

NARENDRA KUMAR

M.Sc. Ph.D. (Environmental Science)

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Babasaheb Bhimrao Ambedkar University

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Research Interest

- Environmental Toxicology and Phytoremediation
- Environmental Impact Assessment and Management
- Ground Water Pollution



OBJECTIVE: To attain professional and personal experience through sustained learning

RESEARCH PUBLICATION

Research Publications

1. Anjali Singh, Ashwani Raju, Pitamber Pati, **Narendra Kumar** (2016). Mapping of coal fire in Jharia coalfield, India: a Remote Sensing Based Approach, Journal of Indian Soc Remote sensing. DOI: 10.1007/s1252-016-0590-5.
2. Dhananjay Kumar and **Narendra Kumar** (2016). Tannery Effluent Toxicity Assessment on the Growth and Germination of Phaseolus vulgaris L. (Bean). International Journal of Green and Herbal Chemistry 5(2): 139-144.
3. **Narendra Kumar**, Poonam, Sanjeev Kumar, Singh D.P. (2015). Ground water quality evaluation at suburban areas of Lucknow, U.P.,India. International Journal of Environmental Sciences. 6(3):376-387.
4. Anjali Verma, **Narendra Kumar**. (2015). Inter Basin Water Transfer of Rivers from Sharda to Yamuna using Construction Techniques. Indian Journal of Applied Research. 5 (2), 252-254.
5. Anjali Verma, **Narendra Kumar**. (2015). Interlinking of rivers in India: Proposed Sharda-Yamuna Link. IOSR Journal of Environmental Science, Toxicology and Food Technology. 9 (2), 28-35.
6. **Narendra Kumar**, Sanjeev Kumar, Kuldeep Baudhh, Neetu Dwivedi, D.P.Singh and S.C.Barman (2014). Toxicity assessment of flash light manufacturing industry effluent by bioassay test in methi (*Trigonella foenumgracum*). J. Env. Biol. 35(6):1107-1113.

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7. **Narendra Kumar**, Sanjeev Kumar, Kuldeep Bauddh, Neetu Dwivedi, Preeti Shukla, D.P.Singh and S.C.Barman, (2014). Toxicity assessment and accumulation of metals in Radish irrigated with battery manufacturing industry effluent. Int. J. of Veg. Sc. DOI: 10.1080/19315260.2014.880771)
8. Anjali Verma, **Narendra Kumar**. (2014). Role of proposed inter -basin water transfer projects in drought and flood management. International Journal of Current Research. 6(7):7356-7357
9. **Narendra Kumar**, Kuldeep Bauddh, Sanjeev Kumar, Neetu Dwivedi, D. P. Singh and S.C. Barman, (2013). Accumulation of metals in weed species grown on the soil contaminated with industrial waste and their phytoremediation potential. Ecol. Eng. 61, 491-495
10. **Narendra Kumar**, Kuldeep Bauddh, Sanjeev Kumar, Neetu Dwivedi, D.P. Singh and S.C.Barman, (2013). Extractability and phytotoxicity of heavy metals present in petrochemical industry sludge. Clean Techn Environ policy 15 (6), 1033-1039
11. **Narendra Kumar**, Kuldeep Bauddh, S.C. Barman, Neetu Dwivedi, and D.P.Singh, (2012). Accumulation of metals in selected macrophytes grown in mixture of drain water and tannery effluent and their phytoremediation potential. Journal of Environmental Biology 33, 923-927
12. S.C. Barman, **N. Kumar**, R. Singh, G.C. Kishku, A.H. Khan, M.M. Kidwai, R.C. Murthy, M.P.S. Negi, P. Pandey, A.K. Verma, G. Jain, and S.K. Bhargava. (2010) Assessment of urban air pollution and it's probable health impact. Journal of Environmental Biology. 31(6) 913-920
13. Ramesh Singh, D.P. Singh, **Narendra Kumar**, S.K. Bhargava, and S.C. Barman. (2010) Accumulation and translocation of heavy metals in soil and plants from fly ash contaminated area. Journal of Environmental Biology. 31, 421-430
14. **Narendra Kumar**, Sanjeev Kumar, Kuldeep Bauddh, Neetu Dwivedi, Kunwar Anand Singh and D.P. Singh. (2009) Phytotoxicity of industrial effluent to *Raphanus sativus* L. and *Trigonella foenumgracum* L.. J. Ecophys. and Occup. Health. 9, 163-169.

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15. **Narendra Kumar**, Kuldeep Baudh, Ramesh Singh, S.C.Barman, D.P.Singh and S.K.Bhargava. (2009) Phytotoxicity of trace metals (Cu & Cd) to Gram (*Cicer orientinum*) and Mung (*Phaseolus mungo*). J. Ecophys. and Occup. Health. 9, 59-65
16. Ranjeev K Sahu, Shaswat Katiyar, Awadhesh K Yadav, **Narendra Kumar**, Jatin Srivastava (2008) Toxicity Assessment of Industrial Effluent by Bioassays; Clean – Soil Air Water, 36(5-6); 517-520
17. L.P.Srivastava, **Narendra Kumar**, K.P.Gupta, R.B.Raizada (2006) Status of HCH Residues in Indian Medicinal Plant Materials. Bull Environ Contam Toxicol 76 : 782-790

Articles in News Papers

1. **Narendra Kumar** (2015). Environmental sustainability: The next major challenge. Hindustan Times (Lucknow Ed.) 08/06/2015.
2. **Narendra Kumar** (2013) Conservation of Wild life must for balanced growth. Hindustan Times (Lucknow Ed.) 19/10/2013
3. **Narendra Kumar** (2013) Montreal Protocol has helped reduce harmful emissions. Hindustan Times (Lucknow Ed.) 18/09/2013

Book Chapters

1. Dhananjay Kumar, D. P. Singh, S. C. Barman and **Narendra Kumar** (2016), Heavy metal and their regulation in plant system: An overview. Springer, New York. In Press.
2. Dhananjay Kumar and **Narendra Kumar** (2016), Impact of Organic Farming on Livelihood of Dalits of Lucknow Region of Uttar Pradesh. The Contribution of Babasaheb Ambedkar for Development of Modern India, Excel India Pub. 200-206

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3. Dhananjay Kumar and **Narendra Kumar** (2016), Phytoremediation of Heavy Metal Pollutants from Wastewater Environment using Aquatic Macrophytes. Bioremediation of Industrial Pollutants, Write and Print Pub. 332-351
4. Komal Sharma and **Narendra Kumar** (2016), Accessibility of safe drinking water: A case study of Lucknow District. The Contribution of Babasaheb Ambedkar for Development of Modern India, Excel India Pub. 213-230.

RESEARCH SUPERVISION

List of Ph. D. students who have worked under my supervision

S. No.	Name of Student	Year of Award	Research Topic
1	Anjali Verma	2015	Benefits of water transfer in the national river linking plan: A case study of proposed Sharda –Yamuna link.
2	Sushil Kumar Bharti	Continuing	Source apportionment of particulate matter and its probable consequence at Urban area of Lucknow
3	Dhananjay Kumar	Continuing	Phytoremediation of soil co-contaminated with Cu, Cd and pesticides.
4	Sangeeta Anand	Continuing	Phytoremediation of pesticides and heavy metals from water by using aquatic macrophytes.
5	Poonam	Continuing	Application of agricultural wastes for removal of heavy metals and persistent organic pollutants (POPs) from water.

List of M.Sc. students who have worked under my supervision for their Dissertation work

S. No.	Name of Student	Topic	Duration
1	Huma Nafis	Removal of fluoride from water using <i>Cymbopogon citratus</i> (Lemon grass) leaves as biosorbent.	2014-2016

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2	Radhey Shyam Sharma	Removal of Pb from wastewater of a battery manufacturing industry by using different agricultural wastes (lemon, orange, bagasse as adsorbent)	2014-2016
3	Suresh Kumar	Diurnal variation in morphology and elemental composition of particulate matter at Rural and urban area of Lucknow.	2013-2015
4	Deepti Singh	Evaluation of air pollution tolerance index of some plants along roadside of Lucknow- Allahabad Highway.	2013-2015
5	Lata Verma	Biomedical waste management practices in different hospitals of Lucknow city: A Case study.	2013-2015
6	Chand Bibi	Physio-chemical Characteristics of Drinking Water: A Case Study of Rural Areas of Lucknow.	2013-2015
7	Yachna Singh	A study on Municipal Solid waste management in Indian cities.	2012-2014
8	Parul Maurya	Determination of Heavy metal content in medicinal plants.	2012-2014
9	Priyanka	Determination of heavy metals in leafy vegetables available in different sites of Lucknow market, India.	2012-2014
10	Mohd Arshad Siddiqui	Assessments find effect of detergent on naturally occurring hydrophytes and macrophytes..	2012-2014
11	Chaitanya Prakash Tiwari	Monitoring and analysis the concentration of PM ₁₀ and PM _{2.5} , determination of heavy metal in ambient air at BBAU, Lucknow.	2012-2014
12	Neha	Distribution of Heavy in water, sediment and aquatic macrophytes growing naturally in river Gomti.	2012-2014
13	Vijayta Singh	Ambient Air Quality in an around a cement industry with particular reference to PM ₁₀ and PM _{2.5} .	2011-2013
14	Anubhav Singh	Rapid Environment Impact Assessment of Cement Grinding Unit in Shahjahanpur U.P.	2011-2013
15	Komal Sharma	Accessibility of safe drinking water: A case study of Lucknow district.	2011-2013
16	Archana	Heavy metal contamination of groundwater at Lucknow, Kanpur, Raebareli, Unnao with particular reference to As and Pb.	2011-2013
17	Poonam	Ground water quality monitoring in suburban areas of Lucknow city.	2011-2013
18	Geeta Singh	Environmental Assessment of Noise Pollution: BBAU Campus, Lucknow.	2010-2012

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19	Saurabh Bajpai	Evaluation of Typha for its possible use as Soil Conditioner.	2009-2011
20	Krishna Rawat	Heavy metal accumulation potential of some aquatic macrophytes.	2009-2011
21	Santosh Kumar	Heavy metal estimation in medicinal plants.	2008-2010
22	Ashutosh Patel	Estimation of heavy metal in vegetable in marketed sample of Lucknow city.	2008-2010
23	Dharmveer Singh	Estimation of heavy metals in cereals and pulses in marketed sample of Lucknow city.	2008-2010
24	Jitendra Kumar	Estimation of Heavy metals in Dry Fruits.	2008-10
25	Sanjeev Kumar	Toxicity assessment of flash light manufacturing industry effluent by bioassay.	2007-2009
26	Swati Sachdev	Toxicity assessment of flash light manufacturing sludge on <i>Raphanus sativus</i> and <i>Trigonella foenum gracum</i> .	2007-2009
27	Kuldeep Baudhh	Seed germination and root elongation test to assess the toxicity of heavy metals.	2005-2007
28	Shiv Shankar	Impact of sewage and industrial waste water on water quality of Sai river near Lucknow.	2004-2006
29	Jeevan Singh Yadav	Status of water pollution in Gomti river Lucknow.	2004-2006
30	Vidhu Tripathi	A Study on rain Water harvesting.	2004-2006

RESEARCH PROJECT

- ✓ 'Impact assessment of dissolved metals in ground water on health and water quality in the industrial, agricultural, and urban areas of Kanpur, Uttar Pradesh' Ongoing with total funds of Rs. > 7 Lacs for two year duration, funded by University Grants Commission, New Delhi, India.

PROFESSIONAL EXPERIENCE

- ASSISTANT PROFESSOR, ENVIRONMENTAL SCIENCE, June 2005 – Till Date
Babasaheb Bhimrao Ambedkar Central University, Lucknow, India

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- **LECTURER, ENVIRONMENTAL SCIENCE, Aug. 2002 – June 2005**
Chatrapati Sahu Ji Maharaj University, Kanpur, India

Course Taught:

- ✓ Environmental Chemistry
- ✓ Environmental Pollution Control and Environmental Biotechnology
- ✓ Environmental Toxicology
- ✓ Environmental Impact Assessment and Management
- ✓ Ecosystem and Biodiversity

Scientific Instruments Compatability:

- ✓ Scanning Electron Microscope
- ✓ Atomic Absorption Spectrophotometer
- ✓ High Pressure Liquid Chromatography
- ✓ Fourier Transmission Infrared Spectroscopy
- ✓ UV-Visible Spectrophotometer
- ✓ Respirable Dust Sampler

Achievements:

- ✓ Successfully guided >40 M.Sc. dissertations.
- ✓ Till date >20 of my students qualified National Eligibility Test for Junior research Fellowship/Lecturership conducted by University Grants Commission, India.

MEMBERSHIP OF ACADEMIC BODIES

- ✓ Academic Council, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Extra Moral Studies Organization, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Media Cell, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Placement Cell, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ School Board, School of Environmental Sciences, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Board of Post-graduate Studies, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Internal Quality Assurance Cell, Department of Environmental Science, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Professor H.S.Srivastava Foundation for Science and Society, Lucknow, India
- ✓ Member Admission Committee, Babasaheb Bhimrao Ambedkar University, Lucknow, India

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- ✓ Life member- CSIR-National Botanical Research Institute, Lucknow 226001, INIDA

ADDITIONAL RESPONSIBILITIES

- ✓ Warden, Ashoka Boys Hostel (Extn), Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Coordinator, Integrated (B. Sc. + M. Sc.) Applied Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ In-charge Guest House, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Coordinator, Sports Activities, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Coordinator, Spot Evaluation of M.Sc. Environmental Science and Environmental Microbiology, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Coordinator, World Wildlife Week Poster Competition-2005, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Seminar In-charge for M.Sc. Environmental Science, Babasaheb Bhimrao Ambedkar University, Lucknow, India
- ✓ Tour Coordinator for M.Sc. Environmental Science, Babasaheb Bhimrao Ambedkar University, Lucknow, India

EDUCATION & CREDENTIALS

Ph.D. –2010, Indian Institute of Toxicology Research (formerly Industrial Toxicology Research Centre), Council of Scientific and Industrial Research, India and Babasaheb Bhimrao Ambedkar University, Lucknow, India

- ✓ ‘Selection of Tolerant Plant Species to Industrial Waste: An Eco-friendly Approach for Cleaning the Environment’

M.Sc. – 1999-2001, Babasaheb Bhimrao Ambedkar University, Lucknow, India

- ✓ Environmental Science

Projects:

- ✓ Learning Various Techniques of Pesticide Residue Analysis, Indian Institute of Toxicology Research (formerly Industrial Toxicology Research Centre), Council of Scientific and Industrial Research, Lucknow, India
- ✓ Pesticide Residue Analysis in Some Indian Medicinal Plants, Indian Institute of Toxicology Research (formerly Industrial Toxicology Research Centre), Council of Scientific and Industrial Research, Lucknow, India

B.Sc. – 1995-1998, C.S.J.M. University, Kanpur, India

- ✓ Completed graduation from PPN College, Kanpur, India with Botany and Chemistry

Computer Literacy -

- ✓ Working knowledge of MS-Office and Internet.

EDUCATIONAL TRAINING/WORKSHOPS

- ✓ Short Term Programme on Renewable Energy Based Technologies, Conducted by the Rural Development Department, National Institute of Technical Teachers' Training and Research, Chandigarh, India
- ✓ 2 Days National Workshop on Environmental Impact Assessment, Organized by Centre for Environment, Institute of Science and Technology, Jawaharlal Nehru Technological University, Hyderabad, India

SEMINAR/SYMPOSIA/WORKSHOP

S. No	Title of the paper presented	Title of Conference/Seminar	Organised by	Whether International/national/state/regional/college or university level
1	Application of mathematical models in environmental quality assessment	National Conference on Mathematical techniques in engineering and technology	Department of Applied Mathematics, School of Physical sciences, B.B.A.University, Lucknow. 30-31, March 2016	National
2	Participated	Workshop on Choice based credit system & outcome based teaching/learning	B.B.A.University, Lucknow. 30-31, March 2016	National
3	Cost Benefit Analysis of Interlinking of Rivers	Emerging Economies and Challenges to Sustainability towards Developing Nation	Sri Aurobindo College, University of Delhi, New Delhi. 29-30 March, 2016	National
4	Role of women in environmental movements	Visualization of Dr. Ambedkar for empowerment of women in India: Issues and Prospects	Committee of Basic Facilities for women, B.B.A.University, Lucknow. 08-09, March 2016	National
5	Dr. Ambedkar's Global Vision: Development and Environmental Concern	Dr. Ambedkar's Global Vision: The emerging knowledge society in 21 st century	Department of Political science B.B.A.University, Lucknow. 07-09, March 2016	International
6	Challenges before sustainable	Changing paradigm of management practices	School of Management studies, B.B.A.University,	International

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	development in the era of climate change	for sustainable development	Lucknow. 05-06, March 2016	
7	Data Integration and its validation in environmental Monitoring	Information Security Challenges	Department of Information Technology B.B.A.University, Lucknow. 24, Feb 2016	National
8	Sustainable Development: Issues and Challenges	Globalisation, Environment and Social Justice: Perspectives, Issues and Concerns	Department of Sociology, B.B.A.University, Lucknow. 15-16, Feb 2016	International
9	Characterization of Particulate Matter at Urban Areas of Lucknow, India	3 rd Lucknow science Congress and National Conference on (Science for Society-An Interdisciplinary Approach)	B.B.A.U., Lucknow 31- Oct to 2 nd Nov, 2015	National
10	Organic farming: A Boon for Food security and Livelihood	Innovation in Animal Sciences for Food Security, Health Security and Livelihood	Babasaheb Bhimrao Ambedkar University and Zoological Society of India 29-31 Oct, 2015	International
11	Equitable access to natural resources: Issues and Challenges	Privatization of Education and social justice in India	Department of Sociology, B.B.A.University, Lucknow. 16-17, Nov. 2015	National
12	Role of Computational Models in environmental science	Modelling and computing	Department of Computer Science, School of Information Science & Technology, B.B.A.University, Lucknow. 10-11, Jul. 2014	International
13	Heavy metal Estimation in some Indian medicinal plants material	Environmental Constraints, Conservation and Resource Development of medicinal plants for health and societal benefits	School of Environment and Natural Resources, Doon University, Dehradun 21 st -23 rd March, 2014	National
14	Disaster Management	Mainstreaming Climate Change Adaptation & Disaster Risk Reduction	Department of Environmental Science B. B. A. University, Lko. 7 th March 2014	National
15	Practical Approach	Environmental	Department of	

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	towards sustainable Development	Technology and Sustainable Development: Challenges & Remedies	Environmental Science B. B. A. University, Lko. 21 st -23 rd Feb 2014	International
16	Ground water Contamination due to fluoride in periurban areas of Lucknow.	Scientific and Technological Advancements: Social Issues and Health Concerns	School of Home Science, B. B. A. University, Lko 18 th -19 th Feb, 2014	International
17	Role of nanotechnology in water treatment	International Conference on nanoscience and Nanotechnology	Department of Applied Physics, School for Physical Sciences B. B. A. University, Lko 18 th -20 th Nov 2013	International
18	Disaster Management Perspective	Uttarakhand Disaster : Contemporary Issues of Climate Change and Development with holistic approach	Sri DevSumanUttarkhand University, Badshahithaul, Tehri Garhwal, Uttarakhand 25 th -27 th Oct 2013	National
19	Environmental education at Primary, secondary and tertiary level	Environment, Education & Society	Department of Environmental Science B. B. A. University, Lko 5 th June 2013	National
20	Applicability of Mathmatical models in the field of Environmental Sciences	Mathmatical Modelling and Numerical Simulation	Department of Applied Mathematics B. B. A. University, Lko 01 st -03 rd Jan 2013	International
21	EIA of coal based thermal power plants	National Workshop on Environmental Impact assessment	Centre for Environment, Institute of science and Technology, JNTU, Hyderabad, 2-3 th Dec 2009	National
22	Drinking water availability in Ambedkar Grams	Dalits and Human Development: Contemporary Issues and Emerging Patterns	Dr. Ambedkar Studies Centre, B. B. A. University, Lko 29-30, Nov. 2006	National
23	Metal accumulation in aquatic macrophytes	Second International conference on Plants and Environmental Pollution	International Society of Environmental Botanist & NBRI, Lucknow 4-9 th Feb, 2002	International

**INVITED LECTURES AND CHAIRMANSHIPS AT
NATIONAL OR INTERNATIONAL
CONFERENCE/SEMINAR ETC.**

S.No.	Title of the Lecture /Academic Session	Title of Conference/Seminar etc.	Organised by	Whether International/national
01	Career Opportunities in the Field of Applied Biosciences	Emerging Prospects of Applied Biosciences in Present Scenario	Deptt. Of Industrial Microbiology, DBPG College, Bachharanwa, Raibareli, U.P. 15 th Oct, 2015	National
02	Biomedical Waste Management	National Seminar on Waste Disposal Crisis: Issue and Challenges	Armapore P.G. College, Kanpur March 29-30 th , 2015	National
03	Biodiversity Conservation	Invited Talk	Mishri Lal Shital Prasad Sarvoday Mahavidyalay, Barabanki, U.P. 24/11/2012	Regional
04	Biogeochemical Cycle	Invited Talk	Mishri Lal Shital Prasad Sarvoday Mahavidyalay, Barabanki, U.P. 20/10/2012	Regional
05	Air Pollution: causes, consequence and control	Remedial Classes	UGC Remedial Coaching, V.B.S.Purvanchal University, Jaunpur 30/09/2012	National
06	Ecological Indicators	Remedial Classes	UGC Remedial Coaching, V.B.S.Purvanchal University, Jaunpur 29/09/2012	National
07	Ecological Pyramids	Invited Talk	Mishri Lal Shital Prasad Sarvoday Mahavidyalay, Barabanki, U.P. 15/09/2012	Regional

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08	Air Pollution; Causes, consequence and control	Invited Talk	Mishri Lal Shital Prasad Sarvoday Mahavidyalay, Barabanki, U.P. 11/08/2012	Regional
09	Ozone Layer Depletion	Invited Talk	Mishri Lal Shital Prasad Sarvoday Mahavidyalay, Barabanki, U.P. 04/08/2012	Regional
10	Global Warming	Invited Talk	Mishri Lal Shital Prasad Sarvoday Mahavidyalay, Barabanki, U.P. 28/07/2012	Regional
11	PM ₁₀ : Monitoring and Probable Health Impacts	National Science Day Function	Institute of Biosciences and Biotechnology, C.S.J.M.U., Kanpur. 28/02/2011	National
12	Occupational Health Hazards	Environment Day Celebration	Institute of Biosciences and Biotechnology, C.S.J.M.U., Kanpur. 05/06/2010	National
13	Bioremediation : An emerging technique for pollution control	Scope and application of microbes in agriculture and environment	Deptt. Of Microbiology, Institue of Biosciences & Biotechnology, CSJM University, Kanpur 19-21 st , 2007	National

CO-CURRICULAR

- ✓ 'A' Certificate of NCC
- ✓ Participated in Inter-University Youth Festival 2001, Organized by Punjab University, India

PERSONAL PARTICULARS

- ✓ Date of Birth : 07th Feb, 1978
- ✓ Gender : Male
- ✓ Category: SC
- ✓ Marital Status : Married
- ✓ Nationality : Indian

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