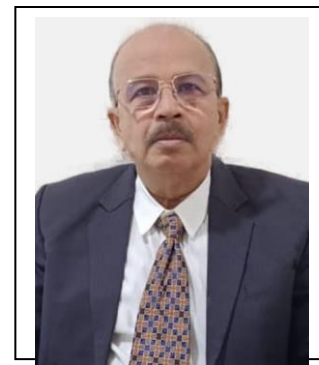


BRIEF CV



Name& Designation : **Dr. Prasoon Kumar Singh**

Address for Correspondence: Professor
Department of Environmental Science & Engineering
Indian Institute of Technology (Indian School of Mines)
Dhanbad-826004 (JHARKHAND)
Email: pk0506@iitism.ac.in; pk0506@yahoo.co.in

Date of Birth : 5th June 1964

Area of Specialisations : Environmental Hydrogeology

Area of Research Interest: Groundwater Quality Assessment & Quantity Management, Environmental Geochemistry, Environmental Hydrogeology, Remote Sensing & GIS Application in Environmental Management, Noise Pollution, Soil Quality Assessment

Educational Qualifications :

Examination	Branch/ Specialization	College/ University /Institute	Year	Percentage/Grade	Class/ Division
Matriculation	Mathematics, Science	B.S.E.B., PATNA	1980	66.3%	I st
M.Sc.	Geology	Patna University, Patna	1989	76.4%	I st (GOLD MEDALIST)
M.Tech.*	Environmental Science & Engineering	Indian School of Mines, Dhanbad	1994	77.6%	I st
Ph.D.**	Geology	VinobaBhave University, Hazaribag	2005	AWARDED	Passed

*- **NOISE POLLUTION IN CEMENT PLANT AND ITS CONTROL MEASURES – A CASE DISCUSSION** (Guide: Prof. A. K. Pal, Retd. Professor /CME/ISM, Dhanbad).

****- GEO-ENVIRONMENTAL AND HYDROGEOLOGICAL INVESTIGATIONS AROUND MINING AREAS NEAR KHUDIA RIVER IN DAMODAR BASIN.** (Guide: Prof. Rajeshwar Singh, Retd. Professor, Department of Geology, VBU, Hazaribag (Email: singhrajeshwar101242@gmail.com))

Awards/ Honours:

- Nominated as the **Chairman of the Technical Committee** for the Accreditation Scheme for Prospecting Agency (APA) and Mining Plan Preparing Agency (MPPA) by NABET-QCI, Ministry of Commerce and Industry (MoCI), Government of India since 14th January 2025.

- Secured **FIRST POSITION in First Class** in M. Sc. (Geology) Examination. - (1989)
- Received **PRIZE BOOK AWARD** for securing TOP POSITION in the M.Sc. Examination. (1989)
- **BEST PAPER AWARD** in ENVIRONMENTAL IMPACT & RISK ASSESSMENT topic at NEERI, Nagpur. - (1995)
- Nominated **EXPERT MEMBER** of The District Environmental Appraisal Committee, (DEAC) For Dhanbad District, Jharkhand by MOEF & CC, New Delhi. - (2017)
- Recognized as a **FUNCTIONAL AREA EXPERT** in the field of GEOLOGY, LANDUSE & HYDROGEOLOGY by NABET, QCI (2017)
- Nominated **EXPERT MEMBER** of "Environmental Clearance for Sustainable Sand Mining and Mining of Minor Minerals" by MOEF & CC, New Delhi - (2018)
- Nominated as **QUESTION PAPER SETTER** of the subjects ENVIRONMENTAL SCIENCE & GEOLOGY by UPSC, New Delhi (2012, 2015,2017,2019)
- Honored as a **SESSION CHAIR PERSON** in the International Conference at NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE (2019) **5th International Conference on Environment and Bio-Engineering (ICEBE 2019)** Held at National University of Singapore, Singapore from January 7 – 9, 2019.
- Recipient of **RESEARCH RATNA AWARD IN ENVIRONMENTAL MANAGEMENT** by IJRULA, World Research Council (2019)

Professional Experience:

Worked as JPF, SPF & Scientist-B in Environmental Management Group at CIMFR (CSIR Lab), Dhanbad from 06/09/1993 to 13/02/2007 - **(14 Years)**

Employment Details:

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Professor	Dept. of Environmental Science & Engineering, IIT(ISM) Dhanbad,	August, 2023	Till Date	14A Present Basic – Rs. 1,99,900/=
2	Associate Professor	Dept. of Environmental Science & Engineering, IIT(ISM) Dhanbad,	14/02/2010	August, 2023	13A2 Present Basic – Rs. 1,66,700/=
3	Assistant Professor	Dept. of Environmental Science & Engineering, IIT(ISM), Dhanbad,	14/02/2007	13/02/2010	Basic– Rs. 30,000 /= + Rs. 8000/= Grade Pay
4	Scientist-B	Geo-Environmental Division, Environmental Management Group, CSIR-CIMFR, Dhanbad	05/12/2001	13/02/2007	Basic – Rs. 8,000 /= (Fixed In Old Scale)
5	Junior Project Fellow/ Senior Project Fellow	Geo-Environmental Division, Environmental Management Group, CSIR-CIMFR, Dhanbad	06/09/1993	04/12/2001	Rs 1800/= & Rs 2100/= (In Old Scale)

Membership of Professional Bodies:

- Member of Institutions of Engineers, Kolkata
- Life Membership of Indian Water Resources Society, Roorkee, (LM 2019-7820)
- Lifetime Membership of IJRULA (International Journal for Research Under Literal Access) – 2019
- World Research Council (WRC) Membership after receiving RULA AWARD – 2019.
- Member of International Association of Hydrological Sciences (IAHS), Institute of Hydrology, Wallingford, Oxfordshire, U.K.; (Membership No. – 6094).
- Life Member of the Indian Association of Hydrologists, Roorkee (LM-1663).
- Fellow of The Society of Earth Scientists, Lucknow, (F/272).
- Life Membership of Indian Geological Congress (LM – 811).
- Life Membership of the Mining, Geological and Metallurgical Institute of India (MGMI), Kolkata (LM-10211).
- NABET-QCI Accreditation for Preparation of EIA as Functional Area Expert for Geology, Land use & Hydrogeology.
- Life Member of the Indian Water Works Association (LM-8066).
- Online Member of the International Association of Hydro geologists– Indian Chapter (INC-IAH) - Membership No.- 142041.

List of Ph. D. Scholars Guided:

Sl. No.	Name	Topic of Research	Awarded /Ongoing	Remarks
01	Ruchi Singh	Impact of Mining and Urbanization on Land use and Vegetation Diversity in Angul - Talcher Region, Orissa	Awarded in Feb 2012	Sole Guided
02	Dipanwita Bhagat	Groundwater resources evaluation and its qualitative assessment in Jharia Coalfield region, Jharkhand	Awarded in Feb 2013	Sole Guided
03	Prabhunath Singh	Study of water resources and its management in and around the Ranchi Township area in Jharkhand, India	Awarded in June 2015	Sole Guided
04	Mukesh Kumar Mahato	Quantitative and Qualitative assessment of water resources with contaminant transport modelling of East Bokaro Coalfield Area.	Awarded in Dec 2015	Sole Guided
05	Ashwani Kumar Tiwari	GIS based aquifer vulnerability assessment & Qualitative analysis of water resources in a Coal mining area, Jharkhand	Awarded in Feb 2015	Sole Guided
06	Binay Prakash Panigrahy	Assessment of groundwater level fluctuation with respect to recharge in Jharia coalfield region, Jharkhand	Awarded in Dec 2016	Sole Guided
07	Anjani Kumar	Evaluation of mine water and development of suitable techniques for ascertaining its suitability for proper management in Western Part of Jharia Coal Mining Region, Jharkhand.	Awarded in Feb 2017	Sole Guided
08	Ritu Ranjan Sinha	Evaluation of Infiltration Behavior and Assessment of Water Poverty Index in Dhanbad Municipal Area, Jharkhand, India	Awarded in Feb 2018	Sole Guided
09	Shonam Sharma	Estimation of the Relationship between Trends of Seasonal Rainfall with Aquifer Recharge in Mining Area and the Development of Spatial Seasonality Index	Awarded in Feb 2018	Sole Guided
10	Sujata Upgupta	Impact of Mining and Allied activities on Land use, land cover and Forest vulnerability in East Bokaro Coalfield Region of Jharkhand	Awarded in August 2018	Sole Guided
11	Poornima Verma	Assessment of Hydro-Geochemical Characteristics of Groundwater Resources and Development of Contamination Index for Bokaro District, Jharkhand,	Awarded in Jan 2019	Sole Guided

		India.		
12	Nishi Kant	Eco hydrological effect of landscape pattern and determination of health risk assessment with reference to heavy metals in the drinking water of Jamshedpur Township Area Jharkhand, India	Awarded in January 2020	Sole Guided
13	Deepak Naresh Dhopte	Impact of assessment of water resources on 4behaviour of water pollution parameters in and around industrial areas of Asansol, West Bengal, India.	Awarded in January 2023	Sole Guided
14	Damodar Prasad	Quantitative and Qualitative Assessment of water resources around mine fire &non-mine fire areas in Jharia coal filed, Jharkhand, India	Awarded in January 2023	Sole Guided
15	Shivam Saw	Aquifer Vulnerability Assessment and estimation of groundwater suitability by using different models and development of suitable techniques for management of groundwater resources of Ranchi Township area, Jharhand.	Awarded in January 2024	Sole Guided
16	Deep Shikha	Qualitative Assessment of Groundwater and Soil near Mining and Industrial areas and In Situ Treatment of Contaminated Groundwater and Soil by Suitable Techniques of Bokaro District, Jharkhand, India	Awarded in January 2024	Sole Guided
17	Rohit Patel	A Mathematical and GIS Based Approach for Noise Mapping and Modeling Under Mixed Traffic Condition in Mid-Sized Indian City	Awarded in Feb 2025	Sole Guided
18	Ankesh Kumar	Source identification and prediction of river water pollution and groundwater contamination level by an ensemble Machine Learning techniques along some parts of the Damodar River, Jharkhand, Eastern India	Joined on July 2022	Undergoing
19	Vivek Kumar	Safeguarding Groundwater Quality: Mitigating Threats from Overexploitation and Coal Mining Pollution	Joined on December 2022	Undergoing
20	Arunima Chakraborty	Evaluation and amendment of recent threats of Microplastics in soil matrix, surface and ground water by artificial intelligence and future prediction using cutting edge machine learning approaches	Joined December 2023	Undergoing
21	Shilpy Kumari	Enhanced groundwater remediation and monitoring by integrating plant-based nanoparticles, GIS, and AI/ML.	Joined on December 2023	Undergoing
22	Ritesh Ranjan	Water quality assessment in mining area of Giridih Coalfield.	Joined on December 2023	Undergoing
23	Mamta	Soil-Water interactions and fluoride enrichment in groundwater	Joined on July 2024	Undergoing
24	Khusboo Kumari	Qualitative aspects of surface and groundwater resources near Mining area	Joined on September 2024	Undergoing

List of M. Tech. Scholars Guided:

Sl. No.	Name	Topic of Research	Awarded /Ongoing
1	Babu Siddharth Sankar Biswal	Impact of Mining and Ancillary Industry on Environmental Hydrogeology in Angul-Talcher-Meramundali Region of Orissa.	2008
2	Bitthal Upadhyay	Water Demand Management, Forecasting and Qualitative Assessment in and around ISM University	2009
3	Sneha Gautam	Assessment of Aquifer potential of Dhanbad township area and designing of rooftop rainwater harvesting structure in CME campus, ISM	2010

4	Anoj Kumar Choudhary	Identification & assessment of fire affected families in fire prone area of the Jharia Coalfield, Dhanbad district, Jharkhand	2010
5	Ramakant Gadhewal	Computational Fluid Dynamics analysis on Beehive Coke Oven	2011
6	Ravi Makawana	Impact of Mining and Urbanization on Landuse in Jharia Coalfield region	2012
7	Arun Kumar	Assessment of Climatic factors and Water Level Fluctuations in and around ISM Campus.	2012
8	Udit Kumar Sao	Hydrogeological investigation in an around Bastacolla coal mining area, Jharkhand	2013
9	Ansu Rakesh	Geo environmental studies in an around Singra Mining area of Jharia coalfield using Remote Sensing & GIS	2013
10	Subash Chandra	Evaluation of Hydrogeological Factors their association and relationship with Water Level Fluctuation of Dhanbad District, Jharkhand	2014
11	Meena Kumari	Flow properties of Flyash and its derivatives for their bulk utilization in Mining Sector	2014
12	Supriya Kumari	Impact of Climate Change on Ground Water resources, near IB Valley Coalfield, Jharsuguda, Odisha	2015
13	Isha Medha	Groundwater zone mapping and management through 5behaviour in the municipal area of Dhanbad District, Jharkhand, India	2015
14	Sumanta Kumar Biswal	Evaluation of Water Quality Pollution Indices for a Part of Bokaro District, Jharkhand, India	2016
15	Nirmalendu Sekhar Misra	Evaluation of Water Poverty Index in an Around Dhanbad-Jharia Urban Area, Jharkhand, India	2016
16	Deepak Kumar	Qualitative Assessment of Tap water of different railway stations under Dhanbad division, and Design of low-cost water treatment methodology	2017
17	Abhijit Debnath	Environmental Traffic Noise Modeling of Dhanbad Township Area- A GIS Based Approach.	2017
18	Shraddha Singh	Quantification of Groundwater Level and its variations in Dhanbad district and development of groundwater flow model.	2017
19	Chirag Chopra	Evaluation of hydro geological factors, water table 5behaviour and characterization of groundwater near Asansol area and development of suitable techniques for conservation	2018
20	Preetam Singh	Recycling of wastewater clothes and their conversation into value added products	2018
21	Shammi Kapoor	Isolation of micro-fine silica from fly ash and its application on different industries	2018
22	Chhavi Jangid	Groundwater Vulnerability Assessment using GIS Based Drastic Model and Solute Transport Model in Dhanbad District	2019
23	Ankit Kumar	Comparative Assessment of Groundwater Quality Based on CCME & NSF WQI Model of Ranchi City & its surrounding Suburban area	2019
24	Praduman Singh	NAPLS (Non-Aqueous Phase Liquids) Contaminations in Aquifer: Beneficiation of Best Available Techniques for Remediation of	2019

		Contamination Sites	
25	Risabh Singh	Environmental Traffic Noise Mapping of Dhanbad city & comparison of Noise levels by Using CRTN Model	2020
26	Brind Yadav	Fluoride and Nitrate contamination in Groundwater and Probabilistic health risk assessment using Monte-Carlo simulation in Gharbar village (Sindri), Dhanbad, Jharkhand, India	2020
27	Zeesan Haider Ali	Assessment of Infiltration behavior and Water Poverty Index in different blocks of Dhanbad, Jharkhand	2020
28	Nikhil B Nidhiri	A GIS based DRASTIC approach for Aquifer vulnerability assessment; Study conducted in the Municipal Corporation region of Ranchi, Jharkhand	2021
29.	Vivek Kumar	Assessment of Groundwater Quality Index Using Entropy Weighted Water Quality Index (EWQI) Model: A case study of Ranchi District, Jharkhand.	2022
30	Ankesh Kumar	Traffic noise mapping through arc GIS and comparison of noise level with CRTN model of Dhanbad city.	2022
31	Abhinav Kumar Singh	Application of DRASTIC model for finding Aquifer vulnerability in Dhanbad, Jharkhand, India	2023
32	Suraj Kumar	Estimation of Water Poverty in Different Wards of Dhanbad Municipal Area and Restoring of Existing Water Bodies for Its Conservation at Suitable Locations	2023
33	Rohit Sharma	Groundwater levels forecasting using Machine Learning Algorithms of Barka Sayal Area of the Central Coalfields Limited, Jharkhand	2024
34	Aman Kumar	A hybrid approach of Machine Learning and GIS for preparation of Artificial Groundwater Recharge Site Suitability Map (AGRSSM) of Dhanbad Municipal area, Jharkhand State	2024
35	Birendra Kumar	Assessment of Fluoride level using Physiochemical Parameter with the help of Machine Learning in Gharbar Village, Dhanbad, Jharkhand.	Undergoing
36	Shivam Raj Sahani	Assessment of metal leaching and dissolution into water bodies from floating solar panel due to some accidents and its Ecological & Human Health Risk Evaluation.	Undergoing

Significant Contribution to Projects & Consultancy:

R&D Projects Completed

S. No	Project Title	Name of the Sponsored	Role of assesses	Amount (in Lakhs)	Details of the Work
1.	Development of guidelines for delineation of water stressed areas and designing of environmental friendly water storage structure for meeting the water needs in mining areas. Project No.: CIL (20)/2021-2022/845/ESE	CIL, MOC, Government of India	PI	107.84	Ongoing since February 2022

2.	Impact of climate change on vulnerable aquifer systems in and around industrial and mining areas of Damodar River Basin (Eastern India) using GIS based Modified DRASTIC Model and Global Climate Model	MoJS, Government of India	Co-PI	78,79,804 .00	Ongoing since January 2025
3.	Identification of suitable sites and designing of environmental friendly rainwater harvesting structures for catching the rain where it falls when it falls in the IIT(ISM) campus area. Project No.: IIT(ISM)/2021-2022/803/INSTITUTE	IIT(ISM) Institute Funded	PI	6.80	Ongoing since June 2021
4.	Groundwater Resource Evaluation and quality assessment near industrial and mining areas in Bokaro district Project No.: ISM/Acad/AC/76.13(e)/2007)	ISM Minor Project	PI	0.41	Completed (2008)
5.	Assessment of Groundwater Level Fluctuations with Respect to Changing Patterns of Rainfall in Jharia Coal Mining Region Project No.: UGC (79)/ 2012-2013/318/ESE	UGC, New Delhi	PI	9.256	Completed (2015)
6.	Estimation of Aquifer Potential in Jharia Coal Mining Region with Suitable Techniques to Improve the Recharge Project No.: MOWR (3)/2012-2013/308/ESE	MOWR, New Delhi	PI	28.547	Completed (2017)

(C) Consultancy Projects

S.No.	Project Title	Sponsored By	Role	ISM Project No.
1.	A scientific study on the assessment of impact of mine blasting operations on environmental pollution and important structures of Chittorgarh fort for suggesting suitable remedial measures	BCL, Kolkata	Co-PI	CONS/7214/2023-24
2.	Cumulative Impact Assessment Study, Carrying Capacity Study and Ecosystem Services Study as per condition of terms of References (ToR) for Expansion of Nigahi Opencast Mining Project from 21Mtpa to 25 Mtpa	NCL	Co-PI	CONS/6096/2021-22

	with increase in leasehold area from 3018.40 ha to 3582.732 ha. (130.626 Lakh)			
3.	Preparation of Catchment Treatment Plan	VEDANTA	Co-PI	VEDANTA (ESL)/2020-2021/726/ESE (Continuing)
4.	Hydrological and Water Quality studies for Panandharo, Umarsar and Akrimota mining area of GMDC	GMDC	PI	CONS/2575/2010-11 (Completed)
5.	Evaluation of Sustainable Development Project at ECL under MOU 2012-2013 (First Phase)	ECL	PI	CONS/2356/2012-13 (Completed)
6.	Preparation of Environmental Statement in respect of DVC Bermo Mines.	DVC	PI	CONS/1516/2012-13 (Completed)
7.	Regional Environmental Management Plan of Angul-Talcher- Meramundali Area of MCL, Orissa	SPCB, Bhubaneswar	Member	CONS/0275/2007-08 (Completed)
8.	Socio-economic Survey of Affected Families at Fire & Subsidence Areas in Jharia Coalfield.	JRDA	Member	CONS/0925/2009-10 (Completed)
9.	Environmental Monitoring of DVC Chandrapura	DVC	Member	CONS/1235/2011-12 (Completed)
10.	Environmental Monitoring of DVC Bokaro Thermal	DVC	Member	CONS/1440/2011-12 (Completed)
11.	Environmental Monitoring of Unit 7,8, DVC Chandrapura	DVC	Member	CONS/1235/2011-12 (Completed)
12.	Compliance of Forestry clearance condition no. 6, 7, 10 and 18 for Ghanudih and Bastacolla area.	BCCL	Member	CONS/1285/2011-12 (Completed)
13.	EIA/EMP study of Madhuban and Damuda area, Dhanbad.	BCCL	Member	CONS/2356/2012 (Completed)

Development of Lab Facilities

Lab Development	
1	In Charge of Land Use & Hydrological Lab of ESE Department
2	Developed Remote Sensing & GIS Lab of ESE Department
3	Developed Rainwater Harvesting Structure in ESE Campus, IIT(ISM)

Training Programme Conducted – as a Course Coordinator

S. No.	Details of Course	institution & Place	Period	Total Duration (Days)
1	Evaluation of Water Resources and its Management	IIT(ISM), Dhanbad	December 10-12, 2012	3
2	Management and Availability of Water Resources Near Mining and industrial Areas	ISM industry Institute Interaction Facility, Kolkata	December 28-30, 2015	3
3	Management of Water Resources Near Mining and industrial Areas	IIT (ISM), Dhanbad	November 9-11, 2016	3
4	Environmental Management: Special Emphasis on Water Resources Near industrial Areas	ISM Industry Institute Interaction Facility, Kolkata	December 27-29, 2017	3
5	Groundwater Resources Management in industrial Areas	IIT (ISM), Dhanbad	August 08-10, 2018	3
6	Application of Remote Sensing and GIS For Environmental Management Near Mining and industrial Areas	IIT (ISM), Dhanbad	December 16 – 21, 2019	6
7.	Webinar on World Water Day (Theme- <i>Groundwater Availability and Management- Its True Value</i>)	IIT (ISM), Dhanbad	March 22, 2021	1
8.	Webinar on World Water Day (Theme- <i>Groundwater Resource – A Hidden Treasure Need Attention</i>)	IIT (ISM), Dhanbad	March 22, 2022	1
9.	Recent Challenges in Groundwater Resource Management	ISM Industry Institute Interaction Facility, Kolkata	December 20-22, 2023	3
10.	Integrated Approaches of Sustainable Groundwater Resource Management Near Mining and Industrial Area: Recharge Strategies and Quality Enhancement Measures	ISM Industry Institute Interaction Facility, Kolkata	December 18-20, 2024	3

Conferences Conducted- as a Convener

S. No.	Details of Course	Institution & Place	Period	total Duration (Days)
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1	Sustainable Development of Groundwater Resources in industrial Region	IIT(ISM), Dhanbad	March 22- 23, 2012	2
2	Recent Approaches to Water Resources Management	IIT(ISM), Dhanbad	December 09-10, 2013	2

International Recognition:

1. **Houston, Texas, USA-** Visited Houston, Texas, USA for attending the Fifth International Conference on “Environmental Science and Technology 2010 (ICEST-2010)” during July 12-16, 2010. The conference was organized by American Academy of Sciences at Hilton Hotel, Houston, Texas, USA.
2. **Rome, Italy-** Visited Rome for attending the International Conference on “Hydrogeology: Back to the Future and 42nd IAH Congress (AQUA 2015)” during September 13-18, 2015. The conference was organized by International Association of Hydrogeologists (IAH) at Sapienza University of Rome.
3. **NUS, Singapore-** visited Singapore during 5th January to 9th January 2019 for attending the International Conference entitled “5th International Conference on Environment and Bio-Engineering (ICEBE 2019)” which was scheduled from 7th -9th January 2019 at Shaw Foundation Alumni House in National University of Singapore. The conference was organized by Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBES), Singapore.

Departmental Activities

- Serving as **DPGC Member** of the ESE Department for the period 15th October 2020 to 14 October 2022.
- Serving as **DFSC Member** of the ESE Department for the period 1st December 2020 to 30th November 2021.
- Serving as **Training Co-ordinator of M. Tech. Students** in the ESE Department since October 2020.
- Served as **Training Incharge of B. Tech & M. Tech. Students** in the ESE Department since 2018-2020.
- Served as **M. Tech. Co-Ordinator** in the ESE Department For Two Academic Years (March 2012-March 2014).
- Served as **Senate Member** from ESE Department for the period 2016 to 2018.
- **DSC External Member** of the Department of Applied Geology, IIT (ISM), Dhanbad.
- Served as an **Expert Member** in the M.Tech & JRF Selection Committee of the ESE Department.

Administrative Exposure (at IIT(ISM) Dhanbad):

- Served as Professor-in- Charge of Central Library, IIT(ISM), Dhanbad since December 2021.
- Serving as **Co-ordinator**, Water Resource Management under the **Centre of Water Resource Management (CWRM)**, IIT(ISM) from 22/09/2020 to till date.

- Served as a **Hostel Warden** of Amber Hostel for one Year (since March 2009- Feb 2010).



(Prasoon Kumar Singh)