

# ***Dr. Vikram Singh***

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## **Overview:**

B.Tech. (ECE), M.Tech. (VLSI Design & Embedded Systems), PhD. (ECE). GATE Qualified (3-times), UGC-NET Qualified, with more than 15 Yr. of Teaching and 1 Yr. of Industrial experience. Presently working as Associate Professor, Department of Electr. & Comm. Engg. at SMVD University.

## **MoU Contributions:**

- Initiated and got SCL-SMVDU for 10 Years MoU
- Initiated and got NIT, Delhi - SMVDU for 03 Years MoU

## **Education:**

- **PhD.** (Date of Award: 25<sup>th</sup> Oct-2019) from Guru Jambheshwar University of Science & Technology, Hisar (Haryana). Title : “**Design And Analysis of Low Power and Low Noise CMOS Amplifiers**”
- **PG-Diploma** in “VLSI Design” from “ACTS, CDAC”, Pune (Aug 2008 -to- Feb 2009)
- **UGC-NET** (Electronics Science) Qualified, 30 June, 2013
- **GATE Qualified** - 2013, 2011, 2010
- **M.Tech.** in “VLSI Design & Embedded Systems” from Guru Jambheshwar University of Science & Technology, Hisar (Haryana) (2006-2008)
- **B.Tech** in “Electronics & Communication Engineering” from to Kurukshetra University, Kurukshetra (2000-2004)

## **Experiences:**

### **Teaching: -**

<b>Sr. No.</b>	<b>Institute</b>	<b>Post Held</b>	<b>From</b>	<b>To (Date)</b>
1.	Shri Mata Vaishno Devi University, Katra (J&K)	Associate Professor-(Level-13A)	1 <sup>st</sup> Jan, 2023	Till-date
2.	Shri Mata Vaishno Devi University, Katra (J&K)	Assistant Professor-Selection Grade (Level-12)	1 <sup>st</sup> Jan, 2020	31 <sup>st</sup> Dec, 2022
3.	Shri Mata Vaishno Devi University, Katra (J&K)	Assistant Professor-Senior Scale (Level-11)	1 <sup>st</sup> Jan, 2015	31 <sup>st</sup> Dec, 2019
4.	The Technological Institute of Textile & Sciences, Bhiwani, Haryana	Assistant Professor (Level-10)	13 <sup>th</sup> Mar, 2009	31 <sup>st</sup> Dec, 2014
5.	Bhiwani Institute of Technology & Sciences, Bhiwani, Haryana	Lecturer	1 <sup>st</sup> Aug, 2005	15 <sup>th</sup> Aug, 2006

### **Industrial: -**

- 1Yr. of experience in the field of Servicing of Computerized Attendance Recording System (July 2004-June 2005) at STJ Electronics Pvt. Ltd, New Delhi.

### **Areas of Interest:**

Low Power CMOS, RF Integrated Circuits, LNA Design, Low Power Digital Design using CNTFET, Digital System Design and Implementation using VHDL and Verilog HDL.

### **PhD. Guide: 01 (Completed)**

### **Master's Thesis Supervised: 11 (Completed)**

### **Patent:**

1. IOT-BASED POWER MONITORING SYSTEM, Design No. : 397256-001 , Date: 11/10/2023 **(Granted)**
2. Deep Learning Based Approach to Predict The Pros and Cons of IOT, ML and Blockchain in Next Generation Industry Environment, (Application No. 202311015529) **(Published)**

### **Publications:**

- 1) Tabassum Khurshid, Vikram Singh\*, “Low Power and Energy Efficient Design of Ternary D-Latch based on CNTFET-RRAM Technology,” *International Journal of Information Technology*, vol. \_\_\_\_, pp. \_\_\_\_\_, (2024). E-ISSN: 2511-2112 (**Scopus Indexed**) Accepted on 03-Aug, 2024.
- 2) Tabassum Khurshid, Vikram Singh\*, “Design of Unbalanced 9:2 Ternary Encoder and 2:9 Ternary Decoder Circuits in RRAM-CNTFET Technology” *International Journal of Circuit Theory and Applications*, Accepted on 04-03-2024 DOI:10.1002/cta.4022 (**SCIE-Indexed**, Impact factor = 2.038) Online ISSN:1097-007X, Print ISSN:0098-9886
- 3) Vikram Singh, Manoj Kumar, Nitin Kumar, “Design of a Low Power LNA Circuit with Noise Canceling Approach in 90 nm CMOS Process”, *Integration the VLSI Journal*, accepted on 25-01-2024 (**SCIE-Indexed**, Impact factor = 1.9) Volume 96, May 2024, 102163 Online ISSN:1872-7522, Print ISSN:0167-9260 <https://doi.org/10.1016/j.vlsi.2024.102163>
- 4) Manoj Kumar, Dilleep Dwivedi, Nitin Kumar, Vikram Singh, Vivek Jangra, “Voltage Controlled Oscillator with Active Inductive and Capacitive Tuning”, *International Journal of Information Technology*, vol. 16, pp. 1015-1022, (2024). E-ISSN: 2511-2112 (**Scopus Indexed**) Accepted on 24-Nov, 2023. <https://doi.org/10.1007/s41870-023-01670-4>
- 5) Tabassum Khurshid, Vikram Singh\*, “CNTFET and RRAM based Low Power Design of Unbalanced Ternary Logic Gates and Arithmetic Circuits”, *Journal of Circuits Systems and Computers*, Vol. 33, No. 5, pp. 2450085-24 Accepted on 12-08-2023 , Online Published 29.09.2023 (2023). (**SCIE-Indexed**) ISSN (print): 0218-1266| ISSN (online): 1793-6454 Impact Factor: 1.5 <https://doi.org/10.1142/S0218126624500853>
- 6) Tabassum Khurshid, Vikram Singh\*, “Energy Efficient Design of Unbalanced Ternary Logic Gates and Arithmetic Circuits using CNTFET”, *AEU International Journal of Electronics and Communications*, Vol. 163, pages 154601 <https://doi.org/10.1016/j.aeue.2023.154601> Accepted on 23rd Feb, 2023 online published on 09 March, 2023 ISSN / eISSN: 1434-8411 / 1618-0399 (**SCIE-Indexed**, Impact factor = 3.2)
- 7) Anil Kumar Bhardwaj, Vikram Singh\*, Arvind Rehalia, Amit Kant Pandit and Ruchi Sharma, “A review on nanomaterials for drug delivery systems and application of carbon based nanomaterials” *ES materials and Manufacturing*, Vol. 21, 824 (**Scopus Indexed**) Accepted on 26th Feb, 2023. ISSN: 2578-0611 (Print Version)ISSN: 2578-062X (Online Version) DOI: 10.30919/esmm5f824
- 8) Misbah Manzoor Kiloo, Vikram Singh\*, Manoj Kumar, Nitin Kumar, Neeraj Tripathi, Anil Bhardwaj, “Active inductor based cross coupled differential ring voltage controlled oscillator for UWB applications,” *International Journal of Information Technology*, vol. 15, pp. 1895 – 1900, (2023).

E-ISSN: 2511-2112 (Scopus Indexed) Accepted on 15-March, 2023.  
<https://doi.org/10.1007/s41870-023-01235-5>

- 9) Vikram Singh, Nitin Kumar, Manoj Kumar, Sandeep K. Arya, “A Common-Gate Cascaded with Cascoded Self-Bias Common Source Approach for 3.1 – 10.6 GHz UWB Low Noise Amplifier”, *International Journal of Information Technology*, 14, 2389 – 2398, (2022). E-ISSN: 2511-2112 (Scopus Indexed) Accepted on 06-May, 2022 Published 28-05-2022.  
<https://doi.org/10.1007/s41870-022-01001-z>
- 10) Humirah Majeed, Vikram Singh\*, “A Common-Gate, gm-boosting LNA using Active Inductor Based Input Matching for 3.1 – 10.6 GHz UWB Applications” *Electrica*, 22(2): 173-187, 2022. E-ISSN: 2619-9831 (ESCI-Indexed) Accepted on 04-March, 2022, Published: 24 May 2022. DOI: 10.54614/electrica.2022.21136 (Impact factor = 0.9)
- 11) Vikram Singh\*, Sandeep K. Arya, Manoj Kumar, “A Common-Gate Current-reuse UWB LNA for Wireless Applications in 90nm CMOS”, *Wireless Personal Communications*, Vol. 119, Issue 2, Pages 1405–1423, (2021) ISSN (Online) 1572-834X, ISSN (Print) 0929-6212 (SCIE-Indexed, 2023 Impact factor = 2.2) <https://doi.org/10.1007/s11277-021-08287-5>(Accepted on 05-Feb, 2021).
- 12) Vikram Singh\*, Sandeep K. Arya, Manoj Kumar, “A 5.7 mW, UWB LNA for Wireless Applications Using Noise Canceling Technique in 90 nm CMOS”, *Frequenz*, Vol. 74, Issue 1-2, Pages 83–93, (2020) ISSN (Online) 2191-6349, ISSN (Print) 0016-1136 (SCIE-Indexed, 2023 Impact factor = 1.072) Published in Print: 2020-01-28 <https://doi.org/10.1515/freq-2019-0051>
- 13) Vikram Singh\*, Sandeep K. Arya, Manoj Kumar, “A 3 - 14 GHz, Self Body Biased Common Gate UWB LNA for Wireless Applications in 90 nm CMOS”, *Journal of Circuits Systems and Computers*, Vol. 28, No. 4, pp. 1950056 (2019). (SCIE-Indexed) ISSN (print): 0218-1266| ISSN (online): 1793-6454 Impact Factor: 1.5 <https://doi.org/10.1142/S0218126619500567> Published 29 June 2018
- 14) Vikram Singh\*, Sandeep K. Arya, Manoj Kumar, “A 0.7 V, Ultra-Wideband Common Gate LNA with Feedback Body Bias Topology for Wireless Applications” *Journal of Low Power Electronics and Applications*,” 2018, 8 (4), 42; (ESCI-Indexed, Impact Factor 2.1, Cite Score: 3.5, EISSN : 2079-9268) <https://doi.org/10.3390/jlpea8040042>. Published: 26 October 2018 (Impact Factor: 0.442)
- 15) Vikram Singh\*, Sandeep K. Arya, Manoj Kumar, “Different Perspectives of Low Power Design for CMOS VLSI Circuits”, *International Journal of Electronics Engineering*, Vol. 10, Issue 2, pp. 604 – 613 (2018) , ISSN: 0973-7383 (Referred)
- 16) Vikram Singh\*, Sandeep K. Arya, Manoj Kumar, “Gm-boosted Current-Reuse Inductive-Peaking Common Source LNA for 3.1 - 10.6 GHz UWB Wireless Applications in 32 nm CMOS” *Analog Integrated Circuits and Signal Processing*, Vol. 97, No. 2, pp: 351–363 Nov. (2018). (SCI, SCIE-Indexed) Doi: 10.1007/s10470-018-1290-6. ISSN: 0925-1030. 2018 Impact Factor: 1.337) Published online: 14 August 2018
- 17) Amit Kumar, Vikram Singh, Neeraj Tripathi “Design of low power VCO based on current re-used topology in 0.13  $\mu\text{m}$  CMOS”, *International Journal of Electronics Engineering*, Vol. 10, No. 1 ISSN (0973-7383), pp:218-224, June 2018 (Referred)
- 18) Mohammad Sibgat Ullah, Rishab Kaw, Peer Athar Rasool, Neeraj Tripathi, and Vikram Singh, “Current Trends in MEMS Drug Delivery Techniques” *International Journal of Engineering and Technology (IJET)*, Vol. 9 No 2, pp. 1355–1364, Apr-May 2017, ISSN (Print) : 2319-8613, DOI: 10.21817/ijet/2017/v9i2/170902284 (Scopus at That Time)
- 19) Suman Rani and Vikram Singh\*, “SNORT: An Open Source Network Security Tool for Intrusion Detection in Campus Network Environment”, *International Journal of Computer Technology and Electronics Engineering*, Vol. 2, Issue 1, Feb. 2012. ISSN:2249-6343 (Referred)

- 20) Nitin Kumar, Vikram Singh, Manoj Kumar, Vivek Arora “Design of a 1.726 mW, 4-stage Differential Ring VCO with Tuning Range of 93.4 % in 0.13  $\mu\text{m}$  CMOS Process” *International Conference on Intelligent Computing, Simulation and Optimization (ICICSO-2023)* on 8-10 Dec, 2023 at Goa India.
- 21) T. Khurshid and V. Singh, "CNTFET Based Unbalanced Ternary Master-Slave Delay Flip Flap Flop," *International Conference on Sustainable Emerging Innovations in Engineering and Technology (ICSEIET)*, ABES Engineering College, Ghaziabad, India, 14-15 September 2023, pp. 523-526, doi: 10.1109/ICSEIET58677.2023.10303382.
- 22) Anitu Atri, Vikram Singh and Tabassum Khurshid, “Design of Low Power 11T SRAM Cell using CNTFET Technology” *5<sup>th</sup> International Conference on “Intelligent Manufacturing and Energy Sustainability (ICIMES 2023)”* Organized by Malla Reddy College of Engineering & Technology, Hyderabad India on 23-24 June, 2023. DOI:10.1007/978-981-99-6774-2\_19
- 23) Smriti Kantroo, Ritika Mattoo, Vikram Singh\*, Neeraj Tripathi and Anil Kumar Bhardwaj, “Design of a Low Power Complementary Current Controlled Skewed Delay Voltage Controlled Oscillator using CNTFET,” *IEEE International Conference on Artificial Intelligence and Applications (ATCON-1)*, 21-22 April, 2023. DOI: 10.1109/ICAIA57370.2023.10169252.
- 24) Jaspreet Kaur, Vikram Singh, “Low Power Differential Ring VCO in Nanotechnology”, *Proceedings of IISTEM International Conference*, Varanasi, India 01st July, 2022. pp. 21-25.
- 25) Killoo M.M., Singh V., Gupta M. (2021) A Low-Power Hara Inductor-Based Differential Ring Voltage-Controlled Oscillator. In: Singh P.K., Singh Y., Kolekar M.H., Kar A.K., Chhabra J.K., Sen A. (eds) *Recent Innovations in Computing*. ICRIC 2020. Lecture Notes in Electrical Engineering, vol 701. pp 85-95 Springer, Singapore. DOI: 10.1007/978-981-15-8297-4\_8 (Scopus Indexed) Online 2021
- 26) Nitin Kumar, Manoj Kumar, Vikram Singh\*, Dhruv Aditya Mittal, and Priyamvada , “A Low Power 3-Stage Ring Voltage Controlled Oscillator with Wide Tuning and Active Load” *3<sup>rd</sup> International Conference in VLSI, Communication and Signal Processing (VCAS 2020)*, MNIT, Allahbad, India, 9-11, Oct, 2020. Lecture Notes in Electrical Engineering, Vol. 777, Springer , Singapore, pp 657-667, DOI: 10.1007/978-981-16-2761-3\_59 (Scopus Indexed)
- 27) Vikram Singh\*, Sandeep K. Arya, and Manoj Kumar, “Effect of Resistive Feedback on Performance Parameters of Common Source LNA”, *IEEE Int. Conf. on Computing, Communication and Automation (ICCCA2017)* Galgotia University, pp. 298-303 5-6 May, 2017 ISBN 978-1-5090-6471-7. (Scopus Indexed) DOI:10.1109/CCAA.2017.8229819
- 28) Syed Mubarshir, Vikram Singh\*, “A 2-10 GHz Ultra-Wideband Common-Gate Low Noise Amplifier using Forward Body Bias Technique in 0.18  $\mu\text{m}$  CMOS”, *IEEE 2nd International Conf. on “2017 Devices for Integrated Circuit (DevIC)”* at IEEE EDS Kolkata, 23-24, March 2017. pp. 541-545, ISBN:978-1-5090-4724-6 (Scopus Indexed) DOI: 10.1109/DEVIC.2017.8074009
- 29) Suman Rani and Vikram Singh, “An Introduction to Intrusion Detection System”, *Proceeding of International Conference on “Recent Trends in Computing, Machatronics and Communication (RTCMC-2012)* pp: 305-306, 25-26th Feb 2012.
- 30) Vikram Singh\* and Ashish Siwach, “Vibration Reduction Using Input Shaping Techniques For Linearly Actuated Electrostatic MEMS Comb Drive” , *Proceeding of International Conference on Innovative Technologies, (P-415)* , pp: 190, 18-19th June 2009
- 31) Tabassum Khurshid, Viram Singh, “CNTFET-RRAM based Design of Ternary D-Latch”, *National Conference on Emerging Trends in Engineering and Sciences (NCETES-2024)* organized by Jawahar Education Society’s, Institute of Technology, Management and Research, Nashik, held on 8th and 9th February 2024.
- 32) Rajeev Sharma and Vikram Singh, “Simulation of Higher Order Solitons in Optical Fiber”, *UGC Sponsored National Conference on “Global Challenges-Role of Science and Technology in giving their*

Solutions (GCRSTS-2016)”, at TIT&S, Bhiwani, 23-24 April -2016.

- 33) Rajeev Sharma, Rohit Kumar, Vikram Singh, “Soliton Stability: Effect of Initial Chirp”, 2nd International Conference on “ Machine Intelligence and Research Advancement”, pp. 316-319, (19-20 March, 2015),
- 34) Vikram Singh, Suman Rani and Lalita Yadav, “Input Shaping: A Technique to Reduce Vibration in MEMS”, National Conference on Global Challenges-Role of Science and Technology in giving their Solutions (GCRSTS-2012), at TIT&S, Bhiwani, 3-4 March -2012.
- 35) Suman Rani and Vikram Singh, “Classification of Attacks on Network based on Protocols”, National Conference on “Challenges in Emerging Computer technologies” at Rayat Bahra Institute of Engineering and Biotechnology, 8-9th April 2010.
- 36) Vikram Singh and Deepak Kedia, “Overview of Input Shaping Techniques” Proceeding of the National Conference on “ Recent Trends in Electronics & Communication” pp. 320-323 , 10-11th April 2008. Shaheed Udham Singh College of Engineering & Technology, Tangori (Mohali), Punjab

#### **Workshops/ Seminars/ Short Term Courses Attended:**

##### **Workshops:-**

- 1) 2-Days (3-4<sup>th</sup> Dec, 2016) attended 11<sup>th</sup> International Conference on “Industrial & Information Systems” at IIT, Roorkee.
- 2) Attended 1-Day Workshop on “Patent Drafting and Filing” at SMVDU, Katra on 20/10/2016.
- 3) 1-day (20<sup>th</sup> Oct 2016) workshop on “Patent Drafting and Filing” at SMVDU, Katra.
- 4) 2-Days (12-13<sup>th</sup> March, 2016) National Workshop on “RF and Microwave Design Using Advanced Design System (ADS)” at G.L.A. University Mathura (U.P.)
- 5) 1-day (6<sup>th</sup> March 2010) National workshop on “Recent Trends in Engineering and Technology” at “Guru Jambheshwar University of Science & Technology”, Hisar (Haryana).
- 6) 1-day (13<sup>th</sup> March 2010) National workshop on “Recent Trends in Mathematics & Computing” at “The Technological Institute of Textile & Sciences”, Bhiwani (Haryana).
- 7) 1-Day (27<sup>th</sup> August 2011) AICTE Sponsored Seminar on “Soft Computing: Its Application & MATLAB” at “The Technological Institute of Textile & Sciences”, Bhiwani (Haryana).
- 8) 1-Day (18<sup>th</sup> August 2012) AICTE Sponsored National Seminar on “Mathematical Modeling in Science & Technology” at “The Technological Institute of Textile & Sciences”, Bhiwani (Haryana).

##### **Industrial Trainings:-**

###### **14 days Industrial Trainings at Industry or Company**

- 1) 14-days / two weeks (09-08-2022 to 22-08-2022) Industrial Training in River Engineering Pvt. Ltd. Greater Noida, (U.P.)
- 2) 14-days / two weeks (18-08-2021 to 31-08-2021) Industrial Training on RF Test Equipment at CSG T&M Department in Amil Ltd, New Delhi.

##### **SDP/FDP/STC:-**

###### **Orientation Courses / Refresher Courses Attended (2-weeks or more)**

- 1) 1-Week (12-20 June, 2023) MOOC NEP FDP from IGNOU
- 2) 2-Months / 8-weeks (July-Sep, 2022) NPTEL-AICTE online MOOC Certification Course on “VLSI Interconnects” Conducted by IIT, Kharagpur/ IIT Madras.

- 3) AICTE-ISTE sponsored Induction/Refresher program on “Sustainable Product Design and Manufacturing (Phase II)”, held online during April 15-21, 2021, at Shri Mata Vaishno Devi University, Katra, (J & K)
- 4) AICTE-ISTE sponsored Induction/Refresher program on “Sustainable Product Design and Manufacturing” held online during March 18-24, 2021, at Shri Mata Vaishno Devi University, Katra, (J & K)
- 5) 2-Months / 8-weeks (Aug-Oct, 2018) NPTEL online MOOC Certification Course on “Microwave Integrated Circuits” Conducted by IIT, Bombay.
- 6) 1-Month (May 3, 2018 to May 30, 2018) MOOC Equivalent to two-week FDP Course on “Pedagogy for Online and Blended Teaching-Learning Process” online conducted by IIT, Bombay at SMVDU, Remote Center.
- 7) 1-Month (March 8, 2018 to April 12, 2018) MOOC Equivalent to two-week FDP Course on “Foundation Program in ICT for Education” online conducted by IIT, Bombay at SMVDU, Remote Center.
- 8) (3-Weeks) Refresher Course in “Information Technology” from 23/06/2016 to 13/07/2016 at “Human Resource Development Center, Guru Nanak Dev University”, Amritsar, Punjab
- 9) (4-Weeks) Orientation Programme from 18/05/2015 to 13/06/2015 at “Human Resource Development Center, Guru Jambheshwar University of Science and Technology”, Hissar, Haryana.
- 10) 2-Weeks (Dec 16-29, 2011) AICTE approved Staff Development Program on “Introduction to MATLAB® and Matrox® Imaging Library (MIL) with Emphasis on hands on Practice (WMMIL, 11)” at Shri Mata Vaishno Devi University, School of Electronics & Communication Engineering Kakryal, Katra, J&K 182320, INDIA.

***Faculty Development Programs (1-week Duration)***

- 1) 1-week (31-07-2023 to 04-08-2023) VLSI to System Design Silicon to End Application Approach, Organized by AICTE, Arm Education and ST Microelectronics.
- 2) 1-week (8-14<sup>th</sup> Feb, 2023) workshop on “Industrial Approach to Internet of Things and Its Research Challenges” organized by School of Electronics Engineering at VIT-AP University.
- 3) 1-week (10-14<sup>th</sup> May, 2021) 5 day online FDP on “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education (AICTE).
- 4) 1-week (5-11<sup>th</sup> March, 2021) Online Short Course on “Design of CMOS Operational Amplifier ICs- A Unique Pedagogical Approach” Conducted by Indian Institute of Technology, Gandhi Nagar, Gujrat (India).
- 5) 1-week (18-22<sup>nd</sup> May, 2019) Faculty Development Program on “Modeling & Simulation in Ultra Low Power VLSI Design” Organized by School of Electronics & Communication Engineering, SMVDU Katra.
- 6) 1-week (21-25<sup>th</sup> Jan, 2019) Faculty Development Program on “Teaching Sciences and Mathematics” Organized by School of Mathematics, SMVDU Katra.
- 7) 1-week (11<sup>th</sup> – 15<sup>th</sup> June 2018) TEQIP-III funded Summer Training Program on Active Learning Workshop Conducted at IIT, Bombay.
- 8) 1-week (7<sup>th</sup> – 11<sup>th</sup> May 2018) TEQIP-III funded 1-Week Faculty Development program on “Emerging Issues in VLSI Design” Organized by School of ECE, SMVDU Katra
- 9) 1-week (24<sup>th</sup>-28<sup>th</sup> Oct 2016), AICTE recognized Short Term Course on “Optimization using MATLAB through ICT” Conducted by NITTTR Chandigarh at Dept. of Mech. Engg., SMVDU, Katra (J & K).
- 10) 1-week (19-23<sup>rd</sup> Sep, 2016, Participated in ISTE STTP for Coordinators on “CMOS, Mixed Signal and Radio Frequency VLSI Design” at Indian Institute of Technology, Kharagpur

- 11) 1-week (29<sup>th</sup> Feb to 4<sup>th</sup> March 2016), AICTE recognized Short Term Course on “Recent Trends in Automobile Engineering” Conducted by NITTTR Chandigarh at Dept. of Mech. Engg., SMVDU, Katra (J & K).
- 12) 1-week (16-20<sup>th</sup> June 2014) ISTE PTU sponsored Faculty Development Programme on “ Advanced Embedded System and VLSI Design & Its Applications” at BRCM CET, Bahal, Bhiwani (Haryana)
- 13) 1-week (21<sup>st</sup> -25<sup>th</sup> April 2014), AICTE recognized Short Term Course on “Intellectual Property Rights & Patenting” Conducted by NITTTR Chandigarh at T.I.T.&S. Bhiwani.
- 14) 1-week (30<sup>th</sup> Sep 2013 – 6<sup>th</sup> Oct 2013) Hands on training and workshop on “Engineering Problem Solving Using MATLAB and Simulink” at “Bhagat Phool Singh Mahila Vishwavidyalaya”, Khanpur Kalan Sonapat (Haryana).
- 15) 1-week (28<sup>th</sup> June – 2<sup>nd</sup> July 2010) MHRD/AICTE Summer School on “Orientation Program for Technical Teachers (OPTT-2010)” at “National Institute of Technology”, Hamirpur (H.P.)".
- 16) 1-week (21<sup>st</sup> – 25<sup>th</sup> December 2009) AICTE Sponsored National Level Winter School on “Teaching with MATLAB and Simulink” at “Sardar Vallabhbhai National Institute of Technology”, Surat (Gujrat).
- 17) 1-week (20-24<sup>th</sup> July 2009) MHRD/AICTE Short Term Program on “Metamaterial Antenna Design and Analysis” at “National Institute of Technical Teachers’ Training and Research”, Chandigarh.
- 18) 1-week (13-17<sup>th</sup> July 2009) MHRD/AICTE Summer School on “Engineering Applications of EDA Tools using Verilog & SPICE (EDAT-09)” at “National Institute of Technology”, Hamirpur (H.P.).

**Training Programs Conducted / Organized:**

- 1) Coordinator of Two Days Workshop on Virtual lab in coordination with IIT-Roorkee at SoECE, SMVDU 19<sup>th</sup>-20<sup>th</sup> February 2024.
- 2) Coordinator of Curriculum Workshop for NEP Syllabus orientation at SoECE, SMVDU 6<sup>th</sup> March 2024.
- 3) Coordinator of Workshop on VHDL and FPGA Hands on Training at SoECE, SMVDU 4<sup>th</sup> and 5<sup>th</sup> May 2024.
- 4) Coordinator of the Workshop on “Hands on Training of VLSI Design using Cadence Software”, on 16-17<sup>th</sup> March, 2023, Organized by School of Electronics & Communication Engineering, SMVDU Katra.
- 5) Coordinator of the “National Intellectual Property Awareness Mission”, on 28<sup>th</sup> February, 2023, Organized by School of Electronics & Communication Engineering, SMVDU Katra.
- 6) Event Coordinator of the “Workshop on Virtual Lab by IIT Roorkee”, on 16<sup>th</sup> February, 2023, Organized by School of Electronics & Communication Engineering, SMVDU Katra.
- 7) Co-coordinator of the One-Day National Seminar on “Yoga and Personal Development” on 31<sup>st</sup> May, 2019, Organized by School of Electronics & Communication Engineering, SMVDU Katra, Funded by TEQIP-III.
- 8) Member, Organizing Committee of the TEQIP-III funded 1-Week Faculty Development program on “Emerging Issues in VLSI Design” Organized by School of ECE, SMVDU Katra during 7<sup>th</sup> May 2018 to 11<sup>th</sup> May 2018.
- 9) Member, Organizing Committee of the “UGC Sponsored One Day Workshop on Scientific Writing using LaTeX” Organized by Dept. of ECE, SMVDU Katra on 24<sup>th</sup> Feb, 2017.
- 10) Workshop Coordinator of 2 Week (26/12/2016 to 04/02/2017) (30/01/2017 to 04/02/2017) ISTE STTP on “CMOS, Mixed Signal and Radio Frequency VLSI Design” Conducted by Indian Institute of Technology, Kharagpur at SMVDU, Katra.

- 11) Coordinator of 2-day (14-15<sup>th</sup> Jan, 2017) UGC Sponsored Workshop on “Numerical Analysis in VLSI CAD Using MATLAB and Simulink” conducted by Dept. of ECE, at SMVDU, Katra (J&K)
- 12) Member, Organizing Committee of the “UGC Sponsored Two Day Workshop on Ultra Low Power Biosensors and Implantable Microsystems” Organized by Dept. of ECE, SMVDU Katra on 2-3<sup>rd</sup> Dec, 2016.
- 13) Organizing member of AICTE Sponsored National Conference on “Mathematical Modeling in Science & Technology” at “The Technological Institute of Textile & Sciences”, Bhiwani (Haryana) on 18<sup>th</sup> August 2012.
- 14) Organizing Member of National Conference on Global Challenges-Role of Science and Technology in giving their Solutions (GCRSTS-2012), at TIT&S, Bhiwani, 3-4 March -2012.
- 15) Member of Technical Committee of National Level Workshop & Competition on ROBO-SOCCER at TIT&S, Bhiwani, 17<sup>th</sup> Sep. 2011.
- 16) Organizing Member of “National Workshop on Conceptual and Multi-Disciplinary View of Bioinformatics” at TIT&S, Bhiwani, 30 April -2011.
- 17) Coordinator of 6-Weeks Summer Training Program on “VLSI Chip Design”, Organized by dept. of Electronics & Communication from 9<sup>th</sup> June 2011 to 20<sup>th</sup> July 2011.

**Expert Talks/ Session Chair:**

- 1) Four Invited Lectures on 14-09-2024 (Offline Mode) at **“Government Higher Secondary School, Panthal, (Reasi)”** on Topics: “Operating Systems”, “Artificial Intelligence”, “Database Management”, “Introduction to Artificial Intelligence” and “Cyber Crime and Cyber Security” to 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> Class students, respectively.
- 2) Invited Lecture (2-Sessions) delivered on 28-08-2024 (Online Mode) in **“Refresher Course on ICT -2024”** at Bhagat Phool Singh Women University, Khanpur, Sonapat Haryana. Topics: “Use of ICT in Effective Teaching, Learning and Assessment”.
- 3) Invited Lecture delivered on 11-01-2024 (Offline Mode) in **“Six-days AICTE-sponsored ATAL Faculty Development Programme (FDP) on Recent Trends in VLSI and Communication Engineering.”** on topic “Multi-valued logic Circuit Design in Nanoscale Technology” at Ganga Institute of Technology & Management, Jhajjar, Haryana
- 4) Invited Lectures (2-Sessions) delivered on 02-01-2024 (Online Mode) in **“Faculty Induction Program-7”** held from 01-30 Jan, 2024” at Bhagat Phool Singh Women University, Khanpur, Sonapat Haryana. Topics: “Careful and Effective Use of ICT in Research”.
- 5) Invited Lecture delivered on 20-12-2023 (Online Mode) in Refresher Course in **“Development of ICT Skills for Implementation of NEP-2020 (ID)”** held from 16/12/2023 to 29/12/2023 at Bhagat Phool Singh Women University, Khanpur, Sonapat Haryana. Topics: “Careful and Effective Use of ICT in Teaching” and “ICT Tools for Creating Digital Learning Environment”.
- 6) Four Invited Lectures on 04-12-2023 (Offline Mode) at **“Government Higher Secondary School, Panthal (Reasi)”** on Topics: “Virus, Antivirus or some smart gadgets”, “2. Database Management”, “Introduction to Artificial Intelligence” and “Introduction to Cloud Computing” to 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> Class students.
- 7) Invited talk delivered on 29-04-2023 (Online Mode) “Research Methodology” Ganga Institute of Technology and Management, Jhajjar, Haryana.
- 8) Invited talk delivered on 11-03-2023 (Online Mode) on “VHDL and Verilog” Ganga Institute of Technology and Management, Jhajjar, Haryana.



- 9) Invited talk delivered on 26-02-2022 (Online Mode) in online Workshop on **“Programming Skills Using Python” conducted by Department of Electronics & Communication Engineering** on “CNTFET Based Digital Circuit Design for Improved Performance” conducted from 21-27 Feb, 2022 at Bhagat Phool Singh Women University, Khanpur, Sonapat (Haryana).
- 10) Expert lecture on “Advance Programming in VHDL” and “ Modeling and Simulation of Digital System with VHDL using Modelsim” in Two Days (14-15 June, 2021) National Level Online Hands-on Workshop on “EDA Simulation Tools & its Application in Engineering” at Bhagat Phool Singh Women University, Khanpur, Sonapat (Haryana).
- 11) Invited Speaker in Two day (21-22 May, 2021) **Virtual International Conference on “Emerging Trends in Engineering, Science, Management & Commerce”** Organized by Madhyanchal Professional University, Bhopal in association with Advance Research Education Society. Topic: “Integrated Circuit Technology Trending towards the End of Moore’s Law”.
- 12) Invited talk delivered on 16-05-2021 (Online Mode) on “Future of Analog Design in VLSI Industry”, at “The Technological Institute of Textile & Sciences, Bhiwani, Haryana”.
- 13) Invited talk delivered on 20-02-2021 (Online Mode) “VHDL and Verilog”, at “Ganga Institute of Technology and Management, Haryana”.
- 14) Session Chair in **“1<sup>st</sup> Advancement in Engineering Sciences (AES2019)”** organized by Dept. of ECE, on 28-29<sup>th</sup> Sep, 2019 at SMVDU, Katra.
- 15) Technical Chair in “4<sup>th</sup> International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET)” organized by Dept. of ECE, on 3-4<sup>th</sup> Nov, 2017 at SMVDU, Katra.
- 16) Technical Chair in **“3<sup>rd</sup> International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET)”** organized by Dept. of ECE, on 17-18<sup>th</sup> Nov, 2016 at SMVDU, Katra.
- 17) Delivered Two-expert lectures on “Basics of VHDL and Its utility in VLSI Design”, and “FPGA implementation of Digital System Design Using VHDL” at Bhagat Phool Singh Women University, Khanpur, Sonapat (Haryana) on 8<sup>th</sup> Oct, 2016.
- 18) Session Chair in **“International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET)”** organized by Dept. of ECE, on 22<sup>nd</sup> Feb., 2015 at SMVDU, Katra.
- 19) Delivered Eight-talks on 20<sup>th</sup> & 21<sup>st</sup> June 2011 on “VHDL programming” in **“Six weeks summer training programme on “Use of Computer Software Tools (MATLAB, Pspice OrCAD, Xilinx)”** at Bhagat Phool Singh Women University, Khanpur, Sonapat (Haryana) on.

#### **Professional Membership:**

- Life membership (LM-72573) of “Indian Society for Technical Education” 2010
- Member of International Association for Engineers (IAENG) (Member No: 120668), 2017
- Life membership of IETE (The Institute of Telecommunication Engineers) , (Member No: M-500669), 2017
- Life membership of CSI (Computer Society of India) 2017, (Member No: 1186305)
- Membership of ACM (Association for Computing Machinery) 2017

#### **Administrative Duties Performed in SMVDU:**

- Member of Institute Admission Committee during July 2009- Sep 2009 at TIT&S, Bhiwani.
- Member of Institute Admission Committee during July 2010- Sep 2010 at TIT&S, Bhiwani.
- Member of Anti-Ragging Squad(s) during Aug-Sep 2015 at SMVDU, Katra.
- Member of Anti-Ragging Squad(s) during Aug-Sep 2016 at SMVDU, Katra.

- Coordinator of the Mini Project-II (ECE 6<sup>th</sup> Sem) 2013-2017 Batch
- Coordinator of the Mini Project-II (ECE 5<sup>th</sup> Sem) 2014-2018 Batch
- Committee member for facilitating Students in robbing gowns in 5<sup>th</sup> Convocation (April-16)
- Coordinator for the registration process (Jan 2016) for ECE 4<sup>th</sup> sem.
- Coordinator for the registration process (July 2016) for ECE 3<sup>rd</sup> sem.
- Member of departmental purchase committee for FY 2016-17.
- UG coordinator for ECE second year.
- Mentor of ECE 2<sup>nd</sup> year (2015-2019)
- Member of committee for making recommendation regarding LED Security lights to be installed at SMVD University, March 2016.
- Member of committee to finalize the technical specifications for purchase of Public Address Lectern System at SMVDU, July 2016
- Member of committee to ensure the execution and compilation of License Deeds entered with M/s Tawi Foods & Beverages and M/s Wadson Foods for running food joints at SMVD University. Sep 2016
- Co-coordinator of Departmental Exam Committee, Jan- May 2017.
- Departmental Coordinator for Moodle April 2017- till date
- UG Coordinator of the School of ECE at SMVDU
- PhD Coordinator of the School of ECE at SMVDU Since Nov, 2021
- Samarth Departmental Coordinator, 2022-2023
- Samarth Departmental Coordinator, 2023-2024
- Departmental Examination Coordinator, 2022-2023
- Incharge Microsystems Lab, 2017-2019 and 2022-2024
- Hostel Warden Aug 2024 to till date
- Incharge Freescale-Lab Aug 2024 to till date
- Anti-ragging Squad (2024-25)
- LPC Sep-2024
- Stock-Verification Sep 2024

**Subjects Taught at Graduation/ Post Graduate Level:**

Circuit Theory, Microprocessor 8085, Digital Electronics, Analog Electronics, Basics of Electronics, Control System, Integrated Circuit Design, Electromagnetic Field Theory, Digital System Design using VHDL and Verilog.

**Dated: 17.12.2024**

**VIKRAM SINGH**