CURRICULUM VITAE

Namrata Gupta

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CAREER OBJECTIVES

Intend to achieve a special identity with leading educational institute for building a better future with committed and dedicated people, which will help me to explore myself fully and realize my potential. I am willing to work as a key player in challenging and creative environment.

SUMMARY

Namrata Gupta received B.E. degree in Electronics & Telecommunication Engineering from CSVTU University, Raipur, Chhattisgarh in 2009 and M. Tech. in Microelectronics & VLSI Design from IIT Kharagpur, West Bengal in 2011. She has 7 years of teaching experience. She has 16 publications in reputed international journals and conferences. Her research areas of interest are semiconductor power devices, MEMS, video motion estimation, performance optimization of devices using machine learning. Currently she has submitted her PhD. thesis for evaluation (NIT Raipur).

WORK EXPERIENCE

1. Assistant Professor and Head of Department in Department of Electronics & Telecommunication, Bhilai Institute of Engineering College Raipur, (C.G.)

   From: 16/06/2012 to 16/08/2017

   Job Description: Smooth conduction of classes and labs, management of faculties and lab staff, acting as a bridge between management and students, doing research in the field of video processing, electronic and VLSI system, along teaching, conducting labs, lab set up, syllabus preparation, guiding B. Tech project.

2. Assistant Professor in Rungta Group of Engineering College (R1) Bhilai, (C.G.)

   From: 01/06/2011 to 09/06/2012

   Job Description: Taking classes and labs for both graduate and post graduate students, guiding B. Tech project.

TECHNICAL INTEREST

Subject Skills:	Semiconductor Devices, Semiconductor Power Devices, MEMS, VLSI Design, System design using VHDL & Verilog, Analog & Digital VLSI, Advanced Electronic Circuit, Digital Electronic Circuits, Micro sensors & MEMS design
Tools Skills:	**TCAD Tools**: Silvaco, Cadance, Tanner, Spice (P-spice, TSpice) **EDA Tool for Digital Circuit Design**: Xilinx with ISE simulator, Modelsim simulator **COMSOL for MEMS Design**

EDUCATIONAL QUALIFICATIONS

2017- Present:	**Ph.D. (Thesis Submitted)** National Institute of Technology Raipur, Chhattisgarh Department of Electronics & Communication Thesis Title: "Design and Analysis of Asymmetric Superjunction Insulated Gate BipolarTransistor: Limitations and Solutions" Thesis Supervisor: Dr. Alok Naugarhiya
2009 – 2011:	**M.Tech in Microelectronic & VLSI Design Engineering (CGPA: 8.38)** Indian Institute of Technology Kharagpur, West Bengal Department of Electronics & Communication Thesis Title: "A Parametric VLSI Architecture for Motion Estimation" Thesis Supervisor: Dr. Indrajit Chakraborti
2005-2009:	**B.E (Percentage: 74.40%)** New Government Engineering Raipur, Chhattisgarh Department of Electronics & Telecommunication Engineering B.E. Project Title: "Embedded System Design for Automatic Toll Tax System" Supervisor: Prof. M.R. Khan
2005 :	**Higher Secondary Education (Percentage: 88.83%)** S.S.V.M. Raipur, Chhattisgarh
Additional qualification	**Advanced Certificate Programme in Machine Learning & Deep Learning** From IIIT Bangalore (Pursuing)

RESEARCH PAPER PUBLISHED / COMMUNICATED / PRESENTED

JOURNALS

1. **Namrata Gupta**, Prannoy Roy and Alok Naugarhiya, "Design and Investigation of Split (n/n-) Buffer layer Semi Superjunction IGBT", on *Applied Physic A: Material science & processing*, 2022. DOI: 10.1007/s00339-022-05497-x. (SCIE Indexed)
2. **Namrata Gupta**, Prannoy Roy and Alok Naugarhiya, "Plasma Enhancement Semi Superjunction Trench IGBT with Higher Figure of Merit", *Journal of Electronic Materials*, pp. 1-10, 2022. (SCIE Indexed)
3. Onika Parmar, **Namrata Gupta**, Alok Naugarhiya, "Reduction in area-specific on-resistance with vertical stepped doped high-k VDMOS", *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, pp. e2979, 2021. (SCIE Indexed)
4. **Namrata Gupta** and Alok Naugarhiya, "Design of Improved Hetero Gate Superjunction IGBT", *Journal of Computational Electronics*, 2021. (SCIE Indexed)
5. **Namrata Gupta** and Alok Naugarhiya, "Performance Assessment of 1.4kV Planar Gate Superjunction IGBT with Stepped Doping Profile in Drift Region", *Silicon* , pp. 1–10, 2020. (SCIE Indexed)
6. **Namrata Gupta** , Sarita Singh and Alok Naugarhiya, "An insulated gate bipolar transistor with three-layer poly gate for improved figure of merit" *Journal of Materials Science: Materials in Electronics*, vol. 31, pp 15513–15521, 2020. (SCIE Indexed).
7. **Namrata Gupta** and Alok Naugarhiya, "Vertical chare plasma IGBT with reduced energy loss", on *Semiconductor Science Technology*. (SCIE Indexed) (Under review).
8. **Namrata Gupta** and Alok Naugarhiya, "Non-Uniform Doped Epitaxial Layer Superjunction IGBT with Enhanced Figure of Merits", *on International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*. (SCIE Indexed) (under review)
9. Ratnesh Tiwari, Vikram Awate, Smita Tolani, **Namrata Verma**, Vikas Dubey, Raunak Kumar Tamrakar "Optical behaviour of cadmium and mercury free eco-friendly lamp nanophosphor for display devices" *Results in Physics*, 2014. (SCIE Indexed)
10. **Namrata Verma**, Tejeshwari Sahu, Pallavi Sahu "Efficient Motion Estimation by Fast Three Step Search Algorithms, *International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering*, 2012.

Conference:

1. **Namrata Gupta**, Alok Naugarhiya, "Capacitive Analysis of Superjunction Vertical IGBT with Gate Engineering", in First International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT 2022), Tiruchirappalli, Tamil Nadu, India during 16 - 18, February 2022. (Presented)
2. **Namrata Gupta**, Alok Naugarhiya, "Design and Analysis of 1.4kV-class Work Function Engineering Planner Gate Superjunction IGBT", in International Conference on Robotics,

Automation & Communication Engineering for Industry 4.0, Faridabad, 4 to 6 Feb 2022. (Presented)

3. **Namrata Gupta** and Alok Naugarhiya, "1.4kV Superjunction IGBT with Variation Doping Profile for Enhanced Performance Parameters", Material today Proceeding, 2020. (Scopus Indexed conference series).
4. Abhishek Ray, Vicky Butram, **Namrata Gupta**, Alok Naugarhiya "Non-Conventional Cantilever for Piezoelectric Energy Harvesting at Ultra Low Resonant Frequency" 2019 9th Annual Information Technology, Electromechanical Engineering and Microelectronics Conference (IEMECON).
5. **Namrata Gupta**, Alok Naugarhiya, Abhishek Ray, Abhinav Gupta "Design and Optimization of MEMS Piezoelectric Cantilever for Vibration Energy Harvesting Application", VCAS 2018. (Book Chapter). DOI: 10.1007/978-981-32-9775-3_60
6. **Namrata Gupta** and Alok Naugarhiya, "Design and optimization of Micro cantilever based sensor for chemicals", presented at National and Computing (VCC 2017), organized by National Institute of Technology, Raipur.
7. **Namrata Gupta and** Rupal Bothra,"A VLSI architecture on motion estimation using full search", International Conference On Emerging Trends In Electrical, Electronics, Instrumentation & Computer Engineering (ETEICE), organized by BIT Raipur on 27th march 2014.
8. **Namrata Gupta** and Pushpendra Patel, "Motion estimation using quick search algorithm", International Conference On Emerging Trends In Electrical, Electronics, Instrumentation & Computer Engineering (ETEICE), organized by BIT Raipur on 27th march 2014.

PROFESSIONAL BODY MEMBERSHIP

1. Life member of the Indian Society for Technical Education (ISTE), with membership number "LM 98231".
2. Life member of the Indian Science Congress Association (ISCA), with membership number "L28744".
3. Associate Member of the Institution of Engineers (INDIA)(IEI) (ISCA), with membership number "AM1634820".

PROFESSIONAL REFERENCES

Dr. Shrish Verma
Professor, Dean Academics
Department of ECE, National Institute of Technology, Raipur, Chhattisgarh. 492010
Email: shrishverma@nitrr.ac.in
Phone No. - +91-9826424427

Dr. Guru Prasad Subas Chandra Mishra
Associate Professor,
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Dr. Alok Naugarhiya
Assistant Professor,
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Dr. Pradeep Singh
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SEMINAR/WORKSHOP ATTENDED

11\03\2021	Organized as a part of the Women's Day Celebration IEEE SB CUK Topic: Talk on VLSI
04\12\2020	A webinar organized by Key sight Technologies
	Topic: Advanced Wide Band Gap High-Power Semiconductor Measurement Techniques
25\09\2020	Online Professional Development Hours organized by PDH IEEE continuing education, new York State.
	Topic: Fully Coupled space charging simulations with EMA3D Internal
11-15\03\2019	One week FDP program sponsored by Electronics and ICT academy, IIITDM Jabalpur and organized by ET&T dept, NIT Raipur.
	Topic: Machine Learning & IoT
15-19\06\2015	ISTE Short Term Training Program sponsored by ISTE New Delhi and organized by ET&T dept., BIT, Raipur
	Topic: Applications of Electronics using Matlab Programming, Simulink & GUI
17\06\2015	Organized by CSVTU Bhilai in association with additive manufacturing society of India Banglore at Raipur
	Topic: National Seminar on 3D Printing & additive manufacturing technologies
30\12\2014	Talk To A Teacher project at BIT Raipur collaborate by IIT Bombay
	Topic: Latex Training
29-31\06\2014	WIPRO under MISSION 10X at BIT Raipur
	Topic: Engineering Faculty Workshop
04-14\06\ 2013	ISTE Workshop on conducted by IIT Kharagpur at SSIPMT, Raipur
	Topic: ANALOG Electronics

ACHIEVEMENTS

2015:	One Proposal with title **"Adaptive Rood Pattern Search for** Fast Block-Matching Motion Estimation" selected in **CGCOST** 2015, amount sensation is 2, 37,400/-.
2009:	Obtain all India rank **96** among 43797 ECE Students and Secured **99.76** %tile in **GATE**

EXTRA CURRICULAR ACTIVITIES

1. Active reviewer in International Conference on Application of Intelligent Computing in Engineering and Science (AICES 2022) and IEEE Transaction on Electron Device.
2. Work as organizing member in International Conference on Emerging Trends in Electrical, Electronics, Instrumentation & Computer Engineering (ETEICE) 2014.
3. Staff club coordinator and Coordinator in UDAY Fest in BIT Raipur.
4. Represented the MT Hall for RANGOLI in ILLU- 2009 & ILLU-2010, IIT Kharagpur.
5. Got 1st prize in Gazal singing competition in Raipur from Dr. RAMAN SINGH, C.M. of C.G.
6. Participated in inter school & college singing competition.
7. Head Girl of school

PERSONAL PROFILE

Date of Birth	:	28th Dec 1986
Sex	:	Female
Father's Name	:	Shree B.P. Verma
Mother's Name	:	Smt. Nirupama Verma
Marital State	:	Married
Husband Name	:	Mr. Saurabh Gupta
Nationality	:	Indian
Languages Known	:	English, Hindi
Hobbies	:	Singing, Event Management

DECLARATION

I consider myself familiar with Electronics and Telecommunication Engineering aspects. I am also confident of my ability to work in a team.

I hereby declare that above information is true to best of my knowledge and belief.

Date: 22/04/2022

Place: Raipur

Namrata Gupta