CV

Dr. Sudhan Majhi

1. Name and full correspondence address

Dr. Sudhan Majhi, PhD, NTU, Singapore
Associate Professor, Indian Institute of Science (IISc), Bangalore, India
Fellow *Sir Visvesvaraya Young Faculty Research*
Fellow Institution of Ingineerer India, IEI
Fellow Institution of Electronics and Telecommunication Engenners (IETE)

2. Email(s) and contact number(s)

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3. Gender

Male

4. Research interest: Signal processing for wireless communication, estimation and detection, blind signal classification, blind wireless receiver design, synchronization, cooperative communications, cognitive radios and secrecy capacity, MIMO, OFDM, SC-FDMA, UWB systems, Sequence Design, receiver design and implementation on National Instrument (NI) hardware.

5. Subject Teaching/Taught

1. Wireless communication

2. Advanced Digital Communication

3. Advanced Digital Signal Processing

4. Statistical Signal Processing for communication

5. Principle of communication

6. Signal, system and networking

7. Communication networking

8. Information theory and coding

9. Probability and Statistics

10. Basic Electronics Lab

11. Design Lab

12. Linear Algebra

13. Calculus

14. Ordinary Differential Equation

15. Data Structure and Programming Language (C and C++)

6. Academic Qualification

Sl.No.	Degree	Year	Subject	University/Institution	% of marks
1.	PhD	2008	Signal processing for wireless communication	NTU, Singapore	N/A
2.	M.Tech	2004	Computer science and data processing	IIT Kharagpur, India	7.7/10
3.	M.Sc	2001	Applied Mathematics	Vidyasagar University, India	72%
4.	B.Sc	1999	Mathematics	Vidyasagar University, WB, India	62%

7. Details of professional training

Sl. No.	Experience	University/Board	Subject	Duration
1.	Summer school	AStar, Singapore	Machine Learning summer school	05/2011-06/2011
2.	Training on Fundamental course on Labview	National Instrument, Singapore	Basic course on Labview,	08/2010-09/2010
3.	Learning English as a secondary language	University of Michigan, USA	English	05/2008-06/2008
4.	Research Associate	NTU, School of CSE	Implement UDP protocol	09/2007-12/2007

8. Work experience

Sl.No.	Positions Held	Name of the Institute	From	To
1.	Associate Professor	Electrical and Communication Engineering , IISc, Bangalore	08/2021	Present
2.	Associate Professor	Electrical Engineering, IIT Patna	07/2018	08/2021
3.	Visiting Professor	Southwest Jiaotong University, China	9/2019	10/2019
4.	Visiting Professor	University of Melbourne, Australia	11/2018	11/2018
5.	Visiting Researcher	University of Michigan Dearborn, USA	05/2016	07/2016
6.	Assistant Professor	Jointly with Mathematics and Electrical Engineering , IIT Patna	03/2013	06/2018
7.	Assistant Professor	Department of Mathematics, IIT Patna	03/2013	10/2013
8.	Research Fellow	EEE, NTU, Singapore	06/2010	03/2013
9.	Research Scientist	IEITR, INSA, France	04/2009	06/2010
10.	Postdoctoral Research Fellow	University of Michigan, Dearborn, USA	01/2008	04/2009
11.	Junior research fellow	Department of Mathematics, IIT Kharagpur	06/2003	06/2004

9. Professional Recognition

Sl.No.	Name of Award	Awarding Agency/Institute	Year
1.	Fellow	*IETE*	2020
2.	Fellow	Institution of Engineers (India)	2020
3.	MDC Vice-Chairs, Asia Pacific Board	IEEE Communication Society	2020
4.	**Best Poster Award** received by PhD students in research scholar day	IIT Patna	2020
5.	Editor	IEEE Transactions on Vehicular Technology	2018-pres.
6.	Senior Editor	IEEE Communications Letters	2019-pres.
7.	Assos Editor	CSSP-Springer	2015-2019
8.	**Best M.Tech Thesis award** received by M.Tech research scholar	IIT Patna	2018
9.	**Best Poster Award** received by PhD students in research scholar day	IIT Patna	2018
10.	**Young Faculty Research Fellowship Award**	Medialabasia, Meity, Gov. India	2017
11.	**Best Paper Award** in "Advancing Technology for Humanity". 2016 IEEE students' Technology symposium	2016 IEEE students' Technology symposium	2016
12.	Associate Editor	CSSP, Springer	2016
13.	Received Start-up grant for **Young Scientists**	DST, GOI, Gov. India	2015
14.	Senior Member	IEEE, USA	2015
15.	**Best Award** in academic category of NI ASEAN Graphical System Design Achievement Awards	National Instrument, Singapore	2012
16.	**Best paper nomination**	IEEE WCNC 07, Hong Kong	2007
17.	Research Scholarship grand	NTU, Singapore	2004-2007
18.	GATE in Mathematics, All India Rank 8th	MHRD, Gov. India	2002
19.	Qualified NET-UGC examination in Mathematics	MHRD, Gov. India	2002
20.	Qualified NET-CSIR Examination in Mathematics	CSIR, Gov. India	2001
21.	Merit Scholarship	S.J. J. T, Delhi	1996-1999
22.	6th Rank in M.Sc, Mathematics	Vidyasagar University, WB, India	2001
23.	5th Rank in B.Sc, Mathematics	Vidyasagar University, WB, India	1999

10. Supervisor

Sl.No	Supervised in	Completed	Ongoing

1.	PhD	10	15
2.	M.Tech	20	2
3.	B.Tech	12	4

11. Project and funding

S.No.	Title	Principal Investigator	Funding Agency	Amount (Lakh)
1.	Young Faculty Research Fellowship	Dr. S. Majhi	Media Lab Asia, Meity,	37
2.	Efficient Non-Stationary OFDM based Multicarrier Waveform Design for High Data Rate Next Generation Mobile Wireless Communication	Co-Pi Dr. S. Majhi	Meity, Gov. India	64
3.	FPGA testbed for Modulation Classification of OFDM, MIMO-OFDM.	DR. S. Majhi	SERB, DST, Gov. India	21
4.	Blind STO and CFO Estimation and Implementation over OFDM, and MIMO-SC-FDMA testbed	Dr. S. Majhi	Start-up grant for Young Scientists (YSS) DST	25
5.	Secrecy Capacity analysis for Cognitive radios	Dr. S. Majhi	MediaLabAsia, Deity, (Manpower)	25
6.	Advanced Wireless Networks: Joint Design of Technology and Business Models course	Dr. S. Majhi	GIAN, MHRD	14
7.	Number Systems for Digital Signal Processing course	Dr. S. Majhi	GIAN, MHRD	8
8.	Developing Signal processing for wireless communication lab, Phase I	Dr. S. Majhi	National Instrument	120
9.	Developing Signal processing for wireless communication lab, Phase I	Dr. S. Majhi	IIT Patna	125
10.	Developing Signal processing for wireless communication lab, Phase II	Dr. S. Majhi	Keysight, Singapore	55
11.	Developing Signal processing for wireless communication lab, Phase II	Dr. S. Majhi	IIT Patna	55
14	Intelligent Receiver design by using statistical and machine learning approach	S. Majhi	Meity	70
TOTAL				**647**

12. Invited Talk

Sl. No.	Title of Talk	Institute/country	year
1.	Research, Publications, Grant and IPR	Technical Institute for Engineers (TIE), India	2019
2.	Blind Modulation classification by Deep learning	UPES, Dehradun, India	2019
3.	Blind modulation classification for MIMO System	NIT Jamshedpur , India	2019
4.	Systematic Sequence Design and their application for wireless communication	Beijing Jiaotong University, China	2019
5.	Blind modulation classification for MIMO System	UESTC, China	2019
6.	Blind modulation classification for OFDM System	ShanghaiTech University , China	2019
7.	Intelligent Receiver design for 5G comm.	ICCECE, Kolkata, India	2019
8.	Blind Modulation Classification for 5G	ICCCS, Nepal	2018
9.	Physical layer security for NOMA	ICACCI conference , Bangalore, India	2018
10.	Sequence Design for wireless communication	VU, India	2016
11.	Blind parameter estimated receiver for wireless communication	NIT-Durgapur, India	2013
12.	Cooperative communication and its performance analysis	KTH, Sweden	2010

13. Institute responsibility

Sl. No.	Positions	Year
1.	Member, BoG, IIT Patna	01/2021-07/2021
2.	Member, Finance committee, IIT Patna	01/2021-07/2021
3.	Chairman JEE (Advanced)	2018-2020
4.	Member of Institute house allotment committee	2019-2021
5.	Member of Institute Medical Committee	2019-2021
6.	Vice Chairman JEE (Advanced)	2016-2018
7.	Member of central purchase committee	2016-2018
8.	Convener/ PIC of Landscaping	2016-2017
9.	Chairman Departmental Purchase Committee	2014-2017
10.	Member of Institute Safety Committee	2017-2019

11.	HOD, Department of Mathematics	2014-2015
12.	Member of Senate	2014-2015
13.	Member of Institute of Academic Policy Committee	2014-2015
14.	Professor In Charge of Foreign Collaboration	2013-2015
15.	Professor In Charge of Classroom Development	2013-2015
16.	Member of Landscaping committee	2014-2015

14. Publications

Journal Papers

[1]   R. Kumar, P. Sarkar, P. K. Srivastava, and Sudhan Majhi. "A Direct Construction of Asymptotically Optimal Type-II ZCP for Every Possible Even Length," Accepted in *IEEE Signal Processing Letters* (2021).

[2]   A. K. Pathy, A. Kumar, R. Gupta, S. Kumar, and Sudhan Majhi." Design and Implementation of Blind Modulation Classification for Asynchronous MIMO-OFDM System," Accepted in *IEEE Transactions on Instrumentation & Measurement*, 2021, pp.1-12.

[3]   Gupta, Jitendra, Md Shahbaz Akhtar, Aneek Adhya, and Sudhan Majhi. "Optimal planning and design of SRLG-aware survivable LR-PON for wireless and FTTx networks," Computer Networks 194 (2021): 108142.

[4]   P. Sarkar, S. Majhi, Z. Liu, "Pseudo-Boolean Functions for Optimal Z-Complementary Code Sets with Flexible Lengths," Accepted at *IEEE Signal Processing Letters*, 2021

[5]   N. Nandan, S. Majhi, and Hsiao-Chun Wu, "Beamforming and Power Optimization for Physical Layer Security of MIMO-NOMA Based CRN Over Imperfect CSI," Accepted at *IEEE Transaction of vehicular Technology*, 2021

[6]   G S R Satyanarayana, S. Majhi, and S. K. Das, "A Vehicle Detection Technique Using Binary Images for Heterogeneous and Lane-Less Traffic," Accepted at *IEEE Transactions on Instrumentation & Measurement*, 2021

[7]   Md S. Akhtar, A. Adhya, J. Gupta, "S MajhiCost-optimal architecture design for adaptive multi-stage TWDM-PON" with PtP WDM overlay, Optical Engineering 60 (1), 2020

[8]   A. Roy, P. Sarkar and S. Majhi, "A Direct Construction of q-Ary 2-D Z-Complementary Array Pair Based on Generalized Boolean Functions," Accepted at *IEEE Communications Letters*, 2020

[9]   Z. Haque, V.S. Kumar and S. Majhi, "A Closed-form Secrecy Outage Probability for mmWave Communication by Ordered Transmit Beamforming," Accepted at *IEEE Communications Letters*, 2020

[10] P. Sarkar and S. Majhi, "A Direct Construction of Optimal ZCCS With Maximum Column Sequence PMEPR Two for MC-CDMA System," Accepted at *IEEE Communications Letters*, 2020

[11] S. Das and S. Majhi, "Two-Dimensional -Complementary Array Code Sets Based on Matrices of Generating Polynomials," Accepted at *IEEE Transactions on Signal Processing*, 2020

[12] S. Das, U. Parampalli, S. Majhi, Z. Liu, and S Budishin, "New Optimal Complementary Code Sets Based on Generalized Paraunitary Matrices," Accepted at *IEEE Transactions on Signal Processing*, 2020

[13] P. Sarkar, S. Majhi, and Z. Liu, "A Direct and Generalized Construction of Polyphase Complementary Sets with Low PMEPR and High Code-Rate for OFDM System," Accepted at *IEEE Transactions on Communication*, 2020

[14] S. Majhi, "Intelligent and secure transceiver design and implementation for future wireless communication," Accepted at CSI, Springer, 2020

[15] A. Samsad, S. Majhi, "A Near-Optimal and Low-Complex Joint Multiuser Detection for QCSS-MC-CDMA System," Accepted at *IEEE System Journal*, 2020

[16] P. Sarkar, A. Roy, Sudhan Majhi, "Construction of Z-Complementary Code Sets with Non-Power-of-Two Lengths Based on Generalized Boolean Functions", Accepted at *IEEE communication letters*, 2020

[17] R. Gupta, S. Kumar, S. Majhi, "Blind Modulation Classification for Asynchronous OFDM Systems Over Unknown Signal Parameters and Channel Statistics," Accepted *at IEEE Transactions on Vehicular Technology*, 2020.

[18] S. Kumar, M. Chaudhari, R. Gupta, S. Majhi, "Multiple CFOs Estimation and Implementation of SC-FDMA Uplink System Using Oversampling and Iterative Method," Accepted at *IEEE Transactions on Vehicular Technology*, 2020.

[19] Avik R. Adhikary, P. Sarkar and Sudhan Majhi,"A Direct Construction of q-ary Even Length Z-Complementary Pairs Using Generalized Boolean Functions" accepted at *IEEE Signal Processing Letters*, 2019

[20] A. R. Adhikary, Sudhan Majhi, Zilong Liu, Yong Liang Guan; "New Sets of Optimal Odd-length Binary Z-Complementary Pairs," accepted at *IEEE Transaction on Information Theory*, 2019.

[21] Avik R. Adhikary and Sudhan Majhi, "New Constructions of Complementary Sets of Sequences of Lengths Non-Power-of-Two," accepted at *IEEE Communications Letters*, 2019.

[22] S. Das, Sudhan Majhi, S. Budishin, Z. Liu, "A New Construction Framework for Polyphase Complete Complementary Codes with Various Lengths," Accepted at *IEEE Transactions on Signal Processing*, Mar 2019.

[23] S. Kumar, Sudhan Majhi, "Blind Symbol Timing Offset Estimation for Offset-QPSK Modulated Signals," Accepted at *ETRI, Wiley*, 2019.

[24] A.R. Adhikary and Sudhan Majhi, "New Construction of Optimal Aperiodic Complementary Sequence Sets of Odd-lengths," Accepted at *IET Electronics Letters*, 2019.

[25] R. Gupta, Sudhan Majhi, O. Dobre, "Design and Implementation of a Tree-Based Blind Modulation Classification Algorithm for Multiple-Antenna Systems," Accepted at *IEEE Transactions on Instrumentation & Measurement*, 2018.

[26] P. Sarkar, Sudhan Majhi, H. Vetticalladi, and A. S. Mahajumi, "A Direct Construction of Inter-Group Complementary Code Set," **IEEE Access**, vol. 6, pp. 42047-42056, 2018.

[27] P. Sarkar, Sudhan Majhi, Zilong Liu, "Optimal Z-complementary Code Set From Generalized Reed-Muller Codes," Accepted at *IEEE Transactions on Communication*, 2018.

[28] A. R. Adhikary, Sudhan Majhi, Zilong Liu, Yong Liang Guan, " New Sets of Even-Length Binary Z-Complementary Pairs With Asymptotic ZCZ Ratio of 3/4," *IEEE Signal Processing Letters*, vol. 25, no. 7, pp. 970-973, July 2018..

[29] S. Das, Sudhan Majhi, Z. Liu, "A Novel Class of Complete Complementary Codes and Their Applications for APU Matrices," *IEEE Signal Processing Letters*, vol. 25, no. 9, pp. 1300-1304, Sept. 2018.

[30] N. Nandan, Sudhan Majhi, H.C. Wu, "Secure Beamforming for MIMO-NOMA Based Cognitive Radio Network," *IEEE Communications Letters*, vol. 22, no. 8, pp. 1708-1711, Aug. 2018.

[31] S. Kumar, Sudhan Majhi, Y. Chau, "Multi-user CFOs Estimation for SC- FDMA System Over Frequency Selective Fading Channels," *IEEE Access*, vol. 6, pp. 43146-43156, 2018.

[32] N. Nandan, Sudhan Majhi, and H. C. Wu, "Maximizing Secrecy Capacity of Underlay MIMO-CRN through Bi-Directional Zero-Forcing Beamforming," *IEEE Transactions on Wireless Communications*, vol. 17, no. 8, pp. 5327-5337, Aug. 2018.

[33] Xiaohang Song, Nithin Babu, Wolfgang Rave, Sudhan Majhi, and Gerhard Fettweis, "Two-Level Spatial Multiplexing using Hybrid Beamforming Antenna Arrays for mm Wave Communications," *IEEE Transactions on Wireless Communications*, vol. 17, no. 7, pp. 4830-4844, July 2018.

[34] Sudhan Majhi, N. Nandan, "Secrecy Capacity Analysis of MIMO System over Multiple Destinations and Multiple Eavesdroppers," *Wireless Personal Communications, Springer* , vol. 100, no. 3, pp. 1009-1022, 2018

[35] S. Das, S. Budishin, Sudhan Majhi, Z. Liu, Y. L. Guan, "A Novel Multiplier-Free Generator for Complete Complementary Codes," *IEEE Transactions on Signal processing*, vol. 66, no. 5, pp. 1184 - 1196, Mar. 2018.

[36] M. Kumar and S. Majhi, "Joint signal detection and synchronization for OFDM based cognitive radio networks and its implementation", Wireless Networks, Springer, pp. 1-14 September 2017.

[37] Sudhan Majhi, R. Gupta, W. Xiang, and S. Glisic, "Hierarchical Hypothesis and Feature based Blind Modulation Classification for Linearly Modulated Signals," *IEEE Transaction on Vehicular Technology*, vol. 66, no. 12, pp. 11057 - 11069, Dec. 2017.

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[39] A. R. Adhikari, Z. Liu, Y. L. Guan, Sudhan Majhi, S. Budishin; " Optimal Binary Periodic Almost-Complementary Pairs," *IEEE Signal Processing Letters,* vol. 23, no. 12, pp. 1816-1820, Dec. 2016.

[40] Sudhan Majhi**,** Ting See Ho, *"*Blind Symbol Rate Estimation and Testbed Implementation for OQPSK Modulated Signals", *IEEE Transactions on Vehicular Technology*, 64 (3), 954-963, March 2015.

[41] Sudhan Majhi**,** P. Richardson, "Capacity Analysis of Orthogonal Pulse-Based TH-UWB signals," *Wireless Personal Communications and Networking, Vol.64, No.2, pp. 255-272, 2012*.

[42] Sudhan Majhi**,** A. S. Madhukumar, A. B. Premkumar, W. Xiang, and P. Richardson, "Enhancing Data Rates of TH-UWB Systems Using M-ary OPPM-BPSM Modulation Scheme," *Wireless Personal Communications and Networking , Vol.56, No.3, pp. 583-597, 2011.*

[43] Sudhan Majhi**,** P. Richardson, "Power Spectral Analysis of Orthogonal Pulse-Based TH-UWB Signals," *International Journal of Communications, Network and System Sciences,* Vol. 3, No. 11. pp. 843-849, 2010.

[44] Sudhan Majhi, Y. Nasser and J. –F. Helard, "Outage performance of opportunistic amplify-and-forward relaying over asymmetric fading environments," *International Journal of Communications, Network and System Sciences,* Vol. 3, pp. 430-433, 2010.

[45] Sudhan Majhi, A. S. Madhukumar, A. B. Premkumar, and P. Richardson, "Combining OOK with PSM Modulation for TH-UWB Radio Systems: A Performance Analysis," **EURASIP Journal on Wireless Communications and Networking,** Vol. (2008), pp.1-11, 2008.

[46] A. S. Madhukumar, Zhen Ye, and **Sudhan Majhi**, "Coexisting Narrowband and Ultra Wideband Systems: Analysis of Power Spectral Density and In-band Interference Power," **World Scientific and Engineering Academy and Society (WSEAS),** Vol. 6, No. 2, pp. 318-324, Feb. 2007.

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[48] Sudhan Majhi, A. S. Madhukumar, and A. B. Premkumar, "Reduction of UWB interference at NB systems based on a generalized pulse waveform," **IEICE Electronics Express**, Vol.3, No.14, pp. 361-367, 2006.

Patents

[49] R. Gupta and S. Majhi, "A Blind Modulation Classification Method for Determining Modulation Format of a Received Signal, IN Patent No. 201931044144, Dated 31/10/2019.

[50] Sudhan Majhi and Manish Kumar, "Blind Wireless Receiver Testbed Implementation for Single Carrier Systems," India Patent Application No. 1337/KOL/2014, dated 22.12.2014.

[51] Sudhan Majhi, Rahul Kumar, and B Jeevan Prakash, "A Blind Modulation Classification (BMC) Method for Linearly Modulated Signal over Single Carrier Systems," *Indian Patent Application No. 201631001884 of 19.01.2016*.

Book Chapter

[52] P. Sarkar and Sudhan Majhi, "A Direct Construction of Intergroup Complementary Code Set for CDMA," chapter in book of "Error Detection and Correction" published by IntechOpen, 2019.

[53] Sudhan Majhi and Y. Nasser and J. -F. Helard, "Orthogonal Pulse-Based Time Hopping Ultra Wideband Radio Systems" *book "Ultra wide band communication technology "*, published by Sciyo 2011.

[54] Sudhan Majhi Y. Nasser and J. -F. Helard, "Outage probability analysis of cooperative communications over asymmetric fading channel," *book "Communications and Networking"*, published by Sciyo 2010.

Conference Papers:

[55] H Harsha, S Kumar, S Majhi, "Blind CFO Estimation for Multi-user in SC-FDMA Uplink Systems Using Variance Minimization," Accepted at International Wireless Communications and Mobile Computing (IWCMC), 2021

[56] Md S. Akhtar, P.Biswas, A. Adhya, S. Majhi, "Cost-efficient Mobile Backhaul Network Design over TWDM-PON," IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), pp. 1-6, 2020

[57] M. S Chaudhari and Sudhan Majhi, "Automated Symbol Rate Estimation Over Frequency-Selective Fading Channel by Using Deep Neural Network," IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), pp. 1-6, 2020

[58] I. Trivedi, S. Majhi, "Span Level Model for the Construction of Scientific Knowledge Graph Authors," 5th International Conference on Computing, Communication and Security (ICCCS), pp. 1-6, 2020

[59] R. Hazra, S. Majhi, "Detecting Respiratory Diseases from Recorded Lung Sounds by 2D CNN," 5th International Conference on Computing, Communication and Security (ICCCS), pp. 1-6, 2020

[60] M Banerjee and S Majhi, "Multi-class Heart Sounds Classification Using 2D-Convolutional Neural Network," 5th International Conference on Computing, Communication and Security (ICCCS), pp. 1-6, 2020

[61] S Parida, S Majhi, SK Das, "Wireless Powered Microwave and mmWave based Communication Networks-A Survey, International Conference on Inventive Computation Technologies (ICICT), India, pp. 1-6, 2020

[62] S. Das, U. Parampalli, **Sudhan Majhi** and Z. Liu, "An Introduction to Z-Paraunitary Matrices," Accepted in International Workshop on Signal Design and its Applications in Communications (IWSDA'19), Dongguan, China, 2019.

[63] R. Gupta, S. Kumar, **Sudhan Majhi**, "Blind Modulation Classification for OFDM in the Presence of Timing, Frequency, and Phase Offsets," Accepted at Vehicular Technology Conference Fall, Resent Results,2019.

[64] S. Das, U. Parampalli, **Sudhan Majhi**, and Z. Liu, "Near-Optimal Zero Correlation Zone Sequence Sets from Paraunitary Matrices," Accepted in IEEE International Symposium on Information Theory (ISIT), Paris, 2019.

[65] P. Sarkar, **Sudhan Majhi**, and Z. Liu, "A Direct and Generalized Construction of Polyphase Complementary Set With Low PMEPR," Accepted in IEEE International Symposium on Information Theory (ISIT), Paris, 2019.

[66] S. Das, **Sudhan Majhi** and P. Sarkar, "An Improved Multiplier-free Generator for Polyphase Complete Complementary Codes," Accepted at 10th International Conference on Sequences and Their Applications, Hong Kong, 2018

[67] R. Gupta, **Sudhan Majhi**, O. Dobre, "Blind Modulation Classification of Different Variants of QPSK and 8-PSK for Multiple-Antenna Systems with Transmission Impairments," Accepted in IEEE 88th Vehicular Technology Conference (VTC-Fall), Chicago, USA, 2008.

[68] **Sudhan Majhi**, M. Kumar and W. Xiang, "Implementation and Measurement of Blind Wireless Receiver for Single Carrier Systems," Accepted in *International Instrumentation and Measurement Technology Conference*, USA, 2018.

[69] N. Nandan and **Sudhan Majhi**, "Secrecy Outage Analysis by Applying Bi-directional Beamforming in Underlay MIMO-CRN," Accepted in *14th International Wireless Communications and Mobile Computing Conference*, Cyprus, 2018.

[70] M. Kumar and **Sudhan Majhi**, "An Efficient Blind CFO Estimation Technique for MIMO-OFDM Systems Using Space-time Diversity," Accepted in *14th International Wireless Communications and Mobile Computing Conference*, Cyprus, 2018.

[71] S. Das, **Sudhan Majhi**, S. Budisin, Z. Liu and Y. L. Guan, " A Novel Multiplier-Free Generator for Complete Complementary Codes," in *Proc. 2017 IEEE Asia-Pacific Conference on Communications* (APCC), Dec., pp. 1-6.

[72] **Sudhan Majhi**, R. Gupta, and W. Xiang, "Novel Blind Modulation Classification of Circular and Linearly Modulated Signals Using Cyclic Cumulant*," in Proc. 2017 IEEE International Symposium on Personal, Indoor and Mobile Radio Communications* (PIMRC), Oct., pp. 1-5.

[73] R. Adhikary, **Sudhan Majhi**, Z. Liu, and Y. L. Guan; "New Optimal Binary Z-Complementary Pairs of Odd Length", *in Proc. 2017 IEEE International Workshop on Signal Design and its Applications in Communications (IWSDA)*, Sep., pp. 14-18.

[74] K. Kanth, S. Gupta, **Sudhan Majhi**, "Selection of Path and Wavelength for Setting up a Free Space Optical Link," in *Proc. 2016 IEEE Students' Technology Symposium*, Sep., pp. 24-29. **(Best Paper Award).**

[75] S. Singh, A. Adhikary, A. Samad and **Sudhan Majhi**, "Design and Performance Analysis of Quasi-Asynchronous SC-FDMA-CDMA System using Quasi Complementary Sequence Sets," in *Proc. 2016 IEEE International Conference on Advances in Computing, Communications and Informatics*, Nov., pp. 1752 - 1756.

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[77] A. Samad, A. R. Adhikary, **Sudhan Majhi**, "Receiver Design for Quasi-Asynchronous MC-CDMA by using QCSS Code", in *Proc. 2016 IEEE International Conference on Communication and Signal Processing (ICCSP),* Apr., pp. 1159 - 1163.

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[79] **Sudhan Majhi**, P. Kumar, and Y. Nasser "Outage Probability of Opportunistic AF OFDM Relaying over Rician Fading Channel," in *Proc. 2016 IEEE International Conference on Telecommunications (ICT)* , May, pp. 0442 - 0447.

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[82] **Sudhan Majhi,** W. Xiang , "Blind Symbol Rate Estimation and Testbed Implementation for Linearly Modulated Signals,'' in *Proc. 2013 IEEE Vehicular Technology Conference (VTC Fall), Sep, pp. 1-5.*

[83] **Sudhan Majhi,**C. Yading, S. H. Ting, "Design and Implementation of a Universal Receiver Testbed for Single Carrier and Multicarrier Signals on NI PXIe Platforms," **Best Award in academic Section of *NI ASEAN Graphical System Design Achievement Awards 2012.***

[84] **SudhanMajhi,** Hua Qian, Weidong Xiang , Sateesh Addepalli and Zhenguo Gao, "Analysis of Outage Probability for Opportunistic Decode-and-Forward Relaying Network over Asymmetric Fading Channels,'' in *Proc. 2011 IEEE International Conference on Ubiquitous and Future Networks*, Jun., pp. 135 – 139.

[85] **Sudhan Majhi,** Y. Nasser and J. -F. Helard, "Outage performance of opportunistic decode-and-forward relaying over asymmetric fading environments," in *Proc. 2010 IEEE International Symposium on* Personal Indoor and Mobile Radio Communications, Sep., pp. 362 – 367.

[86] **Sudhan Majhi,** R. Raulefs, Y. Nasser, A. Dammann and J. –F. Helard, "*Geo-Location Aided Cooperative Communication,*" in *Proc. 2010 IEEE Workshop on Positioning, Navigation and Communication*, Mar., pp. 264 - 269.

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