

BIO - DATA

1-12-21

1. Name : **Dr. B.S. Rai**
2. Father's Name : Late Sri Sumeshwar Rai
3. Date of Birth : 25th Jan. 1954
4. Address : Deptt. of Electronics & Communication Engg.
M.M.M. Engineering College, Gorakhpur
5. Qualification : M.Tech., Ph.D.
6. Designation : Professor
7. Pay Scale : Rs. 37400-67000/-, Grade Pay :10000
8. Experience : (Details given in Annex-1)

Post Held	Name of Organisation	Period
Associated with Project sponsored by DOE, Govt. of India	ISM, Dhanbad	Jun. 78 to Nov. 81
Lecturer	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur	Nov. 81 to March 93
Joint Director	CEDTI, Gorakhpur	March 93 to March 95
Lecturer (SS/SG)	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur.	March 95 to April 96
Asstt. Professor	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur.	April 96 to Nov.2003
Professor	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur.	Nov.2003 and onward
Professor & Head	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur.	July 2011-December 2014
Professor	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur.	December 2014- Jun 2016
Professor	Electronics Engg. Deptt, M.M.M. Engg. College, Gorakhpur.	Join after Retirement (July 2016- Feb-2017)
Director	ITM , Maharajganj (U.P.)	Feb 2017-June 2020

Professor

K1PM-CET, Gorakhpur

July 2020 to till date

9. Publications : As in Annexure-2
10. Ph.D. & M.Tech. Guidance : As in Annexure-3
11. Training Programme & Summer/Winter School : As in Annexure-4

Annexure-1

Experience :

1. From June 78 to Nov 81 in Deptt. of Electronics & Instrumentation at Indian School of Mines Dhanbad.
 - (a) Associated with the project U/G Mine Communication sponsored by DoE Govt. of India.
 - (b) Teaching of Post Diploma students (Advance Instrumentation)
 - (c) Project

(i)	U/G Mine Communication Project
(ii)	U/G Mine Parameters Monitoring

2. From Nov. 81 to March 93. Lecturer, in Electronics Engg. Department, M.M.M. Engg. College, Gorakhpur
 - (a) Teaching :
 - (i) Undergraduate (B.E. Electronics students)
 - Pulse & Digital Circuits
 - Computer Architecture
 - Microprocessor & Interfacing
 - (ii) Post Graduate Students (Industrial Electronics & Process Instrumentation)
 - Computer Programming
 - Advance Microprocessor & Interfacing
 - Digital Signal Processing
 - (b) Project :

Under Graduate : In the area of Microprocessor based system.

Post Graduate : In the area of Microprocessor based system & Digital Signal Processing.
 - (c) Lab Development :

Developed Microprocessor & Computer Lab in Electronics Engg. Deptt.

(d) **Administrative :**

- i. Officer In charge of College Telephone Exchange
- ii. Hostel Warden from July 1987 to June 1990

3. From March 93 to Feb. 95 : Joint at C.E.D.T., Gorakhpur.

(a) Teaching :

(i) DOE-ACC "C" Level

- Data Structure
- Computer Communication Network

(ii) Post Diploma :

- Computer Architecture & Programming
- Signal Processing.

(iii) Advance Course in Area of Information Technology & Process Instrumentation.

- Computer Networking
- Computer Communication
- Mobile & Cellular Communication
- Microprocessor based system Design & Data Acquisition system.

(b) Lab Development :

- (i) Microprocessor
- (ii) Associated Communication & Computer Lab.

(c) Design :

- (i) Design A Microprocessor based digital filter
- (ii) Fabrication of Random Signal Generation
- (iii) Digital Electronics Exchange

(d) Proposals :

- (i) Impact Proposal
- (ii) M.Tech. (Electronics Products Design) Proposal (Submitted to Gorakhpur University)
- (iii) DoE-ACC "C" & "O" Level Proposals
- (iv) Post Diploma Proposal for recognition (Submitted to Technical Education U.P.)
- (v) Short Term Course Proposal .

(e) Appointed as Councilor of DoE-ACC, Councelling Centre at Gorakhpur by the DoE Govt. of India to promote the Computer Applications.

(f) Specialization of Working Area :

- (i) Computer Architecture
- (ii) Computer Net working & Communication
- (iii) Digital Signal Processing
- (iv) Advance Microprocessor & Interfacing.

(g) Administrative /Accounts :

- (i) Looking after the Admin, Stores and Accounts sections of the Centre.
- (ii) Assist Director in Admin, Accounts & Stores work of the centre.
- (iii) Looking after the charge of Director from June 94 and onward in absence of Director.

4.

From March 95 to Continue :

Working as Lecturer (SS/SG) in Electronics & Communication Engg. Deptt. M.M.M. Engg. College, Gorakhpur. Upto 16th April 96 and then Assistant Professor upto Nov.2003. Now working as Professor

(a) Nature of Works same as given in Para-2.

(b) Proposals:

- (i) "Modernization of Computer Hardware Lab" Submitted at HRD Govt. of India.
- (ii) "B.Tech. Program in Information Technology" Submitted Technical University and Govt. of U.P.
- (iii) Post Graduate Diploma Course in Computer Networking, Hardware and Maintenance.

(C) Co-ordinator :

- (i) Co-ordinator of Part-Time Post Graduate Diploma in Computer Networking, Hardware & Maintenance 1st, 2nd & 3rd Batches.
- (ii) Co-ordinator of "Quality Improvement programme" of Teachers sponsored by I.R.D.T. Kanpur Govt. of U.P.
- (iii) Co-ordinator of Summer School sponsored by ISTE on "Maintenance of PC's".

(d) Research :

- (i) Three Ph.D. Scholars are working under my guidance.
 - "Development of Fast RBSB Digital Signal Processor" by Krishna Raj has been awarded in May 2003 at DDU University Gorakhpur
 - "Development of Real Time Processor" by R.N. Shukla D.D.U. University Gorakhpur.
 - "Development of Fast RBSB Arithmetic Processor" by Neelam Sharma U.P. Technical University Lucknow (awarded in 2005).
- (ii) M.Tech. (Industrial Electronics & Process Instrumentation), Guided 7 M.Tech thesis and Degree has been awarded to them.

5.

Chairman, IT Resource Centre :

Looking after the work of IT infrastructure of the college with effect from 2003 and onwards

- (i) campus wide networking
- (ii) Campus autonomous software
- (iii) CAD Software
- (iv) Design Tools & Softwares
- (v) Network Management Software

Administrative Works

- (i). Co-ordinator Admission cell
- (ii). Dean Student Affaires
- (iii). Chief Warden
- (iv). Dean Faculty Affaires
- (v). Member Board of Management (M.M.M.U.T, Gorakhpur)

Publications List:

- [1] Chandan, Toolika Srivastava and B.S.Rai, "Multiband Monopole U-Slot Patch Antenna with Truncated Ground Plane," *Microwave and Optical Technology Letters (MOTL)*, Vol. 58, No. 8, pp. 1949-1952.[SCI, Thomson Reuters]
- [2] Chandan and B.S.Rai, "High Gain Dual-Band Monopole Patch Antenna Using Mirostrip Fed for WLAN Applications," *International Journal of Applied Engineering Research (IJAER, ISSN 0973-9769)*, vol. 10, No.15, pp.35870-35874, 2015. [Scopus Index and SCIMago]
- [3] Chandan, R.K.Prasad and B.S.Rai, "Improve Bandwidth of S Shaped Microstrip Patch Antenna", *International Journal of Emerging Trends in Engineering and Development (IJETED)*, ISSN 2249-6149, Vol.1, pp.641-646, January 2013.
- [4] Anjali Gupta, Chandan and B.S.Rai, "Design and Simulation of Hexagon with a Diamond Slot Microstrip Patch Antenna", *International Journal PISER13*, Vol.02, Issue:03/06, pp. 072 -076, may 2014.
- [5] Smita Chaudhary , Chandan and B.S.Rai, "Design of Microstrip Patch Antenna with T Slot for Wireless Applications", *International Journal PISER13*, Vol.02, Issue:03/06, pp. 080-084, may 2014.
- [6] Toolika Srivastava, Chandan and B.S.Rai, "High-Gain Multiband U-Slot Patch Antenna with Defected Ground Plane," *I-Manager's Journal on Communication Engineering and Systems (JCS)*, Vol. 4, No. 1, pp.8-12, 2015.
- [7] Toolika Srivastava, Chandan and B.S.Rai, " Mirostrip Line-Fed Patch Antenna for USB Applications," *I-Manager's Journal on Wireless Communication Networks*, Vol. 4, No. 1, pp. 31-35, 2015.
- [8] Toolika Srivastava, Chandan and B.S.Rai, "Design and Comparison of Microstrip Patch Antenna with Different Ground Structure," *IJSRD International Journal for Scientific Research & Development*, Vol.3, Issue06, pp. 1326-1328, 2015.
- [9] Chandan and B.S.Rai, "Dual-Band Wang Shaped Microstrip Patch Antenna for GPS and Bluetooth Application," *IEEE Sixth International Conference on*

- Computational Intelligence and Communication Networks (Udaipur), pp. 69-73, 2014. [IEEE Explore]
- [10] Chandan and B.S.Rai, "Bandwidth Enhancement of Wang Shape Microstrip Patch Antenna for Wireless System", IEEE Fourth International Conference on Communication Systems and Network Technologies (NITTR BHOPAL), PP.11-15, 2014. [IEEE Explore]
- [11] Chandan and B.S.Rai, "Dual-Band Monopole Patch Antenna Using Mirostrip Fed for WiMAX and WLAN Applications," Springer Proceedings of Third International Conference INDIA 2016, Vol. 2, pp. 533-539, 2016. [Springer Book Chapter and Scopus+DBLP]
- [12] Chandan and B.S.Rai, "Design & Fabrication of E Shape Microstrip Patch Antenna for WLAN Applications, IEEE 3rd International Conference on "Computing for Sustainable Global Development, IndiaCom 16 Delhi, ISBN 978-93-80544-20-5, pp.814-817, 2016. [IEEE Explore]
- [13] Chandan, Toolika Srivastava and B.S.Rai, "Miniaturized Rectangular Ring Monopole Antenna for WLAN Applications", IEEE Conference on ICCCM-2016, United Institute Allahabad, Accepted, 2016. [IEEE Explore]
- [14] Chandan, Toolika Srivastava and B.S.Rai, "L-Slotted Microstrip Fed Monopole Antenna for Triple Band WLAN and WiMAX Applications," Springer International Conference on Orissa, Accepted 2016. [Springer Book Chapter and Scopus+DBLP]
- [15] Chandan, R.K.Prasad, G. S. Tripathi and B.S.Rai, "Wide Band Microstrip Patch Antenna for Wireless Application", ITR International Conference on Advanced Computer Science and Information Technology (ICACSIT) Delhi, DELACSIT-172-136, PP.No.15-17, 2013.
- [16] Chandan and B.S.Rai, "Inverted F Dual Band Microstrip Patch Antenna for GPS Application" National Conference on Advance in Computer Communication & Embedded System (ACCES-II, 2014), M.M.M. University Gorakhpur, ISBN: 978-93-83842-37-7, PP. 240-243, 2014.
- [17] Smita Chaudhary , Chandan and B.S.Rai, " Design of Microstrip Patch Antenna with Parasitic Elements for GSM Application, National Conference on Advance in Computer Communication & Embedded System (ACCES-II, 2014), M.M.M. University Gorakhpur, ISBN: 978-93-83842-37-7, PP. 217-219, 2014.
- [18] Anjali Gupta, Chandan and B.S.Rai, "Design and Simulation of Microstrip Patch Antenna for GPS Application, National Conference on Advance in

Computer Communication & Embedded System (ACCES-II, 2014), M.M.M. University Gorakhpur, ISBN: 978-93-83842-37-7, PP. 208-211, 2014.

- [19] Chandan and B.S.Rai, "A Planar U-Shaped Microstrip Patch Antenna for WiMAX Applications," National Workshop on Recent Advancement in Communication Engineering and Microelectronics (RACEM), MMMUT, Gorakhpur, pp. 36-39, 2015.
- [20] Chandan, Toolika Srivastava and B.S.Rai "Multiband Microstrip Antenna with Defected Ground for WiMAX/WLAN Applications, National Conference on RACEM MMMUT Gorakhpur, pp. 51-54, 2016.
- [21] A Research paper on "Enhancement of Single Mode Operation in Coaxial Optical Waveguide Using DB Boundary Conditions" by Pooja Lohia, Dr Yogendra Prajapati, Dr. J.P.Saini & Dr. B.S. Rai is accepted for publications in Infrared Physics and Technology, Elsevier.
- [22] Ritambhara Mishra and Dr. B.S. Rai "An Analysis of Fiber-Based All-Optical Signal Regeneration For Reduced Bit Error Rate", National Conference on Advances in Computer Communication & Embedded System(ACCES-II,2014), pp.136-138
- [23] Jitendra kumar Shukla and Dr. B. S. Rai "Effect of Pulse Shaping Filter's Parameter on BER for QAM Modulated WCDMA based Communication System", National Conference on Advances in Computer Communication & Embedded System(ACCES-II,2014), pp.144-147
- [24] Arvind K Pandey, B.S. Rai, G.S.Tripathi, Vishal K Pandey and R.K. Chauhan, "Miniaturised microstrip antenna using CRLH metamaterial transmission line" National Conference on Advances in Computer Communication & Embedded System (ACCES-II,2014), pp. 231-236.
- [25] B. P. Singh and B.S. Rai "Use of Error Detecting and Correcting Codes for Digital Communication in Underground Mines" International Seminar at I.S.I. Calcutta, Jan. 11-14, 1992.
- [26] B. P. Singh and B.S. Rai "Realization of Floating FDNR Using Grounded Capacitor" Journal of I.T., Vol. 65 pt Et, August 1984.
- [27] B. S. Rai, A. K. Sharma, C. B. Tripathi and N. K. Parwal" Multi channel Digital Communication system "National Seminar at R.E. C.Warangal, Aug. 13-14, 1984.

- [28] B. S. Rai, R. K. Prasad and C. B. Tripathi "Microprocessor Based system for monitoring the temperature in underground mines" at I.S.M. Dhanbad, April 14-15, 1986.
- [29] B.S. Rai, C.B. Tripathi and B.P. Singh "Microprocessor Based system for the monitoring of underground mine environments" students journal, IETE, Vol. 27 No. 3, PP, 102-105, 1985.
- [30] B.S. Rai and B.P. Singh "Realization of Threshold Logic" National Seminar on Modern Trends in Electronics at M.M.M. Engg. College, Gorakhpur, pp 70-74 Feb. 4-5, 1988.
- [31] B.S. Rai, S. K. Roy and A. Singh "Realization of Fast Multiplier in 8-bit Microprocessor" National Seminar on Modern Trends in Electronics at M.M.M. Engg. College, Gorakhpur pp,126-130 Feb. 4-5, 1988.
- [32] B.P. Singh and B.S. Rai "RBSD Fast Fourier Transform Processor" Int. Conf. On Signal and System AMSE June 17-18,92 Switzerland GENEVA.
- [33] B.P. Singh and B.S. Rai "New Architecture of Fast Multiplier" J. of IETE (India) Vol.38 Nov. 6, 1992, pp-349-355.
- [34] B.S. Rai & B.P. Singh " Data Communication with Special Reference to Teleprocessing" National conference on Data Communication, CSI Patna, April, 2324,1994.
- [35] R.K. Prasad, C. B. Tripathi and B.S. Rai "Use of fire code to combat burst error in digital communication for underground mines" National seminar at I.S.M. Dhanbad April 14-15.
- [36] B. P. Singh, B.S. Rai, Sanjay Singh and Rajendra Prasad "Microprocessor Based Random Pulse Interval Generator" National Conference on Emerging Trend in Electronics Product Design & Technology at CEDT Mohali on April 6,7 & 8, 1995.
- [37] B.P. Singh & B.S. Rai "Laboratory Teaching Digital & Microprocessor Workshop" on laboratory Teaching at KNIT Sultanpur, July 29-30, 1994.
- [38] B. P. Singh, B.S. Rai and R. N. Shukla "A Fast Firmware for Internet-Video" Seminar on Local Access Network for next Millennium, IETE Centre Bhopal Dec. 25-26, 1998.
- [39] B. P. Singh, B.S. Rai & R. N. Shukla "Faster Cascadable Image Processor", All India symposium " Application of Signal Processing" I.E. Centre Lucknow Sept. 12.13.1998.

[40] Krishna Raj, B. P. Singh & B. S. Rai "Design of Fast VLSI Redundant Binary Signed Multiplier", Seminar on Intelligent System, CSI and IETE Centre Gwalior Feb. 5-6, 2001.

[41] R.K. Prasad, C. B. Tripathi and B.S. Rai "Use of fire code to combat burst error in digital communication for underground mines" National seminar at I.S.M. Dhanbad April 14-15.

Note: Eight more papers in area of Computer H/W and S/W

List of Ph.D. & M.Tech. Thesis Supervised

Annexure-3

- (a) Ph.D.
 - (i) "Development of Fast RBSD Digital Signal Processor" By Krishna Raj has been awarded in May 2003.
 - (ii) "Development of Real Time Processor" by R. N. Shukla work is under progress.
 - (iii) "Development of Fast RBSD Arithmetic Processor" by Neelam Sharma. has been awarded in 2005 .
 - (iv) "Design of Microstrip Patch Antenna for WLAN Applications" by Chandan in submission stage -2016
 - (v) Puja Lohia has been Submitted thesis - 2016
- (b) M.Tech. (Industrial Electronics & Process Instrumentation)
 - (i) Uncertainty Propagation in Fuzy Expert System using prolog by Balvinder Singh.
 - (ii) Subscriber call tester by s. Prakash, Feb 1997.
 - (iii) Data Compression for Digital Multimeida by R. N. Shukla, Feb. 1997.
 - (iv) Higher Order Multiplexer for Digital Communication system, by S.H. Beg, Feb 1997.
 - (v) Video Signal Transmission Through Optical Channel, by H.K. Srivastava, March, 1997.
 - (vi) Development of On Line Purchase System Software Package Under IDMS /R on IBM MAIN-FRAME (IBM 4468) by C.B. Sharma, Dec. 1998.
 - (vii) Study & Design of an Optical Link Usingh Frequency Hopped (FH) Spectrum Ssytem by A.D. Mishra, Jan. 1999.
- (C) M.Tech. (Digital Systems)
 - (i) Supervised the thesis of more than 35 M.Tech. students

Training Programme and Summer /Winter School

Annexure-4

- (a) Conducting "Quality Improvement Programme" of Teachers sponsored by IRDT Kanpur U.P. Govt. of the following Subjects.
- (i) Electronics-I
 - (ii) Microprocessor & its Applications.
 - (iii) Communication Engineering
 - (iv) Computer Awareness
 - (v) Process Control & Instrumentation
- (b) ISTE Summer /Winter Course :
- Organized /Co-ordinator of the following Summer /Winter Course.
- (i) Summer School on Digital Circuit & System May 24 to June 7, 1989.
 - (ii) Summer School on Practical Aspects of Digital Integrated ICs May 24 to June 06, 1993.
 - (iii) Summer School on Maintenance of PCs, March 14, to March 29, 1999.
- (c) Participated in following Training Programme.
- (i) Mine Communication System at Indian Telephone Industries LTd. Banglore, May 21, 79 to June 01, 79.
 - (ii) "Microprocessor and its Application at Centre for Microprocessor Application University of Roorkee, May 3, 84 to June 24, 84 and May 22, 85 to June 11, 85.
 - (iii) VSAT & INTERENT FOR AICTE" at NIC New Delhi Sept. 18, 2000 to Sept. 19, 2000.

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