



Dr. Anish Kumar

Assistant Professor, Department of Civil Engineering

Rajkiya Engineering College, Azamgarh

An AICTE approved Government Engineering college of Uttar Pradesh.

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Google Scholar: <https://scholar.google.com/citations?user=CLHl4clAAAAJ&hl=en>

Career Objective:

A hardworking, enthusiastic, and confident professional, keen to share my knowledge with students and gain more experience in education, while at the same time encouraging students to develop their skills, knowledge, and confidence.

Teaching Experience:

Sl. No	Designation	Institute	Duration
1	Assistant Professor (AGP 6000 6 CPC/ Level 10 7 CPC)	Department of Civil Engineering, Rajkiya Engineering College, Azamgarh	08/12/2017 to till date

Education:

Sl. No	Type of course/ Examination	Name of Institution/Board	% of marks / GGPA
1	Doctor of Philosophy (2023)	National Institute of Technology (NIT), Patna, Bihar, India (An institute of national importance)	8.76
2	Master of Technology (2016)	National Institute of Technology (NIT), Patna, Bihar, India (An institute of national importance)	8.68
3	Bachelor of Technology (2014)	Uttar Pradesh Technical University, Lucknow, Uttar Pradesh, India	81.2 %
4	Class XII (2010)	Central Board of Secondary Education, New Delhi	88.4 %
5	Class X (2008)	Central Board of Secondary Education, New Delhi	91.4 %

Editorial Responsibilities:

Sl. No	Designation	Name of journal	Publisher
1	Editorial board member	Discover-Civil Engineering	Springer
2	Editorial board member	Discover-Cement and Concrete	Springer

Subjects Taught:

Sl. No	Name of Subjects/ Labs
1	Building Materials and Construction
2	Railways, Airport and Waterways
3	Urban Transport System and Planning
4	Transportation Engineering
5	Geotechnical Engineering
6	Modern Construction Materials
7	Integrated Waste Management for Smart Cities
8	Quality Management
9	Construction Technology and Management

Area of Interest: Applications of nanomaterials in civil engineering, Pavement Design, Soil Stabilization, Water quality monitoring, Sustainability, and its associated practices, Machine learning, Development of high-volume fly ash concrete.

Software skills: AutoCAD, Microsoft Office Package, MIDAS Soil works, MIDAS GTSNX, SPSS, Minitab

Publications (Journal):

Sl. No	Title	Indexing	Category	Year
1	Anish Kumar, V.B Chauhan, Aayush Kumar, Gurmesh Sihag, G., & Vikash Singh. (2026). Tree Based Machine Learning Framework for Stability Evaluation of Square Tunnels in Sloping Rock. <i>Transportation Infrastructure Geotechnology</i> , 13(6), 211. https://doi.org/10.1007/s40515-026-00982-9	Scopus	Journal	2026
2	Anish Kumar, Vinay Bhushan Chuahan, Aayush Kumar. Machine Learning Framework for Stability Prediction of Circular Tunnel in Sloping Rock Mass under Surcharge Loading. <i>Transportation Infrastructure Geotechnology</i> . 13, 115 (2026). https://doi.org/10.1007/s40515-026-00889-5	Scopus	Journal	2026
3	Sameer Sen, Sanjeev Sinha and Anish Kumar, Comparative Assessment of Multiple Machine Learning Models for Predicting the Compressive Strength of Multiwalled Carbon Nanotube Reinforced High Volume Fly Ash Concrete, <i>International Journal of material forming</i> , 19, 22 (2026) https://doi.org/10.1007/s12289-026-01987-y	SCI	Journal	2026
4	R. K Mishra, A. K. Mishra, & Anish Kumar, (2026). Support vector machine-based models for predicting flexural and tensile	Scopus	Journal	2026

strength of cement concrete incorporating fly ash with varying water-cement ratio. *Asian Journal of Civil Engineering*, 1-21.

<https://doi.org/10.1007/s42107-026-01646-2>

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|----|---|--------|---------|------|
| 5 | Anish Kumar, Sanjeev Sinha & Rojee Pradhananga, Assessment of unconfined compressive strength of nano-doped fly ash-treated clayey soil using machine learning tools . Scientific Reports. 15, Article number: 33847 (2025).
https://doi.org/10.1038/s41598-025-05401-6 | SCI | Journal | 2025 |
| 6 | Anish Kumar, et. al, Explainable machine learning models for predicting compressive strength of high-volume fly ash concrete,, Asian Journal of Civil Engineering (2025).
https://doi.org/10.1007/s42107-025-01454-0 | Scopus | Journal | 2025 |
| 7 | Anish Kumar, et. al, Explainable LightGBM model for predicting compressive strength of silica fume modified high-volume fly ash concrete. Asian Journal of Civil Engineering (2025).
https://doi.org/10.1007/s42107-025-01411-x | Scopus | Journal | 2025 |
| 8 | Anish Kumar, Sanjeev Sinha, Machine learning-based hybrid regularization techniques for predicting unconfined compressive strength of soil reinforced with multiple additives, Multiscale and Multidisciplinary Modeling, Experiments and Design 8 (5), 228
https://doi.org/10.1007/s41939-025-00831-1 | Scopus | Journal | 2025 |
| 9 | Manish Pratap Singh, Anish Kumar, Sanjeev Sinha, Machine Learning-Based Prediction of Compressive Strength of Plastic Optical Fiber Embedded Transparent Concrete, Asian Journal of Civil Engineering (2025).
https://doi.org/10.1007/s42107-025-01327-6 | Scopus | Journal | 2025 |
| 10 | Amit Kumar, Rajesh Ranjan, Anish Kumar, Sanjeev Sinha, "Addressing rutting damage in flexible pavements: a comprehensive analysis using finite element modelling and support vector machines", International Journal of Advanced Technology and Engineering Exploration, 2025
http://dx.doi.org/10.19101/IJATEE.2024.111100197 | Scopus | Journal | 2025 |
| 11 | Anish Kumar, Sameer Sen, Sanjeev Sinha, Bimal Kumar, Chaitanya Nidhi "Prediction of Compressive Strength of Concrete Doped with Waste Plastic Using Machine Learning-Based Advanced Regularized Regression Models", Asian Journal of Civil Engineering (2025)
https://doi.org/10.1007/s42107-025-01280-4 | Scopus | Journal | 2025 |

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|----|--|--------|---------|------|
| 12 | Anish Kumar, Sameer Sen, Sanjeev Sinha, <i>Machine learning based prediction models for the compressive strength of high-volume fly ash concrete reinforced with silica fume</i> ", Asian Journal of Civil Engineering (2025)
https://doi.org/10.1007/s42107-025-01277-z | Scopus | Journal | 2025 |
| 13 | Anish Kumar, Sameer Sen, Sanjeev Sinha, <i>"Support vector machine-based prediction model for the compressive strength for concrete reinforced with waste plastic and fly ash"</i> , Asian Journal of Civil Engineering (2025)
https://doi.org/10.1007/s42107-024-01256-w | Scopus | Journal | 2025 |
| 14 | Anish Kumar, Amit Kumar, Sanjeev Sinha, <i>"Advancing urban transportation planning: a comparative analysis of machine learning and conventional regression-based trip generation models"</i> International Journal of Advanced Technology and Engineering Exploration (2024)
http://dx.doi.org/10.19101/IJATEE.2024.111100198 | Scopus | Journal | 2024 |
| 15 | Anish Kumar, Sanjeev Sinha, <i>"Support vector machine-based prediction of unconfined compressive strength of Multi-Walled Carbon nanotube doped soil-fly ash mixes"</i> . Multiscale and Multidisciplinary Modeling, Experiments and Design (2024)
https://doi.org/10.1007/s42107-024-01256-w | Scopus | Journal | 2024 |
| 16 | Rishabh Kashyap, V.B Chauhan, Anish Kumar, Sagar Jaiswal, <i>"Machine Learning-Based Stability Assessment of Unlined Circular Tunnels under Surcharge Loading"</i> . Asian Journal of Civil Engineering (2023)
http://dx.doi.org/10.1007/s42107-023-00927-4 | Scopus | Journal | 2023 |
| 17 | Anish Kumar, Sanjeev Sinha, Samir Saurav, and Vinay Bhushan Chauhan. <i>"Prediction of unconfined compressive strength of cement-fly ash stabilized soil using support vector machines."</i> Asian Journal of Civil Engineering (2023): 1-13.
http://dx.doi.org/10.1007/s42107-023-00833-9 | Scopus | Journal | 2023 |
| 18 | Anish Kumar and Sanjeev Sinha. <i>"Role of Multiwalled Carbon Nanotube in the Improvement of Compaction and Strength Characteristics of Fly Ash Stabilized Soil."</i> International Journal of Pavement Research and Technology (2023): 1-22.
http://dx.doi.org/10.1007/s42947-023-00274-2 | Scopus | Journal | 2023 |
| 19 | Anish Kumar and Sanjeev Sinha. <i>"Multiwalled Carbon Nanotube Aided Fly Ash-Based Subgrade Soil Stabilization for Low-Volume Rural Roads."</i> International Journal of Geosynthetics and | Scopus | Journal | 2023 |

Ground Engineering 9, no. 2 (2023): 17.

<http://dx.doi.org/10.1007/s40891-023-00436-z>

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| 20 | Anish Kumar et.al, Random Forest, CART and MLR based predictive model for unconfined compressive strength of cement reinforced clayey soil: A comparative analysis, Asian Journal of Civil Engineering (2023). | Scopus | Journal | 2023 |
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- <https://doi.org/10.1007/s42107-023-00909-6>
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| 21 | Anish Kumar et.al, <i>Advanced Regression Models for Assessing the Strength of Multi-Walled Carbon Nanotube-Modified High-Volume Fly Ash Concrete</i> , Asian Journal of Civil Engineering (2023). | Scopus | Journal | 2023 |
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- <https://doi.org/10.1007/s42107-023-00906-9>
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| 22 | Anish Kumar, Sanjeev Sinha, P.K.Srivastava. <i>A stochastic investigation into the heterogeneity of multiwalled carbon nanotube infused clay bricks</i> , Journal of materials in civil engineering, ASCE. | SCI | Journal | 2023 |
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- <https://doi.org/10.1061/JMCEE7/MTENG-17128>
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| 23 | Asif Ansari, Anish Kumar, A. <i>Water quality assessment of Ganga River along its course in India</i> . Innov. Infrastruct. Solut. 7, 56 (2022). | Scopus | Journal | 2022 |
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- <https://doi.org/10.1007/s41062-021-00668-w>
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| 24 | Anish Kumar, Sanjeev Sinha. <i>Performance of multiwalled carbon nanotube doped fly ash-based clay bricks</i> . International Journal of Advanced Technology and Engineering Exploration. | Scopus | Journal | 2022 |
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- <https://doi.org/10.19101/IJATEE.2021.875265>
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| 25 | Anish Kumar, Sanjeev Sinha. <i>Performance of Multiwalled Carbon Nanotube Doped Fired Clay Bricks</i> , Journal of materials in civil engineering, ASCE. | SCI | Journal | 2022 |
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- [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0004511](https://doi.org/10.1061/(ASCE)MT.1943-5533.0004511)
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|----|---|--------|---------|------|
| 26 | Anish Kumar, Roop Kishor, Chaitanya Nidhi. <i>Improvement of Pavement Subgrade Soil using Millet Husk Ash for Rural Roads</i> , International Journal of Engineering and Advanced Technology, 9(4) 1279-1283, 2020. | Others | Journal | 2020 |
|----|---|--------|---------|------|
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- <https://doi.org/10.35940/ijeat.D7212.049420>
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Conference:

- 1 **Anish Kumar, Sanjeev Sinha, Brihaspati Singh. *Policy Options for Electricity as a Sustainable Transport Fuel***, The International Conference on Advances in Management and Technological Innovations Impacting Industries-III (ICAMT-III 2021), Allahabad
- 2 **Samir Saurav, Sanjeev Sinha, Anish Kumar. *An Assessment of Shrinkage Characteristics of Cementitiously Stabilized Granular Material for Pavement Layers***. 15th International Congress on Advances in Civil Engineering (ACE 2023) At: Famagusta, North Cyprus.
- 3 **Abhideep Yadav, Anish Kumar, Sanjeev Sinha. *Construction stage analysis of a tunnel oblique to a sewer line***. 5th National Conference on 'Recent Advancement in Physical Sciences. December 19-20, 2023. NIT Uttarakhand.
- 4 **Samir Saurav, Sanjeev Sinha, Anish Kumar. *Influence of shrinkage properties on the performance of cementitious stabilized granular materials in pavement layers***. 1st International conference "Recent Advances in Infrastructure Development (RAID 2024). Feb 12-13, 2024.
- 5 **Anish Kumar, Sanjeev Sinha, Sameer Sen. *Machine Learning-Enhanced Soil Stabilization Using Multiwalled Carbon Nanotubes and Fly Ash for Road Construction***. 15th International Conference on transportation planning and implementation methodologies for developing countries (TPMDC)At: Indian Institute of Technology Bombay, Mumbai, India.
https://doi.org/10.1007/978-981-96-8110-5_9
- 6 **Vivek Mathur, Divya Srivastava, Anish Kumar. *Support Vector Machine based Air Quality Prediction of a Mid-Sized Urban City***. 5th International Conference on 'Trends & Recent Advances in Civil Engineering' (TRACE-2024) At: Amity University Uttar Pradesh, Noida.
https://doi.org/10.1007/978-981-95-0736-8_19
- 7 **Anish Kumar, Abhishek Savarnya, Sanjeev Sinha, Sameer Sen. *Unveiling the dynamics of thixotropic behaviour in rejuvenated asphalt binders***. International Conference on Innovations and Sustainability in Civil Engineering: Shaping Tomorrow's Infrastructure. NIT Patna.
https://doi.org/10.1007/978-981-95-6354-8_18
- 8 **Abhay Yadav, Divya Srivastava, Anish Kumar, Arti Vaish, Jitendra Gardia, *Land Use and Green Cover Analysis of Lucknow City using Remote Sensing and GIS***. International Conference on Applications of Mathematical & OR Models for Sustainable Viksit Bharat (ICORSVB -2025)
- 9 **Sameer Sen, Anish Kumar, Sanjeev Sinha. *Development of a CatBoost-Based Predictive Model for Estimating the Compressive Strength of Waste Plastic-Doped Concrete***. International Conference on Innovations and Sustainability in Civil Engineering: Shaping Tomorrow's Infrastructure. NIT Patna. https://doi.org/10.1007/978-981-95-6354-8_11

Book Chapters

1	Anish Kumar, Sanjeev Sinha, <i>Policy options for sustainable urban transportation: a quadrant analysis approach</i> , Risk, Reliability and Sustainable Remediation in the Field of Civil and Environmental Engineering, Elsevier, 2022, Pages 487-497, ISBN 9780323856980, https://doi.org/10.1016/B978-0-323-85698-0.00001-0	Scopus	Book Chapter	2022
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Awards and Recognitions

Sl. No	Awards and Recognitions
1	Amul Vidyashree Award for academic excellence from Amul India Pvt. Ltd.

AICTE-NITTTR Certifications

Sl. No	Module Name
1	Orientation Towards Technical Education and Curriculum Aspects
2	Professional Ethics & Sustainability
3	Instructional Planning and Delivery
4	Technology Enabled Learning & Life Long Self Learning
5	Student Assessment and Evaluation
6	Creative Problem Solving, Innovation, and Meaningful R & D
7	Institutional Management & Administrative Procedures
8	Communication Skills, Modes, and Knowledge Dissemination

NPTEL/ SWAYAM Certifications

Sl. No	Course Name
1	Introduction to Multimodal Urban Transportation Systems (MUTS)
2	Strategy and Sustainable Enterprise
3	Digital Transformation in Teaching Learning Process
4	Air Pollution and Control

Guest/Expert Lecture

Sl. No	Expert/ Guest Lecture
1	Expert Lecture on “Application of multicriteria decision making in transport policy formulation” at Rajkiya Engineering College, Ambedkar Nagar, U.P on 03/08/2019
2	Expert Lecture on “Sustainable urban transportation” at Rajkiya Engineering College, Ambedkar Nagar, U.P on 02/08/2019

FDP / STC /PDTs Industrial Trainings attended.

Sl. No	FDP / STC /PDTs/ Industrial Trainings	Duration
1	One week workshop corporate expectation and academia at Rajkiya Engineering College, Azamgarh	15/09/2018-19/09/2018
2	AICTE sponsored QIP short term course on Recent Developments in Pavement analysis and design at IIT BHU, Varanasi	17/09/2022-22/09/2022
3	AICTE sponsored QIP short term course on Principles and applications of GIS at IIT BHU, Varanasi	07/01/2019-12/01/2022
4	One-week Industrial Training at Offshore Infrastructure Limited, Kochi	08/07/2019-12/07/2019
5	A workshop on Sustainable urban transportation for Patna: A curtain Raiser at National Institute of Technology, Patna	27/08/2016-28/08/2016
6	One week faculty development program on Total Quality management at Rajkiya Engineering College, Azamgarh	04/06/2018-08/06/2018
7	One week faculty development program on Structural Analysis and behaviour under different loading conditions at Krishna Engineering College, Ghaziabad	16/06/2018-20/06/2018
8	One-week Professional Development Training at IIM Vishakhapatnam	15/07/2019-19/07/2019

Personal details:

Date of Birth : 11- July- 1993
Father's Name : Shri B.K. Tripathi
Mother's Name : Madhu Devi
Address : Dr. Anish Kumar, Assistant Professor, Department of Civil Engineering, Rajkiya Engineering College, Azamgarh, Vill- Aikbalpur, Post- Devgaon, Azamgarh, 276201, U.P.

Dr. Anish Kumar, c/o Birendra Kumar Tripathi, Lane No.3, Chanakya Colony, Fazalganj, Sasaram, Rohtas, Bihar, Pin-821115