

## **DR. KAMALJIT SINGH BHATIA**

*Associate Professor ECE*

**Qualifications:** Ph. D (ECE), M. Tech (ECE), B. Tech (EIE)

**Area of Interest:** Optical-OFDM Systems, Nano Materials

**Contact No.:** 7453923221, 9779809586

**Email id:** [ks.bhatia@gbpec.ac.in](mailto:ks.bhatia@gbpec.ac.in) (official), [kamalbhatia.er@gmail.com](mailto:kamalbhatia.er@gmail.com) (Personal)



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### CURRICULUM VITAE

#### **Work Experience (Total: 18yrs)**

- Associate Professor at G.B Pant Institute of Engineering and Technology, Department of Electronics and Communication Engineering, Pauri Garhwal (An Autonomous institute of state government Uttarakhand) from May 21<sup>st</sup>, 2019 to present.
- Assistant Professor at I.K Gujral Punjab Technical University, Kapurthala, State government university of Punjab, INDIA from 29th December, 2016 to 20<sup>th</sup> May, 2018.
- Assistant Professor at Maharaja Ranjit Singh Punjab Technical University, Bathinda, State government university of Punjab from September, 2016 to December 2016.
- Assistant professor at Sri Guru Granth Sahib World University, Fatehgarh sahib, Punjab from August 2012 to August 2016.
- Assistant Professor at Rayat Bahra Institute of Engineering and Technology, Hoshiarpur from August 2008 to August 2012.
- Lecturer at D.A.V Institute of Engineering and Technology, Jalandhar from Aug 2007 to June 2008.
- Lecturer at Sant Longowal Institute of Engineering & Technology (SLIET) Longowal (Sangrur, Punjab) from Aug, 2005 to Aug 2007.
- Lecturer at College of Engineering and Management, Kapurthala from August ,04 to August,05.
- Lecturer at Baba Isher Singh Polytechnic college, Kot Ise Khan from Feb 2003-Aug 2004.
- Faculty at Software technology Group, Nakodar from August 2002 to Feb 2003.

#### **Research Interests:**

- Optical Communication
- Optical-OFDM
- Nano Materials

#### **Education:**

- Doctor of Philosophy (Ph.D.) in Electronics and Communication Engineering from I.K Gujral Punjab Technical University, Kapurthala, India, August 2014.
- Master of Technology (M.Tech.) in Electronics and Communication Engineering from I.K Gujral Punjab Technical University, Kapurthala, India, August 2007.

- Bachelor of Engineering (B.E.) in Electronics and Instrumentation Engineering from I.K Gujral Punjab Technical University, Kapurthala, India, August 2002.

### Google Scholar Profile:

(Link:[https://scholar.google.co.in/citations?hl=en&user=41sexPoAAAAJ&scilu=&scisig=AMD79ooA AAAAXypbMVJrrxnQuvAFhQCsa\\_Mw\\_iL4hTVn&gmla=AJsN-F7wQtHatRY\\_W3ReVZudT97UQG3bgXbAUN39MLDftd92JNJtgs5tf2cRXXRKpq7NGP593hb96nEeUT7zZB2nezR\\_kIJMcN5dFhnFpicRYqLe3OTtoa5e6U-utUt3kQ3S6iuiL9Pg&sciund=4743408725101077400](https://scholar.google.co.in/citations?hl=en&user=41sexPoAAAAJ&scilu=&scisig=AMD79ooA AAAAXypbMVJrrxnQuvAFhQCsa_Mw_iL4hTVn&gmla=AJsN-F7wQtHatRY_W3ReVZudT97UQG3bgXbAUN39MLDftd92JNJtgs5tf2cRXXRKpq7NGP593hb96nEeUT7zZB2nezR_kIJMcN5dFhnFpicRYqLe3OTtoa5e6U-utUt3kQ3S6iuiL9Pg&sciund=4743408725101077400))

### Administrative Experience:

1. Public Information Officer at G.B Pant Institute of Engineering and Technology, Pauri Garhwal. From September 2019 to till date.
2. Coordinator of Professional Societies at G.B Pant Institute of Engineering and Technology, Pauri Garhwal. From August 2019 to till date.
3. Coordinator of ISTE Chapter at G.B Pant Institute of Engineering and Technology, Pauri Garhwal. From August 2019 to till date.
4. Branch Counselor IEEE Student Branch at G.B Pant Institute of Engineering and Technology, Pauri Garhwal. From August 2020 to till date.
5. Head of Department at Department of Electrical Engineering, I.K Gujral Punjab Technical University, Kapurthala, State government university of Punjab, India, from 29th December, 2016 to 20<sup>th</sup> May, 2018.
6. Expert member, Board of Studies, Department of Electronics & Communication Engineering, I.K Gujral Punjab Technical University, Kapurthala, State government university of Punjab, India.
7. Expert member, Board of Studies, Department of Electrical Engineering, I.K Gujral Punjab Technical University, Kapurthala, State government university of Punjab, India.
8. Expert member, Board of Studies, Department of Electronics & Communication Engineering, Maharaja Ranjit Singh Punjab Technical University, Bathinda, State government university of Punjab, India
9. Head of Department at Rayat Bahra Institute of Engineering and Technology, August 2008 to August 2010.
10. Controller of examination at Rayat Bahra Institute of Engineering and Technology, August 2010 to August 2012.
11. Training and Placement Incharge at CEM, Kapurthala, August 2010 to August 2012.

### Research Publications:

**Patent:** Published Patent entitled “Fractal Monopole Antenna for S-Band and C-Band wireless applications” in the Patent Journal of India with Issue No. 39/2018 dated: 28 September, 2018

### Books:

1. K. S. Bhatia, An Analysis of CATV Transmission using different modulation formats, LAP LABERT academic international publishing, 2010
2. K. S. Bhatia, H. Kaur, Vibrations measurements using DSP system, LAP LABERT academic international publishing, 2010
3. K. S. Bhatia, Optical Communication System, LAP LABERT Academic international publishing, 2010
4. K. S. Bhatia, Optical OFDM System, LAP LABERT Academic international publishing, 2010

### Book Chapters:

- B. Singh, N. Kaur, K.S. Bhatia, Keystroke Dynamics For Mobile User Authentication 2328-1405 pp : 64-78, In: Hidden Link Prediction in Stochastic Social Networks, ISBN13: 9781522590965, 2020

### Journal Papers:

S.No	Title of paper with Page No.	Journal's	ISSN/ISBN No.	Whether peer reviewed. Impact factor, if any	No. of co-authors
1	A Compact CPW-Fed Planar Stacked Circle Patch Antenna for Wideband Applications	Wireless Personal Communications	In Press	Yes, SCI (Springer)	03
2	A Three-Step Authentication Model for Mobile Phone User Using Keystroke Dynamics	IEEE Access	VOLUME 8, 2020 125909-125922	SCI	03
3	Experimental analysis of intermodulation distortion and error vector module for multitone RoF-OFDM system	OPTOELECTRONICS AND ADVANCED MATERIALS – RAPID COMMUNICATIONS	Vol. 14, No. 1-2 , p. 37- 42	January-February 2020	3
4	Design of Wideband Flower-Shaped Microstrip Patch Antenna for Portable Applications	Wireless personal communication	109(7)	May 2019	3
5	Analyzing user typing behavior in different positions using keystroke dynamics for mobile phones	Journal of Discrete Mathematical Sciences and Cryptography ( Taylor and francis)	Vol 22, Issue No. 4 pp : 591-603	01 Sep 2019	3
6	Keystroke Dynamics For Mobile User Authentication	Hidden Link Prediction in Stochastic Social Networks	2328-1405 pp : 64-78		3
7	Design of Metamaterial-Loaded Rectangular Patch Antenna for SatelliteCommunication Applications	Iranian Journal of Science and Technology, Transactions of Electrical Engineering	Print ISSN2228-6179 Online ISSN2364-1827 43, pages39–49(2019)	Yes: SCI 0.519	02
8	A Novel Chaos-Based	Journal of Optical	1943-0620 (print)	Yes: SCI	02

	Encryption Approach for Future-Generation Passive Optical Networks Using SHA-2	Communications and Networking	1943-0639 (online) Vol. 9, <b>Issue 12</b> , pp. 1184-1190(2017)	<b>2.74</b>	
<b>9</b>	A Novel Approach for Physical Layer Security in Future-Generation Passive Optical Networks	Photonic Network Communications	1387-974X (print version) 1572-8188 (electronic version) 35(11):1-10., DOI: 10.1007/s11107-017-0738-4.	<b>Yes: SCI 1.203</b>	<b>02</b>
<b>10</b>	<b>Design optimization of CPW-fed microstrip patch antenna using constrained ABFO algorithm</b>	Soft Computing, Springer,	<b>Print ISSN</b> 1432-7643 <b>Online ISSN</b> 1433-7479 22, pages8301–8315(2018)	<b>Yes: SCI 2.36</b>	<b>02</b>
11	Peak-to-average power ratio reduction using coded signal in optical-orthogonal frequency division multiplexing systems	<i>IET Optoelectronics.</i>	<i>ISSN 1751-8768</i> Available on IEEE explore Vol. 6, Iss. 5, pp. 250–254/2012	Yes, SCI 1.12	02
12	Design and simulation of optical-OFDM systems	<i>Journal of Russian Laser Research</i>	( <i>SPRINGE R'S</i> )  <i>ISSN 1573-8760</i> (Online) Volume 33, Number 5, pp. 202-208, September, 2012	Yes, SCI 0.7	02

13	Simulative Analysis of Integrated DWDM and MIMO-OFDM System with OADM	<i>Optik - Int. J. Light Electron Opt.</i>	(Elsevier's) ISSN: <b>0030-4026</b> Volume 12, Issue 4, <i>Elsevier Science</i> (2013) 117– 121	Yes, SCI 0.7	02
14	An adaptive compensation scheme-based coded direct detection optical-orthogonal frequency division multiplex(OFDM) system	<i>Computers and Electrical Engineering</i>	(Elsevier's) ISSN: <b>0045-7906</b> , Volume 38, 1573– 1578, 2012	Yes, SCI 0.7	02
15	Modeling and simulative performance analysis of OADM for hybrid multiplexed Optical-OFDM system	<i>Optik - Int. J. Light Electron Opt.</i>	(Elsevier's) ISSN: <b>0030-4026</b> Pages 1907– 1911, July 2013	Yes, SCI 0.7	02
16	Monitoring and Compensation of optical telecommunication channels by using Optical add drop multiplexers for Optical OFDM system	<i>Journal of Optical Communications, Germany</i>	<i>De Gruyter Mouton</i> <b>Online</b> <b>ISSN:</b> 2191-6322 <i>Vol.33, Issue 2, pp 234-238, 2012</i>	Yes,	02
17	Effect of line coding on jitter and initial laser phase on Q-value in soliton transmission	optik - International Journal for Light and Electron Optics	ELSEVIER's ISSN: <b>0030-4026</b> Volume 125, Issue 2 , pp.805– 809, 2014	Yes, SCI 0.7	02

18	<b>Combating/eliminating dispersion induced fading using Suppressed Carrier link for OFDM signal</b>	TETN <i>International Journal of Electronics</i>	Publisher: Taylor and Francis Ltd ISSN 0020 - 7217 (Print ); ISSN: 1362 - 3060 (Online) Pages 583-592 , Volume 104, 2017 - Issue 4	Yes, SCI 0.7	02
19	<i>Simulative Analysis of IMD in Multitone analog CATV Transmission System.</i>	Optik- Int. J. Light Electron Opt.	Elsevier's ISSN: <b>0030-4026</b> VOL.:124 issue: 122 Pg no.5747-5750 2013	Yes, SCI 0.7	02
20	<i>Comparison between Duobinary and IMDD Technique for CATV Transmission System</i>	Optik- Int. J. Light Electron Opt.	In press ISSN: <b>0030-4026</b> Vol.125, issue 16, pp 4238-4240 August 2014	Yes, SCI 0.7	02
21	Analysis of multitone microwave signals on optical fiber system using external laser modulation	Optik- Int. J. Light Electron Opt.	Elsevier's ISSN: <b>0030-4026</b> Volume 124, Issue 21, November 2013, Pages 5139-5141	Yes, SCI 0.7	02
22	Performance analysis of different modulation	Optik- Int. J. Light Electron Opt.	Elsevier's ISSN: <b>0030</b>	Yes, SCI	02

	formats in 4-channel CATV transmission system using OADM		<b>-4026</b> vol 124, issue 24, 6810-6814,	0.7	
23.	Optical System design and simulation for a VCSEL	Lasers in Engineering	ISSN: 0898-1507 (print) ISSN: 1029-029X (online) Vol26. pp.19-30, 2013	Yes, 0.2	02
24	Coded OFDM in Fiber-Optics Communication Systems with Optimum biasing of Laser Volume 5, Issue 2. Malaysia Vol 5 issue 2 pp 33-43, June 2011	Signal Processing: An International Journal,	ISSN - 1985-2339	Yes, 3.0	02
25	Analysis of Relative Intensity to Noise Ratio for Lasers at Different Bias Currents Vol 58 issue 3 sept 2012, pp 255-259	INTL JOURNAL OF ELECTRONICS AND TELECOMMUNICATIONS	<i>De Gruyter Mouton</i> <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
26.	Simulative approach to turbo code rate encoder Vol25, issue 4, pp-36-43	<i>Optik - Int. J. Light Electron Opt.</i>	<i>(Elsevier's)</i> ISSN: <b>0030-4026</b>	Yes, 0.7	02
27	Comparison of QAM and DP-QPSK in a coherent optical communication system  Volume 125, Issue 20, October 2014, Pages 5940–5942	<i>Optik - Int. J. Light Electron Opt.</i>	<i>(Elsevier's)</i> ISSN: <b>0030-4026</b>	Yes, 0.4	02
28.	Modeling and Simulative Performance Analysis of OADM for Hybrid Multiplexed Optical-OFDM System Vol 33, issue 2 297-303	<i>Journal of Optical Communications, Germany</i>	<i>De Gruyter Mouton, Germany</i> <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02

29.	Impact of Initial Laser Phase Values on Soliton Transmission”, Volume 34, Issue 4, pp. 401-404, 2013	J. Opt. Commun. (JOC),	. De Gruyter Mouton ,Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
30	Effect of modulation formats in hybrid amplified radio over fiber systems Vol. 34, No. 4, pp.365–369 October 2013,.	Journal of Optical Communications,	De Gruyter Mouton ,Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
31	Impact of initial Laser phase values on soliton transmission, vol. 34, issue 4,pp 401-404,2013	Journal of Optical Communications,	De Gruyter Mouton ,Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
32	Best value of Laser Power for coherent optical system , Volume 36, Issue 1, pp 43-49, june 2015	Journal of Optical Communications,	De Gruyter Mouton ,Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
33	Effect of Raman Amplifier and cyclic prefix on O-OFDM system using phase modulation , Vol 36, issue 3, pp 197-203, Nov. 2014, doi 10.4515/joc-2014-0072	Journal of Optical Communications,	De Gruyter Mouton ,Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
34	Effect of gain and noise figure on DPSK modulated long haul optical communication system, Vol 36, Issue 3, pp 257-262, Nov, 2014, doi 10.4515/joc-2014-0073	Journal of Optical Communications,	De Gruyter Mouton ,Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
35	Anlalysis of different Harmonic and Intermodulation distortions	Journal of Optical Communications,	De Gruyter Mouton ,Germany	Yes, 0.4	02



	for CATV systems Vol 36, Issue 2, pp 175-180, May 2015, doi 10.4515/joc-2014-0057		<b>Online</b> <b>ISSN:</b> 2191-6322		
36	Effect of Different scattering techniques on higher order soliton, Vol 36, Issue 3, pp 283-288, Nov, 2014, doi 10.4515/joc-2014-0080	Journal of Optical Communications,	<i>De Gruyter Mouton</i> , Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
37	Supress the FWM by increasing channel spacing and chromatic dispersion of fiber in WDM system Vol 36, Issue 3, pp 243-248, Sept 2014, doi 10.4515/joc-2014-0065	Journal of Optical Communications,	<i>De Gruyter Mouton</i> , Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
38	Performance analysis of 16 channel WDM system with 4 OADM Vol 36 Issue 2, pp 169-173, May 2015, doi 10.4515/joc-2014-0056	Journal of Optical Communications,	<i>De Gruyter Mouton</i> , Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
39	Impact of line width and power of laser on radio over fiber system Vol 36, issue 1, pp 67-70, june 2015, doi 10.4515/joc-2014-0055	Journal of Optical Communications,	<i>De Gruyter Mouton</i> , Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
40	Comparative Anlalysis of soliton Transmission to maximum distance with single Amplifier Vol 4, issue 1, 294-298, March 2013.	International journal of Electronics and Technology	<b>ISSN online:</b> 223 0-7109 <b>ISSN print:</b> 223 0-9543	Yes, 0.2	02
41	Performance anaysis of DQPSK Modulated RoF System Vol 35, issue 3, pp	In press Journal of Optical Communications,	De Gruyter Mouton	Yes, 0.4	02

	245-249, June 2014.		Germany <b>Online</b> <b>ISSN:</b> 2191-6322		
42	Performance Analysis of Different Modulation Formats in Optical Communication DOI 10.4515/joc-2015-0049 Received May 27, 2015; accepted June 5, 2015	Journal of Optical Communications	De Gruyter Mouton Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
43	Simulative analysis of different modulation formats for RoF Transmission System DOI 10.4515/joc-2015-0005 Received January 11, 2015; accepted February 13, 2015	Journal of Optical Communications	De Gruyter Mouton Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
44	Power Analysis of Soliton Pulse for ROF-OFDM System DOI 10.4515/joc-2015-0007 Received January 11, 2015; accepted August 20, 2015	Journal of Optical Communications	De Gruyter Mouton Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
45	Optical Time Division Multiplexing Using Terahertz Optical Asymmetric Demultiplexer . Volume 36, Issue 4, Pages 297–301, ISSN (Online) 2191-6322, ISSN (Print) 0173-4911, DOI: 10.4515/joc-2014-0087, March 2015	Journal of Optical Communications	De Gruyter Mouton Germany <b>Online</b> <b>ISSN:</b> 2191-6322	Yes, 0.4	02
46	Keystroke Dynamics for Mobile Phones: A Survey	Indian Journal of Science and Technology, Vol 9(6), DOI: 10.47485/ijst/2016/v9i6/82084, February 2016	ISSN (Print) : 0974-6846 ISSN (Online) : 0974-	Yes, 0.4	02

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47	Effect of Optical Amplifiers on the Performance of SCM Radio over Fiber Systems	Journal of Optical Communications. Volume 36, Issue 3, Pages 263–268, ISSN (Online) 2191-6322, ISSN (Print) 0173-4911, DOI: 10.4515/joc-2014-0074, January 2015		Yes, 0.4	02
48	Analysis of Different Harmonic and Intermodulation Distortions for CATV Systems	Journal of Optical Communications. Volume 36, Issue 2, Pages 175–180, ISSN (Online) 2191-6322, ISSN (Print) 0173-4911, DOI: 10.4515/joc-2014-0057, May 2015	De Gruyter Mouton Germany Online ISSN: 2191-6322	Yes, 0.4	02
49	Impact of Line Width and Power of Laser on Radio over Fiber System	Journal of Optical Communications. Volume 36, Issue 1, Pages 67–70, ISSN (Online) 2191-6322, ISSN (Print) 0173-4911, DOI: 10.4515/joc-2014-0055, June 2015	De Gruyter Mouton Germany Online ISSN: 2191-6322	Yes, 0.4	02
50	Comparative Study of the Right Protocol for Best Routing Path Vol 6, No 6 (2014) 232-236	Networking and communication Engineering	Print: ISSN 0974 – 9713 & Online: ISSN 0974 – 9616	Yes, 0.4	02
51	Simulative Analysis of CATV Systems for Long Haul Transmission Volume 34, Issue 4, pp. 393–399 Oct. 2013	DE GRUYTER Journal of Optical Communication	ISSN (Online) 2191-6322, ISSN (Print) 0173-4911	Yes, 0.4	02
52	CATV Transmission in Optical Communication System  Vol. 34, Issue 3, pp. 209–214 July 2013	DE GRUYTER Journal of Optical Communication	ISSN (Online) 2191-6322, ISSN (Print) 0173-4911	Yes, 0.4	02
53	Performance Analysis of	DE GRUYTER	ISSN	Yes,	02

	Different Modulation Formats in Optical Communication Volume 37, Issue 2, pp. 227-231 July 2015	Journal of Optical Communication	(Online) 2191-6322, ISSN (Print) 0173-4911	0.4	
54	Simulative analysis of different modulation formats for RoF Transmission System Volume 37, Issue 1, pp. 69-73 July 2015	DE GRUYTER Journal of Optical Communication	ISSN (Online) 2191-6322, ISSN (Print) 0173-4911	Yes, 0.4	02
55	RIN Evaluation for Optimum Performance of Optical-OFDM System Vol. 1, Issue 1, September 2010 P.No 25-28.	International Journal of Computer Science and Technology	I S S N : 0 9 7 6 - 8 4 9 1 (On l i n e ) IJCST	No	02
56	Comparative Analysis of Soliton Transmission to Maximum Distance with Single Amplifier Vol. 4, Issue 1, pp. 294-298, Jan - March 2013	International Journal of Electronics and Communication Engineering.,	ISSN 0974-2166	No	02
57	Comparative Analysis of Soliton Generation with Different Modulation Formats Vol. 4, Issue 1, pp. 411-414, Jan - March 2013.	International Journal of Electronics and Communication Engineering.,	ISSN 0974-2166	No	02
58	Design Issues of Optical Orthogonal Frequency Division Multiplexing System, Volume 4, Number 1 (2011), pp. 19—28.	International Journal of Electronics and Communication Engineering.	ISSN 0974-2166	No	02

59	Simulative Analysis of operating conditions for Flat amplitude Multi wavelength Brillouin-Raman comb fiber laser” IJCST Vol. 1, Issue 1, September 2010 P.No 89-92.	International Journal of Computer Science and Technology,	ISSN : 0976-8491 (Online)	No	02
60	Sampling Synchronization for Optimum Performance of Optical Orthogonal Frequency Division Multiplexing System Volume 4, Number 1 (2011), pp. 11—18	International Journal of Electronics and Communication Engineering	ISSN 0974-2166	No	02
61	Performance analysis of different modulation formats in 4-Channel CATV transmission system using OADM vol 4 Issue 1-2 15-20	International Journal of Electronics and Communication Engineering.,	ISSN 0974-2166	No	02
62	Simulative Analysis of different Modulation Formats for Long-haul transmission Volume 2, Issue 5, September-October 2012 Available Online at <a href="http://www.gpublication.com/jcer">www.gpublication.com/jcer</a>	International Journal JCER	ISSN No.: 2250-2637	No	02
63	Comparison Between EDFA and SOA Amplifiers on The Bases Of Their Performance In Multitone MOF System Vol. 1, Issue 4, pp. 273-276 Nov-Dec 2012	International Journal (IJAETR)	ISSN 2278-7070 (ONLINE) I	No	02
64	Comparative Analysis of Soliton Generation with Different Modulation Formats	International Journal IJECT	ISSN, 2230-7109	No	02

	Vol 4 issue 1 Pp: 411-414				
65	Performance analysis of Optical Code Division Multiplex system Volume 34, Issue 4, Pages 361–364, ISSN (Online) 2191-6322, ISSN (Print) 0173-4911, DOI: 10.4515/joc-2013-0043, October 2013	J. Opt. Commun..	Journal of Optical Communications  <b>Online</b> <b>ISSN:</b> 2191-6322	No	02
66	Simulative Analysis of Dispersion Managed solitons for Long Haul Optical communication System Volume 2, Issue 10 October 2013 Pp: 25-30	International Journal of Engineering Research and technology	ISSN: 2278-0181	No	02
67	Design and implementation of OFDM models with various digital modulation techniques  Volume 2, Issue 4	International journal of Engineering Associates	ISSN: 2320-0804	No	02
68	Simulative analysis of dispersion managed solitons for Long-haul optical communication system Vol 2, 10 (October-2013)	International Journal of Engineering Research and Technology	ISSN: 2278-0181	No	02
69	DESIGN ISSUES OF SPACE TIME BLOCK CODED (STBC) OFDM SYSTEMS Volume 2, Issue 3, March 2014, Pg: 213-219	IJRIT International Journal of Research in Information Technology,	ISSN 2001-5569	No	02
70	Simulative Analysis of different Modulation Formats for Long-haul transmission Vol. 2, Issue 5, pp. 1-7 Sept-Oct 2012	International Journal JCER	ISSN No.: 0976-8324	No	02
71	Performance Evaluation of Optical-OFDM system with different Modulation Techniques Vol. 2, Issue 1, pp. 384-388 Jan-Feb 2013	International Journal IJAETR	ISSN 2278-7070 (ONLINE	No	02
72	Design and Implementation of OFDM	International Journal		No	02

	models with various digital modulation Techniques Vol. 2, Issue 4, pp. 64-68	IJERA	ISSN 2320-0804 (ONLINE)		
73	Precoding and clipping for Space Time Block Coded (STBC) OFDM Systems Vol. 2, Issue 3, pp. 424-430 March 2014	International Journal IJRIT	ISSN 2001-5569 (ONLINE)	No	02
74	Simulative Analysis of DROADM System Vol. 4, Issue 3, pp. 565-570 May-Jun 2015	International Journal IJAETR	ISSN 2278-7070 (ONLINE)	No	02
75	Role of advanced modulation formats Vol. 2, Issue 1, pp. 84-88 Jan 2014	International Journal IJRIT	ISSN 2001-5569 (ONLINE)	No	02

#### Conference Papers:

S.N.	Title	Details of conference Publications	Date of publication
1	Future Generation of Passive Optical Networks	International Conference on Soft Computing Applications in Wireless Communication	2017
2	Keystroke Dynamics Based User Authentication Using Numeric Keypad	7th International Conference CONFLUENCE-2017, Amity University, Noida	2017
3	Authenticating Mobile Phone Users Based on Their Typing Position Using Keystroke Dynamics	Proceedings of 2nd International Conference on Communication, Computing and Networking. Lecture Notes in Networks and Systems, vol 46. Springer, Singapore	2018
4	Keystroke Dynamics for Mobile User Authentication	4 <sup>th</sup> International Multi-Track Conference on Sciences, Engineering and Technical Innovations	Conference Dates: Oct 5-6, 2018
5	Different Techniques for Bandwidth Enhancement of Fractal antennas-A Review	4th International Multi-Track Conference on Sciences, Engineering and Technical Innovations	Conference Dates: Oct 5-6, 2018
6	Bandwidth Enhancement of Microstrip Patch Antennas using Metamaterials: A Review	4th International Multi-Track Conference on Sciences, Engineering and Technical Innovations	Conference Dates: Oct 5-6, 2018
7	Optical Stellar	4th International Multi-Track Conference on	Conference Dates: Oct

	Interferometry –A Review	Sciences, Engineering and Technical Innovations	5-6, 2018
8	Data transmission with OFDM technique using soliton carriers	Proc. of the Second Intl. Conf. on Advances In Computing, Electronics and Communication - ACEC 2014. Copyright © Institute of Research Engineers and Doctors, USA .All rights reserved. ISBN: 978-1-63248-029-3 doi: 10.15224/ 978-1-63248-029-3-175 ACEC 2014 international conference, ISBN 978-1-63248-029-3, Held at Zurich, Switzerland	2014
9	Secure node localization in wireless sensor network: A review	Accepted for Publication ICTMS-15, Dec 29-30, UK, London: Research Cell : An International Journal of Engineering Sciences, Special Issue ICTMS-15 , 29-30 ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online)	December 2015
10	Radio over Fiber Technology – A Review	Research Cell : An International Journal of Engineering Sciences, Special Issue ICTMS-15 , 29-30 December 2015 ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online)	December 2015
11	Performance Analysis of RoF link using Mach-Zehnder Modulator and its parameters	Research Cell : An International Journal of Engineering Sciences, Special Issue ICTMS-15 , 29-30 ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online)	December 2015
12	PERFORMANCE ANALYSIS OF FWM AT VARYING DISPERSION VALUES AND BIT RATES	Research Cell : An International Journal of Engineering Sciences, Special Issue ICTMS-15 , 29-30 ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online)	December 2015
13	ANALYSIS OF DIFFERENT TYPE OF MODULATION TECHNIQUES FOR 100km OPTICAL FIBER CATV TRANSMISSION SYSTEM	An International Journal of Engineering Sciences, Special Issue ICTMS-16 , ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online) © 2016 MID Publications in association with Vidya Publications	2016
14	Investigations on Design issues for Optical OFDM systems	Research Cell : An International Journal of Engineering Sciences, Special Issue ICTMS-16 , ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online) © 2016 MID Publications in association with Vidya Publications	25-26 JUNE 2016
15	Performance analysis of hybrid OCDMA-ROF system	IIE International conference, ICIET'2013, , Bangkok, Thailand:	2013Dec 25-26
16	Factors affecting higher order Soliton in soliton	IIE International conference on Emerging Trends in Engineering and Technology,	, 25-26, Dec- 2013



	transmission”,	ICETET'2013,Bangkok,Thailand	
17	Various routing protocols for networking	IIE International conference on Emerging Trends in Engineering and Technology, ICETET'2013, ,Bangkok,Thailand	25-26, Dec- 2013
18	Factors Affecting Higher Order Solitons in Soliton Transmission  PP09-12	International Conference on Innovations in Engineering and Technology (ICIET'2013) Bangkok (Thailand)	Dec. 25-26, 2013
19	Residue Number system based Distributed Arithmetic approach for optical-OFDM System	SPIE Optical Engineering + Applications, part of SPIE Optics + Photonics symposium, ,San Diego, California United States.	17 - 21 August 2014
20	Data transmission with OFDM technique using soliton carriers	SPIE Optical Engineering + Applications, part of SPIE Optics + Photonics symposium, ,San Diego, California United States.	17 - 21 August 2014
21	“Performance analysis of coded OFDM fiber-optics communications”	Optics and Photonics for Information Processing , SPIE Optical Engineering + Applications * *  San Diego, California, United States	21-25 August 2011
22	Simulative Analysis of operating conditions for optical communication System	Wireless and optical communications  Quebec, Canada	June 3-4, 2014
23	Analysis of denoised speech signal for different threshold selection rules	international conference IMTC-2014 , CTIEMT jalandhar city	June 3-4, 2014
24	Accuracy Enhancement Technique for Pseudo Zernike Moments”	International conference IMTC-2014 , CTIEMT jalandhar city	June 3-4, 2014
25	Performance Comparison of WDM-OFDM system ”	International conference IMTC-2014 , CTIEMT jalandhar city	June 3-4, 2014
26	Investigate the effect of laser source & Line width on FWM power in WDM system	International conference IMTC-2014 , CTIEMT jalandhar city	June 3-4, 2014
27	Different method of channels allocation to mitigating the four wave mixing non-linearity system	International conference IMTC-2014 , CTIEMT jalandhar city	June 3-4, 2014
28	“RIN Evaluation with dispersion compensation for Optimum Performance	Proceedings of the International Computer Science and Technology Conference 2008  San Diego, California, USA	April 1-3, 2008;

	of Optical Transmission System”		
29	Simulative Analysis of operating conditions for Flat amplitude Multiwavelength Brillouin-Raman comb fiber laser”	ICSTC 2008 San Diego California, USA	2008
30	Effects of higher-order dispersion on XPM by using VSTF method”	International conference 3C-06 held at R.V.C.E Bangalore	2006
31	Simulative Analysis of operating conditions for raman Amplifier in a hybrid amplification system	IASTED international conference on WOC-2008, , at Qubec Canada	26-28 May 2008

**Books published as single author or co-author or as editor**

S.N.	Title with page no.	Type of Book & Authorship	Publisher & ISSN/ISBN No.	Whether Peer Reviewed	No. of Co-author & Date of Publication	Whether you are the main author
1.	Optical OFDM System	LAP LABERT Acedemic publishing	ISBN No.978-3-659-34776-4 Published at Gemany	Yes	00	yes
2.	Optical Communication System	Do	ISBN No.978-3-659-35885-2	Yes	00	yes
3.	Vibrations measurements using DSP system	Do	ISBN No. 978-3-659-11899-9	Yes	01	yes
4.	An Analysis of CATV Transmission using different modulation formats	Do	In Press	Yes	00	yes

## Ph.D./ M.Tech/ M. Phil Thesis Guidance

Sl. No.	Name of student[s] for Ph.d	Title of Ph.D. Thesis	Remarks
1	Dr.Kulwinder Singh	Investigations on design issues for Hybrid Optical ROF-OFDM systems	2017 (Awarded)
2	Dr. Nancy Gupta	Design and Performance Optimization of Microstrip Patch Antennas for Broadband Wireless Communications	2018 (Awarded)
3	Dr.Harsimranjit Singh Gill	MITIGATION OF SECURITY ISSUES IN NEXT GENERATION PASSIVE OPTICAL NETWORKS	2018 (Awarded)
4.	Dr. Baljit Saini	Keystroke Dynamics Based User Authentication for Touch Screen Mobile Devices	2019 awarded
5.	Ms. Shally Gujral	Bandwidth enhancement of fractal antenna design in X-Band using a composed material	Perusing
6.	Ms. Monika Tuteja	Performance enhancement of microstrip antenna using a newly synthesized material	Perusing
7.	Ms. Simarpreet Kaur	Performance enhancement of stellat interferometry systems using multi-telescope photonic beam combiner	Perusing
8.	Simarjit Kaur	Secure Node localization and data aggregation scheme for wireless sensor networks	Perusing

### M.Tech students guided:

S. No.	Name Of the Student	Title of the Dissertation for M.Tech	Year of Completion
1	Taranvir Kaur	Solitons transmission in optical fiber communication	<b>2014 Completed</b>
2	Sandeep Kaur	Design issues of optical code division multiple access system	
3	Ramandeep Kaur	Investigations on design issues for ROF systems	
4	Monika	On the accuracy of pseudo Zernike moments for image processing applications	
5	Amanpreet Kaur	Various design issues for CATV transmission systems	
6	Prabhdeep Kaur	Performance enhancement of WDM system using dynamic reconfigurable optical add-drop multiplexer	
7	Anjali Gupta	Role of advance modulation formats for coherent optical communication systems	
8	Manparveen Singh	PERFORMANCE ENHANCEMENT OF VARIOUS SCHEDULING ALGORITHMS IN WIMAX	
9	Paramjit Singh	Routing protocols for networking	

10	Ankit Gupta	Design issues of metro networks	2015 Completed
11	Iqbal Deep Kaur	Investigations on design issues of WDM systems	
12	Ranbir Kaur	DENOISING OF SPEECH SIGNAL USING DISCRETE WAVELET TRANSFORM	
13	Harmandeep Kaur	Design issues of different OOFDM systems	
14	Veerpal Kaur	Effect of RIN and clipping on CATV systems	
15	Sandeep Singh	Simulation analysis of IMD in multitone analog CATV transmission systems	
16	Anjali Gupta	Role of advance modulation formats in optical communication systems	
17.	Sandeep Kaur jatana	Role of Higher order solitons in optical communication systems	
18.	Kamaldeep Kaur	Performance enhancement by using OTDM in Optical communication system	
19.	Prabhdeep Kaur	Synthesis and characterization of M-ferrites by using Sr as doping agent	
20.	Harminder Singh	Gallium doped M-Type ferites	
21.	Ramandeep Kaur	Effect of Indium doping on M-Type ferrites.	
22.	Harpreet Singh	Sr-Co doped Hexagonal M-Type ferrites	
23.	Sakshi Sharma	Design Improvements of Radio over Fiber System	
24.	Sandeep Singh	Design Improvements of CATV System by Employing Laser Clipping	2013 completed
25.	Amandeep Kaur	Simulation Analysis of IMD in multitone analog CATV transmission Systems	
26.	Rajwinder Singh	RIN Evaluation With and without Dispersion Compensation	
27	Parveen Rani	Analysis of Multitone Microwave signals on optical fiber system using external laser modulation	
28	Neeraj	Design issues for OFDM Systems	
29	Gursharan Singh	Precoding and clipping for STBC coded OFDM systems	

30	Mohit Sharma	INVESTIGATIONS ON DESIGN CONSTRAINTS FOR DROADM BASED OOCDMA SYSTEMS	
31	Sanjeev Kumar	Design improvements for metro networks at higher data rate	
32	Som Nath	Comparison of RZ and NRZ modulation formats for 40 Gb/s systems	

### Reviewer in International Journals:

1. IEEE Transactions in communication
2. IEEE Access
3. International journal of computers and Electrical Engineering
4. International Journal of Electronics and Communications (AEU)
5. IET Electronics Letters
6. Journal of Computational Electronics
7. Optik
8. International Journal of Electronics

### Short-Term Courses and Conference Organized:

#### Programmes/Conferences Organized:

1. Workshop: One-week workshop on "Antenna Design, Fabrication and Measurement Technologies" Nov 25-29, 2019, Department of Electronics and Communication Engineering, GBPIET, Pauri.
2. Short-Term Course: One-week short-term course on "FPGA and Mentor Graphics Tool" Oct 10-14, 2019, Department of Electronics and Communication Engineering, GBPIET, Pauri.
3. International Conference: Smart Machine Intelligence and Real-time Computing, Jun 26-27, 2020, Department of Electronics and Communication Engineering, GBPIET, Pauri.

### Subjects Taught:

1. Digital Signal Processing (UG, EC 4100, EE 304), Spring-2009, Spring-2016 (with Dr. V. Kanhangad).

S.No	Subject	Semester	Level
1.	BEEE	1 <sup>st</sup> /2 <sup>nd</sup>	UG
2.	EMI	3 <sup>rd</sup>	UG
3.	LCS	4 <sup>th</sup>	UG
4.	ACS	5 <sup>th</sup>	UG& PG
5.	DSP	5 <sup>th</sup>	UG& PG
6.	WC	6 <sup>th</sup>	UG& PG
7.	OFC	7 <sup>th</sup> /8 <sup>th</sup>	UG& PG
8.	AMP	1 <sup>st</sup> /2 <sup>nd</sup>	PG& PG

