



Name : RAJANI BISHT

Designation : Associate Prof.

Department : Electronics Engg.

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FAX Number :

**Area of Interest**

Major Area: VLSI DESIGN, TFT CIRCUITS

Minor Area: Microprocessors

## Personal Profile

Date of Birth : 03.03.63  
Marital Status : Married  
Residence : D-48, HBTI WEST CAMPUS, KANPUR  
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### Academic Qualifications

| Sl. No. | Degree | Year               | Institute/ College             | University                         |
|---------|--------|--------------------|--------------------------------|------------------------------------|
| 1.      | BE     | 1984               | GEC JABALPUR                   | Rani Durgawati University Jabalpur |
| 2.      | ME     | 2000               | University Of Roorkee, Roorkee | University of Roorkee, Rookee      |
| 3.      | PHD    | Perusing under QIP | IIT Kanpur                     | IIT Kanpur                         |

M.Tech. Dissertation: “VLSI interconnect delay minimization using CMOS inverters”

Doctoral Dissertation: Perusing

## Experience Record

### Academic:

| Sl. No. | Designation     | Organization          | Duration              |
|---------|-----------------|-----------------------|-----------------------|
| 1.      | Associate Prof. | H.B.T.I. KANPUR       | 2003 onwards          |
| 2       | Assistant Prof. | H.B.T.I. KANPUR       | 1998 10 2003          |
| 3       | Sr. Lecturer    | H B T I KANPUR        | 18 Oct 1993 to 1998   |
| 4       | Lecturer        | Govt. Engg. College   | Nov 1990 to 1991      |
|         | Lecturer        | Bhopal                | July 1987 to 1990 Nov |
| 5       | Lecturer        | Govt Womens           | Oct 1984 to July 1987 |
|         | Lecturer        | Polytechnic Bhopal    |                       |
|         |                 | Govt Polytechnic Durg |                       |

### Scientific:

| Sl. No. | Designation              | Organization  | Duration            |
|---------|--------------------------|---------------|---------------------|
| 1       | Senior Project Associate | I.I.T. KANPUR | August 1991 to 1992 |

## **Teaching Records**

### **Courses Taught at PG Level:**

- VLSI SYSTEM DESIGN
- ADVANCED MICROPROCESSORS
- SOLID STATE SEMICONDUCTOR DEVICES
- Advanced Semiconductor Devices

### **Courses Taught at UG Level:**

- VLSI TECHNOLOGY
- VLSI DESIGN
- DIGITAL INTEGRATED CIRCUITS
- ELECTRONICS CIRCUITS & DEVICES
- INTEGRATED CIRCUITED & DEVICES
- MICROELECTRONICS
- ANTEENA & WAVE PROPAGATION
- INDUSTRIAL INSTRUMENTATION
- COMPUTER AIDED DESIGN OF ELECTRONIC CIRCUITS
- COMMUNICATION SYSTEM PRACTICE
- PC HARDWARE
- Advanced Semiconductor Devices
- Digital System Design using VHDL

### **Invited lectures at Other Organizations**

- “VLSI Design & Testing” at Institution of Engineers, Kanpur Chapter on Feb 15<sup>th</sup>, 04.
- MPEC Kanpur “ Overview on VLSI Design”
- AITH Kanpur “ Overview on VLSI Design”

## **Administrative Experience**

### Administrative Work:

- 1988-1990 2nd LT. NCC OFFICER GOVT. WOMEN'S POLYTECHNIC BHOPAL
- 1989-1990 WARDEN GOVT. WOMEN'S POLYTECHNIC BHOPAL
- 2005 WARDEN NGH HBTI KANPUR
- Warden GH-IV HBTI Kanpur
- Head Electronics(two terms) HBTI Kanpur

### Professional Committee Work:

- 2001, Member, Syllabi making committee, curriculum development of UPTU syllabus of Electronic & Communication, HBTI KANPUR
- 2004, Member, Syllabi making committee, curriculum Revision of UPTU syllabus of Electronic & Communication, HBTI KANPUR
- 2004, Member, Syllabi making committee, curriculum development of Polytechnic syllabus of Electronic & Communication, IRDT, KANPUR

## **Membership of Professional Bodies**

Associate Member/Institution of Electronics & Telecommunication Engineers/M138582

### Research Guidance Guided many U G projects and M.Tech Theses

| S. No. | Year | Title of M tech Thesis  | Name of Student             |
|--------|------|---|-----------------------------|
| 1.     | 2004 | Single Precision 32 Bit Pipeline Floating Point Addition & Subtraction in VHDL                          | Ms. Richa (740/02)          |
| 2.     | 2004 | Automatic Test Pattern Generator for Sequential Circuits  | Amit Kumar (733/02)         |
| 3.     | 2005 | Analog Technique for MOS and TFT Circuits   | Sunil Kumar Yadav (720/03)  |
| 4.     | 2005 | Process Automation System for Differential Pressure Control of Propellant Tanks in Liquid Rocket Stages | Man Mohan Vaishya (721/03)  |
| 5.     | 2006 | Analysis of Tradeoff in CMOS Differential Amplifier   | Ajay Bharti (745/04)        |
| 6.     | 2007 | Design of I/O Buffer (Slew Rate Controlled) in 65nm CMOS Process  | Manoj Kumar Tiwari (721/05) |
| 7.     | 2007 | Analysis of Impact of Kink effect on poly-silicon TFT Analog Circuit & its reduction                    | Manish Agarwal (702/05)     |
| 8.     | 2010 | Analysis and Characterization of Gate Diffusion Input   | Arun Prakash Singh (709/07) |
| 9.     | 2010 | Design and Implementation of Fast Adders Using VHDL   | Nishi Chandra (729/08)      |

|     |      |   |                                  |
|-----|------|---|----------------------------------|
|     |      | and FPGA  |                                  |
| 10. | 2011 | Design of 16 -bit Microprocessor using VHDL   | Abhai Shankar Chaurasia (734/09) |
| 11. | 2011 | Design of Adder using Quaternary Signed Digit Number System                         | Vishal Pandey (732/09)           |
| 12. | 2012 | Characterization of Low Power MOS SRAM Cells  | Ankit Khandelwal (707/10)        |
| 13. | 2012 | Threshold Voltage Compensation for Analog circuit design using TFT                  | Geeta Awasthi (710/10)           |
| 14. | 2013 | Design of MOS current mode Logic Adder  | Koshal Kishor Gupta (707/11)     |
| 15. | 2013 | Low Power CMOS full adder design  | Pankaj Verma (709/11)            |
| 16. | 2014 | Design of 8-bit RISC Microprocessor using VHDL                                      | Atul Kumar (723/12)              |
| 17. | 2014 | Floating Point Multiplier Design based on Vedic Multiplication Technique using VHDL | Pankaj Singh (726/12)            |
| 18. | 2014 | Performance Analysis of conventional & Double Gate (DG) MOSFET                      | Rajesh Kumar (729/12)            |
| 19. | 2015 | Leakage Power Reduction Techniques for CMOS Circuits                                | Kuldeep Singh (741/13)           |

### Sponsored Projects

|                |                |              |             |
|----------------|----------------|--------------|-------------|
| Title          | Funding Agency | Amount       | Duration    |
| “VLSI Design”, | AICTE,         | Rs10.0Lacks, | Three Years |

### Publications

| Sr. No. | Authors                             | Title of Paper   | Name of Organizer (Institution)               | Name of University | Conference Date and Year   |
|---------|-------------------------------------|--|---|--------------------|--|
| 1       | Rajani Bisht, B. Mazhari            | “Impact of Kink Effect on Performance of Poly-Silicon based TFT Differential Amplifiers” | Asian Symposium on Information Display (ASID) | IIT Kanpur         | 06 in New Delhi during Oct 8 to Oct 12, 06.  |
| 2       | Rajani Bisht, S Sarkar, R P Agarwal | “VLSI interconnect delay minimization using CMOS inverters”                              | IIT, Roorkee                                  | IIT, Roorkee       | 1. Proceedings of All India Seminar on Recent Trends in VLSI, (held on 29 <sup>th</sup> -30 <sup>th</sup> September 2001 at. |