

Resume

DR. MRITUNJAY KUMAR SINGH
M. ASCE, F. AGGS, DEIC (JGWR)



Address for Correspondence:

Professor (HAG)
Department of Mathematics & Computing
Indian Institute of Technology (ISM)
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Area of Specializations:

Applied Mathematics
(Fluid Dynamics/Hydrodynamics/PDE with Computational Techniques)

Area of Research Interest:

Solute Transport Modelling/Groundwater Contamination Problems/Mathematical Modelling & Computation

Academic Qualification:

M. Sc, Ph.D. (B.H.U) with IV First Class

Examination	Branch/ Specialization	College/University /Institute	Year	Percentage /Grade	Class/ Division
Matriculation	Mathematics, Science	B.S.E.B., PATNA	1985	76%	I
I. Sc.	Mathematics, Science	B.I.E.C, PATNA	1987	63.4%	I
B.Sc. (Spl. Hons.)	Mathematics	MAGADH UNIVERSITY, BODH GAYA	1991	82.8%	I
M.Sc.	Mathematics	BHU, VARANASI	1994	92.3%	I
Ph.D.	Mathematics	BHU, VARANASI	1999	Awarded	
B.Ed.	Mathematics	PATNA UNIVERSITY, PATNA	2001	71.2%	I

Certificate of Merit:

(i) Chancellor Medal
(ii) Dr. S C De Medal
(iii) B.H.U. Medal
For securing highest % of marks (92.3%) in M.A. / M. Sc.
Exam., 1994 at B.H.U., Varanasi.

Ph.D. (1999):

"Concentration Distribution of Pollutants along Unsteady
Groundwater Flow in Aquifers"
Guide: Prof. Naveen Kumar (Retd.)
Department of Mathematics
Faculty of Science, BHU, Varanasi-221005
Email: navkumar50s@gmail.com

Date of Birth:

6th June, 1969

Employment:

Employer	Position held	Date of Joining	Date of Leaving	Pay with Scale of pay
Bengal College of Engineering & Technology, Durgapur	Lecturer	11 th July,2002	30 th June, 2005 (FN)	8000-200-13500 (Old pay Scale)
Indian Institute of Technology (Indian School of Mines), Dhanbad	Sr. Lecturer	30 th June,2005 (AN)	26 th Oct.,2006	10000-320-15300 (Old pay
	Assistant Professor	27 th Oct.,2006	26 th Oct.2009	30000+8000AGP in PB-3(15600-39100) (New pay
	Associate Professor	27 th Oct.,2009	6 th Nov.,2017	49950+9500AGP in PB-4(37400-67000) (New pay
	Professor	7 th Nov., 2017	25 th Dec.,2023	(1,59,100-2,20,200) in Academic Pay Level 14A
	Professor (HAG)	26 th Dec.,2023	---	(1,82,200 - 2,24,100) in Academic Pay Level 15
	Warden	March1, 2006	March31, 2013	
	Head (Centre for Societal Mission)	May5,2017	Sept.2, 2018	
	Associate Dean (Outreach Programme)	May21,2017	Sept.2, 2018	
	Dean (Students Welfare)	Sept3,2018	Oct20,2023	
	Dean (Academic)	Oct21, 2023	June30,2026	
	Dean (Faculty)	July1,2026	...	

Ph.D. Awarded/Ongoing:

Sl. No	Name	Topic of Research	Joined/ Awarded	Remarks
1	Premlata Singh 1809/2007	Transport Analysis of Contaminants through Unsteady Groundwater Flow in Aquifer	2007/2010	Sole Guided
2	Nav Kumar Mahato 2009DR0109	Study of Solute Transport Modeling along Unsteady Groundwater Flow in Aquifer http://hdl.handle.net/10603/7911	2009/2013	Sole Guided
3	Shafique Ahamad 2010DR0008	Study of Some Problems on Analytical Approach of Unsteady Groundwater Flow in Aquifer http://hdl.handle.net/10603/33029	2010/2013	Sole Guided
4	Priyanka Kumari 2010 DR0026	Study of Analytical and Numerical Approach of Solute Transport Modeling http://hdl.handle.net/10603/33030	2010/2013	Sole Guided
5	Pintu Das 2012DR0101	Solute Dispersion with Unsteady Groundwater flow in Porous Formation	2012/2016	Sole Guided
6	Sultana Begam 2013DR0003	Study of Contaminant Concentration Distribution through Unsteady Groundwater Flow in Porous Formation	2013/2017	Sole Guided
7	Ayan Chatterjee 2013DR0182	Mathematical Modeling of Solute Transport in Porous Media	2013/2018	Sole Guided
8	Affreen Akhter 2014DR0278	Study of Hydrodynamic Dispersion through Porous Media	2014/2020	Sole Guided

9	Rajan Kumar 2015DR0119	Mathematical Modelling of Flow Formation in Magnetohydrodynamics	2015/2020	Guide
10	Bhuvaneshvar Kumar 16DR000251	Mathematical Modelling and Analysis of Newtonian and Non-Newtonian Fluid Flow with Heat and Mass Transfer	2016/2021	Guide
11	Rakesh Kumar Singh 2015DR0005	Modeling and Analysis of Solute Transport Problems in Porous Medium	2015/2021	Sole Guided
12	Arnab Bhattacharyya 2015DR0208	Mathematical Modelling and Analysis of Hydrodynamic Flow with Heat and Mass Transfer	2015/2021	Guide
13	Chandan Kumar Thakur 2014DR0008	Study of Contaminant Concentration Prediction in Aquifer	2014/2021	Sole Guided
14	Amit Kumar Pandey 2015DR1039	Mathematical Study of Solute Transport through Porous Media	2015/2022	Sole Guided

15	Manish Chaudhary 16DR000174	Mathematical Study of Pollutant Transport Behaviour in Geological Formations	2016/2022	Sole Guided
16	Rohit Kumar 2015DR0094	Modelling of Solute Dispersion through Porous Media: An Analytical Study	2015/2022	Sole Guided
17	Vivek Kumar Sinha 16DR000265	Mathematical Modelling of Non-Newtonian Fluid Flows in Magnetohydrodynamics Regime	2016/2022	Guide
18	Sohini Rajput 17DR000438	Mathematical Study of Groundwater Contamination Problem in Aquifer	2017/2022	Sole Guided
19	Rashmi Radha 19DR0180	Study of Advection Dispersion Transport Modelling in Porous Media	2019/2024	Sole Guided
20	Animesh Samanta 2015DR0223	Mathematical Study of Contaminant Concentration Distribution in Porous Formation	2015/ 2024	Sole Guided
21	Kundan Kumar 17DP000172	Comparative Investigation and Design of Wireless Signal and Power Transfer	2017/2025	Co-Guide
22	Tapan Chatterjee 17DR000562	Mathematical Modeling of Transport Phenomenon in Porous Medium	2017/2025	Sole Guided
23	Pallawi Bharti	Mathematical Modelling of Solute Dispersion in Fracture Porous Media	2021/ Ongoing	Sole Guided
24	Manish Kumar	Solute Transport Modelling	2022/ Ongoing	Sole Guided
25	Chinmoyy Roy Laskar	Contaminant Transport Modelling	2023/ Ongoing	Sole Guided

M. Phil. Awarded:

Sl. No	Name	Topic of Dissertation	Awarded
1	Nav Kumar Mahato	One-dimensional Dispersion along Unsteady Groundwater Flow in Semi-infinite Aquifer	2007
2	Divya Shukla	Longitudinal Dispersion along Unsteady Groundwater Flow in Finite Aquifer	2008
3	Asim Kumar Garai	Concentration Distribution Behaviour through the Wall of Cylinder	2009
4	Shafique Ahamad	One-dimensional Solute Dispersion along Transient Groundwater Flow in Aquifer	2010
5	Pintu Das	Review on Solute Transport Modeling in Semi-infinite Aquifer	2011
6	Rakesh Kumar Singh	Study of Advection-dispersion Equation and its Applications	2013

7	Jay Kishan Kumar	Study of Advection-Dispersion Equation with Numerical Method	2014
8	Animesh Samanta	Study of Advection Dispersion Equation by Finite Element Method	2015

Integrated M. Tech. Awarded

Sl. No	Name	Topic of Dissertation	Awarded
1	Abhishek Singh Yadav 2012JE0517	Energy Model Simulation in Wireless Network Topology Using NS3	2017
2	Arpit Sharma 2013JE0765	Proposing a Text Classification Model which can serve as the Basis of Command Detection in always Listening AI platform in Home Automation	2018
3	Shridhar Goel 17JE002961	Preventing Spread of Fake News with Deep Learning Approach	2022
4	Abhay Chauhan 17JE003100	Portrait Relighting	2022
5	Aman Harsh 19JE0104	Deep Learning Approach for Precise Protein Localization and Classification in Microscopy Images	2024
6	Devesh Gupta 20JE0317	Exploring In-context Learning and Prompt Engineering for Multilingual Natural Language Processing (NLP)	2025
7	Akkala Abhinaya Sree 20JE0090	Sentiment Analysis in Code Mixed Text	2025
8	Dev Meerchandani 21JE0297	Automated Satellite Image Classification Using Convolutional Neural Network and Clip LightGBM	2026
9	Md Tauqueer Perwaiz 21JE0551	Patient Specific and Patient Independent Epileptic Seizure Prediction using Scalp EEG Pipelines	2026

Research Project

Completed/Ongoing/Applied:

- Minor Research Project** [ISM/Acad/MRP/2006 dated 26th June, 2006] -**PI**
Funding Agency: **Indian School of Mines, Dhanbad**
Title of the Project: "Mathematical Modelling of Concentration Distribution Behaviour of Pollutants in Aquifer"
Duration of the project: 03 years (June, 2006-2009)
Status: Completed
Project value: 0.5 Lakhs
- Major Research Project** [F. No.37-205/2009(SR) dated 12th January, 2010] -**PI**
Funding Agency: **University Grant Commission, New Delhi**
Title of the Project: "Study of Analytical Approach of Unsteady Groundwater Flow Modelling"

- Duration of the project: 03 years (Feb., 2010 - 2013)
Status: Completed
Project value: 8.67 Lakhs
3. **Major Research Project** [25(0251)/16/EMR-II dated 20th May, 2016] -**PI**
Funding Agency: **Council of Scientific and Industrial Research, New Delhi** Title of the Project: “Mathematical Study of Solute Transport in Porous Formations”
Duration of the project: 03 years (June, 2016 -2019)
Status: Completed
Project value: 16.79 Lakhs
 4. **Major Research Project** [Ref No. EMR/2016/001628 dated 30th January, 2017]-**PI**
Funding Agency: **Science and Engineering Research Board, DST, New Delhi**
Title of the Project: “Study of Non-Linear Advection Dispersion Equation and Their Applications”
Duration of the project: 03 years (February, 2017 - 2020)
Status: Completed
Project value: 23.45 Lakhs
 5. **Major Research Project** [Ref No. CIL(4)/2015-2016/461/Mining Engg]-**Co-PI**
Funding Agency: **Coal India limited**
Title of the Project: “Development of guideline for prevention and mitigation of explosion hazard by risk assessment and determination of explosibility of Indian Coal incorporating risk-based mine emergency evacuation and re-entry protocol”
Duration of the project: 03 years
Project value: 31.00 Lakhs (Total Project Value: 833.57 Lakhs)
 6. **UBA Project** [Ref. No. UBA/2018-2019/567/AM] -**PI**
Funding Agency: **MHRD, New Delhi**
Title of the Project: “Unnat Bharat Abhiyan Programme at IIT(ISM) Dhanbad”
Duration of the project: one year from Sept. 2017 onwards
Status: Completed
Project value: 1.75 Lakhs
 7. **TEQIP Collaborative Research Project**
[Ref. No.: 1-3643335191 1-5748515018 Dated 18th June,2019]- **Co-PI**
Funding Agency: **National Project Implementation Unit, MHRD, New Delhi**
Title of the Project: “Mathematical Study of Non-reactive Solute Transport in Multilayer Porous Media”
Duration of the project: 01 year
Status: Completed
Project value: 8.06 Lakhs
 8. **Teachers Associateship for Research Excellence (TARE) (Host Institute)**
[Reference No.: TAR/2022/000472]
Funding Agency: **SERB(DST), New Delhi**
Title of the Project: “Investigation of the impact of pore geometry on the non linear filtration characteristics in porous media”
Duration of the project: 03 years (2024-2027)

Status: **Sanctioned/Ongoing**

Project value: 15 Lakhs (50% of sanctioned grant will be received at IIT(ISM) as a Host Institute)

**9. International Project under Indo Norwegian Cooperation Programme
2024(INCP2)-Co-PI**

[Reference No.: F58-8/2024]

Funding Agency: **University Grant Commission, New Delhi**

Title of the Project: "Bioscopy-Towards modern transdisciplinary education and research in microscopy"

Duration of the project: 03 years (2025-2027)

Status: **Sanctioned**

Project value: 14.66 Lakhs

Courses Taught:

1. Mathematics-I & II
2. Complex Analysis
3. Integral Transform and Integral Equation
4. Differential Equation
5. Partial Differential Equation
6. Computational Fluid Dynamics
7. Hydrodynamics and Application to Groundwater
8. Computer Programming (Fortran, C & C++)
9. Operating Systems
10. Numerical Methods
11. Solute Transport Modelling
12. Innovative Critical Thinking

Training Programme/Workshop/Courses Conducted:

Under Graduate Training Programme on "Linear Algebra and Real Analysis" funded by DST was organized as a **Co-coordinator** during 28th May, 2012 - 6th June, 2012 at Indian School of Mines, Dhanbad

Science Academy's Lecture Workshop conducted as Coordinator on "Concept of Fluid Dynamics and its Applications" during October 8-10, 2014 at ISM Dhanbad

Workshop conducted jointly with C-DAC Pune, as **Convener** on "High Performance Computing", July 29-31, 2015 at ISM Dhanbad.

Science Academy's Lecture Workshop conducted as Coordinator on "Fluid Flow through Porous Media and its Applications" during December 25-27, 2015 at ISM Dhanbad

Science Academy's Refresher Course conducted as Coordinator on "Differential Equations and their Applications in Science and Engineering" during July 4-16, 2016 at ISM Dhanbad

Short Term Training Programme conducted as Coordinator on "Groundwater Contamination and Modelling Approaches" during December 18-20, 2016 at IIT(ISM) Dhanbad.

Science Academy's Refresher Course conducted as Coordinator on "Crustal strength Rheology and Seismicity" during May 15-26, 2017 at IIT(ISM) Dhanbad.

Science Academy's Refresher Course conducted as Coordinator on "Concept of Fluid Dynamics and Applications" during June 25-July 6, 2018 at IIT(ISM) Dhanbad.

Online Workshop conducted as Coordinator (DSW) on “Student Excellence Learning Program (SELP)” under TEQIP-III during Jan4-9, 2021 at IIT(ISM) Dhanbad.

AICTE Training and Learning (ATAL) Academy Faculty Development Programme (FDP) conducted as Coordinator on the topic “Leadership Excellence through Yoga and Meditation” during Jan10-21,2023 at IIT(ISM) Dhanbad.

Workshop conducted as a Coordinator on the topic “Vedic Mathematics” on July 10, 2023 at IIT(ISM) Dhanbad.

National Conference Organized:

Convener, Recent Advances in Mathematics and its Applications (RAMA), Feb. 14-16, 2013 at ISM, Dhanbad.

Joint Organizing Secretary, Indian Mathematical Society-2014, Dec.27-30, 2014 at ISM Dhanbad.

Convener, Industry Institute Interaction (III), Adaptive Technologies for Sustainable Growth, Feb. 3, 2018 at IIT(ISM), Dhanbad.

Co-convener, Industry Institute Interaction: Make an India Initiative

International Conference Organized:

Member, Organizing Committee and Programme Committee, International Conference on Modelling and Simulation of Diffusive Processes and Applications (ICMSDPA), October 09-12, 2012, BHU, Varanasi.

Regional Coordinator, International Groundwater Congress (IGWC) - Dec.17-21, 2012

Member, Organizing Committee and Programme Committee, International Conference on Modelling and Simulation of Diffusive Processes and Applications (ICMSDPA), October 29-31, 2014, BHU, Varanasi.

Regional Coordinator, International Groundwater Congress (IGWC) – Feb.17-21, 2015

Organizing Secretary, 3rd International Conference on Applications of Fluid Dynamics (ICAFD), Dec.19-21, 2016 in association with Fluid Mechanics Group, University of Botswana, Botswana.

Coordinator, Symposium on Solute Transport in Surface/Subsurface Water Bodies: A Modelling Approach, (Parallel Event of ICAFD-2016).

Coordinator, Webinar on Groundwater Contamination and Modelling Approaches (GCMA-2021), 23rd Dec.,2021 in association with AGGS, India at IIT(ISM) Dhanbad

Visited Abroad:

1. International Conference on Earth and Space-2012 at Pasadena, California, USA during 15-18, April, 2012. Visited NASA JPL at California Institute of Technology, California.
2. International Conference EMI-2015-HK at the PolyTech University Hong Kong, China during January7-9, 2015.

Invited Talk:

1. **Delivered on the topic** “Analytical approach of unsteady groundwater flow modelling” during the 2nd National Conference on Recent Advances on Solid State Materials and Devices organized by Sanjay Institute of Engineering & Management Sept. 6-7, 2008, Mathura (U.P.).

2. **Delivered on the topic** “Analytical approach of solute transport modelling in homogeneous porous formation” during the 2nd National Symposium on Differential Geometry and Mathematical Modelling on Bio-Sciences organized by Department of Mathematics and Astronomy, Lucknow University, Lucknow under UGC-SAP Programme, **Jan. 9-10, 2010**, Lucknow (U.P.).
3. **Delivered on the topic** “One-dimensional homogeneous semi-infinite aquifer along unsteady groundwater flow with variable porosity” during International Conference on Mathematical Modelling and Numerical Simulation organized by Department of Applied Mathematics, BBAU (A Central University), Lucknow, **July 1-3, 2013**, Lucknow (U.P.).
4. **Delivered on the topic** “Geo-mathematical modelling of groundwater contamination” Brain Storming Workshop on Geostatistics for Natural Resources Modelling (BSWG), February, 28, 2014, ISM Dhanbad
5. **Delivered on the topic** “Advective-dispersive equation and application to hydrological sciences” in Short Term Training Programme (STTP), March 10, 2014, NIT Raipur.
6. **Delivered on the topic** “One-dimensional analytical model with variable coefficients in semi-infinite aquifer”, in 2nd International Conference on Applications of Fluid Dynamics (ICAFD2014), July 21-23, 2014 at SVU in TIRUPATI, INDIA
7. **Delivered on the topic** “Solute transport model in homogeneous and anisotropic porous media”, in 2nd International Conference on Modelling and Simulation of Diffusive Processes and Applications (ICMSDPA), October 29-31, 2014, BHU Varanasi.
8. **Delivered on the topic** “Scale dependent solute dispersion in aquifer systems”, 32nd and 33rd AHI Annual Convention and National Seminar on Water Resources with a Colloquium on Interlinking Rivers, July 10-11, 2015, Andhra University, Vishakhapatnam.
9. **Delivered on the topic** “Groundwater contamination and its mathematical approaches”, during 3 days Training Programme on Design and Implementation of Rainwater Harvesting System for Augmentation of Rural Water Supply, January 21-23, 2016, ISM Dhanbad.
10. **Delivered on the topics** i) “Strum Liouville Problems” and ii) “Classification and reduction of second order equations to canonical form” in Science Academy’s Refresher Course on Differential Equations and their Applications in Science and Engineering (DEASE-2016), July 4-16, 2016 at ISM Dhanbad.
11. **Delivered on the topic** “Basics of FORTRAN Programming Language and Applications” in Training Programme on Dynamical Systems: Theory and Applications (DSTA-2017) during May 8-12, 2017 at IIT(ISM) Dhanbad.
12. **Delivered on the topics** i) “Geological formations and their characteristics” and ii) “Mathematical Modelling Approaches” in Science Academy’s Refresher Course on Crustal Strength Rheology and Seismicity (CSRS-2017) during May 15-26, 2017 at IIT(ISM) Dhanbad.
13. **Delivered on the topics** i) “Academy Activities-SEP: How Science is Progressing in India?”, ii) “Fluid Flow through Porous Media iii) Mathematical Modelling Approaches” iv) Groundwater Contamination through Point / Non-point Source in Aquifer v) “Basics of FORTRAN Programming Language and Applications” in Science Academy’s Refresher Course on Concept of Fluid dynamics and Application (CFDA-2018) during June 25-July 6, 2018 at IIT(ISM) Dhanbad.
14. **Delivered on the topic** “Mathematical modelling of Groundwater contamination” in a Short Program entitled “Groundwater Resource Management in Industrial

Areas in Mines” during August8-10, 2018 at IIT (ISM), Dhanbad.

15. **Delivered on the topic** “FORTRAN Programming Language and Applications” Training Programme on Dynamical Systems: Theory and Applications (DSTA2018) during September4-8, 2018 at IIT(ISM) Dhanbad.
16. **Delivered on the topic** “Mathematical Modelling of Solute Transport in Groundwater with Point and Non-point Sources of Contamination” in the National Conference “Recent Advances in Mathematics and Scientific Computing” during September 18-19, 2018 at Magadh University, Bodh Gaya.
17. **Delivered on the topic** “Solute Transport Modelling in Porous Formation” in a workshop on “Numerical and Computational Methods for Fluid Solid Interaction Problems” during Sept 27 -28, 2018 at IIT (ISM), Dhanbad.
18. **Delivered on the topic** “Mathematical Modelling of Contaminant Transport” in a Lecture Series on “Modelling natural processes and resources” during Nov.2, 2018 at School of Science, Adamas University, Kolkata, West Bengal.
19. **Delivered on the topic** “Generalized dispersion theory in solute transport model by homotopy analysis method” in 8th International Groundwater Conference (IGWC-2019), Oct21-24,2019, Department of Hydrology, IIT Roorkee (Key Note Speaker)
20. **Delivered on the topic** “Career Scope in Mathematics, Statistics and Data Science” in a Webinar Series on May17, 2020 at School of Science, Adamas University, Kolkata, West Bengal.
21. **Delivered on the topic** “Mathematical Modelling and Applications with Special emphasis to How Mathematics is Progressing in India” in a National Webinar Series on May26, 2020 at T.N.B. College, Tilka Manjhi Bhagalpur University, Bhagalpur, Bihar.
22. **Delivered on the topic** “Mathematical Approach of Solute Transport Modelling” in an International Webinar Series on June27, 2020 at KIET, Ghaziabad, U.P.
23. **Delivered on the topic** “Mathematics-III (Laplace Transformation and its Applications)” in Webinar TEQIP-III Special Classes during September28-October3, 2020 at Chaibasa Engineering College, Chaibasa, Jharkhand.
24. **Delivered on the topic** “Mathematical Sciences: Challenges, Applications & Future Directions in India” in a National Webinar Series on Nov.27, 2020 at Atma Ram Sanatan Dharma College (ARSD College), University of Delhi, New Delhi.
25. **Delivered on the topic** “Mathematical Modelling and Applications with Specific Reference to Groundwater Contamination” in an Online Workshop on Differential Equations: Theory, Analysis and Applications with MATLAB (DEETAAM-2021) during July12-16,2021 at School of Physical Sciences, DIT University Dehradun.
26. **Delivered on the topic** “Mathematical Modelling and Applications” in a webinar on Frontier in Mathematics on February12, 2022 at School of Sciences, SR University, Telangana.
27. **Delivered on the topic** “Trigonometric Identities, Graphs and Trigonometrical Equations” in an Instructional School for Mathematical Foundation (ISMF)-2022 during Oct8-23,2022 at IIT Patna.
28. **Delivered on the topic** “Multispecies Convection-Dispersion Transport (CDT) Modelling” in an International Groundwater Conference (IGWC)-2022 during Nov.2-4,2022 at IIT Roorkee and also Chaired one of the Technical Sessions along with Prof Vijay P. Singh, Texas A & M University, USA.
29. **Delivered on the topic** “Convection-Dispersion Transport (CDT) Modelling” in Online Refresher Course on Nov.9, 2022 at Department of Mathematics, University of Allahabad, U.P.
30. **Delivered on the topic** “Fundamental Concept of PDE and Its Application to Solute Transport Modelling” in STUTI Programme of DST during March14-20,

- 2023 organized by Department of Mathematics and Computing, IIT(ISM) Dhanbad exclusively for Women from Jharkhand.
31. **Delivered on the topic** “Concept of Functions” in an Instructional School for Mathematical Foundation (ISMF)-2022 during June19-20,2023 at IIT Patna.
 32. **Delivered on the topic** “Convection-Dispersion Transport Modelling” on June28, 2023 at Department of Mathematics, Mizoram University, Aizawl.
 33. **Delivered on the Topic** “Role of Jharkhand in Glorifying India in Special Reference to Agriculture and Allied Sector” on Aug.28,2023 at Birsa Agricultural University, Ranchi
 34. **Delivered on the topic** “Fundamental of PDE and Application to Solute Transport Modelling” on Oct.9, 2023 organized by Department of Mathematics, IIT Ropar.
 35. **Delivered on the topic** “Mathematical Modelling of Solute Transport: A Semi-analytical Approach” in a Workshop on Advances in Fluid Solid Interactions using AI/ML with special reference to numerical weather prediction and smart farming using IoT during February12-16, 2024 organized by Department of Mathematics and Computing, IIT(ISM) Dhanbad.
 36. **Delivered on the topic** “Personal Leadership Style and Traits with Special Reference to Academia” in Nurturing Future Leadership Programme during March18-22, 2024 organized under aegis of Malviya Mission Teacher Training Programme (MMTTP) IIT (ISM) Dhanbad.
 37. **Delivered on the topic** “Contaminant Transport Modelling for Aquifer” in Two Week Refresher Course on **‘Recent Advancements in Mathematics, Statistics and Computer Science** during Oct14-26, 2024 organized under aegis of Malviya Mission Teacher Training Programme (MMTTP) Central University of South Bihar (CUSB), Gaya (Online).
 38. **Delivered on the topic** “Personal Leadership Style and Traits with Stress or without Stress” in Nurturing Future Leadership Programme during Oct21-26, 2024 organized under aegis of Malviya Mission Teacher Training Programme (MMTTP) IIT (ISM) Dhanbad.
 39. **Delivered on the topic** “Mathematical Modelling of Solute Transport: A Semi-analytical Approach” in a National Conference on Advances in Fluid Solid Interactions using AI/ML with special reference to numerical weather prediction and smart farming using IoT during February12-16, 2024 organized by Department of Applied Geophysics, IIT(ISM) Dhanbad.
 40. **Delivered on the topic** “Contaminant Transport Modelling: A Mathematical Approach” in a National Seminar on WaterNexus - 2025 during May16-17, 2025 organized by Department of Civil Engineering, IIT(ISM) Dhanbad.
 41. **Delivered on the topic** “Way Forward for Implementation and Execution of NEP-2020” in an ATAL FDP - 2025 on August20,2025 organized by Department of Mechanical Engineering, BIT Sindri.
 42. **Delivered on the topic** “Digital Bharat @ Viksit Bharat-2047” in an International Conference on Advances in Computer Science, Engineering & Technology (ICACSET 2025) on 3rd December 2025 at Amity University Jharkhand, Ranchi.
 43. **Delivered on the topic** “NEP-2020: State Level Reforms & Implementation Strategies” in Shiksha Samvad - 2026 on 17th February,2026 organized by Department of Higher Education, Govt. of Chhattisgarh, Raipur.
 44. **Delivered on the topic** “Multispecies Advection-Dispersion Transport Modelling” in a National Conference on Recent Developments in Mathematics and Statistics

on February 27, 2026 organized by Department of Mathematics and Statistics, CUJ Jharkhand.

45. **Delivered on the topic** “AI Strategic Implementation and Computation for Viksit Bharat-2047” in 4th International Conference on Engineering Design and Computing on 28th February, 2026 at Swami Vivekananda University, Kolkata.
46. **Delivered on the topics** i) “Regulatory Framework, Academic Governance and Ranking” and ii) “Institutional Ecosystem: Universities, Research Institutes and Industry Linkages” on 3rd July, 2026 in the GuruDakshta (Faculty Induction Programme) during July 3-29, 2026 organized under aegis of Malviya Mission Teacher Training Programme (MMTTP) IIT (ISM) Dhanbad.
47. **Delivered on the topics** “Way Forward Strengthening, Mentoring and Promoting Students Mental Well Being” on 13th July, 2026 in the Faculty Upgradation Programme during July 13-14, 2026 organized by IIST Shibpur, Kolkata.

Professional Membership:

Life Member: Mathematical Society, B.H.U., Varanasi
Bhaskaracharya Educational Society, Patna
Bharat Ganit Parisad, Lucknow
Indian Mathematical Society, New Delhi
Indian Association of Hydrologists (IAH), NIH Roorkee
BHU Alumni Association, Dhanbad Chapter
Association of Hydrologists of India (AHI), Andhra University, Waltair
Society of Applied Mathematics (SAM), IIT(ISM), Dhanbad
Indian Red Cross Society, Dhanbad
Association of Global Groundwater Scientists (AGGS), Coimbatore
Indian Geological Congress (IGC), Roorkee

Member: American Society of Civil Engineers (ASCE)-EWRI-EMI, USA.
International Association of Hydrological Sciences (IAHS), U.K.

Fellow: Association of Groundwater Scientists (AGGS)

Board of Studies:

1. External Expert member of Board of Studies 2020 Meeting for Applied Sciences, at Centurion University of Technology & Management (CUTM) on July 11, 2020 (Online Mode).
2. External Expert member of Board of Studies 2021 Meeting for M.Sc. programme in Applied Mathematics and Computing, at The Neotia University, School of Science and Technology, Kolkata on April 2, 2021 (Online Mode).
3. External member of the curriculum and structure scrutiny and vetting committee for Computer Science Concentration Online UG and PG Programs at IIT Patna, July-2022 (Online/Hybrid Mode)

National Advisory Board:

Member, 3rd International Conference on Frontiers of Science and Technology-2021 (ICFST-2021) scheduled on August 13-14, 2021 in virtual mode, Department of Applied Sciences, KIET Group of Institutions, Delhi-NCR, Ghaziabad, India

National Recognition:

1. Prof. M K Singh, Dean (Students' Welfare) was nominated as State Chief Education Advisor, Jharkhand by Yog Social Society (YSS), Lucknow on 30th July, 2020.

2. Prof. M K Singh, Dean (Students' Welfare) conferred as Best Mathematics Professor of the Year by Asian Education Award-2021 on 10th April,2021.
3. Inder Mohan Thapar Research (IMTR) Award-2021 conferred on 9th Dec.,2022, IIT(ISM) Dhanbad.
4. Meditation Ambassador for "Har Ghar Dhyan" programme of Ministry of Culture in collaboration with The Art of Living Foundation for Meditation and Mental Health of the people from all walks of life at IIT(ISM) Dhanbad. (28th Nov.,2022).
5. Nodal Officer, Monitoring and Outreach Implementation NEP-2020 Program, Dhanbad, Jharkhand for Four State Universities such as BBMKU Dhanbad, Nilamber Pitamber University, Palamu; Vinoba Bhave University, Hazaribagh; Sido Kanhu Murmu University, Dumka
6. Nodal Officer, STEM Teachers Training for PM Shri School in Jharkhand
7. Expert Committee Member, AICTE, New Delhi
8. Prof. M K Singh, Dean (Academic) conferred as Change Maker Award-Academia-2025 by India Education Forum and India Employer Forum at Novotel Mumbai International Airport, Mumbai (7th Nov.,2025)
9. Advisor/Subject Expert Member, UPSC, New Delhi

International Recognition:

1. Certificate of Outstanding contribution in reviewing for the recognition of the contribution made to the quality of journal i.e., Journal of Hydrology, Elsevier.
2. Valuable contribution and outstanding performance as a Member of the Scientific Committee of the 3rd Conference of the Arabian Journal of Geosciences (CAJG), held online, on 2–5 November 2020.
3. Valuable contribution and outstanding performance as a Member of the Scientific Committee of the Mediterranean Geosciences Union Annual Meeting (MedGU-21), held in Istanbul, Turkey, on 25–28 November 2021.
4. AGGS-Fellow Award conferred on 2nd Nov.,2022 during IGWC-2022 at IIT Roorkee.

Administrative Exposure (at IIT(ISM) Dhanbad)

Warden (March1, 2006- March31, 2013); Member, Task Force (2013-2018)
 Secretary, DAC (2012-2018); Secretary-cum-Treasurer, SAM (2010-2019)
 Member, Improvement/Innovation Group (2012-2018)
 Member, Staff Recruitment Committee (2015)
 PCE-CD (2017-2018); Convener, SRIJAN (2015-2017)
 Convener, Visit of Sri Sri Ravishankar Jee on 2nd March, 2017
 Convener, III & BASANT-2018; Joint Secretary, IIT(ISM) AA (2018-2019)
 Member-Organizing Committee, 39th Convocation & 93rd Foundation Day-2018
 Member-Organizing Committee, 40th Convocation & 94th Foundation Day-2019
 Member-Organizing Committee, 41st and 42nd Convocation -2022 & 97th Foundation Day-2022
 Convener & Member-Organizing Committee, 43rd Convocation -2023 & 98th Foundation Day-2023
 Convener & Member-Organizing Committee, 44th Convocation -2024 & 99th Foundation Day-2024
 Convener & Member-Organizing Committee, 45th Convocation -2025
Member (Senate Nominee), BoG, IIT (ISM Dhanbad (Jan1,2024-Dec.31,2025))
Member (BoG Nominee), Finance Committee, IIT (ISM Dhanbad (Jan1,2024-Dec.31,2025))

Chairperson-For the award of Institute Medals and Sponsored Medals (2018-2025)

Chairperson-Modalities for PDA/PDF and DDF Rules (2019)

Chairperson-HAG Criteria & Quantification (2019 & 2021)

Head, CSM (May5, 2017-September2, 2018)

Associate Dean (Outreach Programmes) (May21, 2018 -September2,2018)

Dean (Students' Welfare) (Sept.3, 2018-Oct.20, 2023)

Dean (Academic) (Oct.21, 2023- June30,2026)

Dean (Faculty) (July1,2026- Continued)

Dy Director/Director (In-charge)-2018/2021/2022/2023/2024/2025/2026