

BIO – DATA



PERSONAL:

NAME : MANOJ KUMAR KOWAR
ADDRESS : BHILAI INSTITUTE OF TECHNOLOGY,
BHILAI HOUSE, DURG – 491 001 (C.G.)
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Email: mkkowar@gmail.com
DATE OF BIRTH : 4th JANUARY, 1959.
SEX : MALE
NATIONALITY : INDIAN

ACADEMICS : **B.Tech, M.Tech, PhD, MBA (Pursuing)**

Specialization : **Electronics Engineering, Human Resource Management**

PROFESSIONAL EXPERIENCE:

Sl. No.	Organisation	Designation	From	To
1	IIT, Khargapur	Junior Research Fellow	5.9.85	4.9.86
2	Institute of Radio Physics & Electronics, University of Calcutta	UGC – JRF	10.9.86	1.2.90
3	Birla Institute of Technology, Mesra, RANCHI	Assistant Professor	10.2.90	11.9.97
4	Bhilai Institute of Technology, Durg	Reader	12.9.97	11.8.00
5	Bhilai Institute of Technology, Durg	Associate Professor	12.8.00	22.5.02
6	Bhilai Institute of Technology, Durg	Professor	23.5.02	28.2.05
7	Bhilai Institute of Technology, Durg	Dy. Director	1.3.05	9.2.06
8	Bhilai Institute of Technology, Durg	Principal	10.2.06	Till date

- **Acting as Visiting Professor at IITM, Gwalior**

Total Teaching Experience at UG & PG Level:

- 20 Years

Total Research experience:

- 6 Years

R&D ACTIVITIES:
Publication (Books & Journals)

Books	International Journal	National Journal	International Conference	National Conference	Total
1	24	22	14	61	121

Book:

1. **Elements of Electronic Instrumentation** [recommended by Institution of Engineers (India)], Narosa Publishing House, New Delhi, 1996, ISBN : 81-7319-094-1

Publication (International Journals):

1990

1. **‘Modelling of Epitaxial Growth rate of Silicon by Vapour Phase Epitaxy’**, Microelectronics Journal (GB), vol. 21, No. 5, pp. 29-39, 1990.

1992

1. **‘Improved Model of Silicon Epitaxial Growth by VPE’**, International Journal of Electronics (USA), vol. 72, pp. 103-110, 1992.

1995

1. **‘Modelling of Silicon Epitaxy using Silicon Tetrachloride as the Source’**, Microelectronics Journal (GB), vol. 26, pp. 507-514, 1995.

2002

1. **‘Modelling of Low Pressure Chemical Vapour Deposition of Silicon from Silane’**, Microelectronics Journal (GB), vol. 33, pp. 174-180, 2002.

2008

1. **‘Fingerprint Image Processing – Enhancement, Minutiae Extraction and Matching’**, International Journal of Engineering Research & Industrial Applications (India), Vol. I, No. III (2008) pp. 61-77.
2. **‘Adaptive Digital Watermarking Technique’** International Journal of Engineering Research & Industrial Applications (India), Vol. I, No. III (2008) pp. 191-197.
3. **‘An Intelligent Hybrid Tool for finding and organizing Relevant Text’** International Journal of Computer Science & Applications (India)
4. **‘Radiographic Image Enhancement: Spatial Domain Methods and Their Performance Evaluation’**, Journal on Future Engineering & Technology, Vol. 2, No. 3 (January 2008), pp. 41-46
5. **‘Image Filtering and Analysis of Semiconductor Material in Nanoscale’**, International Journal of Nanosystems, Vol. 1, No. 2, July – December, 2008, pp. 179-182
6. **‘Enhancement of AFM Image Artifacts’**, International Journal of Nanosystems, Vol. 1, No. 2, July – December, 2008, pp. 141-145.
7. **‘Automatic Subject Indexing: A Bootstrapping Approach through Text Mining Operations’**, International Journal of Engineering Research & Industrial Applications (India), Vol. I, No. VI (2008) pp. 163-174.
8. **‘Comparison, Analysis and Demand of Pseudo Random Sequence Generators’**, International Journal of Engineering Research & Industrial Applications (India), Vol. I, No. IV (2008) pp. 185-197.
9. **‘Development of Artificial Neural Network Models for Temperature Parameters Pattern Recognition over the Smaller Scale Geographical**

- Region-District'**, International Journal of Engineering Research & Industrial Applications (India), Vol. I, No. VI (2008) pp. 111-121.
10. **'Intelligent Fuzzy Decision Making for Selective Answer Evaluation using Utility Functions'**, IEEE Computer Society, IEEE CNF, pp. 587-591, 2008.
 11. **'Development of an 8-Parameter Artificial Neural Network Model for Long-Range Monsoon Rainfall Pattern Recognition over the Smaller Scale Geographical Region-District'**, IEEE CNF, IEEE Conference Proceedings, pp. 569-574, 2008.
 12. **'Exploiting Confusion Matrices for relevance Ranking of Text Documents'**, IEEE Computer Society, IEEE CNF, pp. 492-497, 2008.

2009

1. **'Digital Watermarking : A Survey'** International Journal of Engineering Research & Industrial Applications (India), Vol. II, No. II (2009) pp. 63 – 74.
2. **'An Intelligent Hybrid Tool for finding and organizing Relevant Text'**, International Journal of Computer Science & Applications, Vol. 2, No. 1, pp. 34-37, April-May 2009.
3. **'Ranking Text Relevance Measures using Probabilistic Techniques'**, International Journal on Computer Engineering and Information Technology, Vo;. 1, No. 1, pp. 17-22, Nov 08 – Jan 09.
4. **'Recognizing Multi Objective Decision Making Features in Subjective Question Answering'**, International Journal on Computer Engineering and Information Technology, Vo;. 1, No. 1, pp. 145-150, Nov 08 – Jan 09.
5. **'Hierarchical Positioning of Semantic Associative Terms in Formulating Automatic Back-Indexes'**, International Journal of Engineering Research & Industrial Applications (India), Vol. 2, No. IV (2009) pp. 163 – 172..
6. **'Mathematical Model of Micro Optics in MOEMS'**, International Journal of Engineering Research & Industrial Applications (India), Vol. 2, No. VI (2009) pp. 59 – 68.
7. **'Mathematical Model for Microactuator in MOEMS'**, International Journal of Multidisciplinary Research & Advances in Engineering (IJMRAE) (India), Vol. 1, No. 1 (Nov.2009) pp. 271 – 280.
- 8.

Publication (International Conference):

1997

1. **'Speech Recognition System for Wheel Chair Control'**, Proceedings of the International Conference on Cognitive System, NIIT, New Delhi, 821-829, 1997.

2006

1. **'Automatic Generation of the Back of the Book Index: An Integrated Approach through Text Mining Operations'**, Proceedings of the *International Conference on Recent Trends in Information Systems (IRIS)*, held at National Engineering College, Kovilpati, Tamilnadu during 6 – 8 January 2006, pp. 416 – 423.

2008

1. **‘Statistically Undetectable Watermark using Blind Detection’**, International Conference on Computer and Communication Engineering (ICCE 08), 13-15 May 2008, International Islamic University, Malaysia.
2. **‘Intelligent Fuzzy Decision Making for Subjective Evaluation using Utility Functions’**, International Conference of Emerging Trends in Engineering & Technology ICTET-08, G.H. Rasoni College of Engineering, 16 – 18 July 2008, Nagpur.
3. **‘A Fuzzy Document Ranking System using Matrices**, International Conference on Emerging Trends in Engineering & Technology ICTET-08, G.H. Rasoni College of Engineering, 16 – 18 July 2008, Nagpur.
4. **‘Learning Ontology and Semantic Concept Spaces for Automatic Document Relevance Ranking’**, International Conference on Resource Utilization & Intelligent Systems, Kongu Engineering College, Tamilnadu, January 3-5, 2008, pp.591-595.
5. **‘Development of an 8-Parameter Artificial Neural network for Long range Monsoon Rainfall Pattern Recognition over the Smaller Scale Geographical Region District’**, International Conference of Emerging Trends in Engineering & Technology ICTET-08, G.H. Rasoni College of Engineering, 16 – 18 July 2008, Nagpur.
6. **‘Development of Artificial Neural Network Models for Long range Meteorological Parameters Pattern Recognition over the Smaller Scale Geographical Region-District’**, International Conference of Industrial & Information Systems (ICIIS – 2008), IIT Kharagpur, 8-10 December 2008.
7. **‘Exploiting Confusion Matrices for Relevance of Text Documents**, International Conference of Emerging Trends in Engineering & Technology ICTET-08, G.H. Rasoni College of Engineering, 16 – 18 July 2008, Nagpur.

2009

1. **‘Spatial Interpolation of Rainfall Variables using Artificial Neural Network’**, International Conference on advances in Computing, Communication and Control (ICAC3’09), January 23-24, 2009, pp. 547-552, Mumbai, India.
2. **‘Exceptions/Variance based Analysis of Information Processed in Frequent Value Encoding Scheme’** 2009 IEEE International Advance Computing Conference , 6-7 March 2009, Thapar University, Patiala, India.
3. **‘Probabilistic Modelling of Frequent Value Bus Encoding Scheme for Low Power Consumption’** 2009 IEEE International Advance Computing Conference , 6-7 March 2009, Thapar University, Patiala, India.
4. **‘Role of Exact Page Accessions for Determining Text Relevance Measures’**, *Third International Conference on Information Processing* organized by Visveswaraya College of Engineering, Bangalore University, Bangalore, INDIA, 7th – 9th August 2009
5. **‘What makes an Unbiased Evaluation towards Subjective Answer Assessments?’**, *Third International Conference on Information Processing*

organized by Visveswaraya College of Engineering, Bangalore University,
Bangalore, INDIA, 7th – 9th August 2009

6.

Publication (National Journals):

2004

1. **‘A Medical Expert System based on Fuzzy Logic’**, *Applied Science Periodical*, Siwan, Bihar (India), pp. 221-227, November 2004, vol. VI(4).
2. **‘Quality Education : Faculty Performance Appraisal System’**, *The Journal of Engineering Education*, Pune (India), pp. 41 – 43, Vol. XVIII, No. 1, July 2004.
3. **‘E-Learning: A New Way of Learning’**, *Pranjana, The Journal of Management Awareness*, Ghaziabad (India), pp. 1 – 7, Vol. 7, No. 2, July – December 2004.

2007

1. **‘Development of an Encoder Model for Encrypted Communication’** *Applied Science Periodical*, Vol. IX (1) February 2007, pp.9-12.
2. **‘Information Technology in Business Performance Management’**, *GGU Journal of Business*, vol. 3, no.1, January – June 2007, pp. 95-104
3. **‘Design of Embedded System for Speed Control of 3-Phase Induction Motor’**, *Lab Experiments*, Vol. 7, No. 2, June 2007, pp. 143-150.

2008

1. **‘Farm Irrigation using Wireless Sensor Network (FIWSN)’**, *CSI Communications*, Vol. 32, Issue 1 (April 2008), pp. 32-34
2. **‘Contrast Enhancement of Underwater Images’**, *Journal of Acoustical Society of India*, Vol. 35, No.1, pp.33-35, 2008.
3. **‘Speckle Reduction in Ultrasound Image Processing’**, *Journal of Acoustical Society of India*, Vol. 35, No.1, pp.36-39, 2008.
4. **‘Generation of Pseudorandom Sequence using Elliptic Curve’**, *Indian Journal of Information Science & Technology*, vol. 3, Issue 2 (May 2008) pp. 11-18.
5. **‘An Improved Evolutionary Algorithm for Secured Image using Adaptive Genetic Algorithm’**, *Journal of Discrete Mathematical Science & Cryptography*, Vol. 11, No. 6, pp. 673-683, 2008.
6. **‘Pseudo Random Number + Genetic Algorithm = Evolutionary Security System’**, *CSVTU Research Journal*, Vol. 1, No. 2, July, 2008, pp. 69-75.
7. **‘Implementation of Image Restoration Techniques and their Performance Evaluation’**, *ADIT Journal of Engineering*, Vol. 5, No.1, pp. 58-62, December 2008.

2009

1. **‘Growth Rate Simulation in an LPCVD Reactor for Epitaxial Process of Silicon’**, *CSVTU Research Journal*, Vol. 2, No.1, (January 2009), pp. 53-56.
2. **‘Long Range Summer Monsoon Rainfall Forecasting over Subdivisions of Chhattisgarh by Deterministic Neural Network’**, *CSVTU Research Journal*, Vol. 2, No.1, (January 2009), pp. 37-41.

3. **‘Evolving and Evaluation of 3LPFFBP Deterministic ANN Model for District Level Long Range monsoon Rainfall Prediction’**, Journal of Environmental Science & Engineering, Vol. 51, No.2, pp 137 – 144, April 2009.
4. **‘Fuzzy Logic Based Medical Expert System: A Case Study’**, CSVTU Research Journal, Vol. 2, No.2, (July 2009), pp. 37-40.
5. **‘Deterministic Artificial Neural network Skeleton to Recognize Pattern of Total Monsoon Rainfall Data Time Series of Ambikapur District’**, CSVTU Research Journal, Vol. 2, No.2, (July 2009), pp. 41-45.
6. **‘On Development of an Effective E-Learning Material’**, CSVTU Research Journal, Vol. 2, No.2, (July 2009), pp. 59-63.

2010

7. **‘Development of a 6 Parameter Artificial Neural Network Model for Long-Range July Rainfall Pattern Recognition over the High Resolution Geographical Region - District’**, CSVTU Research Journal, Vol. 03, No.01, (Jan 2010), pp. 36-40.
8. **‘Monte Carlo Study of Effect of Inhomogeneous and Source Position on Dose Distribution of Gammamed Plus High Dose Rate Ir-192 Brachytherapy Sources**, CSVTU Research Journal, Vol. 03, No.01, (Jan 2010), pp. 19-22. (ISSN No.: 0974 - 8725)
- 9.

Publication (National Conference/Seminar):

1997

1. **‘Development of a Medical Expert System using Fuzzy Set Theory and Fuzzy Logic’**, Proceedings of National Conference on Recent Advances in Biomedical Engineering, pp. IV-5 – IV-8, 1997, Model Engg. College, Cochin, 1997.

2001

1. **‘Development of a Growth Rate Model of Silicon Epitaxial Layer at Low Pressure’** Proceedings of All India Seminar on Recent Trends in VLSI, pp. 1-4, 2001, IIT, Roorkee.

2003

1. **‘Development of a VLSI Process Simulator’**, Proceedings of the National Conference on Microchips Design and Fabrication, pp. 13-22, March 2003, MSIT, New Delhi.

2004

1. **‘Design & Implementation of a Secure Communication Encoder using VHDL’**, *National Conference on Recent Trends in Communication Techniques (NATCON’04)*, Noorul Islam College of Engineering, Tamilnadu, April 7&8, 2004, pp. 70-72.
2. **‘Design & Development of a Model Encoder for Secure Communication’**, National Conference on Mathematical Modelling, 17-19 May, 2004, Vijnana Parishad of India, MANIT, Bhopal, pp. E-21.
3. **‘Control of Adiabatic Flame Temperature in the Race Away Zone in Iron Making using Steam Injection into Hot Air Input’**, *Proceedings of the Control Instrumentation System National Conference (CISCON 2004)*, 5-6 November 2004, Manipal Institute of Technology, Manipal, Karnataka, pp. 172-176.

2005

1. **'Fractal Compression in Efficient Communication'**, National Conference on Advanced Communication Techniques (ACT 05), 5-6 April 2005, Bhilai Institute of Technology, Chhattisgarh, pp. 81-87.
2. **'PC Telephony – VoIP Communications'**, National Conference on Advanced Communication Techniques (ACT 05), 5-6 April 2005, Bhilai Institute of Technology, Chhattisgarh, pp. 290-297.
3. **'Intelligent Interactive Communication'**, National Conference on Advanced Communication Techniques (ACT 05), 5-6 April 2005, Bhilai Institute of Technology, Chhattisgarh, pp. 307-310.
4. **'FPGA Implementation of Attendance Recorder'**, National Conference on Advanced Communication Techniques (ACT 05), 5-6 April 2005, Bhilai Institute of Technology, Chhattisgarh, pp. 388.
5. **'Development of a Novel Encryption Technique for Secure Communication'**, National Conference on Advanced Image Processing & Networks (NACIPAN'05), National Engineering College, Kovilpati, Tamilnadu, 11-12 February, 2005, pp. 192-201.
6. **'Virtual Voting Machine'**, National Level Technical Symposium, 28-29 January 2005, Shri Shankaracharya College of Engineering & Technology, Chhattisgarh, pp. 28-34.
7. **'Chip Model of Prepaid Energy Meter'**, National Level Technical Symposium, 28-29 January 2005, Shri Shankaracharya College of Engineering & Technology, Chhattisgarh, pp. 2-5.
8. **'Fractal Image Coding using fixed Point'**, National Level Technical Symposium, 28-29 January 2005, Shri Shankaracharya College of Engineering & Technology, Chhattisgarh, pp. 19-22.
9. **'Fractal Image Compression: An Introductory Overview'**, National Level Technical Symposium, 28-29 January 2005, Shri Shankaracharya College of Engineering & Technology, Chhattisgarh, pp. 23-27.
10. **'Design & development of Model CODEC for Secure Communication'**, National Level Technical Symposium, 28-29 January 2005, Shri Shankaracharya College of Engineering & Technology, Chhattisgarh, pp. 78-84.
11. **'Impact of Information Technology on Common People'**, State Level Seminar organised by Institution of Engineers (India), Bhilai Local Centre, Bhilai, on May 17, 2005.
12. **'Technical Education: A Review'**, *State Level Workshop on "Redefining Technical Education in the context of Global, national and Local Needs"*, organised by CSVTU, Bhilai, 2-3 July 2005.

2006

1. **'Cyber Security through Encryption of Textual Information'**, *National Conference on Cyber Security, Data Mining & ICT for the Society* held at Guru Ghasidas University, Bilaspur during 18-19 January 2006, pp.8.
2. **'ICT for Rural development: Agro-Meteorological Study of rainfall Data'**, *National Conference on Cyber Security, Data Mining & ICT for the Society* held at Guru Ghasidas University, Bilaspur during 18-19 January 2006, pp.29.
3. **'CMMS & Preventive Maintenance'**, *All India Seminar on recent Trends on Systems, Technology & Maintenance Management organised by CSIT, Durg* during 6 – 7 January 2006.

4. **'Best Energy from Waste'**, National Seminar on Application of Appropriate technology for Rural Development, CSVTU, Bhilai, February 11 – 12, 2006, pp. 157-164.
5. **'Decision Support System for Agricultural Applications'**, National Seminar on Application of Appropriate Technology for Rural Development, CSVTU, Bhilai, February 11 – 12, 2006, pp. 117-121.
6. **'A Framework for Automatic Answer Evaluation in Restricted Domain'** National Conference on Applications of Information Technology – Emerging Trends, August 06 – 07, 2006, Prestige Institute of Management & Research, Indore. P. 23.
7. **'Conversion of a Relation Schema in BCNF to 4NF'**, National Conference on Software & Emerging Technologies, Couksey Engineering College, Bilaspur, September 8-9, 2006.
8. **'MOEMS: A Critical Review'**, National Conference on Recent Trends in Mechatronics, Nanotechnology and Robotics, NIT, Rourkela, April 15-16, 2006.
9. **'Sustainable Expansion of 'SIS' Model for Paddy (*Oryza Sativa*); A Case Study for Chhattisgarh State'**, National Symposium on Conservation and Management of Agro-Resources in Accelerating the Food Production for 21st Century, IGKV, Raipur, 14-15 December 2006.
10. **'Macro machining: A New Technique for Fabricating IC'**, National Conference on Advances in Electronic Materials and Devices, Guru Ghasidas University, Bilaspur, March 5-6, 2006, p.50

2007

1. **"Opportunities of Broadband Technology in Enhancing Quality of Education"**, All India Seminar on Advanced Communication Techniques and Networking: Exploring Challenges, Institution of Engineers (India) Bhilai Local Centre, 6-7 January 2007.
2. **"Achievable Attack on Principal Communication & Transformation Procedure (RSA) and its Effect: A survey of Mathematical review"**, All India Seminar on Advanced Communication Techniques and Networking: Exploring Challenges, Institution of Engineers (India) Bhilai Local Centre, 6-7 January 2007.
3. **"Sharing a Secret Text in Multiple Images"**, All India Seminar on Advanced Communication Techniques and Networking: Exploring Challenges, Institution of Engineers (India) Bhilai Local Centre, 6-7 January 2007.
4. **"Advanced Broadband Communication for Mobility Emergency & safety Application"** National Conference on Broadband Communications, Bhilai Institute of Technology, Durg, 16-17 March 2007.
5. **"Annual rainfall Forecasting through Trend Analysis: A Case Study of Raipur District, C.G."** National Conference on Technological Advancements in Processing and Decision Making, Bhilai Institute of Technology, Durg, 16-17 March 2007.
6. **"Fuzzy Decision Making for Automatic Answer Evaluation with Boot-Strapped Ontologies"** National Conference on Recent Trends of Mathematics in Science & Technology, Bhilai Institute of Technology, Durg, 16-17 March 2007.
7. **"Environmental Sensors: Trends & Techniques"** National Conference on Environmental Challenges & the Remedial Techniques, Bhilai Institute of Technology, Durg, 16-17 March 2007.

8. **‘Parameter Estimation of Electrical Model of Heart by Modelling & Simulation of Cardio Vascular variables’** National Conference on Recent Trends of Mathematics in Science & Technology, Bhilai Institute of Technology, Durg, 16-17 March 2007.
9. **‘Design and Development of Real Time Digital Signal Processor’** National Seminar on Technology for Sustainable Development – Perspective & Strategies, Institute of Technology, Guru Ghasidas University, Bilaspur, January 06 – 07, 2007 (p.77).
10. **‘A Process Model for High Growth in VLSI Epitaxial Process at Low Pressure’** National Seminar on Technology for Sustainable Development – Perspective & Strategies, Institute of Technology, Guru Ghasidas University, Bilaspur, January 06 – 07, 2007 (p.76).
11. **‘Parameter Estimation of an Electrical Model of Left Ventricle of Human Heart’** National Seminar on Technology for Sustainable Development – Perspective & Strategies, Institute of Technology, Guru Ghasidas University, Bilaspur, January 06 – 07, 2007 (p.73).
12. **‘A Mathematical Survey on RSA for Fast Communication & Transform’** National Seminar on Technology for Sustainable Development – Perspective & Strategies, Institute of Technology, Guru Ghasidas University, Bilaspur, January 06 – 07, 2007 (p.32).
13. **‘Design & Development of Embedded System for Auto Level Control with Intelligent Fault Display for Textile Machine Carding’** National Seminar on Technology for Sustainable Development – Perspective & Strategies, Institute of Technology, Guru Ghasidas University, Bilaspur, January 06 – 07, 2007 (p.74).
14. **‘Fingerprint Enhancement and Minutia Extraction’**, National Conference on Information & Communication Technology & its Applications, Shri Shankaracharya College of Engineering & Technology, Bhilai, October 26 – 27, 2007, (P. 8-13)
15. **‘Adaptive Image Enhancement of Radiographic Images’**, National Conference on Information & Communication Technology & its Applications, Shri Shankaracharya College of Engineering & Technology, Bhilai, October 26 – 27, 2007, (P. 14-19)
16. **‘Establishing Secure Wireless Network’**, National Conference on Information & Communication Technology & its Applications, Shri Shankaracharya College of Engineering & Technology, Bhilai, October 26 – 27, 2007, (P45-49.)
17. **‘Speckle Reduction in Ultrasound Image Processing’** National Symposium on Acoustics, Acoustical society of India, December 5-7, 2007.
18. **‘Contrast Enhancement of Underwater Images’** National Symposium on Acoustics, Acoustical society of India, December 5-7, 2007.
19. **‘Fuzzy Logic and Medical Engineering’** National Seminar on Mathematics and its Interdisciplinary Applications, Pt. S.N.S. Govt. P.G. College, Shadol (M.P.), 18-19 December 2007.

2008

1. **‘Image Enhancement for Efficient Underwater Visualization’**, National Conference on Innovations in Science & Technology towards Industrial Development, Rungta College of Engineering & Technology, Bhilai, January 4 & 5, 2008.
2. **‘Legibility Enhancement for Information Visualization’**, National Conference on Innovations in Science & Technology towards Industrial Development, Rungta College of Engineering & Technology, Bhilai, January 4 & 5, 2008.

3. **‘Speeding up of RSA Computation using Java BigInteger’**, National Conference on Information Security: Practices & Challenges, Guru Ghasidas University, Bilaspur, February 9 & 10, 2008
4. **‘A Simulator for MOEMS’**, National Symposium on MEMS, NEMS & Nano Engineering, GMRIT, Rajam (AP), 8-9 August 2008, pp. 54-57.
5. **‘Change in Electromagnetic Field of Cell/Tissue or Change in its Potential may be Probable Cause of Cancer: A Theoretic Physical Model of Cancer’**, Advances in Physics & its Applications, BITCON – 2008, Bhilai Institute of Technology, Durg 7-8 November 2008.
6. **‘Telemedicine, A Solution for Rural Development’**, National Conference on Emerging Trends Computers & Electronics Engineering for Rural development, CSIT, Durg, pp. 165-171.
7. **‘Development of a Satellite Based Agriculture Metrological Information System (AGRIMETCAST) in the Context of Chhattisgarh using Remote Sensing Data’**, National Symposium on Advances in Remote Sensing Technology and Applications with Special Emphasis on Microwave Remote Sensing organised by Indian Society of Remote Sensing, Dehradun during 18-20 December 2008.

2009

1. **‘ICT for Environmental Monitoring’**, National Conference on Advances in Environmental science & Engineering (AICTE Sponsored), 8th-9th January 2009, BIT, Durg.
2. **‘Soft Computing-A Powerful Technique in Applied Mathematics’**, National Seminar on Computer Applications & Applied Mathematics (CGCOST Sponsored), 10th January 2009, BIT, Durg.
3. **‘Low Pass Filtering to Reduce Artifacts from AFM Image’**, Recent Advances in Nanoscience & Nanotechnology, SSCET, Bhilai, 12-13 January 2009, pp. 24.
4. **‘Image Filtering and SNR Improvement Nanoscale Semiconductor Material’**, Recent Advances in Nanoscience & Nanotechnology, SSCET, Bhilai, 12-13 January 2009, pp. 30.
5. **‘An Evaluation Framework for Subjective answers using Fuzzy Logic’**, National Conference on *Establishing Kinship between Mathematical Sciences & Society (NCKMS – 09)*, organised by Govt. V.Y.T Autonomous College, Durg during October 30-31, 2009 (P. 36)
6. **‘Detecting Topic Similarities for Ranking Text Document Relevances’**, National Conference on *Establishing Kinship between Mathematical Sciences & Society (NCKMS – 09)*, organised by Govt. V.Y.T Autonomous College, Durg during October 30-31, 2009 (P. 36)

2010

1. **‘Identification of Internal Dynamics of Rainfall (Chaos)’**, Technologia - 2010, organised by M.P.C. C. E.T, Bhilai during 24-15 February 2010.

Papers Accepted/Communicated for Publication:

1. **“A Growth Rate Model for LPCVD Reactor”**, International Journal of Electronics, USA
2. **“Modelling of Low Pressure Chemical Vapour Deposition of Silicon from Silane”**, International Journal of Electronics, USA.
3. **“Evolving & Evaluation of MLP FFFB Deterministic Neural Networks to Forecast Long Range Monsoon Rainfall over Districts of Subdivision EPMB”**, Indian Journal of Pure & Applied Mathematics, India.

4. **“Evolving & Evolution of SLP FFFB Deterministic ANN Model for District Level Long Range Monsoon Rainfall Prediction”**, Journal of Earth Science, India.
5. **“Exploitation of Artificial Neural Network Technique to Predict South West Monsoon Rainfall over Small Scale Geographical Regions”** Reflections des ERA-Journal of Mathematical Sciences, India.
6. **“Decision Support AGRO-EXPERT System (DSAES): Case Study of Chhattisgarh State”**, Journal of Rural Science, India
7. **Image Enhancement in remote Sensing Applications**, International Journal of Remote Sensing, Taylor & Francis Publication
8. **Assessment of Image Restoration Techniques to remote Sensing Applications**, Journal of Indian Society of remote Sensing, Springer Publication.
9. **‘System Level Simulation of MOEMS’**, ACCST Research Journal, Vol. VIII, No.1, January 2010
10. **‘Design Steps for MOEMS’**, ACCST Research Journal, Vol. VII, No. 3, July 2009
11. **‘Process Simulation in MOEMS’**, ACCST Research Journal, Vol. VII, No. 4, October 2009

PhD SUPERVISOR:

- Approved as a PhD Supervisor by Pt. Ravishankar Shukla University, Raipur.
- Approved as a PhD Supervisor by Chhattisgarh Swami Vivekanand Technical University, Bhilai.
- Six candidates are carrying out their PhD work under the supervision out of four of them have submitted their thesis for evaluation.
- No. of Thesis guided at M.Tech. level: 17

TECHNICAL LECTURES DELIVERED AS AN EXPERT:

1. **'Broadband Communication Technology'**, National Symposium organised by Institution of Engineers (India) Bhilai Local Centre, 2001.
2. **'Patients' Electrical Safety'**, STTP on Industrial Hazards and Safety held at Bhilai Institute of Technology, Durg.
3. **'The New Internet in the face of Emerging Technologies'**, Seminar organised by Institution of Engineers (India) Bhilai Local Centre, 2002.
4. **'Medical Electronics'**, Workshop organised by Institution of Engineers (India) Bhilai Local Centre, 2003.
5. **'Telecommunication in Medical Healthcare'** State Level Seminar cum Workshop organised by Electronics Department of St. Thomas College, Bhilai 2003.
6. **'Data warehousing & Mining in Medicine'**, Guru Ghasidas University Bilaspur, November 2003.
7. **'Instrumentation for Environmental Monitoring'**, Bhilai Institute of Technology, Durg, 2006
8. **'Office Automation Software'**, UGC-Staff Academic College, Pt. Ravishankar Shukla University, Raipur, 5-6 February, 2008
9. **'Problem & Project Based Learning'**, Chhattisgarh Swami Vivekanand Technical University, Bhilai, 16 February, 2008.
10. **'Continuing Education for better Industry-Institute Interaction'**, Chhattisgarh Swami Vivekanand Technical University, Bhilai, 30 April, 2008.

HONOURS & AWARDS:

- Awarded the **"Eminent Engineer"** by the Bhilai Local Centre of Institution of Engineers (India) in 2006.

MEMBERSHIP OF PROFESSIONAL BODIES:

Sl. No.	Name of the Institution/Society	Grade of Membership	Year of Election
1.	Indian Society for Technical Education (ISTE)	Life Member (14865)	1991
2.	The Institution of Electronics & Telecommunication Engineers (IETE)	Life Member (92961)	1991
3.	Bio Medical Engineering Society of India (BMESI)	Life Member (L559)	2002
4.	The Institution of Engineers (India)	Life Fellow (109106/5)	2003
5.	International Association of Engineers (IAENG)	Life (65057)	2008

RESPONSIBLE POSITIONS HELD OUTSIDE THE PRESENT INSTITUTE:

1. Appointed as **Chairman, Board of Studies** in Electronics & Telecommunication Engineering under the faculty of Engineering at Pt. Ravishankar Shukla University, Raipur in the year 2003 and still continuing the same.
2. Appointed as an **external expert member in the Board of Studies** of Information Science at Guru Ghasidas University, Bilaspur.
3. Appointed as an **external expert member in the Examination Committee** of the Engineering Faculty at Guru Ghasidas University, Bilaspur.
4. Appointed as **Examiner** for a number of Universities in the country, noteworthy to mention are Pt. Ravishankar Shukla University (Raipur), Guru Ghasidas University (Bilaspur), Birla Institute of Technology (Mesra, Ranchi), Regional Engineering College (Kurukshehra), NIT Raipur, CSVTU Bhilai.
5. Acted as the **Chairman, Students' Committee of Institution of Engineers** (India), Bhilai Local Centre.
6. Appointed as Member of the **State Executive committee** of Chhattisgarh State Centre of Institution of Engineers (India).
7. Acting as **Chairman, Board of Studies** in Electronics & Telecommunication Engineering, Applied Electronics & Instrumentation, Electrical & Electronics of Chhattisgarh Swami Vivekanand Technical University, Bhilai.
8. Acting as **Dean** of faculty of Electrical, Electronics & Telecommunication, Electrical & Electronics, Computer Science & Engineering, Information Technology at Chhattisgarh Swami Vivekanand Technical University, Bhilai.
9. Acting as a **member of Academic Council** at Chhattisgarh Swami Vivekanand Technical University, Bhilai.
10. Acting as a member of **Executive Council** at Chhattisgarh Swami Vivekanand Technical University, Bhilai.
11. Acting as **member of Academic Planning & Evaluation Board** of CSVTU, Bhilai.
12. Acting as a **member of Standing Committee** at Chhattisgarh Swami Vivekanand Technical University, Bhilai.
13. Acting as the **Editor** of the Electronic Division of the 'CSVТУ Research Journal' published by Chhattisgarh Swami Vivekanand Technical University, Bhilai.
14. Acting as a **member of the editorial board** of 'ACCST Research Journal' published by Mathematical Society, Siwan, Bihar.
15. Presently acting as one of the **Reviewers** of an International Journal entitled "Journal of Super Computing", Springer Publications.
16. Presently acting as one of the **Reviewers** of an International Journal entitled "International Journal of Network Security", Springer Publications.
17. Acting as **member of the Executive Committee** of Chhattisgarh State Centre of Institution of Engineers (India)
18. Elected as the **Chairman** of Institution of Engineers (India), Bhilai Local Center.

CONTRIBUTIONS IN CURRICULUM DEVELOPMENT AND LESSON PLANNING:

1. Instrumental in designing and developing the Course curriculum and Syllabus for BE (Computer Science & Engineering) course of Pt. Ravishankar Shukla University, Raipur.
2. Acted as an expert in framing the syllabus for the MCA course of Pt. Ravishankar Shukla University, Raipur.
3. Instrumental in developing the course curriculum for M.Tech. (Bio Medical Instrumentation) and M.Sc. (Bio Medical Instrumentation) of Birla Institute of Technology, Mesra, Ranchi.
4. As the chairman, framed the course structure and detailed syllabus of BE (Electronics & Telecommunication) course of Pt. Ravishankar Shukla University, Raipur.
5. As the chairman, framed the course structure and detailed syllabus of M.Tech. (Electronics & Telecommunication) Specialisation in Instrumentation & Control course of Pt. Ravishankar Shukla University, Raipur.
6. As the chairman, framed the course structure and detailed syllabus of BE (Electronics & Telecommunication, Applied Electronics & Instrumentation, Electrical & Electronics) course of CSVTU, Bhilai.
7. As the chairman, framed the course structure and detailed syllabus of M.Tech. (Electronics & Telecommunication) Specialisation in Instrumentation & Control, Communication Systems, VLSI Design & Technology, and Digital Electronics courses of CSVTU, Bhilai.
8. As chairman, proposal for starting Dual Degree Programme (BE+MBA) and Integrated Post Graduate Programme (BE+ME) at Chhattisgarh Swami Vivekanand Technical University, Bhilai has been prepared.

PROFESSIONAL /INDUSTRIAL TRAINING:

1. Undergone a professional training as Bio Medical Instrumentation Engineer at B.M Birla Heart Research Institute, Calcutta for a duration of one month.
2. Undergone Quality Control Engineer training at Sen & Pandit Co., Calcutta for a duration of three months.
3. Attended a Two weeks STTP at IIT Kharagpur on Bio-Medical Instrumentation.

VARIOUS POSITIONS HELD AT THE PRESENT INSTITUTE:

1. Acted as Head of Electronics & Telecommunication Department during the year 1997-2006.
2. Acted as Head of Computer Sc. & Engg Department and MCA Department during 1998 to 2003 as an additional duty.
3. Acted as Head of Information Technology Department during 2000 to 2003 as an additional duty.
4. Acted as Co-ordinator of Computer Sc. & Engg, Information Technology and MCA department at the Institute during 2003 – 2006.
5. Acted as Professor Incharge Admission during 1998 to 2002.
6. Acted as Chief Proctor during the year 2002 - 2006.
7. Acted as Centre Superintendent of Examination for University Examinations during the year 2003-2006.
8. Acting as Head of Central Computer Center of the Institute since 1998
9. Represented the Institute for Liassoning with AICTE, New Delhi.
10. Represented the Institute for Liassoning with State Government.
11. Represented the Institute for Liassoning with the University.
12. Acted as Deputy Director of the Institute.
13. Acting as Principal of the Institute.

Sponsored Projects undertaken by Dr. M.K. Kowar

<i>Sl. No.</i>	<i>Title of The Project</i>	<i>Funding Agency</i>	<i>Institute where undertaken</i>	<i>Capacity in Which worked</i>	<i>Year</i>	<i>Status</i>
1.	Process Simulation Programme: Numerical Simulation of Silicon Epitaxy	Department of Electronics (DOE), Govt. of India	Microelectronics Center, Institute of Radio Physics & Electronics, University of Calcutta	UGC – JRF	1986 – 1990	Completed
2.	Magneto Static Waves Based Devices	Indo – US Tie-up, Govt. of India	Microelectronics Center, Electrical & Electronic Communication Engg. Department, IIT, Kharagpur	JRF	1984 – 1986	Completed
3.	Logically Interlaced Virtual Eyes	RDCIS, Rourkela Steel Plant	Electronics & Telecommunication Engg. Department, BIT, Durg	Principal Investigator	2004 – 2005	Completed
4.	Development & Analysis of Image Security System using Multi Chaotic Schemes	AICTE	BIT, Durg & SSCET, Bhilai	Principal Investigator	2008-2010	Applied for
5.	FPGA Implementation of a Real Time Secured Image using Elliptic Curve	DIT	BIT, Durg & SSCET, Bhilai	Principal Investigator	2008-2010	Applied for
6.	Development of Long Range Monsoon Rainfall Forecasting System in Context of Chhattisgarh State	CGCOST	BIT Durg	Principal Investigator	2009 – 2011	Ongoing

Self Appraisal:

Performance Appraisal during past three (3) years.

1. Developed the Advanced Communication Engg. Laboratory
2. Developed the Computer centres of various departments of the Institute
3. Developed the course curriculum for BE (Electronics & Telecommunication), BE(Computer Sc. & Engg.) BE(Information Technology), MCA
4. Developed the scheme for awarding sessional marks to students
5. Developed an MIS package for the Institute
6. Developed a students' feedback and evaluation system at the present Institute
7. Developed the scheme of allotment of projects to the BE students
8. In number of occasions acted as Management Representative
9. Developed standard teaching materials for the subjects being undertaken

3 Major Strengths:

- Love for teaching, Learning & Research
- Punctuality & Sincerity
- Commitment to Organisation

3 Major Weaknesses

- Tendency to take too much of load
- Eager to actively involve in all matters
- Less dependency on others