

RESUME

DR. MANISH SABRAJ

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Katra Distt Reasi (J&K) 182320



EDUCATIONAL QUALIFICATION:

Ph.D. (Electronics and Communication Engineering) from SHRI MATA VAISHNO DEVI UNIVERSITY in 2013.

M. Tech. (Electronics and Communication Engineering) from IIT GUWAHATI in 2003 with first class.

GATE 2002 percentile:98.74 GATE 2001 percentile:94.69

B.E.(Electronics and Communication Engineering) from Govt. College of Engineering and Technology Jammu in 2001 with first class.

| Degree Offered | Board \University | Year of Passing | CPI/Percentage |
|-----------------------|--------------------------|------------------------|-----------------------|
| Ph.D (ECE) | SMVD University | 2013 | -----N.A.----- |
| M.Tech(ECE) | IIT Guwahati | 2003 | 8.44 (CPI) |
| B.E.(ECE) | Jammu University | 2001 | 69.45% |
| 12 th | J&K Board | 1995 | 74.50% |
| 10 th | J&K Board | 1993 | 70.62% |

EXPERIENCE:

- I. Worked as a Lecturer(ECE) at P.D.M Engineering College (Haryana) for one year from 16-06-2004 to 09-05-2005.
- II. Worked as a Lecturer(ECE) at Shri Mata Vaishno Devi University Katra (J &K) for three years from 21-05-2005 to 19-06-2008.
- III. Worked as a Assistant Professor (ECE) at Shri Mata Vaishno Devi University Katra (J &K) from 20-06-2008 to 06-05-2013.
- IV. Presently working as Associate Professor (ECE) at Shri Mata Vaishno Devi University Katra (J &K) w.e.f 07-05-2013.

COMPUTER KNOWLEDGE:

DOS, Windows,FORTRAN, BASIC, C,C++,Matlab,8085µp,8086µp,ADSP 218X, TMS320C5X

PROJECT IN M.TECH.:

Title : OFDM AIR- INTERFACE FOR WIRELESS COMMUNICATIONS

Software : MATLAB,ADSP 2181 Assembly Language

Description : Modulation technique is Orthogonal Frequency Division Multiplexing in which fast data stream is used to modulate a number of carriers which are closely spaced in frequency domain. Because of orthogonality between the carriers, the information on each carrier can be received.

SUBJECTS TAKEN IN M.Tech:

- * Statistical Digital signal Processing
- * Computer networks
- * ADSP 218x Processor lab
- * Linear algebra,Probability and Random process
- * Linear System Theory
- * Nonlinear Systems
- * Digital Control Systems
- * Optimal Control

ACHIEVEMENTS:

- 3rd rank in IIT Guwahati during M.Tech.
- Secured 13 rank in RECEE,J&K in 1996.
- Got 94.69 percentile in GATE-2001
- Got 98.74 percentile in GATE-2002
- Got MHRD scholarship for 1.5 years during M.Tech.
- Throughout First Division

PERSONAL PROFILE:

| | | |
|-----------------|---|--------------------------------|
| Name | : | MANISH SABRAJ |
| Father's name | : | LATE SH. RAM PAUL |
| Date of Birth | : | 12th JUNE,1978 |
| Sex | : | Male |
| Marital status | : | Married |
| Nationality | : | Indian |
| Languages Known | : | English, Hindi, Dogri, Punjabi |

Interests:

Interested in innovative programming, creative applications of electronics skills in new areas, development of user-friendly applications.

I here by declare that all the above information is true to the best of my knowledge.

Sd/
Manish Sabraj

Dr. Manish Sabraj
School of Electronics & Communication Engineering
Shri Mata Vaishno Devi University

I. List of Publications:

- [1]** **Manish Sabraj** and Manish Rai, “Analysis for Selection Diversity Scheme in DS-CDMA Networks with Synchronization Errors” , Proceedings; VLSI, Embedded Systems, Signal Processing and Communication Technologies, April 2009, pp 156-158.
- [2]** **Manish Sabraj**, Vipin Kakkar, R.K.Abrol, “Spectrum Estimation Using FFT”, National Conference on Emerging Trends in Electronics Engineering and Computing E³C 2010”, Feb 2010.
- [3]** **Manish Sabraj**, Vipin Kakkar, R.K.Abrol, “ Spectrum Estimation of Signal from the noisy measurements using Window- Based and AR model-based methods”, International Conference on Engineering Innovations : A Fillip to Economic Development, Feb 2010.
- [4]** **Manish Sabraj**, Vipin Kakkar, “ Distribution Function Estimation of the Timing Jitter in Sample Rate Converter ”, *International Journal of Engineering and Technology* ISSN 0975-4024 Vol.2(2), April 2010, pp110-114.
- [5]** **Manish Sabraj**, Vipin Kakkar, “Spectrum Estimation Methods: Comparison and Performance Analysis”, *Advances in Wireless and Mobile Communications* ISSN 0973-6972 Volume 3, Number 2 (2010), pp. 175–181.
- [6]** **Manish Sabraj**, Vipin Kakkar, “ Spectral Analysis of Sample Rate Converter ”, *Signal Processing: An International Journal (SPIJ)*, ISSN 1985-2339 Volume(4): Issue (4), October 2010, pp 219-217.
- [7]** **Manish Sabraj**, Vipin Kakkar, “ Performance Degradation of Sample Rate Converter with Output Frequency Variation ”, *International Journal of Electronics and Communication Engineering Research and Development (IJEERD)*, ISSN 0975-6450 Volume 3, Number 2, (2011), pp 219-225.
- [8]** **Manish Sabraj**, Vipin Kakkar, "Impact of Input Frequency and Modulator Order on the Performance of Sample Rate Converter" *International Journal of Electronics and Communication Technology (IJECT)* ISSN : 2230-7109 (Online) | ISSN : 2230-9543 (Print) Vol. 2 Issue 2 (June, 2011), pp. 119-121.
- [9]** **Manish Sabraj**, Vipin Kakkar, " Performance Analysis of Sample Rate Converter with variation of conversion factor”, *International Journal of Electronics Engineering Research (IJEER)* ISSN 0975-6450 Volume 3 Number 2 (July, 2011) pp. 219-225.

- [10] **Manish Sabraj**, Vipam Kakkar, " Performance Analysis of Upsample Filter for Sample Rate Converter", *Signal & Image Processing : An International Journal (SIPIJ)* ISSN 2229-3922, e-ISSN 0976-710x, doi: 10.5121/sipij, Vol. 3, No.1, February 2012, pp 59-65.
- [11] Aasif Bashir Dar et al., "An Analysis of 16 Channel 64 User Hybrid WDM/TDM Topology in the optiwave simulation environment", *International Journal of Computer Science and Engineering*, E-ISSN 2347-2693 Volume 4 Issue 5, May 2016 pp 31-35.
- [12] Sadaf Nadeem, Manish Sabraj, " PAPR Reduction in OFDM Using Clipping and Filtering Scheme" *International Journal of Advanced Research in Science and Engineering*, ISSN 2319-8354 Vol 7 Issue 4 March 2018.
- [13] Sadaf Nadeem, Manish Sabraj, " PAPR Reduction in OFDM Using Selective Mapping and Dynamic Clipping " *International Journal of Electronics, Electrical and Computational Systems*, ISSN 2348-117X Vol 7 Issue 3 March 2018.
- [14] Tehleel Zahoor, Manish Sabraj, "LMS-RLS Joint Adaptive Equalization in Wireless Communication" *International Journal of Advanced Research in Computer Science* ISSN 0976-5697, Vol 9 No 2 April 2018.
- [15] Mohit Kumar, Manish Sabraj, "Pulse Compression in Radar System using BFO" *International Journal of Electronics Engineering*, ISSN 0973-7383, Vol 11 Issue 1 May 2019.
- [16] Shafi, M., Jha, R.K., Sabraj, M., A survey on security issues of 5G NR:Perspective of artificial dust and artificial rain, *Journal of Network and Computer Applications* (2020), doi:<https://doi.org/10.1016/j.jnca.2020.102597>

II. Papers Presented in Conferences/ Seminars etc..

- [1] "Spectrum Estimation using FFT" , National Conference on Emerging Trends in Electronics Engineering and Computing , Feb 2010.
- [2] "Spectrum Estimation of Signal from noisy measurements using window based and AR Model Based Methods", International Conference on Engineering Innovation, Feb 2010.
- [3] "A Novel Synthesis Technique for Angular Stable Modified Circular Ring Frequency Selective Surface", National Conference on Trends in Electronics and Communication Technologies, March 2015.
- [4] "PAPR Reduction in OFDM Using Selective Mapping and Dynamic Clipping", International Conference on Research Trends in Engineering, Applied Science and Management, March 2018.

- [5] “*PAPR Reduction in OFDM Using Clipping and Filtering Scheme*”, International Conference on Research Trends in Engineering, Applied Science and Management, April 2018.

III. STC/Workshops/Conferences/MOOCs etc. Attended

- [1] Short Term Course on “*Programming in C and C++*”, conducted by CEDTI Jammu/Srinagar, January 2003.
- [2] Short Term Course on “*DSP using Matlab*”, Organized by NITTTR Chandigarh, July 2006.
- [3] Workshop on “*High Impact Teaching Skills*” Organised by Del Carneige and associates, Inc. Trainer & Wipro, November 2009.
- [4] “*Mission 10X workshop*” Organised by Wipro and Indian Society for Technical Education, November 2009.
- [5] Short Term Course on “*Instrumentation & Signal Processing*”, Organized by NIT Srinagar, June 2010.
- [6] Workshop on “*Trends in Communication Technologies*”, Organized by IETE Jammu, September 2010.
- [7] Workshop on “*Introduction to Research Methodology*”, Organized by IIT Bombay, July 2012.
- [8] Workshop on “*Aakash for Education*”, Organized by IIT Bombay, November 2012.
- [9] “*First National Conference on Machine Intelligence Research and Advancement (NCMIRA,12)*” Organized by School of Electronics and Communication Engineering, Shri Mata Vaishno Devi University, Katra, December 2012.
- [10] Two-week ISTE Workshop on “*Analog Electronics*” conducted by IIT Kharagpur, June 2013
- [11] Two-week ISTE Workshop on “*Signals and Systems*” conducted by IIT Kharagpur, January 2014.
- [12] Two week ISTE Workshop on Control Systems conducted by IIT Kharagpur from 2nd to 12th Dec 2014.
- [13] One Week Short Term Course on EDA Tools and Design Methodologies in VLSI & Communication Systems during 12th -16 June 2015.

- [14]** AICTE approved Four-week Faculty Development Program on Use of ICT in Education and Blended Learning conducted by IIT Bombay from May 2nd 2016 to July 10th 2016.
- [15]** One Day Workshop on Patent Drafting and Filing organized by Department of Biotechnology Shri Mata Vaishno Devi University Katra on 20th October 2016.
- [16]** UGC Sponsored Two Day Workshop on Ultra Low Power Biosensors and Implantable Microsystems organized by Department of Electronics and Communication Engineering, Shri Mata Vaishno Devi University Katra during 2-3 December, 2016.
- [17]** Two week ISTE STTP on CMOS, Mixed Signal and Radio Frequency VLSI Design conducted by IIT Kharagpur from 30th January to 4th February 2017.
- [18]** One Day Faculty Development Programme on PCB Design/ Circuit Simulation using Target3001! Software with DELLSOFT Technologies Pvt. Ltd. On 14th June 2017.
- [19]** Successfully passed the course Basic Physics by SWINBURNE University of Technology on June 27th, 2017.
- [20]** Acted as a Technical Chair at the 4th International Conference on Recent Trends and Advancements in Engineering and Technology organized by Shri Mata Vaishno Devi University Katra during 03-04 November 2017.
- [21]** TEQIP-III Sponsored Workshop on NBA Accreditation at The Institution of Engineers (INDIA) during 08-10 December 2017.
- [22]** AICTE approved Faculty Development Programme (FDP 101X) conducted by IIT Bombay from March 8, 2018 to April 12, 2018.
- [23]** TEQIP-III funded and Technically Supported by MathWorks India, a two week Refresher course on Introduction to MATLAB and Research Enhancement Tools organized by SECE in collaboration with HRDC SMVDU during 16th March- 25 March 2018.
- [24]** TEQIP-III funded One Week Faculty Development Program on Emerging Issues in VLSI Design organized by SECE Shri Mata Vaishno Devi University Katra during 7th May 2018 to 11th May 2018.
- [25]** AICTE approved Faculty Development Programme (FDP201X) on Pedagogy for Online and Blended Teaching Learning Process conducted by IIT Bombay from May 3, 2018 to May 30, 2018.
- [26]** MHRD-TEQIP-KITE Five Day TEQIP-III Summer Training Programme on Active Learning Workshop conducted by IIT Bombay during 11 June-15 June 2018.
- [27]** Professional Development Training under TEQIP-III held from 6th to 10th August 2018 at IIM Trichy.

IV. Projects/Dissertations Supervision:

| Level | Title of the Project | Name of the Students | Name of the Co-Supervisors (If any) | Remarks* (If industry or hardware related) |
|--------------|--------------------------------------------------------|--------------------------------------------------|------------------------------------------------|---------------------------------------------------|
| UG | Digital Image Stegnography using wavelet transform | Hemant Yadav,Raj Kumar ,Rajendra Kr.,Rahul Dular | Sole Supervisor | Software Related |
| UG | Quiz Game Controller for Hats with Data Logging | Harsh,Kundan,Abhimanyu & Kanav | Sole Supervisor | Hardware Related |
| PG | Development of Low Power Buck Converter | Aamir Amin | Dr. Vipin Kakkar | Hardware/Software Related |
| PG | Design and Modelling of Electrostatic Energy Harvester | Sakshi Koul | Dr. Vipin Kakkar | Hardware/Software Related |
| UG | Wireless RF | Harsh Koushal (2013EEC18) | NA | Hardware Related |
| UG | Arduino Based Shadow Alarm | Anuj Happa (2013EEC06) Siddhant Sharma | NA | Hardware Related |

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|----|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------|
| | | (2013EEC45) Varun Dev (2103EEC48) Vishant Sharma (2013EEC52) | | |
| UG | Design and Development of Eye Controlled Wheel Chair | Ansu Kumari (2012EEC08) Dharini Maheshwari (2012EEC23) Nirupa Sinha (2012EEC51) Meenakshi Jha (2012EEC80) | Dr. Sumeet Gupta | Hardware and Software Related |
| PG | Biosensor for Cerebrospinal Fluid Monitoring | Baseerat Khan (14MMC008) | Dr. Vipin Kakkar | Software Related |
| PG | Lab on Chip Sensor for in vivo Diagnosis of Hypertension | Shagun Gupta (14 MMC 021) | Dr. Vipin Kakkar | Software Related |
| UG | DTMF Based Home Automation System | Akarshan Magotra(14BEC007) Akshat Antahal(14BEC009) Nishant(14BEC035) Suchet Sharma(14BEC054) | NA | Hardware Related |

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| UG | Obstacle AVOIDER Robotic Vehicle | Akshat Antahal(14BEC0 09) Nishant(14BEC0 35) Suchet Sharma(14BEC0 54) Nikhil Sharma(2012EE C83) | NA | Hardware Related |
| UG | Efficient Power Manager | Akarshan Magotra(14BEC 007) Gurmaan Shaan Singh(14BEC02 4) | NA | Hardware Related |
| PG | ISI Reduction in Wireless Communication using Adaptive Equalization | Tehleel Zahoor(15MMC 016) | NA | Software Related |
| UG | GSM Based Home Automation System | Akshat(14B EC009) Nishant (14BEC035) Suchet (14BEC054) | NA | Hardware Module |
| UG | Bluetooth Controlled Home | Aakansha Sabharwal (15BEC003) | NA | Hardware Module |

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|----|-----------------------------------------|-------------------------------------------------------------------------------|-----------------|--------------------------------------------------|
| | Automation | | | |
| UG | Infinite Range Surveillance Robot | Akshat(14B EC009) Nishant (14BEC035) Suchet (14BEC054) | NA | Hardware Module |
| PG | Peak to Average Power Reduction in OFDM | Sadaf Nadeem (2016 MMC 013) | NA | Software |
| UG | IMPLEMENTATION OF ISIS AND BGP | Rudrakshi Sharma (15BEC018) | NA | Related to Telecom |
| UG | ROBOTIC ARM GESTURE | Navita Dubey(15BEC014) | NA | Hardware Module |
| PG | PULSE COMPRESSION | Mohit Kumar | NA | Software |
| UG | VOICE CONTROLLED ROBOT CAR | 17BEC002 ABHINAN DAN JOSHI 17BEC043 RAJEEV KUMAR 17BEC044 RAKSHIT ABROL | SOLE SUPERVISOR | HARDWARE AND SOFTWARE KNOWLEDGE RELATED TO TITLE |

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|----|------------------------------------------------|------------------------------------------------------|---------------------------|---------------------------------------------------------------|
| UG | AUTOMATIC GARBAGE COLLECTION SYSTEM USING IOT | ABHINAV SLATHIA (16BEC005) SAHIL GUPTA (16BEC052) | SOLE SUPERVISOR | HARDWARE AND SOFTWARE KNOWLEDGE RELATED TO TITLE |
| UG | LTE and Baseband integration (INTERNSHIP) | Piyusha Khajuria(16BEC041) | Mr. Rajesh Koul | EXPOSURE TO INDUSTRY |
| UG | DATA COMMUNICATION AND NETWORKING (INTERNSHIP) | KAJAL CHOUDHARY (16BEC028) | Mr. Sumit Kaundal | EXPOSURE TO INDUSTRY |
| UG | CIRCUIT CORE (INTERNSHIP) | PANKAJ SHARMA (16BEC074) | Mr. BHUWAN CHANDRA PANDEY | EXPOSURE TO INDUSTRY |
| PG | MIMO-OFDM SYSTEMS FOR WIRELESS COMMUNICATIONS | SUHANI SHARMA Enroll No. 18MMC016 | SOLE SUPERVISOR | SKILLS GAINED IN MATLAB SOFTWARE APPLIED TO MIMO OFDM SYSTEMS |