybrid cladding," Elsevier – Optical Fiber Technology, vol. 47, pp. 21-26, 2019.
19. Prabu Krishnan, "Performance Analysis of Hybrid RF/FSO System using BPSK-SIM and DPSK-SIM over Gamma-Gamma Turbulence Channel with Pointing errors for Smart City Applications," IEEE Access, 6 : 75025-75032, 2018.
20. Prabu Krishnan, "Design of Collision Detection System for Smart Car Using Li-Fi and Ultrasonic Sensor," IEEE Transactions on Vehicular Technology, vol. 67, Issue 12, pp. 11420-11426, 2018.
21. Prabu Krishnan, Jana Utsav, K. A Balaji, "Asymptotic BER Analysis of QAM and PSK with OFDM RoFSO over M - Turbulence in the presence of Pointing errors," IET Communications, vol. 12, Issue 16, pp. 2046 – 2051, 2018.
22. K. A. Balaji, K. Prabu, "BER analysis of relay assisted PSK with OFDM ROFSO system over Malaga distribution including pointing errors under various weather conditions," Elsevier – Optics Communications, vol. 426, pp. 187-193, 2018.
23. K. Prabu, Sanchal Thakkar, "Temporal broadening analysis of FSO Link with pointing error over M-distribution channel model," Elsevier – Optics Communications, vol. 421, pp. 115-124, 2018.
24. K. Prabu, Saumya Gupta, Satwiki Jaiswal, "Impact of Pointing Errors and Turbulence Effects on POLSK and Coherent OWC based FSO System over Generalized Turbulence Channel Model," Springer – Photonics Network Communications, pp. 1-10, 2018.
25. K. A. Balaji, K. Prabu, "Performance evaluation of FSO system using wavelength and time diversity over malaga turbulence channel with pointing errors." Elsevier – Optics Communications, vol. 410, pp. 643-651, 2018.
26. K. Prabu, S. Charanya, Mehul Jain, Debapriya Guha, "BER Analysis of SS-WDM based FSO system for Vellore weather conditions," Elsevier – Optics Communications, vol. 403, pp. 73-80, 2017.
27. G. Aarthi, K. Prabu, G. Ramachandra Reddy, "Aperture averaging effects on the average spectral efficiency of FSO links over turbulence channel with pointing errors," Elsevier – Optics Communications, vol. 385, pp. 136-142, 2017.

28. K. Prabu, D. Sriram Kumar, "Polarization shift keying based relay-assisted free space optical communication over strong turbulence with misalignment," Elsevier – Optics & Laser Technology, vol. 76, pp. 58-63, 2016.
29. K. Prabu, D. Sriram Kumar, "MIMO free-space optical communication employing coherent BPOLSK modulation in strong atmospheric turbulence channels with pointing errors," Elsevier – Optics Communications, vol. 343, pp. 188-194, 2015.
30. K. Prabu, Rajeswar Rajendran, D. Sriram Kumar, "Spectrum analysis of Radio over Free Space Optical Communications Systems through different Channel Models," Elsevier – Optik, vol. 126, pp. 1142-1145, 2015.
31. K. Prabu, D. Sriram Kumar, "BER analysis of DPSK-SIM over MIMO Free Space Optical Systems with Misalignment," Elsevier – Optik, vol. 125, pp. 5176-5180, 2014.
32. K. Prabu, D. Sriram Kumar, "Performance analysis of free space optical systems employing with binary polarization shift keying signalling over gamma-gamma channel with pointing errors," SPIE - Opt. Eng., vol. 53, pp. 076105, 2014.
33. K. Prabu, Shashidhar Cheepalli, D. Sriram Kumar, "Analysis of PolSK based FSO system using wavelength and time diversity over strong atmospheric turbulence with pointing errors," Elsevier – Optics Communications, vol. 324, pp. 318-323, 2014.
34. K. Prabu, D. Sriram Kumar, T Srinivas, "Performance analysis of FSO systems under strong atmospheric turbulence conditions using various modulation schemes," Elsevier – Optik, vol. 125, pp. 5573-5581, 2014.
35. K. Prabu, D. Sriram Kumar and Reza Malekian, "BER Analysis of BPSK-SIM based SISO and MIMO FSO systems in strong turbulence with pointing errors," Elsevier – Optik, vol. 125, pp. 6413-6417, 2014.
36. K. Prabu, D. Sriram Kumar, "BER analysis for BPSK based SIM-FSO Communication System over Strong Atmospheric Turbulence with Spatial Diversity and Pointing errors," Springer – Wireless Personal Communications, pp. 1-15, 2014.
37. K. Prabu, D. Sriram Kumar, "Bit error rate analysis of free-space optical system with spatial diversity over strong atmospheric turbulence channel with pointing error," SPIE - Optical Engineering, vol. 53, pp. 126108, 2014.
38. Prabu K, D. Sriram Kumar, "Outage Analysis of Relay-Assisted BPSK-SIM Based FSO Systems Over Strong Atmospheric Turbulence with Pointing Errors," International Journal of Computer and Communication Engineering, vol. 3, pp. 317-320, 2014.
39. K. Prabu, Sumanta Bose, D. S. Kumar, "BPSK based Subcarrier Intensity Modulated Free Space Optical System in Combined Strong Atmospheric Turbulence," Elsevier – Optics Communications, vol. 305, pp. 185-189, Sep 2013.

CONFERENCES

1. Vineeth Palliyembil, K Prabu, Jagadeesh V K, Palanivel Muthuchidambaranathan and Sunday Ekpo, "Performance analysis of FSO system over generalized turbulence channel with pointing errors using PolSK signalling technique," International Conference on Wireless Communications Signal Processing and Networking (WiSPNET 2020) (Accepted).
2. Malavika R, K. Prabu, "Computational study of nanostructured Photonic crystal fiber," Third International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018), International and Interuniversity Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Kottayam, Kerala, India.

3. G.Aarthi, G.Ramachandra Reddy, Prabu K, Performance Analysis of Alamouti Scheme in Turbulence induced fading with Pointing Errors, IEEE Innovations in Power and Advanced Computing Technologies (i-PACT2017), VIT University, Vellore.
4. Prabu K, D. Sriram Kumar, Outage Analysis of Relay-Assisted BPSK-SIM Based FSO Systems Over Strong Atmospheric Turbulence with Pointing Errors, ICWOC 2014, NTU, Singapore.
5. Prabu K, P. Paridhi Bharati, D. S. Kumar, "Performance Analysis of DPSK-SIM based FSO System over Strong Atmospheric Turbulence Channel," IEEE India Annual Conference 2013, INDICON 2013, IIT Bombay, India.
6. Prabu K, Sumanta Bose, D. S. Kumar, "Analysis of optical modulators for Radio over Free Space Optical communication Systems and Radio over Fiber Systems," IEEE India Annual Conference 2012, INDICON 2012, Kochi, India, Dec 2012.
7. Sumanta Bose, Prabu K, D. S. Kumar, "Real-Time Breath Rate Monitor based Health Security System using Non-invasive Biosensor," IEEE Intl. Conf. on Computing, Communication and Networking Tech. (ICCCNT 2012), Coimbatore, July 2012.
8. Sumanta Bose, Prabu K, D. Sriram Kumar, "Array Signal Processing and Optimization using Algorithms in Nature", International Proceedings of Computer Science and Information Technology (IPCSIT), Chennai, Volume. 37, April 2012.
9. Prabu K, Naga Krishnan R, Chockkalingam J, Nivethan V, "Analysis of Mach-Zehnder Modulator with one arm loaded with Ring Resonator for Radio over Fibre Applications," The 8th WSEAS International Conference on Applied Electromagnetics, Wireless and Optical Communications (ELECTRO '10), Malaysia, 55-57, 2010.

Books

1. "Microwave Engineering Theory and Techniques" – David M Pozar, Wiley, WILEY India Adaptation, Content contribution for Indian Adaptation by Prabu K, Santosh A. Janawade.

Book Chapters

1. A chapter author for a book "Principles and Applications of Free Space Optical Communication", IET Publications. Title of the chapter is "Performance analysis and mitigation of turbulence effects using spatial diversity techniques in FSO systems over combined channel", 2019.
2. A chapter author for a book "Turbulence and Related Phenomena", IntechOpen. Title of the chapter is "Performance analysis of FSO systems over atmospheric turbulence channel for Indian weather conditions", 2019.
