### RESUME

Prof. Manoj Kumar Shukla Director Rajkiya (Government) Engineering College Kannauj, India **Professor (presently on deputation) Department of Electronics Engineering Harcourt Butler Technical University** (Formerly known as Harcourt Butler Technological Institute) Kanpur-208002 India



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Dr. Manoj Kumar Shukla - Google Scholar

www.manojkrshukla.weebly.com

# **Educational Qualifications**

- Passed High School and Intermediate in 1982 and 1984 respectively from Govt. Inter College, Fatehpur (U.P.), India securing first division.
- Graduated (B.E.) in Electronics Engineering from Amravati University, India in 1989 securing 73.55 % and post-graduated (M.Tech.) from Motilal Nehru National Institute of Technology (M.N.N.I.T.), Allahabad, India in 2004 with 8.5 CPI.
- Completed **Ph.D**. in June, 2011 from **M.N.N.I.T.**, **Allahabad**, **India** in Electronics & Communication Engineering with topic "Performance Evaluation of Interleave Division Multiple Access (IDMA) Scheme in Wireless Communication".

#### **Employment/Job Experience**

#### Administrative Experience

- 1. Working as Director, Rajkiya Engineering College, Kannauj, U.P. since Jan 27, 2021 to till date
- 2. Worked as Registrar, Harcourt Butler Technical University (HBTU), Kanpur from June 5, 2018 to Nov 30, 2019 in addition to regular other responsibilities.
- 3. Worked as Pro Vice Chancellor, HBTU from Nov 30, 2019 to Jan 26, 2021 in addition to regular other responsibilities.
- 4. Coordinator, STEP-HBTI from Aug 5, 2017 to Aug 4, 2020 in addition to regular other responsibilities.

5.

# Academic Experience

#### i. Current – from Feb 2015

**Professor,** Department of Electronics Engineering, Harcourt Butler Technical University (Formerly known as Harcourt Butler Technological Institute), Kanpur-208002 India

• Teaching UG and PG courses on Basic Electronics, Analog Integrated Circuit, Wireless communication, Solid State Electronics.

Supervising research in the form of B. Tech., M. Tech and involved in research projects in the area of wireless communication networks

#### **ii.** Feb 2007 - Feb 2015:

Assistant/ Associate Professor, Department of Electronics Engineering, Harcourt Butler Technical University

(Formerly known as Harcourt Butler Technological Institute), Kanpur-208002 India

- Teaching UG and PG courses on Basic Electronics, Analog Integrated Circuit, Wireless communication, Solid State Electronics.
- Supervising research in the form of B.Tech., M.Tech and involved in research projects in the area of wireless communication networks.

#### **iii.** March 2004-Jan 2007

Assistant Professor, Department of Electronics & Comm. Engineering, Dehradun Institute of Technology (DIT), Dehradun, India

- Teaching UG courses on Basic Electronics, Digital Electronics, Switching Logic
- Supervising research for B.Tech. Students.
- Convener of Entrepreneur Development Cell (EDC), a project sponsored by Department of Science & Technology (DST), Govt. of India

# **iv.** Jan 2000-July 2002

**Lecturer**, Department of Electronics & Comm. Engineering, Babu Banarasi Das National Institute of Technology & Management (BBDNITM), Lucknow, India

- Taught Graduate courses on Data Communication Networks, Principles of Communications and Transmission Systems, Analog Integrated circuits.
- Supervised Undergraduate students.

#### v. Nov. 1997-Jan 2000

**Assistant Manager**, R&D and Production Engineering Department, Stynetics Technological Products, Delhi

- Responsible for research on Smoke Detector and Microprocessor Based Weighing Machines
- Developed various interface cards for remote and powerful display with weighing machines
- Developed new smoke detector based on ionization principle.

# **vi.** July 1989-Nov 1997

Engineer/ Sr. Engineer, Calcom Electronics Ltd., Delhi, India.

• Worked in R&D and Production Engg. Department

- Advanced topics in Networking; TCP/IP and Internet Fundamentals at Masters level;
- Supervising research in the form of Masters and Ph.D. thesis, and involved in research projects.

# **Industrial/ Research Experience**

a. Completed a research project on Design of Low Voltage Operation B/W Television sets using S.M.P.S and Switching Circuit based Triacs in Calcom Electronics Ltd., Delhi.

The B/W Television was the well known product of Calcom Electronics Ltd., Delhi, for which the company was largest Original Equipment Manufacturer (OEM) in India. The list of well known customer included Phillips, LG, Onida, EC TV, Salora, Videocon, and many more.

The oblivious choice for end user is operate the electronic gadget at the lowest voltage to highest voltage. The voltage range provided by Indian Standard Institute (IS) is 10% limit to both side of normal operating voltage.

The switched mode power supply (SMPS) was designed for intended low voltage operation of Television sets. An SMPS is usually employed to efficiently provide a regulated output voltage, typically at a level different from the input voltage. Unlike a linear power supply, the pass transistor of a switching mode supply switches very quickly (typically between 50 kHz and 1 MHz) between full-on and full-off states, which minimizes wasted energy. Voltage regulation is provided by varying the ratio of on to off time. In contrast, a linear power supply must dissipate the excess voltage to regulate the output. This higher efficiency is the chief advantage of a switched-mode power supply. Switching regulators are used as replacements for the linear regulators when higher efficiency, smaller size or lighter weight is required. They are, however, more complicated, their switching currents can cause electrical noise problems if not carefully suppressed, and simple designs may have a poor power factor.

The project was a success and was released in the market.

The designed Triac based low voltage operation circuit works on the principle of switching of multitap power transformer with the help of Triacs followed by linear regulated power supply which helps in low voltage operation of TV set.

The project was success however was not released in market due to some market related problems.

b. Completed a research project on Design of New B/W TV Chassis in Calcom Electronics Ltd., Delhi.

In Calcom Electronics Ltd., I was assigned as leader to my team for designing new B/W TV chassis which was based on KA 2917/AN 5151 IC. This IC contains all the

essential operational circuits of television including intermediate frequency amplifiers, video amplifiers and some part of horizontal &vertical oscillator circuits. The project was a success and was released in the market.

c. Developed new smoke detector based on ionization principle in Stynetics Technological Products, Delhi.

A smoke detector is a device that detects smoke, typically as an indicator of fire. Commercial, industrial, and mass residential devices issue a signal to a fire alarm system, while household detectors, known as smoke alarms, generally issue a local audible and/or visual alarm from the detector itself.

An ionization type smoke detector is generally cheaper to manufacture than an optical smoke detector. It can detect particles of smoke that are too small to be visible. It includes about 37 kBq or 1 µCi of radioactive element americium-241 (241 Am), corresponding to about 0.3 µg of the isotope. The radiation passes through an ionization chamber, an air-filled space between two electrodes, and permits a small, constant current between the electrodes. Any smoke that enters the chamber absorbs the alpha particles, which reduces the ionization and interrupts this current, setting off the alarm. 241 Am, an alpha emitter, has a half-life of 432 years. Alpha radiation, as opposed to beta and gamma, is used for two additional reasons: Alpha particles have high ionization, so sufficient air particles will be ionized for the current to exist, and they have low penetrative power, meaning they will be stopped by the plastic of the smoke detector and/or the air.

The variation in ionization is sensed as variation in voltage (in uV) which is further amplified and employed for activating audio/video indicators.

- d. Convener of Steering Committee for products in Calcom Electronics Ltd., Delhi. In this position, I was enjoying the position of Head of Production Engineering Department and was responsible for following activities.
  - Field Called Rate (FCR) meetings on weekly basis for exploration for reasons of failures of TV sets in the field after sales, if any, with time bound correction schedules.
  - Coordination in New Model release starting from its initial circuit design to field trials and final market release.
  - Incorporation of design changes from R&D to production department.
  - Establishment of new production lines as per requirements.
  - Assembly line balancing for smoothening the component/ production assembly process in assembly floors.

# **Courses taught at UG Level**

#### From 2000 to till date:

Data Communication Networks, Solid State Electronics, Analog Integrated Circuits, Solid State Electronics, Basic Electronics, Radar & Satellite Communication, Mobile Communication, Analog Communication, Digital Electronics, Commuter Organization,

Digital Hardware Design, Power Electronics, VLSI Technology, Digital Signal Processing, Signals & Systems.

# **Courses taught at PG Level**

#### From 2000 to till date:

Data Communication Networking, Wireless Communication, Digital Communication, Mobile Communication, Advanced Semiconductor Devices, Fuzzy Electronics.

# Laboratory Development Activities/New Experiments Developed

- Developed Communication Lab for UG students of Electrical, Electronics Engineering in D.I.T., Dehradun and B.B.D.N.I.T.M., Lucknow, India.
- Added 10 experiments related to analog, digital communication in H.B.T.I., Kanpur.
- Designed the syllabus of various subjects of A.K. T.U., Lucknow as B.O.S. Member for U.G. and P.G. Students.

# **Membership of Professional Bodies**

- Member, Institution of Electronics & Telecommunication Engineers (I.E.T.E.), India.(Member:LM 42710)
- Member, Indian Society of Technical Education (I.S.T.E.), India (Member :M 150475)
- Member, Institute of Electrical and Electronics Engineers (IEEE), U.S.A. (Member/Account: 92987329)
- Member, International Society for Electronics & Electrical Engineers (ISEEE), U.S.A.

# **Other Activities**

- Working as **Coordinator STEP-HBTI**, **Kanpur** since 05.08.2017.
- Worked as **Registrar of HBTU Kanpur** 05.06.2018 to 30.11.2019.
- Worked as **Pro Vice Chancellor of HBTU Kanpur** since 30.11.2019 to 26.01.2021.
- Worked as Observer in DRDO Entry Test 2016 CEPTAM 08 in IIT Kanpur on 15.07.2016.
- Member, Advisory Board, Greater Noida Institute of Technology, Greater Noida
- Engaged as Member in **Board of Studies** (BoS) of Dr. A.P.J. Abdul Kalam Technical University (APJAKTU), Lucknow since 2016 to 2018.
- Engaged as Member in **Board of Studies** (BoS) of **Rajkiya Engineering College, Kannauj** since 28.06.2017.
- Working as **Officer In-charge of Communication Systems** at H.B.T.I. (presently H.B.T.U.), Kanpur, India. Involved in installation and day-to-day operation of EPABX system and Closed User Group (CUG) MOBILE facility in H.B.T.I., Kanpur, India since 2007 to Dec. 3, 2011 to Aug 27, 2017.

- Worked as **Controller of Examinations** in H.B.T.I. (presently H.B.T.U.), Kanpur from Oct., 29, 2014 to June, 22, 2015.
- Worked as **Officer in-charge Stores Purchase Section (SPS)** in H.B.T.I. (presently H.B.T.U.), Kanpur from June 3, 2012 to Aug. 14, 2013.
- Worked as **Hostel Warden** in H.B.T.I. (presently H.B.T.U.), Kanpur, India since 2008 to 2012.
- Worked as **Assistant Supdt. Examination** in H.B.T.I. (presently H.B.T.U.), Kanpur, India since April 2007 to May 2012.
- **Member, Board of Studies (BoS)** Electronics Department, H.B.T.I. (presently H.B.T.U.), Kanpur, India since 2008.
- Worked as Hostel Warden in Babu Banarasi Das National Institute of Technology & Management, Lucknow, India.
- Worked as Officer In-charge of various student activities.
- Paper Setting for H.B.T.I. (presently H.B.T.U.), Kanpur, Integral University, GBTU, any many other institutes.
- As observer in JEE, 2013 held during May 5-7, 2013 at Allahabad Center

# **Details of Research work Supervised/Supervising**

# (a) At Ph.D. Thesis Supervision

Guided Mr. Kulbhushan Gupta from SHAIIS, Allahabad, India on topic "Performance"
Analysis of Interleave-Division Multiple-Access Scheme in Ad-Hoc Networks" with Dr. C.
Shukla from Sam Higginbottom Institute of Agriculture, Technology and Sciences, formerly
Allahabad Agricultural Institute is a government aided deemed university located in Allahabad,
India (india india
Guided Mr. Surendra Srivas from Bundelkhand Institute of Engineering & Technology,
Jhansi in "Optical IDMA Systems" funded from TEQIP II under Dr. A.P.J. Abdul Kalam
Гесhnical University, Lucknow.
☐ Guided Ms. Prachi Tripathi in "Underwater Wireless Communication using IDMA Scheme"
from Harcourt Butler Technical University funded from TEQIP II under U.P Technical
University (presently known as Dr. A.P.J. Abdul Kalam Technical University).
Guided Ms. Shivani Dixit from Harcourt Butler Technical University in
'Performance Evaluation of SC-FDMA-IDMA Scheme in Acoustic Environment " funded from
ΓΕQIP II under Dr. A.P.J. Abdul Kalam Technical University, Lucknow.
☐ Guiding Ms. Roopali Agarwal from Harcourt Butler Technical University in " SC-FDMA-
IDMA Scheme in Wireless Communication " funded from TEQIP II under Dr. A.P.J. Abdul
Kalam Technical University, Lucknow.
☐ Guiding Ms. Mohit Srivastava from Harcourt Butler Technical University in " MIMO
Communication in Multiple Carrier Communication" funded from TEQIP II under Dr. A.P.J.
Abdul Kalam Technical University, Lucknow.

#### (b) At PG Level:

Supervised various thesis at M.Tech. Level in the area of Digital and Mobile Communication.

- 1. "Performance Evaluation of IDMA Scheme with Power Control Algorithm for Wireless Communication", 2007-8, Aashish Agarwal, (Electronics Engg. Dept., H.B.T.I., Kanpur),G.B.Technical University.
- 2. "Orthogonal Frequency Division Multiplexing Simulation using MATLAB",2007-8, Mukesh Pathela (Electronics& Comm. Engg. Dept., Dehradun Institute of Technology, Dehradun), U.P. Technical University.
- 3. "Simple Diversity for IDMA scheme", 2008-9, Aashish Shukla, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B.Technical University.
- 4. "FPGA Implementation of Orthogonal Interleavers", 2008-9, AmitRai, (Electronics Engg.Dept., H.B.T.I., Kanpur), G.B.Technical University.
- 5. "Wireless Optical IDMA Systems", 2009-10, Aakanksha Dhaka, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 6. "Wired Optical IDMA Systems",2009-10, Monika Gupta, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 7. "Statistical Analysis of Probability Based Spectrum Sensing in Cognitive Radio", 2010-11, Abhilasha Kumari, (Electronics Engg.Dept.,H.B.T.I., Kanpur), G.B. Technical University.
- 8. "IDMA Mechanism with QPSK Modulation Scheme in AWGN Environment", 2010-11, Shashi Tiwari, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 9. "Performance Analysis of Power Line Communication with IDMA Systems", 2010-11, Nutan Sharma, (Electronics Engg.Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 10. "Underwater Communication with IDMA Scheme",2011-12, Tanuja Pande (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 11. "Performance Evaluation of IDMA Scheme for Ultra Wideband WPAN", 2011-12, Vishal Shukla (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B.Technical University.
- 12. "M-Ary PSK Modulation Techniques for IDMA Systems",2011-12, Vivek Kumar (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B.Technical University.
- 13. "Analysis of Square Grid Based Wireless Sensor Networks in Presence of Raleigh Fading", 2011-12, Brishketu Suman Tripathi (Electronics & Comm. Engg. Dept., Maharana Pratap Engg. College, Kanpur), Karnataka State Open University.
- 14. "Comparative Analysis of RADOME Material used in Air-Crafts and RADAR", 2011-12, Nagendra Kumar Yadav, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 15. "Performance Evaluation of UWB Based IDMA Scheme for WPAN with RAKE Reception", 2012-13, Abhshek Tripathi
- 16. "Fuzzy Signal Detection for Ultra Wideband in Multiple Access Communication System" 2012-13, Deepmala Trivedi, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 17. "Performance Evaluation Of Single Carrier Frequency Division Multiple Access Interleave Division Multiple Access (SC-FDMA-IDMA) Scheme Employing BCH Coding" 2012-13, Devendra Tiwari, (Electronics Engg. Dept., H.B.T.I., Kanpur), G.B. Technical University.
- 18. "OFDM-MIMO and IDMA Scheme for Underwater Communication" 2013-14, Sanjiv Mishra. Electronics Engg. Dept., H.B.T.I., Kanpur, U.P. Technical University.
- 19. "MRC Diversity Technique with IDMA Scheme for Underwater Communication" 2013-14, Archana. Electronics Engg. Dept., H.B.T.I., Kanpur, U.P. Technical University.

- 20. "SC-FDMA-IDMA Scheme for LTE Uplink In Underwater Communication" 2013-14, Manoj Kumar Singh. Electronics Engg. Dept., H.B.T.I., Kanpur, U.P. Technical University.
- 21. "Performance Evaluation of Prime Number Based Interleaver in Under Water Acoustic Environment" 2014-15, Shaily Gupta, Electronics Engineering Dept., H.B.T.I., Kanpur, U.P. Tech. University.
- 22. "Performance Analysis of Various Interleavres in Under Water Communication for SC-FDMA IDMA Technique", 2014-15, Ajay Patel, Electronics Engineering Dept., H.B.T.I., Kanpur, U.P. Tech. University.
- 23. "Design and Analysis of Numerical Interleaver for IDMA 20. "SC-FDMA-IDMA Scheme for LTE Uplink in Underwater Communication" 2013-14, Manoj Kumar Singh. Electronics Engg. Dept., H.B.T.I., Kanpur, U.P. Technical University.
- 24. "Performance Evaluation of Prime Number Based Interleaver in Under Water Acoustic Environment" 2014-15, Shaily Gupta, Electronics Engineering Dept., H.B.T.I., Kanpur, U.P. Tech. University.
- 25. "Performance Analysis of Various Interleavers in Under Water Communication for SC-FDMA IDMA Technique", 2014-15, Ajay Patel, Electronics Engineering Dept., H.B.T.I., Kanpur, U.P. Tech. University.
- 26. "Design and Analysis of Numerical Interleaver for IDMA Scheme", 2015-16, Shubham Srivastava, Electronics Engineering Dept., H.B.T.U., Kanpur.
- 27. "Analysis of Indoor MIMO Visible Light Communication System", 2016-17, Prachi Sonkar, Electronics Engineering Dept., H.B.T.U., Kanpur.
- 28. "Novel Approach to Reduce PAPR In OOFDM For VLC Systems", 2017-18, Preeti Kumari, Electronics Engineering Dept., H.B.T.U., Kanpur.
- 29. "Channel Estimation of Wavelet Based MIMO-OFDM System in Wireless Communication", 2018-19, Nivedita Singh, Electronics Engineering Dept., H.B.T.U., Kanpur.

#### (c) At UG Level:

Supervised about 30 projects at UG level in different areas of Electronics & Communications

#### **Books**

Authored text book "Wireless and Mobile Communication" with OXFORD University Press along with Prof. Upena Dalal, S.V.N.I.T., Surat, India.

Authored book chapter with Rohit Tripathi "Modeling and Designing of E-bike for Local Use" (ISBN 978-981-15-9251-5) in Patel N., Bhoi A.K., Padmanaban S., Holm-Nielsen J.B. (eds) Electric Vehicles. Green Energy and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-15-9251-5\_12 on 26 November 2020 DOI https://doi.org/10.1007/978-981-15-9251-5\_12 with Publisher Springer, Singapore

Authored ebook "Performance Evaluation of IDMA Scheme in Wireless Communication" with GRIN Publishing – GRIN Verlag GmbH, Nymphenburger, Germany, 2014.

# **Advisory Committee & Editorial Board Member**

1. International Journal of Advances in Engineering & Technology "IJAET" (Ethopia)

- 2. Bonfring International Journal of Research in Communication Engineering (ID: BIJ-ED-R1178) (India)
- 3. International Journal of Scientific and Engineering Research (France)
- 4. International Journal of Networks and Communications (Scientific & Academic Publishing, USA)
- 5. American Journal of Computation, Communication and Control (AASCIT USA)
- 6. HELIX Journal, India

#### **Reviewer for Journals**

- 1. Journal of Organizational and End User Computing (JOEUC) with Special Issue On: Big Data Analytics in Business, Healthcare & Governance (IGI Global Publication, U.S.A.)
- 2. Computers & Electrical Engineering (Elsevier Publications, U.S.A.)
- 3. IEEE Communications Letters (IEEE Publications, U.S.A.)
- 4. Wireless Communications and Mobile Computing (Wiley Publications, U.S.A.) International Journal of Communication Systems (Wiley Publications, U.S.A.) Transactions on Emerging Telecommunications Technologies (Wiley Publications, U.S.A.)
- 5. International Journal of Electronics (Taylor & Francis, U.S.A.)
- 6. International Journal of Computer Applications (Foundation of Computer Science, U.S.A.)
- 7. ICTACT Journal on Communication Technology (India)
- 8. International Journal of Computer Engineering Research, 5170-00200, Nairobi, 73023 Victoria Island, Lagos, (www.academicjournals.org/JCER)
- 9. Advanced Institute of Convergence Information Technology (Korea)

#### **Expert Lectures**

- 1.Expert Talk in 15 days Professional Training on "Pedagogy and Modern Technology Tools" during September 6th-20th, 2021 organized by IEEE Delhi Section Antennas & Propagation Society Chapter Jaipur in association with IEEE Rajasthan Subsection, Government Women Engineering College, Ajmer and IEEE Student Branch, GWEC Ajmer.
- 2.Expert lecture on "Upcoming Trends of Wireless Communication," during GUJCOST sponsored three Days National Level Webinar on "Applications of AI & VLSI in Future Wireless Communication" organized by V. T. Patel Department of Electronics & Communication Engineering, Chandubhai S. Patel Institute of Technology, Faculty of Technology & Engineering, Charotar University of Science & Technology (CHARUSAT), Changa, Gujarat during August 26-28, 2021.

- 3.Expert lecture on "Quality Higher Education in University and Institute: NEP 2020" on 13 August 2021 during webinar on "New Education Policy 2020" organized by Harcourt Butler Technical University, Kanpur.
- 4.Expert lecture on "New Education Policy for Primary & Higher Education" on 25 March 2021 during webinar series on "New Education Policy 2020" organized by Rajkiya Engineering College, Sonbhadra during March 25-26, 2021.
- 5.Expert lecture on "Ultra Wideband Communication- Standards, Characteristics and Applications" on 17 March 2021 during one-week online ATAL Faculty Development Program on "Modern Techniques for Wireless Communication from 17th 21st May 2021 organized by Department of Electronics Engineering, Madhav Institute of Technology and Science, Gwalior.
- 6.One week Faculty Development Program on "Machine Learning Based 5G Wireless Communication Systems" from 04.01.2021 to 08.01.2021 on topic "Multiple access scheme with appropriateness for 5G communication systems" organized by Department of Communication Engineering, School of Electronics Engineering, Vellore Institute of Technology, Vellore.
- 7.AICTE-AQIS Sponsored Short Term Training Program (STTP) on "AI and 5G Communication Technology" from December 7-12, 2020 organized by Department of Electronics & Communication, Poornima College of Engineering, Jaipur.
- 8.ICDST 2019: International Conference on Defense and Space Technologies 2019 held at Institute of Engineering & Technology, Lucknow, India, August 23-25, 2019.
- 9.14.04.2016 on "Underwater Communication" in Conference on "Advances in Electrical & Information Communication Technology (AEICT-2017)" in association with The Institution of Electronics and Telecommunication Engineers (IETE) during April 13-14, 2017 in R.V. Institute of Technology, Bijnore, India
- 10. 01.03.2017 on "Power Line Communication" in One Week Faculty Development Programme on "Simulation Techniques of Power Electronics Converters (STPEC)" from 27.02.2017 to 04.03.2017 in Department of Electrical Engineering, Harcourt Butler Technical University (Formerly known as Harcourt Butler Technical Institute), Kanpur funded by TEQIP II.
- 11. 04.02.2017 in One Week Faculty Development Program on "Advance Course on Antenna and Microwave" on "Fading in Microwave Communication" during Jan 30- Feb 04, 2017 in Department of Electronics Engineering, Harcourt Butler Technical University (Formerly known as Harcourt Butler Technical Institute), Kanpur funded by TEQIP II.
- 12. 15.03.2016 on "Recent Trends in Wireless Communication Systems" at Govt. Women Engineering College, Ajmer.
- 13. 14.03.2016 on "Wireless Communication" in Shree Ganpati Institute Of Technology, Ghaziabad.
- 14. 04.03.2016 on "New Trends in Wireless Communication" at J.S.S., Noida in FDP on "Next Generation Wireless Systems & Standards" held during 29 Feb-5 March 2016.
- 15. 10.10.2015 on "Digital Logic Families" at Allanhouse Institute of Technology, Kanpur. 04.05.2015 on "New Trends in Wireless Communication Systems" at Govt. Women Engineering College, Ajmer.
- 16. 12.11.2014 on "Wireless Communication Systems" in Ph.D. Workshop at Jaipur National University, Jaipur.

- 17. 21.04.2014 on "Modulation in Wireless and Mobile Communication" at Corporate Group of Institutes, Bhopal
- 18. 11.04.2014 on "Wireless and Mobile Communication" at Pranveer Singh Institute of Technology, Kanpur
- 19. 09.04.2014 on "Cognitive Radio" at IIFTM University, Moradabad
- 20. 22.04.2012 on "Modulation Scheme" at Dr. Ambedkar Institute of Technology for Handicapped, Awadhpuri, Kanpur, U.P. 208024
- 21. 20.10.2011 on "Application of Electronics in Robotics" at Dr. Ambedkar Institute of Technology for Handicapped, Awadhpuri, Kanpur, U.P. 208024
- 22. 20.10.2011 on "TDM & FDM Techniques" at Dr. Ambedkar Institute of Technology for Handicapped, Awadhpuri, Kanpur, U.P. 208024
- 23. 05.04.2010 to 07.04.2010 on "Modulation Techniques" (Wireless Comm. TEC 801) at Dr. Ambedkar Institute of Technology for Handicapped, Awadhpuri, Kanpur, U.P. 208024
- 24. 23.01.2010 on "Mobile communication & VLSI Design" at Krishna Institute Engineering & Technology, Ghaziabad, U.P.
- 25. 28.04.2009 to 04.05.2009 on "Electronic Devices & Circuits" at Kumaon Engineering College, Dwarahat, Uttarakhand
- 26. 01.04.2009 to 02.04.2009 on "Wireless Communication" at Kanpur Institute of Technology, A-1, UPSIDC Ind. Area, Kanpur-01, U.P.
- 27. 21.11.2008 on "Multiple Access Schemes" at Dr. Ambedkar Institute of Technology for Handicapped, Awadhpuri, Kanpur, U.P. 208024

#### **Session Chair in Conferences**

- 1. International Conference on Information & Technology 'IICT 2007' at Dehradun Institute of Technology, Dehradun, India during July 26-28, 2007
- 2. National Conference on Recent Advancements in Communication and Electronics 'RACE 10' at Laxmi Devi Institute of Engineering & Technology, Alwar, India during Nov. 12-13, 2010
- 3. IEEE International Conference on Computational Intelligence and Communication Networks (CICN 2011) at Gwalior, India during Oct. 7-9. 2011
- 4. IEEE International Conference on Communication Systems and Network Technologies (CSNT 2012) at Rajkot, India during May. 11-13. 2012
- 5. National Conference on Emerging Trends in Electrical, Instrumentation & Communication Engineering (ETEIC 2012) at Anand Engineering College, Agra, India during April 6-7, 2012
- 6. IEEE International Conference on Communication Systems and Network Technologies (CSNT 2012) at GLA University, Mathura, India during Nov. 2-5. 2012
- 7. IEEE International Conference on Communication Systems and Network Technologies (CSNT 2013) at MIR Lab, Gwalior, India during April. 6-8. 2013.
- 8. National Seminar on Recent Advances in Communication and Signal Processing (RACSP 2013), in Corporate Institute of Science & Technology, Bhopal, India during 2-3 May 2013.
- 9. IEEE International Conference on Advances in Engineering and Technology Research, ICAETR 2014 in Virendra Swaroop Group of Institutions, Kanpur during Aug. 2, 2014.

- 10. IEEE International Conference on Computational Intelligence and Communication Networks (CICN 2014), 14-16 Nov., 2014 at Rajasthan Vidhyapeeth University, Udaipur, India.
- 11. IEEE Fifth International Conference on Communication Systems and Network Technologies 2015 (CSNT 2015), 4-6 April, 2015, Gwalior, India.
- 12. IEEE Sixth International Conference on Communication Systems and Network Technologies 2016 (CSNT 2016), 5-7 March, 2016, Chitkara University, Chandigarh, India.
- 13. Session Chair, for chairing a session in Indian Conference on Antennas and Propagation (InCAP 2021) during December 13-16, 2021 held at MNIT Jaipur in Online Mode.

# **Short Term Courses and Workshop Attended**

- 1. Signal Processing and Filter Designing at Harcourt Butler Technological Institute, Kanpur, India during May 9-11, 2007 supported by TEQIP
- 2. Applications of Mathematics in Engineering and Technology AT Harcourt Butler Technological Institute, Kanpur, India during Sep. 8, 2007 supported by TEQIP
- 3. Information & Communication Technology & It's Impact on Education at Dehradun Institute of Technology, Dehradun, India during Oct. 23-25, 2008 supported by TEQIP
- 4. Restructuring and Financing of Power Sector at Indian Institute of Technology, Kanpur, India during Dec. 26-28, 2001(3 Days) supported by IIT, Kanpur
- 5. VLSI Design and IC CAD 'VDIC 06' at Motilal Nehru National Institute of Technology, Allahabad, India during Dec. 4-8, 2006 (5 Days) supported by TEQIP I.
- 6. VLSI Design & DSP at Dehradun Institute of Technology, Dehradun, India during Oct. 28-30, 2004 (3 Days) supported by ISTE
- 7. National Workshop on "Industry-Academia Interaction for Strengthening Technical Education" 30th August 2013, Friday Jointly Organized by PHD Chamber of Commerce and Industry, Lucknow (U.P.) & Harcourt Butler Technological Institute Kanpur -(U.P.)
- 8. State Level Faculty Interaction Seminar and Curriculum Review Workshop held during June 8-9, 2015 in Harcourt Butler Technological Institute Kanpur -(U.P.) under TEQIP II
- 9. National Workshop on Outcome Based Education and NBA Accreditation held during July, 01-03, 2016, organized by SPFU and ESCI, in Lucknow, India under TEQIP II.
- 10. Workshop on Intellectual Property Rights (IPR) and Patenting held during Aug., 27-29, 2016, organized by HBTI and ESCI, in Kanpur, India under TEQIP II.
- 11. Workshop on Occupational Health and Safety Management Practices held during Oct., 03-05, 2016, organized by HBTU and ESCI, in Kanpur, India under TEQIP II.

## **Short Term Courses Organized**

- 1. Faculty Development Program on "Emerging Trends in Wireless Communication" at Harcourt Butler Technological Institute, Kanpur, India during Dec. 3-9, 2008 (7 Days) supported by TEQIPI.
- 2. Workshop on "Simulation on Circuit Design and Signal Processing" at Harcourt Butler Technological Institute, Kanpur, India during Oct. 14-15, 2013 (2 Days) supported by TEQIP

#### **Short Term Courses as Resource Person**

- 1. Short Term Course on Microwave Devices: Theory and Techniques during 4th 10th July 2016 at Department of Electronics and Communication Engineering of Madan Mohan Malaviya University of Technology, Gorakhpur, on 04-05 July 2016 on "Principles of Microwave Communication in Satellite" and "Multiple Access Schemes".
- 2. AICTE sponsored Two weeks FDP on "Simulation and Mathematical Tools for Engineering Research" during July 04 to July 15, 2016 at Electronics Engineering Department of Kamla Nehru Institute of Technology Sultanpur, India, on 05-06 July 2016 on "Basics of MATLAB Programming" and "Simulation of Communication Principles".
- 3. Short Term Course on "Microwave Devices: Theory and Techniques" during 4th 10th July 2016 at Department of Electronics and Communication Engineering of Madan Mohan Malaviya University of Technology, Gorakhpur, India
- 4. Faculty Development Programme on "Simulation and Mathematical Tools for Engineering Research" on 06.07.2016 during July 04 to July 15, 2016 at Electronics Engineering Department of Kamla Nehru Institute of Technology, Sultanpur, India.
- 5. FDP on "IT Tools and Optimization" in Kanpur Institute of Technology, Kanpur, India on 09.06.2016 during program from 06-11 June 2016.
- 6. Workshop on "Performance Analysis of Interleave Division Multiple Access Scheme" at Chandubhai S Patel Institute of Technology in Charotar University of Science & Technology, Changa, Gujarat. India from March 20-21, 2014.
- 7. Workshop on "Mobile Ad Hoc and Vehicular Communication (MAVECOM 2013)" at Motilal Nehru National Institute of Technology, Allahabad, India during Sept. 23, 2013 (1 Days), India.
- 8. Workshop on "DSP Applications" at GLA Institute of Technology & Management, Mathura during Sept. 5-6, 2009 supported by TEQIP & GLA Group
- 9. Workshop on "Wireless and Mobile Communication" at Motilal Nehru National Institute of Technology, Allahabad, India during June 30-July 12, 2008 (13 Days) supported by AICTE/ MHRD, India
- 10. Workshop on "Emerging Trends in Wireless Communication" at Harcourt Butler Technological Institute, Kanpur, India during Dec. 3-9, 2008 (7 Days) supported by TEOIP
- 11. Workshop on "Circuit Simulation using SPICE and VHDL" at Motilal Nehru National Institute of Technology, Allahabad, India during April 8-10, 2006 (3 Days) supported by TEQIP,

  India

#### **Faculty Development Program Attended**

- Ashok Hotel, Nainital, India during Jan. 24-Feb. 04, 2005 (12 Days) at Dept. of Science & Technology (DST), India
- 2. KIET-ED Cell, Ghaziabad, India during Nov. 29-Dec. 10, 2004 at Dept. of Science & Technology (DST), India
- 3. "Modelling and Simulation and Analysis of Engineering Systems" at Harcourt Butler Technological Institute, Kanpur, India during Oct. 25-30, 2013

### **Consultancy Details**

- 1. Third Party Inspection on 20/12/2020 21/12/2020 for U.P. Power Transmission Corporation Ltd.
- 2. Third Party Inspection on 19/10/2020- 20/10/2020 for U.P. Power Transmission Corporation Ltd.
- 3. Third Party Inspection on 18/10/2020- 19/10/2020 for U.P. Power Transmission Corporation Ltd.
- 4. Third Party Inspection on 30/11/2020- 02/12/2020 for U.P. Power Transmission Corporation Ltd.
- 5. Third Party Audit for Kanpur Smart City Ltd 01/11/2019--Till Date-- more than 1 Year(s) 8 Month(s)

#### Patents filed and Published

- 1. Patent published on "Tokenless Voter Verification System and Method thereof" with Application Number- 202011044601, in Official Journal of The Patent Office with Issue Number- 43/2020, publication date- 23/10/2020 Part-1.pdf (ipindia.nic.in) PAGE 148
- 2. Patent published with application no. 202011052331 in Official Journal of The Patent Office on "MITA Interleaver for OFDM-IDMA System" with www.ipindia.nic.in in issue no. 50/2020 on 11.12.2020 on page 34.
- 3. Patent published on "METHOD FOR PRODUCING PBTTT-C14 FIBERS" by application no. 202111001815
- 4. Published patent on "Touch-Free dual liquid DISPENSING APPARATUS and Method of using the LIQUID DISPENSING APPARATUS" with Application No. 202111004220 on 01 Feb 2021
- 5. Patent published on "Wearable eye movement Detection Device and Methods" by application no. 202111003126 A published on 29.01.2021
- 6. Patent published on "Advanced Remote Attendance Biometric System for preventing the spread of COVID 19 Infection" by application no. 202111011435 published on 17.03.2021

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## Research Project

Research Project "A Pilot Project to Improve Potato Productivity in Village Aher, Kannauj using an IoT-based Deep Learning Framework (ID 1494)" from Council of Science & Technology for amount Rs. 1044000.00 with letter CST/D 1248 dated 30.08.2022

#### # International Journals

1. **M. Shukla**, V.K. Srivastava, Sudarshan Tiwari, "Analysis and Design of Optimum Interleaver for Iterative Receivers in IDMA Scheme" Wiley Journal of Wireless Communications and Mobile Computing (WCM) Vol. 9, Issue 10, pp. 1312-1317, 2009. (Indexed in Thomson Reuters and SCOPUS Master Journal List)

DOI: 10.1002/wcm.710, Online ISSN: 1530-8677

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2. **M. Shukla**, Aasheesh Shukla, Rohit Kumar, V.K. Srivastava, Sudarshan Tiwari, "Simple Diversity Scheme for IDMA Communication System", International Journal of Applied Engineering Research (IJAER) Vol. 6, 2009/pp. 877-883

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3. **M. Shukla**, V.K. Srivastava, Sudarshan Tiwari, "A VHDL Implementation of Orthogonal Interleavers for the IDMA Scheme", The IUP Journal of Telecommunications, Vol. 1, 2009, pp. 63-71, 2009. (Indexed in SCOPUS Master Journal List)

http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1521407 ISSN: 0975-5551 http://www.iupindia.in/1109/IJTC\_VHDL%20Implementation\_63.html

4. **M. Shukla**, Ruchir Gupta, "Performance Analysis of Optimum Interleaver based on Prime Numbers for Multiuser Iterative IDMA Systems" International Journal of Interdisciplinary Telecommunications and Networking (IJITN), U.S.A., Vol.2, pp. 51-65, 2010. (Indexed in Thomson Reuters and SCOPUS Master Journal List)

DOI: 10.4018/jitn.2010070103, ISSN: 1941-8663 EISSN: 1941-8671

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6. **M. Shukla**, V.K. Srivastava, S. Tiwari, "Implementation of Interleavers for Iterative IDMA Receivers", Journal of Information Technology, pp. 1-10, 2011. (Indexed in SCOPUS Master Journal List)

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7. **M. Shukla**, Akanksha Gupta, Rinkoo Bhatia, "Performance Evaluation of Maximal Ratio Receiver Combining Diversity with Prime Interleaver for Iterative IDMA Receiver", International Journal of Information Engineering and Applications, Vol 1, No.3, pp. 29-39, 2011. (Indexed in EBSCO (U.S.), Index Copernicus (Poland))

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8. Kulbhushan Gupta, C.K. Shukla, **M. Shukla**, "Iterative IDMA Receivers with Random and Tree Based Interleavers", International Journal of Information Engineering and Applications, Vol 1, No.3, pp. 13-24, 2011.

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10. Somendra Shukla, Sanjiv Mishra, Vijay Shankar Tripathi, and **M. Shukla**, "Orthogonal Interleavers with Iterative IDMA Scheme for Multipath Environment", International Journal of Recent Trends in Engineering (IJRTE) Vol. 5, pp. 92-94, 2011.

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