



PRESENT POSITIONS

Deputy Director

Indian Institute of Technology Roorkee
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Professor

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ACADEMIC PROFILE

B.E. Electrical Engineering University of Jodhpur	1967
M.E. (Hons.) Electrical Engineering (PSE) University of Roorkee	1969
Ph.D. Protection/Static Protective Relays University of Roorkee	1977

PROFESSIONAL PROFILE

Sr. Research Fellow Department of Electrical Engg. University of Roorkee	Sep. 1969 – July 1970
Lecturer Department of Electrical Engg. University of Roorkee	July 1970 – May 1975
Reader Department of Electrical Engg. University of Roorkee	May 1975 – Feb. 1980
R & D Manager Universal Electrics Ltd., Faridabad	Feb. 1980 – Feb. 1982
Professor Department of Electrical Engg. University of Roorkee/IIT Roorkee	Since Feb. 1982



ADMINISTRATIVE PROFILE	
R & D Manager Universal Electrics Ltd. Faridabad	Feb. 1980 – Feb. 1982
Head, Electrical Engg. Deptt. University of Roorkee Roorkee	Sep. 1991 – Sep. 1994
Dean, Research & Ind. Liaison University of Roorkee Roorkee	May 2000 – April 2002
Dean, Sp. Res. & Ind. Consultancy IIT Roorkee Roorkee	May 2002 – June 2003
Dean, Faculty Affairs IIT Roorkee Roorkee	Aug. 2003 – Aug. 2004
Deputy Director IIT Roorkee Roorkee	Since May 2006
R&D Manager, Universal Electrics Ltd. (Feb. 1980 – Feb. 1982)	
<ul style="list-style-type: none"> • As R&D Manager, <i>headed R&D Division</i> of Universal Electrics Ltd., Faridabad, a Birla Group public limited company, for two years. • Held additional charge of Quality Control Manager. • Was assisted by Deputy Manager R&D and Deputy Manager QC. • <i>Setup a new R&D unit</i> of the company. • Developed several new instruments, transducers and control panel accessories. • Initiated industrial research in microprocessor based instrumentation and protection, <i>first initiative of this kind in India</i>. • Also setup a quality assurance system for metering, control and protection panels, motor control centres, protective relays, measuring instruments and panel accessories. 	
Dean R&IL / SRIC, University of Roorkee / IIT Roorkee (May 2000 – June 2003)	
<ul style="list-style-type: none"> • Got the accounts of sponsored research and consultancy projects computerized. • Institute was registered as engineering consultancy service provider with Central Excise Department. • Initiated, compiled, edited and published the <i>“IITR at a Glance”</i> (April 2002 – March 2003). 	



- Initiated, compiled, edited and published the *R&D News Magazine of IITR, "SCI-TECH"* (July 2002 – June 2003).
- Developed and implemented software for on-line filling of consultancy forms.
- Developed and implemented software for on-line filling of forms related to sponsored research projects.
- Up scaled and updated the *SRIC Website*.
- Compiled, edited & published revised edition of *"Expertise and Facilities"*.
- Instrumental in signing an *MOU with Govt. of Uttaranchal* for total quality assurance of civil and electrical works in Haridwar for Ardh-Kumbh Fair, 2004.
- Instrumental in signing an *MOU with UNDP* for implementation by IITR of the project on Pro-Poor IT Initiatives in Uttaranchal.

Dean Faculty Affairs, IIT Roorkee (Aug. 2003 – Aug. 2004)

- Introduced new guidelines and procedures of *faculty selection*.
- Introduced new guidelines and procedures of *re-employment, leave and financial assistance*.
- Introduced new guidelines for appointment of *joint professors, guest faculty and visiting faculty*.
- Introduced *Outstanding Teacher and Outstanding Research Awards* for the faculty.
- Introduced *Research Initiation Grant* for the new faculty.

Dy. Director, IIT Roorkee (Since May 2006)

- Approving Authority for Group B, C and D Employees, Purchases and Stores, Institute Hospital, Medical Attendance and House Allotment.
- Chairman Investment, Master Plan & several other committees.
- Introduced new Medical Attendance & Treatment Rules.
- Revised the House Allotment Rules
- Prepared new Master Plan of the Campus.
- Provided wire connectivity in rooms of 5 married students' hostels.
- Provided Wi-Fi access in rooms of 9 single students' hostels.
- Planned and prepared for WiMAX in the campus.



Other Administrative Involvement

- Member, Board of Governors, IIT Roorkee (Jan. 2004 – Dec. 2005).
- Special Invitee, Board of Governors, IIT Roorkee (Since June 2006).
- Member, Finance Committee, IIT Roorkee (Jan. 2004 – Dec. 2005).
- Special Invitee, Finance Committee, IIT Roorkee (Since June 2006)
- Chairman, Institute Investment Committee, IIT Roorkee (Since Jan. 2004).
- Chairman, Microprocessor Application Centre (1985-1990)
- Chairman/Member of several institute committees (1982-2007).

HONOURS AND AWARDS

1.	Chancellor's Gold Medal, University of Roorkee, 1969, for securing First Position in M.E. (Electrical).
2.	The Central Board of Irrigation & Power Gold Medal, 1973 for the research paper "Improved Protection for 25 KV Traction Overhead Equipment".
3.	The Institution of Engineers (India) Prize, 1974-75, for the research paper "A Telemetry Unit for Hospitals".
4.	The Union Ministry of Irrigation and Power Prize, 1977-78, for the research paper "Novel Circuits Applying Operational Amplifiers for Sampling Distance & Directional Relays".
5.	The Institution of Engineers (India) Certificate of Merit, 1980-81, for the research paper "An Infrared Temperature Scanner".
6.	The Institution of Engineers (India) Certificate of Merit, 1985-86, for the research paper "Microprocessor Based Load Shedding and Restoration Equipment".
7.	The Systems Society of India Best Paper Award, 1986, for the research paper "Practical Oriented Design of Over-fluxing Relay for Grid Transformer".
8.	The Systems Society of India Best Paper Award, 1987, for the research paper "An Integrated Relaying Scheme for Grid Transformer Protection".
9.	The Institution of Engineers (India) Certificate of Merit, 1989-90, for the research paper "Ultrasonic Multi-flaw Location Indicator"
10.	The Institution of Engineers (India) Certificate of Merit, 1990-91, for the research paper "Discrete Cosine Transform Application to Transformer Differential Relaying".



11.	The Institution of Engineers (India) Certificate of Merit, 1990–91, for the research paper “Digital Differential Relaying for Generator Differential Protection”.
12.	The Systems Society of India Best paper Award, 1990, for the research paper “Digital Generator Differential Relay: Performance Evaluation”.
13.	The Institution of Engineers (India) Certificate of Merit, 1992–93, for the research paper “High Accuracy Measurement of Low Frequencies Using on 8–Bit Microprocessor”.
14.	The Institution of Engineers (India) Certificate of Merit, 1995–96, for the research paper “Adaptive Digital Differential Protection of Transformer: Improvement Over the Fixed–Bias Scheme”.
15.	Khosla Prize, University of Roorkee, 2001, for the research paper “ANN–Based QRS–Complex Analysis of ECG”.
16.	Outstanding Teacher Award–2004, Indian Institute of Technology Roorkee.

PH.D. THESES GUIDED

1.	Application of Microprocessor to Some Power System Problems. (A.K. Ghai, submitted on 15.2.80, Ph.D. awarded in 1982)
2.	Microprocessor–Aided On–Line Processing of Electrocardiographic Signal for Diagnosis and Prosthesis. (V.N. Pande, submitted on 12.9.85, Ph.D. awarded in 1986)
3.	On Application of Microprocessor to substation Relaying. (A.M. Basha, submitted on 18.12.85, Ph.D. awarded in 1986)
4.	Digital Algorithms and Relaying Schemes for Protection of Power Systems. (G.C. Kakoti, submitted on 27.7.88, Ph.D. awarded in 1989)
5.	Microprocessor–Based Instrumentation for Conductor Vibration Measurement. (K. Valecha, submitted on 19.1.90, Ph.D. awarded in 1990)
6.	Microprocessor–Based Protection and Monitoring of Large Generators. (K. Soundara Rajan, submitted on 30.8.90, Ph.D. awarded in 1992)
7.	Development of Pattern Recognition Techniques for the Analysis of ECG Waveform. (S.S. Mehta, submitted on 13.12.94, Ph.D. awarded in 1995)
8.	Development in Adaptive Relaying for Transformer and Line Protection. (R.P. Maheshwari, submitted on 25.9.95, Ph.D. awarded in 1996)
9.	Artificial Neural Network Based ECG Classification. (G.Vijaya, submitted on 19.8.97, Ph.D. awarded in 1998)



10.	Ambulatory Monitoring and Analysis of ECG Signals. (P.K. Kulkarni, submitted on 29.9.87, Ph.D. awarded in 1998)
11.	Developments in Model–Reference Adaptive Digital Control. (Rajan Hari Chile, submitted on 22.1.99, Ph.D. awarded in 1999)
12.	Medical Image Compression and Analysis. (Sukhwinder Singh, submitted on 29.12.05, Ph.D. awarded in 2006)
13.	Application of Neuro-Fuzzy Techniques for Power Transformer Differential Protection (Manoj Tripathy, submitted on 30.5.2007)
14.	Physiological Manifestations under Venom Interaction and Their Analysis (Ranjan Maheshwari, submitted on 24.7.2007)

M.E. / M.TECH. DISSERTATIONS GUIDED (2001 ONWARDS)	
1.	Feature Extraction from Medical Images Using Image Processing Techniques Dileep Kumar P.V., Feb. 2001
2.	Medical Data Sharing between Hospitals for Telemedicine Dinesh Dutt Jha, Feb. 2001
3.	Patient Data Transmission between PC and Microcomputer on RS–485 Network Kamlesh Kumar, Feb.
4.	Teleconsultation for Healthcare J. Bargavi Priadarsini, Feb. 2002
5.	Power System Simulator for Dynamic Testing of Protective Relays Raj Pal Singh, Feb. 2002
6.	Data Acquisition and Transmission for Remote Monitoring of Bridge Structures B. Srikanth, Feb. 2002
7.	Vibration and Air–Gap Monitoring of Hydrogenerator Kumar Nikhil, Feb. 2002
8.	An Intelligent On–Line Machine Fault Diagnosis System Nishchal Kumar Verma, Feb. 2003
9.	Automated Test System for Efficiency of Turbine and Generator Abhinay Mohan, Feb. 2003
10.	Simulator for Small Hydro Power Plant Pankaj Kumar Chandrakar, Feb. 2003
11.	Vibration Signal Analysis and Feature Extraction Sreenivasulu Guntapudi, Feb. 2003
12.	Performance Evaluation of Controllers for Flow and Level Process over Internet Nitin, Feb. 2003



13.	Structural Health Monitoring of Bridges Amit Arunrao Linge, Feb. 2003
14.	Real-Time Multi-Channel Process Monitoring and Control Roop Pahuja, June 2003
15.	FPGA Implementation of Digital Distance Protection T. Mahesh, June 2004
16.	Distributed-Wireless Data Acquisition System for Performance Testing of Turbine and Generator Nakkala Sivaram Prasad, June 2004
17.	Instrumentation for Road Roughness Measurement P. Sudheer, June 2004
18.	Online Fingerprint Verification for Security Applications K. Uendra, June 2004
19.	Detection of Generator Stator Faults using Neuro-Fuzzy Technique Saurabh Nema, June 2004
20.	Transit Time Flow Meter Application to Closed Pipes Demanding High Accuracy Prem Vasantha Kumar Mandimala, June 2005
21.	FPGA Based Data Processor for Discharge Measurement Using Propeller Current Meters Sirat Moin Uddin, June 2005
22.	Online Fingerprint Verification M. Bhushan Kumar, June 2005
23.	Design and Development of an Embedded System with Reconfigurable System-on-Chip Architectures Suresh A., June 2006
24.	Error Sources and Error Correction for Flow Measurement in Open Channel by Ultrasonic Transit-Time Flowmeter and Propeller Current Meter Boby Abraham Y., June 2006
25.	Development of PLC Based Controls for a Hydroelectric Power Plant P.S. Sai Krishna, June 2006
26.	FPGA-Based Floating-Point Arithmetic Unit for Turbine Efficiency Measurement Lokesh Sharma, June 2006
27.	FPGA Based Controller for Hydro-Electric Unit Datla Srinivasa Raju, June 2007
28.	LAN Based Monitoring and Control of Batch Process Reactor K.V. Kalyan Kumar, June 2007
29.	Flow Measurement in Trapezoidal Open Channels with Profiler and Propeller Current Meters Kasundra Sanjay Kumar Bhagvanji, June 2007
30.	Accuracy Improvement of Flow Measurement using UTTF M. Satya Rama Pavan Kumar, June 2007



RESEARCH PAPERS PUBLISHED (2001 ONWARDS)	
1.	H.K. Verma and Vinod Kumar, “Digital Instrumentation for Bridges–Possibilities and Limitations”, Proceedings of National Workshop on Research Interests in Bridge Engineering – Present and Future, New Delhi, March 15, 2001, pp. 135 – 142.
2.	S.C. Saxena, H. K. Verma and R.H. Chile, “Modified Approach to Model–Reference Adaptive Controller”, Journal of Institution of Engineers (India), vol. 82, Pt. ET, July 2001, pp. 43 – 54.
3.	H.K. Verma and Vinod Kumar, “Remote Monitoring of Bridge Structures: Instrumentation and Internet Access”, Bridge Engineering: Some Issues of Research Interest, Roorkee, June 2002, pp. 227 – 240.
4.	K. Upendra, Harsimrat Singh, Vinod Kumar and H. K. Verma, “Information Security through Biometrics”, Proceedings of National Conference on Research and Practices in Current Areas of Interest (RPIT - 2004), SLIET Longowal, March 26 – 27, 2004, pp. 102 – 106.
5.	H.K. Verma, N.M. Bhandari, Vinod Kumar, Pradeep Bhargava, A.K. Dwivedi and Amit A. Linge, “Instrumentation of Bridges for Monitoring Thermal Gradients: Laboratory Model Studies”, Highway Research Bulletin No. 70, 2004, pp. 167 – 180.
6.	H.K. Verma and Arun Kumar, ”Instrument Networking for Efficiency Measurement in Small Hydro Power Stations”, Proceedings of IGHEM – 2004, Proceedings of International Conference for Innovation in Hydraulic Efficiency Measurement, Lucerne, Switzerland, July 14–16, 2004, Paper No. 1.
7.	Sukhwinder Singh, Vinod Kumar and H.K. Verma, “Removing Blocking Artifacts in Compressed Medical Images”, Proceedings of 1st International Bio–Engineering Conference (IBEC–2004), NTU, Singapore, Sept 8–10, 2004, pp 101 – 104.
8.	H.K. Verma, “Performance Testing of SHP Stations: Scope, Tests and Methodology”, Proceedings of Workshop on Performance Testing of SHP Stations, Roorkee Oct. 7–9, 2004, Paper No. 2.
9.	H.K. Verma, “Current Meters and IEC Provisions”, Proceedings of Workshop on Performance Testing of SHP Stations, Roorkee, Oct. 7–9, 2004, Paper No. 10.
10.	Manoj Tripathy, R.P. Maheshwari, H. K. Verma, “Advances in Transformer Protection: A Review,” Electric Power Components & Systems, USA, 2005, vol. 33, No.11, pp.1203 – 1209.
11.	Roop Pahuja, H.K. Verma and Vinod Kumar, “Virtual Instrument for Real Time Monitoring and Control of Temperature”, Proceedings of the International Conference on Emerging Technologies in Intelligent Systems and Control: Exploring, Exposing and Experiencing the Emerging Technologies (EISCO – 2005), Coimbatore, January 5–7, 2005, vol. 1, pp. 276 – 282.



12.	Arun Kumar and H. K. Verma, “Standards and Testing of Small Hydropower Stations”, Proceedings of the International Congress on Renewable Energy, Pune, Jan. 20–22, 2005, pp. 1– 9.
13.	H. Sinvhal, H.K. Verma, A.K. Pant, V.K. Nangia, J.D. Sharma and Vinod Kumar, “Public Private Partnership in e-Governance: The Uttaranchal Experience”, Proceedings of the International Conference on E-Governance in the Developing World: Best Practices and Critical Success Factors (eGov-2005), Hyderabad, July 29-31, 2005, pp. 1 – 8.
14.	Sukhwinder Singh, Vinod Kumar and H.K. Verma, “Adaptive Threshold for Block Classification for DCT–Based Medical Image Compression”, Proceedings of 3 rd International Conference on Computer Application in Electrical Engineering–Recent Advances (CERA 05), IIT Roorkee, Sept 29–Oct.1, 2005, vol. I, pp. 475 – 478.
15.	Manoj Tripathy, R.P. Maheshwari and H. K. Verma, “RBFNN Algorithm for Power Transformer Protection,” Proceedings of International Conference on Computer Applications in Electrical Engineering Recent Advances (CERA 05), IIT Roorkee, Sept. 29 - Oct. 1, 2005, vol. I, pp.589 – 592.
16.	Prem V.K. Mandimala, H.K. Verma and Arun Kumar, “Accuracy Improvement of Numerical Integration for Discharge Calculation from Multi-path UTTF Measurement,” International Conference on Computer Applications in Electrical Engineering Recent Advances (CERA 05), IIT Roorkee, Sept. 28 - Oct. 1, 2005, vol. II, Paper No. 298.
17.	Roop Pahuja and H.K. Verma, “RS – 485 Network Based Virtual Instrumentation System for Data Monitoring Applications”, Proceedings of National Conference on Sensors NCS-2005, TIET, Patiala, Nov. 25-26, 2005, pp. 179 – 182.
18.	Vinod Kumar, Ranjan Maheshwari and H. K. Verma, “Toxicity and Symptomatic Identification of Species involved in Snakebites in the Indian Subcontinent”, J. Venom. Anim. Toxins including Tropical Disease, vol. 12, No. 1, February, 2006, pp. 3 – 18.
19.	M.P.S. Chawla, H.K. Verma and Vinod Kumar, “A New Approach to ECG Modeling using Principal Component Analysis”, Proceedings of the National Conference, NCCCB–2006, Engineering College, Kota, March 8–10, 2006, Paper No. 042.
20.	Manoj Tripathy, R.P. Maheshwari and H.K. Verma, “Power Transformer Protection Based on HMM and ANN Technique”, Proceedings of the National Conference on Technical Challenges in Power Systems, KNIT, Sultanpur, March 24–25, 2006, pp. 157 – 162.
21.	Ranjan Maheshwari, Vinod Kumar and H.K. Verma, “Toxicity and Symptomatic Identification of Species Involved in Snakebites in the Indian Subcontinent”, Journal of Venomous Animals and Toxins Including Tropical Diseases, vol.12, No. 1, 2006, pp. 3 – 18.
22.	Arun Kumar and H.K. Verma, “Standards and Performance Testing for Small Hydropower Development”, Workshop on Development of Small, Mini & Micro Hydropower Plants-Challenges & Related Issues, Central Board of Irrigation & Power, New Delhi, June 16, 2006.



23.	M.P.S. Chawla, H.K. Verma and Vinod Kumar, “ECG Modeling and QRS Detection Using Principal Component Analysis”, 3rd International Conference on Advances In Medical, Signal and Information Processing, MEDSIP 2006, Glasgow, UK, July 17-19, 2006, Paper No. 04.
24.	Arun Kumar and H.K. Verma, “Standards and Guidelines for Small Hydropower Development: The Indian Initiative,” Proceedings of Himalayan Small Hydropower Summit (HSHS), Dehradun, Oct. 12-13, 2006, pp. 310-316.
25.	Manoj Tripathy, R. P. Maheshwari, H. K. Verma, “HMM Based Technique Operating Condition Detection, Proceedings of International Conference on Large Power Transformers Modern Trends in Application, Installation, Operation and Maintenance (CIGRE), pp. 21-34, Oct. 12-13, 2006, New Delhi.
26.	M.P.S. Chawla, H.K. Verma and Vinod Kumar, “Modeling and Feature Extraction of ECG Using Independent Component Analysis”, Advances in Power Systems Controls and Management Systems, 7 th IEE International Conference on Advances in Power System Control, Operation and Management, APSCOM-2006, Hongkong, Oct. 31 – Nov. 2, 2006, Paper No. 040, pp. 14-18.
27.	M.P.S. Chawla, H.K. Verma and Vinod Kumar, “Independent Component Analysis: A Novel Technique for Removal of Artifacts and Base Line Wander in ECG”, Third Control Instrumentation System Conference (CISCON-2006), Manipal, Nov. 3-4, 2006, Paper no. 09.
28.	Manoj Tripathy, R. P. Maheshwari, H. K. Verma, “Application of BPNN for Power Transformer Protection”, <i>Proceedings of 14th National Power Systems Conference, Indian Institute of Technology Roorkee, December 27-29, 2006</i> , Paper no. 94.
29.	Manoj Tripathy, R. P. Maheshwari and H. K. Verma, “PSO Based Probabilistic Neural Network for Power Transformer Protection”, <i>Proc. of IEEE International Conference on Industrial Technology, December 15-17, 2006, Mumbai, pp. 70-71</i>
30.	Sukhwinder Singh, Vinod Kumar and H.K. Verma, “Reduction of Blocking Artifacts in JPEG Compressed Images”, <i>Journal of Digital Signal Processing</i> , vol.17, No. 1, Jan. 2007, pp. 225-243.
31.	K. Upendra, Sukhwinder Singh, Vinod Kumar and H.K. Verma, “Online Fingerprint Verification”, <i>Journal of Medical Engineering and Technology</i> , vol.31, No. 1, Jan. 2007, pp. 36 –45.
32.	Manoj Tripathy, R. P. Maheshwari and H. K. Verma, “Application of Probabilistic Neural Network for Differential Relaying of Power Transformer”, <i>Proceedings IET, Generation, Transmission & Distribution</i> , vol. 1, no. 2, March 2007, pp. 218-222. (168)
33.	Sukhwinder Singh, Vinod Kumar and H.K. Verma, “DWT-DCT Hybrid Scheme for Medical Image Compression”, <i>Journal of Medical Engineering and Technology</i> , vol. 31, issue 2, March 2007, pp. 109-122.
34.	Sukhwinder Singh, Vinod Kumar and H.K. Verma, “Optimization of Block Size for DCT-Based Medical Image Compression”, <i>Journal of Medical Engineering and Technology</i> , vol. 31, issue 2, March 2007, pp. 129-143.



35.	Sukhwinder Singh, Vinod Kumar and H.K. Verma, “Adaptive Threshold Based Block Classification in Medical Image Compression for Teleradiology”, Computer in Biology and Medicine, vol. 37, 2007, pp. 811-819.
36.	Ranjan Maheshwari, Vinod Kumar and H.K. Verma, “Neural Network Based Species Identification in Venom Interacted Cased in India, accepted 2007, published online.
37.	Manoj Tripathy, R. P. Maheshwari and H. K. Verma, “Radial Basis Probabilistic Neural Network for Differential Protection of Power Transformer”, Accepted for publication in Proceedings IET Electric Power Applications.
38.	Manoj Tripathy, R. P. Maheshwari and H. K. Verma, “Probabilistic Neural Based Protection of Power Transformer, Accepted in Proceedings IET Electric Power Applications.
39.	Manoj Tripathy, R. P. Maheshwari and H. K. Verma, “RBPNN for Differential Protection of Power Transformer”, Provisionally Accepted in IET Electric Power Applications,
40.	Manoj Tripathy, R. P. Maheshwari and H. K. Verma, “Neuro-Fuzzy Technique for Power Transformer Protection”, Accepted for publication in International Journal of Electric Power Components and Systems, Taylor and Francis.

TECHNICAL REPORTS (2001 ONWARDS)

1.	H.K. Verma and Vinod Kumar, “12 kV Bipolar 1.2/50 μ s Impulse Voltage Tester with Built-in Impulse Counter and Breakdown Detector”, H.S. Chawla & Company, New Delhi, Feb. 2001.
2.	H.K. Verma, S.C. Saxena and Vinod Kumar, “6 kV Bipolar 1.2/50 μ s Impulse Voltage Tester”, National Test House, Ghaziabad, Aug. 2001.
3.	H.K. Verma, S.C. Saxena and Vinod Kumar, “5 kV Bipolar 1.2/50 μ s Impulse Voltage Tester”, National Test House, Ghaziabad, Aug. 2001.
4.	H.K. Verma and Vinod Kumar, “10 kV Bipolar 1.2/50 μ s Impulse Voltage Tester with Built-in Impulse Counter and Breakdown Detector”, Genus Overseas Electronics Ltd., Jaipur, Feb. 2002.
5.	H.K. Verma and Vinod Kumar, “Computerized Vibration Test System for Static and E.M. Watthour Meters (as per IS 13010-1990 and IS 13779-1993)”, National Test House, Ghaziabad, March 2002.
6.	H.K. Verma and R.P. Maheshwari, “Design and Development of Digital Overfluxing Relay”, AVK-SEG & Controls (India) Ltd., Noida, May 2002.
7.	H.K. Verma and R.P. Maheshwari, “MODBUS-Based Communication Software for Digital Overfluxing Relay”, AVK-SEG & Controls (India) Ltd., Noida, May 2002.



8.	H.K. Verma and Vinod Kumar, “Short–time Overcurrent, Voltage Interruption and Voltage Dip Tester for Static Watthour Meters”, National Test House, Ghaziabad, Sept. 2002.
9.	H.K. Verma, R.P. Maheshwari and Vinod Kumar, “Residual–Life Assessment of Electrical Equipment of Mohammedpur Power House, Uttaranchal Hydro–Power Corporation, Dehradun, (through AHEC) Feb. 2003.
10.	H.K. Verma, R.P. Maheshwari and Vinod Kumar, “Renovation, Modernization and Uprating Study of Nirgajni Hydroelectric Power Station in U.P.”, UP Jal Vidyut Nigam Ltd., Lucknow (through AHEC), Sept. 2003.
11.	H.K. Verma, R.P. Maheshwari and Vinod Kumar, “Renovation & Modernization Studies of Galogi Power Plant”, Uttaranchal Jal Vidyut Nigam Ltd. (through AHEC), Jan. 2004.
12.	H.K. Verma and R.P. Maheshwari, “Performance Evaluation of Solang and Kothi Hydroelectric Power Plants in Himachal Pradesh”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, Nov. 2004.
13.	H.K. Verma and Arun Kumar, “Performance Testing of Madhavaram SHP Station (2x 2 MW) Nandyal, A.P.”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, Dec. 2004.
14.	H.K. Verma and R.P. Maheshwari, “RMU Studies of Chitaura, Salawa and Bhola Power Plants”, U.P. Jal Vidyut Nigam Ltd. (through AHEC), March 2005.
15.	H.K. Verma and Arun Kumar, “Performance Testing of Babbanpur SHP Station (2 x 500 kW), Babbanpur, Distt. Sangrur, Punjab”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, Aug. 2005.
16.	H.K. Verma, H. Sinvhal & V.K. Nangia, “Assessment of Citizen Needs”, UNDP New Delhi and IT Department, Government of Uttaranchal , Aug. 2005.
17.	H.K. Verma, H. Sinvhal & V.K. Nangia, “BPR Studies: A Pioneering Effort in Uttaranchal”, UNDP New Delhi and IT Deptt., Government of Uttaranchal, Aug. 2005.
18.	H.K. Verma, H. Sinvhal & V.K. Nangia, “Soochna Kutirs: The Information Kiosks in Public–Private Partnership”, UNDP New Delhi and IT Department, Government of Uttaranchal, Aug. 2005.
19.	H.K. Verma, Vinod Kumar & J.D. Sharma, “Uttara Portal: A Comprehensive Portal of Uttaranchal”, UNDP New Delhi and IT Department, Government of Uttaranchal, Aug. 2005.
20.	H.K. Verma and Arun Kumar, “Performance Testing of Aleo SHP Station (2x1500 kW), Aleo, Manali, Distt. Kullu, H.P.”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, Dec. 2005.
21.	H.K. Verma and Arun Kumar, “Performance Testing of Manal SHP Station (2x1500 kW), Manal, Distt. Sirmour, H.P.”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, Jan. 2006.
22.	H.K. Verma and Arun Kumar, “Performance Testing of Ching SHP Station (2x500 kW), Ching, Distt. Shimla, H.P.”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, Feb. 2006.



23.	H.K. Verma, Arun Kumar, and B.K. Gandhi, “Performance Testing of TB Dam SHP Station (3x2650 kW), Hospet, Distt. Bellary, Karnataka”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, March 2006.
24.	H.K. Verma, Arun Kumar, R.P. Maheshwari and B.K. Gandhi, “Performance Testing of Chunchi Doddi SHP Station (3x3.5 MW), Chunchi Doddi, Distt. Bangalore Rural, Karnataka”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, March 2006.
25.	H.K. Verma, H. Sinvhal, Vinod Kumar, J.D. Sharma and V.K. Nangia, “Final Report: Pro–Poor IT Initiatives in Uttaranchal”, UNDP, New Delhi and IT Department, Government of Uttaranchal, March 2006.
26.	H.K. Verma, Arun Kumar, R.P. Maheshwari and B.K. Gandhi, “Performance Testing of Sugur SHP Station (3x1.5 MW), Sugur, Distt. Bellary, Karnataka”, Ministry of Non–Conventional Energy Sources, GoI, New Delhi, April 2006.
27.	H.K. Verma, Arun Kumar, and B.K. Gandhi, “Performance Testing of Mandagere SHP Station (2x1.75 MW), Mandagere, Distt. Mandya, Karnataka” Ministry of New and Renewable Energy, May 2006.
28.	H.K. Verma, Arun Kumar and B.K. Gandhi, “Performance Testing of Someshwara SHP Station (3x8.25 MW), Someshwara, Distt. Mandya, Karnataka”, Ministry of New and Renewable Energy, May 2006.
29.	H.K. Verma, Arun Kumar and B.K. Gandhi, “Performance Testing of Sahyadri SHP Station (1x300 kW), Sahyadri, Distt. Shimoga, Karnataka”, Ministry of New and Renewable Energy, July 2006.
30.	H.K. Verma, Arun Kumar and B.K. Gandhi, “Performance Testing of Salag SHP Station (1x150 kW), Salag, Distt. Kangra, Himachal Pradesh”, Ministry of New and Renewable Energy, September 2006.
31.	H.K. Verma, Arun Kumar and B.K. Gandhi, “Performance Testing of Varahi SHP Station (3x7.5 MW), Siddapura, Distt. Udipi, Karnataka”, Ministry of New and Renewable Energy, November 2006.
32.	H.K. Verma, Arun Kumar and B.K. Gandhi, “Performance Testing of Kosi SHP Station (4x4.8 MW), Distt. Kataiya, Bihar”, Ministry of New and Renewable Energy, December 2006.
33.	H.K. Verma, R.P. Maheshwari and B.K. Gandhi, “Performance Testing of Killa SHP Station (2x875 kW), Distt. Sangrur, Punjab”, Ministry of New and Renewable Energy, February 2007.
34.	H.K. Verma, Arun Kumar and B.K. Gandhi, “Performance Testing of Chakbhai SHP Station (2x1000 kW), Chakbhai, Distt. – Sangrur”, Ministry of New and Renewable Energy, February 2007.
35.	H.K. Verma, Arun Kumar and B.K. Gandhi “Performance Testing of Lohgarh (2x1000 kW), Lohgarh, Distt. Ludhiana, Punjab”, Ministry of New and Renewable Energy, March 2007.



36.	H.K. Verma, Arun Kumar and B.K. Gandhi, "Performance Testing of Sahoke (1x1000 kW), Sahoke, Distt. Sangrur, Punjab", Ministry of New and Renewable Energy, April 2007.
37.	H.K. Verma, Arun Kumar and B.K. Gandhi, "Performance Testing of Rani Avanti Bai Lodhi Sagar (2x5 MW), Bargi, Distt. Jabalpur, Madhya Pradesh", Ministry of New and Renewable Energy, May 2007.

LABORATORY DEVELOPMENT

Developed several new laboratories in Electrical Engineering Department, University of Roorkee / IIT Roorkee:

- Power System Protection Laboratory (1975)
- Printed Circuit Boards Laboratory (1979)
- Microprocessor Laboratory (Centre for Microprocess Application) (1984)
- Instrumentation and Signal Processing Laboratory (1986)
- Applied Instrumentation Laboratory (1986)
- Meter and Relay Testing Laboratory (1988)
- Data Acquisition Laboratory (1988)
- FPGA and Embedded Systems Laboratory (1999)
- Virtual Instrumentation Laboratory (2002)
- Intelligent Sensors and Sensor Networks Laboratory (2006)
- Intelligent Instrumentation and Instrument Networks Laboratory (2007)

CURRICULUM DEVELOPMENT

- Member, Working Group, Laboratory Instruction Manuals B.E. Elect (1972-73)
- Member, Working Group, Revision of B.E. (Elect) Curriculum (1977-78)
- Member, Working Group, Revision of M.E. (Elect) Curriculum (1978-79)
- Member, Working Group, Revision of B.E. (Elect) Curriculum (1987-88)
- Member, Working Group, Revision of M.E. (Elect) Curriculum (1989-90)
- Member, Working Group, Revision of B.E. (Elect) Curriculum (1995-96)
- Leader, Working Group, Revision of M.E. (M&I) Curriculum (1995-96)



MEMBERSHIP OF SOCIETIES

- Fellow, Institution of Engineers (India) (FIE)
- Fellow, Institution of Electronics & Telecommunication Engineers (FIETE)
- Fellow, Institution of Instrumentation Scientists & Technologists (FIIST)
- Life Member, Systems Society of India (LMSSI)
- Life Member, Bio-Medical Engineering Society of India (LMBMSI)
- Life Member, National Institution of Quality & Reliability (LMNIQR)
- Member, International Group for Hydraulic Efficiency Measurement (MIGHEM)
- Member, Instrumentation, Systems & Automation Society (MISA)

NATIONAL / INTERNATIONAL COLLABORATIONS

- Adviser to Regional Engg. College Srinagar for setting up Microprocessor Applications Laboratory (1985 – 1987).
- Joint initiative with Military Hospital Roorkee for ECG interpretation and database creation (1987 – 1995).
- Joint e-Governance / IT initiatives with Govt. of Uttaranchal (Since Jan. 2002).
- Joint research project with IIT Delhi & AIIMS Delhi, sponsored by MICT, GoI (2002 – 2003).
- Joined International Group for Hydraulic Efficiency Measurement in 2004.
- Joint project on Measurements in Small Hydro Power Stations with HTA, Switzerland (2004–2005)
- Leading a national network for performance and R&M related testing of SHP Stations, sponsored by MNES, GoI (Since 2004).
- Knowledge sharing with Technische Universitat Darmstadt, Germany on Reconfigurable Embedded Systems (Since Sep. 2005).

SPONSORED RESEARCH PROJECTS

Projects Completed

- | | |
|----|---|
| 1. | H.K. Verma, S.C. Saxena and Vinod Kumar, “Computer Based Monitoring, Protection and Control of Power Stations, Sponsored by MHRD, 1990 – 1992 (Funds received & utilized: Rs. 1.0 million). |
| 2. | Vinod Kumar and H.K. Verma, “Development of Integrated Software for Quantification of Autonomic Tone”, Jointly with AIIMS Delhi and IIT Delhi, Sponsored by Ministry of |



	Communication Information Technology, 2001 – 2002.
3.	H.K. Verma, A.K. Pant, J.D. Sharma, Vinod Kumar, H. Sinvhal and V.K. Nangia, “Pro-Poor IT Initiatives in Uttaranchal – Portal Development, Application Standards and Data Centre”, Sponsored by Government of Uttaranchal and Funded by UNDP, Jan 2003 – May 2006 (Funds received & utilized : Rs. 32.3 millions).
Ongoing Projects	
1.	H.K. Verma and Arun Kumar, “Strengthening of Test Facilities and Networking of Institutions for Performance and R&M Related Testing of SHP Stations”, Sponsored by Ministry of Non-Conventional Energy Sources, GoI, Since April 2004 (Funds received: Rs.25 millions).
2.	H.K. Verma, H. Sinvhal, J.D. Sharma, Vinod Kumar and V.K. Nangia, “Setting up Citizen Information and Service Centres in the Border Districts of Uttaranchal”, Sponsore By Government of Uttaranchal, Since July 2006 (Funds received: Rs. 38.8 millions).

CONSULTANCY PROJECTS (COMPLETED 2001 ONWARDS)				
<i>S. No.</i>	<i>Project Title</i>	<i>Sponsoring Organization/ Company</i>	<i>Completion Date</i>	<i>Principal Investigator (PI) & Co-Investigators</i>
1.	10–KV, 1.2/50, Bipolar Impulse Voltage Tester	Genus Overseas Electronics Ltd., Jaipur	Feb. 2002	Dr. H.K. Verma (PI) Dr. Vinod Kumar
2.	Computerized Vibration Test System for Static and E.M. Watthour Meters	National Test House, Ghaziabad	Mar 2002	Dr. H.K. Verma (PI) Dr. Vinod Kumar
3.	Communication Software for Digital Overfluxing Relay	AVK–SEG & Controls (India) Ltd., Noida	May 2002	Dr. H.K. Verma (PI) Dr. R.P. Maheshwari
4.	Digital Overfluxing Relay	AVK–SEG & Controls (India) Ltd., Noida	May 2002	Dr. H.K. Verma (PI) Dr. R.P. Maheshwari
5.	Short–time Overcurrent, Voltage Interruption and Voltage Dip Tester for Static Watthour Meters	National Test House, Ghaziabad	Sep. 2002	Dr. H.K. Verma (PI) Dr. Vinod Kumar
6.	Data Acquisition & Processing Unit for Stator Core Fault Detector	B.H.E.L., Haridwar	Oct. 2002	Dr. H.K. Verma (PI) Dr. Vinod Kumar
7.	Residual–Life Assessment of Electrical Equipment of Mohammedpur Power House	Uttaranchal Hydro–Power Corporation, Dehradun	Feb. 2003	Dr. H.K. Verma (PI) Dr. Vinod Kumar Dr. R.P. Maheshwari
8.	RLA & RMU Studies of Electrical Equipment of Nirgajni Power Plant	U.P. Jal Vidyut Nigam Ltd.	Sep. 2003	Dr. H.K. Verma (PI) Dr. Vinod Kumar Dr. R.P. Maheshwari



9.	Renovation & Modernization Studies of Galogi Power Plant	Uttaranchal Jal Vidyut Nigam Ltd.	Jan. 2004	Dr. H.K. Verma (PI) Dr. Vinod Kumar Dr. R.P. Maheshwari
10.	Performance Evaluation of Solang and Kothi Hydroelectric Power Plants in Himachal Pradesh	MNES, GoI	Nov.2004	Dr. H.K. Verma (PI) Dr. Vinod Kumar Dr. R.P. Maheshwari
11.	Performance Testing of Madhavaram SHP Station (2 x 2 MW), Nandyal, Andhra Pradesh	K.M. Power Pvt. Ltd., Hyderabad	Dec. 2004	Dr. H.K. Verma (TL) Dr. Vinod Kumar Shri Arun Kumar (PC) Dr. R.P. Maheshwari Shri S.N. Singh (PI) Dr. R.P. Saini Dr. B.K. Gandhi
12.	RMU Studies of Chitaura, Salawa and Bhola Power Plants	U.P. Jal Vidyut Nigam Ltd.	Mar 2005	Dr. H.K. Verma (PI) Dr. Vinod Kumar Dr. R.P. Maheshwari
13.	Performance Testing of Babbanpur SHP Station (2 x 500 kW), Babbhanpur, Distt. Sangrur, Punjab	Kotla Hydro Power Ltd., Noida	Aug. 2005	Dr. H.K. Verma (TL) Dr. Vinod Kumar Shri Arun Kumar (PC) Dr. R.P. Maheshwari Shri S.N. Singh Dr. R.P. Saini (PI) Shri S.K. Singhal Dr. B.K. Gandhi
14.	Performance Testing of Aleo SHP Station (2 x 1500 kW), Aleo, Manali, Distt. Kullu, Himachal Pradesh	Aleo Manali Hydro Power Ltd., Noida	Dec. 2005	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Shri S.N. Singh Shri M.K. Singhal (PI) Shri S.K. Singhal Dr. B.K. Gandhi
15.	Performance Testing of Manal SHP Station (2x1.5 MW), Manal, Distt. Shimla, Himachal Pradesh	Himalayan Crest Power Ltd., New Delhi	Jan. 2006	Dr. H.K. Verma (TL) Dr. Vinod Kumar Shri Arun Kumar (PC) Dr. R.P. Maheshwari Shri S.N. Singh Dr. R.P. Saini Shri S.K. Singal (PI) Dr. B.K. Gandhi
16.	Performance Testing of Ching SHP Station (2 x 500 kW), Ching, Distt. Shimla, Himachal Pradesh	Hateshwari Om Power Enterprises Pvt. Ltd., Shimla/ Ahmedabad	Feb. 2006	Dr. H.K. Verma (TL) Dr. Vinod Kumar Dr. R.P. Maheshwari Shri Arun Kumar (PC) Shri S.N. Singh Dr. R.P. Saini Shri M.K. Singhal (PI) Dr. B.K. Gandhi



17.	Performance Testing of TB Dam Mini Hydroelectric Power Station (3 × 2.65 MW), Hospet, Distt. Bellary, Karnataka	NCL Energy Ltd., Hyderabad	Mar. 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Shri S.N. Singh Dr. R.P. Saini Shri S.K. Singal (PI) Dr. B.K. Gandhi
18.	Pro-Poor IT Initiatives in Uttaranchal – Studies, Field Implementation and Impact Assessment	UNDP/Govt. of Uttaranchal	Mar. 2006	Dr. H.K. Verma (PI) Dr. A.K. Pant Dr. J.D. Sharma Dr. Vinod Kumar Dr. H. Sinvhal Prof. V.K. Nangia
19.	Performance Testing of (2 × 1.75 MW) Mandagere SHP Station in Karnataka	Bhoruka Power Ltd., Bangalore	Mar. 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Dr. R.P. Saini Shri S.K. Singal (PI) Dr. B.K. Gandhi
20.	Performance Testing of (3 x 3.5 MW) Chunchi Doddi SHP Station in Karnataka	Sai Spurthi Power Ltd., Bangalore	Mar. 2006	Dr. H.K. Verma (TL) Dr. Vinod Kumar Shri Arun Kumar (PC) Dr. R.P. Maheshwari Dr. R.P. Saini Shri M.K. Singhal (PI) Dr. B.K. Gandhi
21.	Performance Testing of (3 × 8.25 MW) Someshwara SHP Station in Karnataka	Pioneer Genco Ltd., Hyderabad	April 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Dr. R.P. Saini (PI) Dr. B.K. Gandhi
22.	Performance Testing of (3 x 1.5 MW) Sugur SHP Station in Karnataka	SLS Power Industries Ltd., Bangalore	April 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Dr. R.P. Saini (PI) Dr. B.K. Gandhi
23.	Performance Testing of (1x300 kW) Sahyadri SHP Station in Karnataka	Sahyadri Power Company Pvt. Ltd., Shimoga, Karnataka	June 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Shri S.N. Singh (PI) Dr. B.K. Gandhi
24.	Performance Testing of (3x7.5 MW) Varahi Tailrace SHP Station in Karnataka	Sandur Power Co. Ltd., Bangalore	Sep. 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. B.K. Gandhi Dr. R.P. Saini (PI)
25.	Performance Testing of (1x150 kW) Salag SHP Station in Himachal	Dhauladhar Hydro Systems Pvt. Ltd., Hamirpur	Sep. 2006	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. B.K. Gandhi



	Pradesh			Dr. M.K. Singhal (PI)
26.	Performance Testing of (2x875 kW) Killa SHP Station in Punjab	Kotla Hydro Power Ltd., Noida	Feb. 2007	Dr. H.K. Verma (TL) Shri Arun Kumar (PI) Dr. R.P. Maheshwari Dr. B.K. Gandhi
27.	Performance Testing of (2 × 1000 kW) Chakbhai MHP Station in Punjab	Aqua Power Ltd., Noida	Feb. 2007	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. R.P. Maheshwari Dr. B.K. Gandhi Dr. S.N. Singh (PI)
28.	Performance Testing of (2x1000 kW) Lohgarh SHP Station in Punjab	Aqua Power Ltd., Noida	March 2007	Dr. H.K. Verma (TL) Shri Arun Kumar (PC) Dr. B.K. Gandhi Dr. R.P. Saini (PI)
29.	Performance Testing of (1x1000kW) Sahoke SHP Station in Punjab	Kotla Hydro Power Pvt. Ltd., Noida	April 2007	Dr. H.K. Verma Shri Arun Kumar Dr. B.K. Gandhi Dr. R.P. Maheshwari
30.	Performance Testing of (2x5 MW) Rani Avanti Bai Lodhi Sagar Jabalpur	VA Tech Escher Wyss Flovel Ltd., Faridabad	May 2007	Dr. H.K. Verma Shri Arun Kumar Dr. B.K. Gandhi Dr. R.P. Maheshwari Dr. R.P. Saini

*TL: Team Leader
PC: Programme Coordinator*

INDUSTRIAL CONSULTANCY	
Nature of Consultancy	
<ul style="list-style-type: none"> • e-Governance and IT-enabled services • Performance evaluation of SHP stations • Renovation and modernization of SHP stations • Design of SCADA systems • Development of static and digital protective relays • Modeling and evaluation of overhead current collection system • Development of microprocessor-based instruments • Development of PC-based test systems • Development of meter test and calibration equipment • Design of industrial instrumentation systems • Design of distributed data acquisition systems 	



Consultancy Receiving Organizations

<i>International Organization</i>	UNDP
<i>Government</i>	Government of Uttarakhand
<i>Govt. Organizations</i>	RDSO Ministry of Railways Lucknow, IRI Bhopal, CBRI Roorkee, Doordarshan, New Delhi
<i>Research/Test Centres</i>	ISRO, National Test House, Eicher Research Centre
<i>Power Corporations/Boards</i>	Uttarakhand Jal Vidyut Nigam, UP Jal Vidyut Nigam, APSEB, HPSEB, MPEB, KSEB
<i>Protective Relay Manufacturers</i>	AVK-SEG & Controls (India), English Electric, G.E.C. Alstom
<i>EM Energy Meter Manufacturers</i>	Havells' Industries, Towers & Transformers, APEEC, Baroda Electric Meters, Capital Power Systems, VXL Landis & Gyr., etc.
<i>Static Energy Meter Manufacturers</i>	Genus Overseas Electronics, H.S. Chawla and Co., Rajasthan Electronics and Instruments
<i>Power Equipment Manufacturers</i>	BHEL Haridwar
<i>SHP Developers</i>	KM Power Hyderabad, Kotla Hydro Power Noida, Aleo Manali Hydro Power Noida, Himalayan Crest Power New Delhi, Hateshwari Om Power Enterprises Ahmedabad, NCL Energy Hyderabad, Khuali VA TECH Escher Wyss Flovel Ltd., etc.

Three e-Governance Projects funded by UNDP and Government of Uttarakhand

First e-governance project with a total funding of **US\$ one million** from UNDP was initiated in Jan. 2003 and completed in May 2006.

- Needs, priorities and aspirations of the people of Uttaranchal were ascertained by PRA and RUA techniques in seven places.
- BPR studies, aimed at achieving transparency, automaticity, cost reduction, quality and efficiency, were carried out for six departments of GoUA.
- An electronic service delivery system was setup.
- An n-tier, citizen - centric and secured Uttara Portal with 115 websites and about a dozen applications was developed.
- Over 30 information kiosks (Soochna Kutirs) were setup in rural and remote areas of Nainital district in public-private-partnership mode, which are since operational.
- One mobile information kiosk is providing services in Nainital district.



- Several government departments in Nainital district were partly computerized and connected to Uttara Portal to enable them provide services to citizens electronically.
- A computer-network was created in rural areas of Nainital district and linked to internet to provide accessibility to Uttara Portal as well as internet services in remote areas.
- 14 VSATs were installed in some remote information kiosks and nodal government offices.

Second e-governance project with a funding of **Rs. 40 million** was received from the Government of Uttarakhand in April 2005.

- It was meant for strengthening the infrastructure created under the UNDP-funded project, extending implementation in more places of the state and expanding the government services delivered electronically.
- Uttara Portal now has more than 200 websites and incorporates 7 portals within it.
- Application software for many new services developed and launched.
- An e-Service and Information Centre has been set up in Dehradun and is delivering several government services to the citizens. Six more such centres being set up in various Tehsils of Dehradun district.

Third e-governance project with a funding of **Rs. 50 million** was received from the Government of Uttarakhand in July 2006.

- Project aims at setting up e-Service and Information Centres/Kiosks in 5 border districts of the State.
- Two centres being set up in Mana and Badrinath, total of 40 centres planned.
- Equipment for 40 VSATs acquired for providing connectivity in remote centres.
- Six mobile units will be soon pressed into service for providing government services electronically where fixed centres are not viable.

“Strengthening of Test Facilities and Networking of Institutions for Performance and R&M Related Testing of SHP Stations”: A project of National importance, funded by MNRE, Government of India.

- Requirements of testing related to performance of new SHP stations and renovation and modernization (R&M) of old SHP stations were studied in the backdrop of Indian SHP scenario.
- Proposal submitted to Ministry of New and Renewable Energy, GoI in Oct. 2003.
- Sanction for **Rs. 25 million** received in April 2004.
- Setup a National Network for SHP Testing involving IIT Roorkee, Jadavpur



University, NIT Trichy and MANIT Bhopal.

- Over 20 faculty members from four institutes are involved in the National Network led by Dr. H.K. Verma.
- Highly sophisticated equipment and other field-test facilities procured.
- Performance testing of about 20 SHP stations in 5 states carried out till July 2007.
- R&M related testing of 7 SHP stations in Uttarakhand, UP and Bihar states carried out till July 2007.
- Awareness meetings and workshops for equipment manufacturers, designers and SHP developers organized in Roorkee, Delhi, Trichy and Kolkata.

OTHER PROFESSIONAL ACTIVITIES

- Member of National Working Group on “Philosophy and Application of Backup Protection for Transmission Lines, Reactors and Busbars”, Head Office: Central Board of Irrigation and Power, New Delhi
- Member of CIGRE National Study Committee on “Information System and Telecommunication for Power Systems”, Head office: Central Board of Irrigation and Power, New Delhi.
- Founder Chief Editor of “IITR at a Glance”. April 2002 – March 2003
- Founder Editor-in-Chief, SCI-TECH (R&D Magazine of IITR)
July 2002 – June 2003
- Chief Editor, “Expertise & Facilities in IIT Roorkee” Jan 2002 – July 2003