

## CURRICULUM VITAE

### Prof. Sandeep Chaudhary

Professor, Department of Civil Engineering  
& Dean, Administration

Indian Institute of Technology Indore

Email: schaudhary@iiti.ac.in

Contact No.: +91-731-660-3256 (O); +91-9549654195 (M)

### Academic and Research Qualifications

Ph.D. (2006, Indian Institute of Technology Delhi, India) \*,

\*Ph.D. Thesis Title: Development of a hybrid analytical-numerical procedure and neural networks for composite structures subjected to service load

M.E. (Structural Engineering) (1999) (Malaviya National Institute of Technology Jaipur, Jaipur, India)

B.E. (Civil) (1996) (MBM Engineering College Jodhpur, Jodhpur, India)

### Work Experience

- Professor (HAG), Department of Civil Engineering, IIT Indore (Oct 23, 2024–Cont)
- Professor, Department of Civil Engineering, IIT Indore (Oct 23, 2018-Oct 22, 2024)
- Associate Professor, Department of Civil Engineering, IIT Indore (May 17, 2017-Oct 22, 2018)
- Associate Professor, Department of Civil Engineering, MNIT Jaipur (July 29, 2011-May 16, 2017)
- Post Doc. Research Fellow, Structural System Laboratory, Kunsan National University, South Korea (Aug 16, 2010-July 28, 2011)
- Associate Professor, Department of Civil Engineering, MNIT Jaipur (July 01, 2010-Aug 15, 2010)
- Lecturer/Reader, Department of Structural Engineering, MNIT Jaipur (Oct 31, 1996-June 30, 2010)

### Specialization

- Structural Engineering
- Steel Concrete Composite Construction
- Sustainable Construction Practices
- Building Product Engineering
- Waste Upcycling and Management
- Sustainable Rural Housing

### Research Credentials

Technology Transfer/ Translational Research:	01/02
Patents (granted/ published/ filed/ in process):	02/04/01/01
Sponsored Research Projects:	31
(PI/Scientific Director/Mentor/Co-PI/Guide)	(14/01/06/04/06)
Publications in SCIE/Scopus Indexed Journals:	123
Publications in Conference Proceedings:	76
Books authored/edited:	09
Technical reports:	01
Book/ video chapters:	05

Ph.D. Supervision (completed/ongoing):	15/08
MTech and MSc thesis Awarded/Ongoing:	42/04

### **Courses Taught**

Solid Mechanics, Structural Analysis, Finite Element Method, Design of Concrete Structures, Design of steel-concrete composite structures, Prestressed Concrete Design, Sustainable Construction\*, Advanced Concrete Technology\*, Design Thinking for Rural Application\*

\*Courses developed and introduced

### **Awards / Achievements / Recognitions / Fellowships**

- Received Best Technology Award 2024 from IIT Indore
- Honorary mention as the second-best teacher of IIT Indore based on the student feedbacks in the last four semesters, on the occasion of Teacher's Day, 2024
- Received Best Research Paper Award 2023 from IIT Indore
- Recognized as a leading scientist in the field of Sustainable Construction by Publons in 2022
- Eminent Engineer Award by The Institution of Engineers (India) during the 37th National Convention in 2022.
- Utkrisht Seva Samman (Excellent Service Award) by The Institution of Engineers (India), Indore and JK cement in 2021.
- Holds the first technology transfer of IIT Indore for waste-upcycled novel bricks
- Offered Research Fellowship by the Hong Kong Polytechnic University for two months in 2017.
- Post-Doctoral Research Fellowship granted by National Research Foundation, S. Korea (2010-2011).
- QIP Fellowship for pursuing Ph.D. at IIT Delhi by Ministry of Human Resources Development, Government of India (2002-2005).
- Merit Scholarship during B.E. (1993-1995).

### **List of sponsored research projects**

#### ***As Principal Investigator (14)***

01. "Bio-shielded innovative cement composites developed by embedding mould- and insect-repelling non-pathogenic bacteria" funded by ANRF. (2026-2029). Collaborator: DAVV Indore.
02. "Livelihood interventions for Scheduled Caste labourer through "Shramik Vikas" community partnered training programs in Simrol Block, Indore District, Madhya Pradesh State" funded by DST, GOI. (2025-2028).
03. "Advancing the Industrial Application of Epoxy Bonded Reinforcement" funded by Captain Steel India Limited. (2025-2026).
04. "Sustainable Cement Manufacturing: Overcoming Limestone Shortages with Bio Ash" funded by JSW Cement Ltd, Ballari, India. (2025-2026).
05. "Inspiring the researchers of tomorrow in sustainable concrete construction" funded by SPARC and UKIERI. (2024-2026). Collaborator: University of Plymouth, UK and NIT Warangal, India.
06. "Technology Dissemination of Compressed Colored Composite for a wide range of products to support sustainable rural infrastructure" funded by DST, GoI. (2023-2025). Collaborator: TIET Patiala, India.
07. "A comprehensive rheology based thixotropic fluid flow model for improved control on 3D printing of concrete" funded by SERB, DST, GOI. (2021-2024).
08. "Safeguarding heritage structures using seismic metamaterials" funded by SPARC, MHRD. (2019-2021). Collaborator: UNIVERSITÉ AIX-MARSEILLE, France and IMPERIAL COLLEGE LONDON, UK.

09. "Natural-coloured functionally graded rubberised geopolymer system: A cement-less solution for optimised concrete paver manufacturing" funded by DST, GOI. (2018-2020). Collaborator: University of Edinburgh, UK.
10. "Sustainable and economical functionally graded rubberized concrete pavements" funded by DST, GOI. (2017-2021). Collaborator: University of Carthage, Tunisia.
11. "Utilization of plastic waste in concrete: Feasibility studies" funded by DST, GOI. (2016-2019). Collaborator: MNIT Jaipur.
12. "Waste utilisation in concrete as aggregate: Asian perspective" funded by Asian Concrete Federation. (2016-2019). Collaborator: Researchers from China, Hong Kong and Thailand.
13. "Experimental and analytical studies for the short term and long term behavior of epoxy bonded steel-concrete composite bridges" funded by DST, GOI. (2012-2015).
14. "Development of a highly efficient procedure and GUI equipped software for the service load analysis of composite structures" funded by DST, GOI. (2008-2011).

#### ***As Scientific Director (1)***

01. "Carbon-neutral technologies for recycling large-tonnage waste from fuel energy with the production of functional geopolymer materials" funded by Government of the Russian Federation. (2022-2024). Collaborator: Platov South-Russian State Polytechnic University (NPI), Russia.

#### ***As Scientist Mentor (6)***

01. "Innovative Waste-Derived and Eco-Friendly Alternatives to Alkali Activators in Geopolymer Concrete: Towards Sustainable Development" funded by DST, GOI. (2025-2027). Collaborator: NPDF: Dr. Rudra Pratap Singh.
02. "Innovative and sustainable fibre-reinforced recycled aggregate concretes for structural applications" funded by INSA, DST, GOI. (2023-2024). Collaborator: ISRF: Dr. Thanongsak Imjai.
03. "GOBAiR - a novel cow dung based foaming agent for developing sustainable light weight construction materials" funded by IIT Indore. (2023-2024). Collaborator: TRF: Dr. Sanchit Gupta.
04. "Sustainable solution for limestone shortage in cement manufacturing through Ca-rich bio ash" funded by DST, GOI. (2022-2024). Collaborator: NPDF: Dr. Ashita Singh.
05. "Durability studies on geopolymer concrete containing waste rubber fibre as partial replacement of sand" funded by DST, GOI. (2015-2017).
06. "Durability of concrete containing zinc slag as partial replacement of sand" funded by DST, GOI. (2010-2013).

#### ***As Co-Principal Investigator (4)***

01. "Development of Portable Kit – An Alternative to Traditional Post Harvest Management Employing Photodynamic Inactivation" funded by AgriHub: Innovation Hub for Agriculture, IIT Indore. (2025-2027).
02. "Sustainable building products for net zero in construction: from lab to market" funded by TNE Grant, British Council Going Global Partnerships. (2025-2026). Collaborator: Overall Lead: Dr Reyes Garcia; Indian Lead Partner: Prof Sandeep Chaudhary; Collaborators: University of Warwick, UK; Concrete4Chnage Ltd, UK; Abhishek Bricks, India; JSW Cement, India;.
03. "Waste characterization and possible gainful utilization of induction melting furnace dust" funded by Jaideep Ispat & Alloys Pvt. Ltd., Moira Sariya, India. (2021-2022).
04. "Utilization of Bamboo Strip as reinforcement in concrete" funded by TEQIP, MHRD. (2019-2020).

#### ***As a Guide (6)***

01. "PARVAT (Prevention of accidents in hilly routes by virtue of automated technology)" funded by DRISHTI-CPS, IIT Indore. (2023-2024). Collaborator: Student PI: Himanshu Khati, Benjamin Basumatary.
02. "A digital twin based real time traffic regulation system for risk management and failure prevention in bridges" funded by DRISHTI-CPS, IIT Indore. (2022-2023). Collaborator: Student PI: Ayush.

03. "Real time quality control tool for fresh state concrete using a hydrostatic digital twin model" funded by DRISHTI-CPS, IIT Indore. (2022-2023). Collaborator: Student PI: Parth Dwivedi.
04. "A cyber physical system for low energy HVAC solutions based on natural thermal cycles and adaptive thermal comfort for smart cities" funded by DRISHTI-CPS, IIT Indore. (2022-2023). Collaborator: Student PI: Sumer Thakur.
05. "Experimental investigations of bond characteristics of steel-concrete composite interface connected by adhesive bonding" funded by Institution of Engineers (India). (2015-2016). Collaborator: Student PI: Pankaj Kumar.
06. "Performance evaluation of interlocking brick/block masonry" funded by Institution of Engineers (India). (2007-2008). Collaborator: Student PI: Ahmed Naqvi.

## Patents

01. Gupta, S., Singh S., Thakare, A., Jha, H.C., Chaudhary, S. (*Published, 2025*). "Food and bacteria blended powder as a bio-admixture for cement composites", Application No. 202521035191A, Filed: 2025.
02. Thakare, A. A., Gupta, S., Rajpoot, S., Jha, H. C., and Chaudhary, S. (*Published, 2025*). "Bacterial Mortar Composition and Process for Preparation Thereof by using Food Waste derived Nutrient Media", Application No. 202521071253A, Filed: 2025.
03. Gupta, Sanchit; Chaudhary, Sandeep (*Published, 2025*). "A System and Method for a Switchable Modular Assembly for Requirement-based Transformable (SMART) Mould for Testing of Reinforced Concrete", Application No. 202521132964, Filed: 2025.
04. Gupta, S., and Chaudhary, S. (*Published, 2024*). "Cow dung-based lightweight construction materials and method", Application No. 202421010279A, Filed: 2024.
05. Gupta, T., Chaudhary, S., Sharma, R. K., and Jain, S. (*Granted, 2020*). "Method of Preparation of Conplas Paver Block Utilizing waste Polythene", Patent No. 396218, Application No. 202011002264, Grant Date: May 5, 2022.
06. Authors: Gupta, T., Sharma, R. K., Chaudhary, S., and Siddique, S (*Granted, 2020*). "Composition for preparation of Paver Block utilizing rubber waste", Patent No. 385236, Application No. 202011018399, Grant Date: Dec. 27, 2021.

## List of publications

### Books Published

01. Manna, S., **Chaudhary, S.**, and Gupta, V. K. (Editors) (2026). Applied Mathematics and Mechanics: ICAMM 2023, Indore, India, October 18–20. Springer Nature Link. (ISBN: 978-981-95-2314-6)
02. Gambhir, M. L., and **Chaudhary, S.**(2025). Concrete Technology: Theory and Practice. McGraw Hill. (ISBN: 9789364446969)
03. **Chaudhary, S.**, Patel, K. A. (2023). Testing & Evaluation of Civil Engineering Materials. AICTE (MoE). (ISBN: 9780128189610)
04. Hau, K. K., Gupta, A. K., **Chaudhary, S.**, Gupta, T. (Editors) (2022). Recent Advances in Structural Engineering and Construction Management - Select Proceedings of ICSMC 2021. Springer Singapore. (ISBN: 9789811940392)
05. Samui, P., Kim, D., Iyer, N., and **Chaudhary, S.**(Editors) (2020). New Materials in Civil Engineering. Butterworth-Heinemann, Elsevier. (ISBN: 9780128189610)
06. Pancharathi, R.K., Sangoju, B., and **Chaudhary, S.**(Editors) (2020). Lecture Notes in Civil Engineering: Advances in Sustainable Construction Materials - Select Proceedings of ASCM 2019. Springer Singapore. (ISBN: 9789811533631)
07. **Chaudhary, S.**, and Tripathi, B. (Editors) (2013). Current Challenges in Structural Engineering. (ISBN: 97998382880738)
08. Misra, A., and **Chaudhary, S.**(Editors) (2009). Sustainable Concrete Infrastructure Development. (ISBN: 9788190872317)
09. **Chaudhary, S.**, Tiwari, S. K., and Chaudhary, M. (Editors) (2007). Recent trends in Geotechnical and Structural Engineering.

### SCI/ SCI-E Journal Publications (123)

01. Dicha, H. M., **Chaudhary, S.**, Husain, M. N., and Krishnaraj, R. (2026). "Source based shear behavior of reinforced recycled aggregate concrete structures: review". *Discover Materials*, 6(31).
02. Dicha, H. M., Husain, M. N., **Chaudhary, S.**, and Krishnaraj, R. (2026). "Banana fiber-reinforced diatomaceous earth slurry treatment for enhancing structural recycled aggregate concrete under elevated temperatures". *Discover Sustainability*, 7, 122.
03. **Chaudhary, S.**(2026). "Impacting construction through concrete science focused on sustainable and robust translational research". *Indian Concrete Journal*, 100(1), 66-82.
04. Gupta, S., Rajpoot, S., Thakare, A. A., Jha, H. C., and **Chaudhary, S.**(2025). "Upcycling Food Wastes as a Cost-Effective Nutrient Media in Bacterial Rubberized Mortar for Carbon Sequestering". *Waste and Biomass Valorization*, 16, 4939-4953.
05. Singh, A., Baghel, S. S., Bhadauria, S. S., and **Chaudhary, S.**(2025). "Mechanochemical Treatment of Low-Alkali Activated Slag Concrete: A Comparative Study of Potassium and Sodium Activators". *Journal of Materials in Civil Engineering, ASCE*, 37(11), 04025409.
06. Lazorenko, G., Kasprzhitskii, A., and **Chaudhary, S.**(2025). "One-step microwave preparation of phosphoric acid activated foams from spontaneous combustion coal gangue". *Journal of Industrial and Engineering Chemistry*, .
07. Panghal, H., **Chaudhary, S.**, and Kumar, A. (2025). "Enhancing sustainable concrete performance: dual treatment of recycled coarse aggregates for improved strength and durability". *European Journal of Environmental and Civil Engineering*, 29(15), 3225–3256.
08. Lazorenko, G., Kasprzhitskii, A., Yatsenko, E.A., Wensheng, L., and **Chaudhary, S.**(2025). "Towards coal mining waste valorization: Gangue as resource for the production of geopolymer and related alkali-activated materials". *Green Technologies and Sustainability*, 3(3), 100205.
09. Singh, A., Panghal, H., Rath, D. K., Kumar, R., and **Chaudhary, S.**(2025). "Evaluating the potential of oil seed extract ashes from niger, cotton, and flaxseed as sustainable supplementary cementitious materials". *Sustainable Energy Technologies and Assessments*, 76, 104285.
10. Sharma, A., Gupta, S., Husain, M.N., and **Chaudhary, S.**(2025). "Factors affecting the rheology of cement-based composites: A review". *Journal of American Ceramic Society*, 108(6), e20429.
11. Dicha, H.M., **Chaudhary, S.**, Husain, M. N., and Krishnaraj, R. (2025). "Banana fibre-reinforced diatomaceous earth slurry treatment of recycled aggregate for enhanced structural concrete performance". *Scientific Reports*, 14, 4717.
12. Modi, M.A., Patel, K.A., and **Chaudhary, S.**(2025). "Prediction of deflection considering cracking and temperature gradient effects in steel-concrete composite girders". *Structural Engineering and Mechanics*, 93(1), 65-82.
13. Parolkar, R., and **Chaudhary, S.**(2025). "Dynamic duo: Understanding the interplay between fatigue and freeze-thaw in concrete durability". *Construction and Building Materials*, 489, 142309.
14. Jain, A., Maaze, M. R., Sachdeva, N., **Chaudhary, S.**and Gupta, R. (2025). "Optimizing granite waste aggregate content in self-compacting concrete using multi criteria decision approach". *Sustainable Chemistry and Pharmacy*, 46, 102093.
15. Sharma, A. and **Chaudhary, S.**(2025). "Experimental Investigations and Development of a Comprehensive Rheological Model for Cement Paste: A Novel Integration of Thixotropic Behavior and Hydration Effects". *Journal of Structural Design and Construction Practice*, .
16. Modi, M. A., Ramnavas, M. P., Patel, K. A., and Chaudhary S. (2025). "Analytical Approach for Predicting Deflection in Composite Deck Slabs Subjected to Service Load". *Journal of Structural Design and Construction Practice*, 31(1), 04025103.
17. Sharma, A., **Chaudhary, S.**(2025). "Time-resolved rheological characterization of cement paste using a distinct shear protocol: quantifying thixotropic and hydration-driven structuration". *Innovative infrastructure solutions*, 10, 487.
18. Singh, A., Panghal, H., Bhadauria, S. S., and **Chaudhary, S.**(2025). "Valorization of De-oiled Sesame and Sunflower Seed Residues as Sustainable Alternatives to Limestone and Supplementary Cementitious Materials in Cement Matrices". *Journal of Sustainable Cement-Based Materials*, .

19. Modi, M.A., Patel, K.A., and **Chaudhary, S.**(2024). "Assessment of cracking, creep and shrinkage effects in indeterminate steel-concrete composite flexural members at service load". *Structures*, 70, 107663.
20. Imjai, T., Aosai, P., Garcia, R., Raman, S.N., and **Chaudhary, S.**(2024). "Deflections of high-content recycled aggregate concrete beams reinforced with GFRP bars and steel fibres". *Engineering Structures*, 312, 118247.
21. Neupane, R. P., Imjai, T., Garcia, R., Chua, Y. S., and **Chaudhary, S.**(2024). "Performance of eccentrically loaded low-strength RC columns confined with posttensioned metal straps: An experimental and numerical investigation". *Structural Concrete*, 25(5), 3583-3599.
22. Kefyalew, F., Imjai, T., Garcia, R., Son, N.K., and **Chaudhary, S.**(2024). "Performance of recycled aggregate concrete composite metal decks under elevated temperatures: a comprehensive review". *Journal of Asian Architecture and Building Engineering*, 24(2), 683–705.
23. Singh, A., Thakare, A. A., and **Chaudhary, S.**(2023). "A case study on examining the fresh-state behavior of self-compacting mortar containing waste powders from various sources". *Case Studies in Construction Materials*, e02684.
24. Srimuang, K., Imjai, T., Kefyalew, F., Raman, S. N., Garcia, R., and **Chaudhary, S.**(2023). "Thermal and acoustic performance of masonry walls with phase change materials: A comparison of scaled-down houses in tropical climates". *Journal of Building Engineering*, 108315.
25. Kumar, P., Kasar, A. A., and **Chaudhary, S.**(2023). "Numerical Analysis of Interfacial Failure Mechanism in Bonded Steel–Concrete Composite Connections". *International Journal of Steel Structures*, 23, 1279-1293.
26. Gupta, S., Agrwal, H., and **Chaudhary, S.**(2023). "Thermo-mechanical treatment as an upcycling strategy for mixed recycled aggregate". *Construction and Building Materials*, 398, 132471.
27. Jain, A., Gupta, R., Gupta, S., and **Chaudhary, S.**(2023). "Evaluation of real time fire performance of eco-efficient fly ash blended self-consolidating concrete including granite waste". *Journal of Building Engineering*, 77, 107533.
28. Singh, A., Bhadauria, S. S., Thakare, A. A., Kumar, A., Mudgal, M., and **Chaudhary, S.**(2023). "Durability assessment of mechanochemically activated geopolymer concrete with a low molarity alkali solution". *Case Studies in Construction Materials*, e02715 /20.
29. Neupane, R. P., Imjai, T., Makul, N., Garcia, R., Kim, B., and **Chaudhary, S.**(2023). "Use of recycled aggregate concrete in structural members: a review focused on Southeast Asia". *Journal of Asian Architecture and Building Engineering*, 24(3), 1197–1220.
30. Gupta, S., and **Chaudhary, S.**(2022). "State of the art review on supplementary cementitious materials in India – II: Characteristics of SCMs, effect on concrete and environmental impact". *Journal of Cleaner Production*, 357, 131945.
31. Jain, A., **Chaudhary, S.**, and Gupta, R. (2022). "Mechanical and microstructural characterization of fly ash blended self-compacting concrete containing granite waste". *Construction and Building Materials*, 314 (Part A), 125480.
32. Thakare, A. A., Singh, A., Gupta, T., and **Chaudhary, S.**(2022). "Effect of size variation of fibre-shaped waste tyre rubber as fine aggregate on the ductility of self-compacting concrete". *Environmental Science and Pollution Research*, 30, 20031–20051.
33. Jain, P., Gupta, R., and **Chaudhary, S.**(2022). "Comprehensive assessment of ceramic ETP sludge waste as a SCM for the production of concrete". *Journal of Building Engineering*, 104973.
34. Thakare, A. A., Siddique, S., Singh, A., Gupta, T., and **Chaudhary, S.**(2022). "Effect of rubber fiber size fraction on static and impact behavior of self-compacting concrete". *Advances in Concrete Construction*, 13(6), 433-450.
35. Jain, A., Choudhary, S., Gupta, R., **Chaudhary, S.**, and Gautam, L. (2022). "Effect of granite industry waste addition on durability properties of fly ash blended self-compacting concrete". *Construction and Building Materials*, 340, 127727.

36. Jain, A., **Chaudhary, S.**, Choudhary, S., and Gupta, R. (2022). "Resistance of fly ash blended self-compacting concrete incorporating granite powder against acid and sulphate environments". *Arabian Journal of Geosciences*, 15, 1156.
37. Thakare, A. A., Gupta, T., Deevan, R., and **Chaudhary, S.**(2022). "Micro and macro-structural properties of waste tyre rubber fibre-reinforced bacterial self-healing mortar". *Construction and Building Materials*, 322, 126459.
38. Muttill, N., **Chaudhary, S.**, Prasad, E. K., and Singh, S. K. (2022). "Waste tyre recycling: An emerging applications with a focus on permeable pavements". *Indian Journal of Engineering and Material Sciences*, 29(6), 707-713.
39. Gupta, S., Singh, D., Gupta, T., and **Chaudhary, S.**(2022). "Effect of limestone calcined clay cement (LC3) on the fire safety of concrete structures". *Computers and Concrete*, 27(4), 263-278.
40. Singh, G.K., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2021). "Methodology for rapid estimation of deflections in two-way reinforced concrete slabs considering cracking". *Journal of Structural Design and Construction Practice-ASCE*, 26(2).
41. Gupta, V., Pathak, D. K., Kumar, R., Miglani, A., Siddique, S., and **Chaudhary, S.**(2021). "Production of colored bi-layered bricks from stone processing waste: structural and spectroscopic characterization". *Construction and Building Materials*, 278, 122339.
42. Gupta, T., Siddique, S., Sharma, R. K., and **Chaudhary, S.**(2021). "Investigating mechanical properties and durability of concrete containing recycled rubber ash and fibers". *Journal of Material Cycles and Waste Management*, 1-13.
43. Bhardwaj, A., Nagpal, A. K., **Chaudhary, S.**, and Matsagar, V. (2021). "Effect of location of load on shear lag behavior of bonded steel-concrete flexural members". *Steel and Composite Structures*, 41 (1), 123-136.
44. Jain, A., Sharma, N., Choudhary, N., Gupta, R., and **Chaudhary, S.**(2021). "Utilization of non-metalized plastic bag fibers along with fly ash in concrete". *Construction and Building Materials*, 291, 123329.
45. Choudhary, S., Gupta, R., Jain, A., and **Chaudhary, S.**(2021). "Experimental Investigation of Rubberized Functionally Graded Concrete". *Revue des Composites et des Materiaux Avances*, 31 (1), 1-11.
46. Kumar, S., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2021). "Rapid prediction of long-term deflections in steel-concrete composite bridges through a neural network model". *International Journal of Steel Structures*, 21, 590–603.
47. Choudhary, S., Singh, A., Jain, A., Gupta, R., and **Chaudhary, S.**(2021). "Effect of Fiber Volume Fraction of Waste Originated Tire Fiber and w/c Ratio on Mechanical Properties of Functionally Graded Concrete". *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 46, 2791–2808.
48. Siddique, S., Gupta, V., **Chaudhary, S.**, Park, S., and Jang, J. G. (2021). "Influence of the precursor, molarity and temperature on the rheology and structural buildup of alkali-activated materials". *Materials*, 14(13), 3590.
49. Vasic, V. M., Pezo, L., Gupta, V., **Chaudhary, S.**, and Radozevic, Z. (2021). "An artificial neural network-based prediction model for utilization of coal ash in production of fired clay bricks: A review". *Science of Sintering*, 53, 37-53.
50. Jain, A., Gupta, R., and **Chaudhary, S.**(2020). "Influence of granite waste aggregate on properties of binary blend self-compacting concrete". *Advances in Concrete Construction*, 10, 127-140.
51. Gupta, V., Pathak, D., Siddique, S., Kumar, R., and **Chaudhary, S.**(2020). "Study on the mineral phase characteristics of various Indian biomass and coal fly ash for its use in masonry construction products". *Construction and Building Materials*, 235, 117413.
52. Gupta, V., Siddique, S., and **Chaudhary, S.**(2020). "Optimum mixing sequence and moisture content for hydrated lime fly ash bricks". *Journal of Cleaner Production*, 285, 124859.
53. Thakare, A. A., Siddique, S., Sarode, S. N., Deewan, R., Gupta, V., Gupta, S., and **Chaudhary, S.**(2020). "A study on rheological properties of rubber fiber dosed self-compacting mortar". *Construction and Building Materials*, 262, 120745.

54. Gupta, T., Siddique, S., Sharma, R. K., and **Chaudhary, S.**(2020). "Effect of aggressive environment on durability of concrete containing fibrous rubber shreds and silica fume". *Structural Concrete*, 1-13.
55. Gupta, V., Pathak, D. K., **Chaudhary, S.**, and Kumar, R. (2020). "Raman Imaging for Measuring Homogeneity of Dry Binary Blend: Combining Microscopy with Spectroscopy for Technologists". *Analytical Science Advances*, 1(2), 89-96.
56. Gupta, S., and **Chaudhary, S.**(2020). "State of the art review on Supplementary Cementitious Materials in India – I: An overview of legal perspective, governing organizations, and development patterns". *Journal of Cleaner Production*, 261, 121203.
57. Bhardwaj, A., Matsagar, V., Nagpal, A. K., and **Chaudhary, S.**(2020). "Bond Behavior in Flexural Members: Numerical Studies". *International Journal of Steel Structures*, 21, 225-243.
58. Thakare, A. A., Singh, A., Gupta, V., Siddique, S., and **Chaudhary, S.**(2020). "Sustainable development of self-compacting cementitious mixes using waste originated fibers: A review". *Resources Conservation and Recycling*, 105250.
59. Jain, A., Siddique, S., Gupta, T., Jain, S., Sharma, R. K., and **Chaudhary, S.**(2020). "Evaluation of concrete containing waste plastic shredded fibers: Ductility properties". *Structural Concrete*, 1–10.
60. Gupta, V., Chai, H. K., Lu, Y., and **Chaudhary, S.**(2020). "A state of the art review to enhance the industrial scale waste utilization in sustainable unfired bricks". *Construction and Building Materials*, 254, 119220.
61. Jain, A., Gupta, R., and **Chaudhary, S.**(2020). "Sustainable development of self compacting concrete by using granite waste and fly ash". *Construction and Building Materials*, 262, 120516.
62. Jain, A., Gupta, R., and **Chaudhary, S.**(2019). "Performance of self-compacting concrete comprising granite cutting waste as fine aggregate". *Construction and Building Materials*, 221, 539-552.
63. Varshney, L. K., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2019). "An efficient and novel strategy for control of cracking, creep and shrinkage effects in steel-concrete composite beams". *Structural Engineering and Mechanics*, 70(6), 751-763.
64. Kumar, P., and **Chaudhary, S.**(2019). "Effect of reinforcement detailing on performance of composite connections with headed studs". *Engineering Structures*, 179, 476-492.
65. Siddique, S., **Chaudhary, S.**, Shrivastava, S., and Gupta, T. (2019). "Sustainable utilisation of ceramic waste in concrete: Exposure to adverse conditions". *Journal of Cleaner Production*, 210, 246-255.
66. Gupta, T., Kothari, S., Siddique, S., Sharma, R.K., and **Chaudhary, S.**(2019). "Influence of stone processing dust on mechanical, durability and sustainability of concrete". *Construction and Building Materials*, 223, 918-927.
67. Luhar, S., **Chaudhary, S.**, and Luhar, I. (2019). "Development of rubberized geopolymer concrete: Strength and durability studies". *Construction and Building Materials*, 204, 740-753.
68. Siddique, S., Gupta, T., Thakre, A.A., Gupta, V., and **Chaudhary, S.**(2019). "Acid resistance of fine bone china ceramic aggregate concrete". *European Journal of Environmental and Civil Engineering*, 25(7), 1219–1232.
69. Gupta, T., Kothari, S., Siddique, S., Sharma, R.K., and **Chaudhary, S.**(2019). "Behaviour of waste rubber powder and hybrid rubber concrete in aggressive environment". *Construction and Building Materials*, 217, 283-291.
70. Gupta, T., Patel, K.A., Siddique, S., Sharma, R.K., and **Chaudhary, S.**(2019). "Prediction of mechanical properties of rubberised concrete exposed to elevated temperature using ANN". *Measurement*, 147, 106870.
71. Saxena, R., Gupta, T., Sharma, R. K., **Chaudhary, S.**, and Jain A. (2018). "Assessment of mechanical and durability properties of concrete containing PET waste". *Scientia Iranica*, 27(1), 1-9.
72. Jain, A., Siddique S., Gupta, T., Sharma, R. K. and **Chaudhary, S.**(2018). "Utilization of shredded waste plastic bags to improve impact and abrasion resistance of concrete". *Environment Development and Sustainability*, 22, 337–362.
73. Saxena, R., Siddique, S., Gupta, T., Sharma, R. K., and **Chaudhary, S.**(2018). "Impact resistance and energy absorption capacity of concrete containing plastic waste". *Construction and Building Materials*, 176, 415-421.



74. Kumar, P., Patnaik A., and **Chaudhary, S.**(2018). "Effect of bond layer thickness on behaviour of steel-concrete composite connections". *Engineering Structures*, 177, 268-282.
75. Siddique, S., Shrivastava, S., and **Chaudhary, S.**(2018). "Evaluating resistance of fine bone china ceramic aggregate concrete to sulphate attack". *Construction and Building Materials*, 186, 826-832.
76. Siddique, S., Shrivastava, S., and **Chaudhary, S.**(2018). "Influence of ceramic waste as fine aggregate in concrete: Pozzolanic, XRD, FT-IR and NMR investigations". *Journal of Materials in Civil Engineering, ASCE*, 30(9), 04018227.
77. Luhar, S., **Chaudhary, S.**, and Luhar, I. (2018). "Thermal resistance of fly ash based rubberized geopolymer concrete". *Journal of Building Engineering*, 19, 420-428.
78. Siddique, S., Shrivastava, S., **Chaudhary, S.**, and Gupta, T. (2018). "Strength and impact resistance properties of concrete containing fine bone china ceramic aggregate". *Construction and Building Materials*, 169, 289-298.
79. Rajawat, D., Siddique, S., Shrivastava, S., **Chaudhary, S.**, and Gupta, T. (2018). "Influence of fine ceramic aggregates on the residual properties of concrete subjected to elevated temperature". *Fire and Materials*, 42(7), 834-842.
80. Gupta, T., Siddique S., Sharma R.K., and **Chaudhary, S.**(2018). "Lateral force microscopic examination of calcium silicate hydrate in rubber ash concrete". *Construction and Building Materials*, 179, 461-467.
81. Jain, A., Siddique S., Gupta, T., Jain, S., Sharma, R. K. and **Chaudhary, S.**(2018). "Fresh, Strength, Durability and Microstructural Properties of Shredded Waste Plastic Concrete". *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 43, 455-465.
82. Siddique, S., Shrivastava, S., and **Chaudhary, S.**(2018). "Durability properties of bone china ceramic fine aggregate concrete". *Construction and Building Materials*, 173, 323-331.
83. Pendharkar, U., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2017). "Closed form expressions for long-term deflections in high-rise composite frames". *International Journal of Steel Structures*, 17(1), 31-42.
84. Siddique, S., Shrivastava, S., and **Chaudhary, S.**(2017). "Lateral force microscopic examination of interfacial transition zone in ceramic concrete". *Construction and Building Materials*, 155, 688-725.
85. Gupta, T., Tiwari, A., Siddique, S., Sharma, R. K., and **Chaudhary, S.**(2017). "Response assessment under dynamic loading and microstructural investigations of rubberized concrete". *Journal of Materials in Civil Engineering, ASCE*, 29(8), 04017062.
86. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2017). "Neural network based approach for rapid prediction of deflections in RC beams considering cracking". *Computers and Concrete*, 19(3), 293-303.
87. Ramnavas, M. P., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2017). "Explicit expressions for inelastic design quantities in composite frames considering effects of nearby columns and floors". *Structural Engineering and Mechanics*, 64, 437-447.
88. Gupta, T., Siddique, S., Sharma, R. K., and **Chaudhary, S.**(2017). "Effect of elevated temperature and cooling regimes on mechanical and durability properties of rubberized concrete". *Construction and Building Materials*, 137, 35-45.
89. Siddique, S., **Chaudhary, S.**, and Shrivastava, S. (2017). "Influence of ceramic waste on the fresh properties and compressive strength of concrete". *European Journal of Environmental and Civil Engineering*, 23(2), 212-225.
90. Kumar, P., **Chaudhary, S.**, and Patnaik, A. (2017). "A review on application of structural adhesives in concrete and steel-concrete composite and factors influencing the performance of composite connections". *International Journal of Adhesion and Adhesives*, 77, 1-14.
91. Ramnavas, M. P., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2017). "Service load analysis of composite frames using cracked span length frame element". *Engineering Structures*, 132, 733-744.
92. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2017). "An automated computationally efficient two stage procedure for service load analysis of RC flexural members considering concrete cracking". *Engineering with Computers*, 33(3), 669-688.

93. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2016). "A tension stiffening model for analysis of RC flexural members under service load". *Computers and Concrete*, 17(1), 29-51.
94. Pendharkar, U., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2016). "Rapid prediction of moments in high-rise composite frames considering cracking and time-effects". *Periodica Polytechnica Civil Engineering*, 61(2).
95. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2016). "Rapid prediction of inelastic bending moments in RC beams considering cracking". *Computers and Concrete*, 18(6), 1113-1134.
96. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2016). "An element incorporating cracking for reinforced concrete skeletal structures at service load". *Advances in Structural Engineering*, 20(9), 1257-1276.
97. Gupta, T., Sharma, R. K., and **Chaudhary, S.**(2016). "Mechanical and durability properties of waste rubber fiber concrete with and without silica fume". *Journal of Cleaner Production*, 112, 702-711.
98. Tripathi, B., and **Chaudhary, S.**(2016). "Performance based evaluation of ISF slag as a substitute of natural sand in concrete". *Journal of Cleaner Production*, 112, 673-683.
99. Gupta, T., **Chaudhary, S.**, and Sharma, R. K. (2015). "Assessment of mechanical and durability properties of concrete containing waste rubber tire as fine aggregate". *Construction and Building Materials*, 73, 562-574.
100. Pendharkar, U., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2015). "Rapid prediction of long-term deflections in composite frames". *Steel and Composite Structures*, 18, 547-563.
101. Ramnavas, M. P., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2015). "Cracked span length beam element for service load analysis of steel concrete composite bridges". *Computers & Structures*, 157, 201-208.
102. Gupta, T., Sharma, R. K., and **Chaudhary, S.**(2015). "Influence of waste tyre fibers on strength, abrasion resistance and carbonation of concrete". *Scientia Iranica*, 22(4), 1481-1489.
103. Gupta, T., Sharma, R. K., and **Chaudhary, S.**(2015). "Impact resistance of concrete containing waste rubber fiber and silica fume". *International Journal of Impact Engineering*, 83, 76-87.
104. Gupta, R. K., Kumar, S., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2015). "Rapid prediction of deflections in multi-span continuous composite bridges using neural networks". *International Journal of Steel Structures*, 15(4), 893-909.
105. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2014). "Analytical-numerical procedure for cracking effect in RC beams". *Engineering Computations*, 31(5), 986-1010.
106. Patel, K. A., Bhardwaj, A., **Chaudhary, S.**, and Nagpal, A. K. (2014). "Explicit expression for effective moment of inertia of RC beams". *Latin American Journal of Solids and Structures*, 12, 542-560.
107. **Chaudhary, S.**, Pendharkar, U., Patel, K. A., and Nagpal, A. K. (2014). "Neural networks for deflections in continuous composite beams considering concrete cracking". *Iranian Journal of Science and Technology Transactions in Civil Engineering*, 38(C1+), 205-221.
108. Vu, T. D., Lee, S. Y., **Chaudhary, S.**, and Kim, D. (2013). "Effects of tendon on static and dynamic behavior of CFTA girder". *Steel and Composite Structures*, 15(5), 567-583.
109. Varshney, L. K., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2013). "Control of time-dependent effects in steel-concrete composite frames". *International Journal of Steel Structures*, 13(4), 589-606.
110. Tripathi, B., Misra, A., and **Chaudhary, S.**(2013). "Strength and abrasion characteristics of ISF slag concrete at different w/c and sand replacements". *Journal of Materials in Civil Engineering, ASCE*, 25(11), 1611-1688.
111. Tadesse, Z., Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2012). "Neural networks for prediction of deflection in composite bridges". *Journal of Constructional Steel Research*, 68(1), 138-149.
112. Cui, J., Kim, D., Koo, K. Y., and **Chaudhary, S.**(2012). "Structural model updating of steel box girder bridge using modal flexibility based deflections". *Baltic Journal of Road and Bridge Engineering*, 7(4), 253-260.

113. Pendharkar, U., **Chaudhary, S.**, and Nagpal, A. K. (2011). "Prediction of moments in composite frames considering cracking and time effects using neural network models". *Structural Engineering and Mechanics*, 39(2), 267-285.
114. Cho, S. G., Kim, D., and **Chaudhary, S.**(2011). "A simplified model for nonlinear seismic response analysis of equipment cabinets in nuclear power plants". *Nuclear Engineering and Design*, 241(8), 2750-2757.
115. Kim, D., **Chaudhary, S.**, Nocete, C. F., Wang, F., and Lee, D. H. (2011). "A probabilistic capacity spectrum strategy for the reliability analysis of bridge pile shafts considering soil structure interaction". *Latin American Journal of Solids and Structures*, 8(3), 291-303.
116. Pendharkar, U., **Chaudhary, S.**, and Nagpal, A. K. (2010). "Neural networks for inelastic mid-span deflections in continuous composite beams". *Structural Engineering and Mechanics*, 36(2), 165-179.
117. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2009). "Control of creep and shrinkage effects in steel concrete composite bridges with precast decks". *Journal of Bridge Engineering, ASCE*, 14(5), 336-345.
118. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2008). "Service load behavior of low rise composite frames considering creep, shrinkage and cracking". *Latin American Journal of Solids and Structures*, 5(4), 237-258.
119. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2007). "Bending moment prediction for continuous composite beams by neural networks". *Advances in Structural Engineering*, 10(4), 439-454.
120. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2007). "A hybrid procedure for cracking, creep, shrinkage and thermal gradient in continuous composite bridges". *Latin American Journal of Solids and Structures*, 4(3), 203-227.
121. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2007). "An analytical-numerical procedure for cracking and time-dependent effects in continuous composite beams under service load". *Steel and Composite Structures*, 7(3), 219-240.
122. Pendharkar, U., **Chaudhary, S.**, and Nagpal, A. K. (2007). "Neural network for bending moment in continuous composite beams considering cracking and time effects in concrete". *Engineering Structures*, 29(9), 2069-2079.
123. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2007). "Hybrid procedure for cracking and time-dependent effects in composite frames at service load". *Journal of Structural Engineering, ASCE*, 133(2), 166-175.

#### ***Conference publications (76)***

01. Gupta, S., Meena, S., and **Chaudhary, S.**(2025). "Side-inflow functionally graded pervious concrete and its potential application in pavement systems". *International Conference on Sustainable Materials and Infrastructure (ICSMI 2025)*, Jammu, India, December 16-18, 2025.
02. Gupta, S., Patra, S. K., and **Chaudhary, S.**(2024). "Upcycling Waste Tyre Rubber as Innovative Slip and Fall Event Reducing (SAFER) Concrete Flooring". *Proc., Recent Advances in Waste Minimization & Utilization-2024 (RAWMU 2024)*, Jalandhar, India, April 23-24, 2024.
03. Yatsenko, E.A., Goltsman, B.M., Novikov Yu.V., Tkachenko, V.D. and **Chaudhary, S.**(2024). "Study of the processes of obtaining and properties of mechanochemically activated geopolymers based on granulated ground blast furnace slag.". *International Conference on Industrial Engineering*, Sochi, Russia, May 19-25, 2024.
04. **Chaudhary, S.**(2024). "Sand Shortage and Remediation in India: through the lens of Construction Industry". *The International Conference on capacity and capability building to investigate global sand crisis*, Boston, USA, June 20-21, 2024.
05. Dwivedi, P., Gupta, S., and **Chaudhary, S.**(2024). "Investigating the clear cover requirement for required fire resistance rating in LC3 concrete columns". *Concrete under Severe Conditions – Environment and Loading (CONSEC 2024)*, Chennai, India, September 25-27, 2024.
06. Singh, A. and **Chaudhary, S.**(2024). "Addressing Key Challenges in Sodium and Potassium-Based One-Part Geopolymers for Practical Construction Use". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.

07. Husain, M. N., Divyansh, Frangadouno, T., Gupta, S., Kim, B., and **Chaudhary, S.**(2024). "Heterogeneous characteristics of recycled Aggregate and their optimum utilization in Concrete". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
08. Singh, K., Nagriwala, S., Gupta, S., and **Chaudhary, S.**(2024). "Evaluating the heterogeneous characteristics of recycled aggregates and their impact on the optimum utilization in concrete". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
09. Yatsenko, E. A., Novikov, Y. V. and **Chaudhary, S.**(2024). "Foamed geopolymer materials based on ceramic waste". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
10. Jadhao, P. G., Tripathi, M., **Chaudhary, S.**, and Gupta, S. (2024). "Development of a novel rotary device for enhanced abrasion treatment of recycled concrete aggregate". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
11. Sunkar, Y., Chaudhary, M. K., Dukic, A., Moneypenny, A., Kim, B., **Chaudhary, S.**and Gupta, S. (2024). "Effect of carbonation on recycled aggregate and requirement of concrete cover". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
12. Khati, H., Carter, S., **Chaudhary, S.**, Kim, B., and Gupta, S. (2024). "Effect of Adhered Mortar Content of Recycled Concrete Aggregate on Concrete Exposed to Elevated Temperatures". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
13. Maitra, S., Evans, A., Gupta, S., **Chaudhary, S.**, and Kim, B. (2024). "Post-Fire Performance of Recycled Aggregate Concrete: Impact of Varied Adhered Mortar Content". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
14. Soni, T., Ratan, A., Gupta, S., and **Chaudhary, S.**(2024). "Post Abrasion Treatment of Recycled Concrete Aggregate (RCA)". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
15. Meghana, P. S., Rohilla, K., Gupta, S., and **Chaudhary, S.**(2024). "Cryogenic Treatment: A Novel Approach for Treatment of Recycled Aggregates". *1st International Symposium on Materials for Sustainable Development (ISMSD 2024)*, Indore, India, December 20-21, 2024.
16. Gupta, S., and **Chaudhary, S.**(2023). "Understanding the significance of quality control on the life cycle of concrete structures under corrosion". *Proc., 10th Asia-Pacific Young Researchers and Graduates Symposium (YRGS 2023)*, Perth, Australia, December 06-08, 2023.
17. Gupta, S., Lal, D.N., Sharma, A., and **Chaudhary, S.**(2023). "A novel mathematical model for temporal effect of buildup and breakdown on cement rheology". *Proc. International Conference on Applied Mathematics and Mechanics (ICAMM 2023)*, Indore, India, October 18-20, 2023.
18. Akash, R.S.K., Singh, S.K., and **Chaudhary, S.**(2023). "AI-driven Urban Planning: Enhancing Infrastructure and Livability". *Proc. International Conference on Applied Mathematics and Mechanics (ICAMM 2023)*, Indore, India, October 18-20, 2023.
19. Gupta, S., and **Chaudhary, S.**(2023). "Recirculation strategy for end of life concrete structures as low carbon construction materials". *Proc., International Symposium on Life Cycle Maintenance of Concrete Infrastructure*, Hong Kong, China, September 25-26, 2023.
20. Gupta, S, and **Chaudhary, S.**(2023). "Resource sustainability and the bubble of carbon neutrality in cement manufacturing industry". *Proc., International Conference on Resource Sustainability (icRS 2023)*, Guildford, United Kingdom, August 07-08, 2023.
21. Gupta, S, Sharma, A., Lazorenko, G., and **Chaudhary, S.**(2023). "Advancing 3D printing of concrete using heat-cured geopolymer". *Proc., Materials Science, Form-Building Technologies and Equipment 2023 (ICMSTE 2023)*, Yalta, Russia, May 16-19, 2023.
22. Patel, K.A., Shewarega, A., **Chaudhary, S.**, and Nagpal, A. K. (2022). "A step-by-step method for time-dependent analysis of composite beams". *Proc., 12th Structural Engineering Convention (SEC 2022)*, Jaipur, ASPS Conference Proceedings, December 19-22, 2022.

23. Jain, P., Gupta, R., and **Chaudhary, S.**(2022). "A literature review on the effect of using ceramic waste as supplementary cementitious material in cement composites on workability and compressive strength". *Materials Today: Proceedings*, , .
24. Choudhary, S., Jain, A., Bhavsar, H., **Chaudhary, S.**, and Choudhary, R. (2021). "Analysis of steel fiber reinforced concrete wall panels under compression, flexural and impact loading". *Materials Today: Proceedings*, , .
25. Choudhary, S., **Chaudhary, S.**, Jain, A., Gupta, R. (2020). "Assessment of effect of rubber tyre fiber on functionally graded concrete". *Materials Today: Proceedings*, , .
26. Gupta, V., Pathak, D. K., Kumar, R., **Chaudhary, S.**(2020). "Application of Raman Spectroscopy for Characterization of Natural Stone Sludge Waste". *Materials Today: Proceedings*, , .
27. Jain, A., Choudhary, R., Gupta, R., **Chaudhary, S.**(2020). "Abrasion resistance and sorptivity characteristics of SCC containing granite waste". *Materials Today: Proceedings*, , .
28. Choudhary, S., **Chaudhary, S.**, Jain, A., Gupta, R. (2020). "Valorization of waste rubber tyre fiber in functionally graded concrete". *Materials Today: Proceedings*, , .
29. Gandhi, S., Gupta, S., and **Chaudhary, S.**(2019). "Segregation studies on light weight aggregate concrete". *Proc., Ninth Asia-Pacific Young Researchers & Graduates Symposium*, Shanghai, China, December 19-20, 2019.
30. Gupta, V., Siddique, S., **Chaudhary, S.**(2019). "Characterization of different types of fly ash collected from various sources in Central India". *Materials Today: Proceedings ICMPC 2019*, , .
31. Agrawal, H., Modhe, S., Gupta, S., and **Chaudhary, S.**(2019). "Porosity based design - An improved design approach for pervious concrete". *Proc., Ninth Asia-Pacific Young Researchers & Graduates Symposium*, Shanghai, China, December 19-20, 2019.
32. Saxena, R., Siddique, S., Gupta, T., Sharma, R.K., and **Chaudhary, S.**(2018). "Utilisation of PET plastic waste as fine aggregate in concrete". *Proc., National Conference on Advances in Sustainable Construction Materials*, Warangal, India, March 15-16, 2018.
33. Gupta, T., Siddique, S., Sharma, R.K., and **Chaudhary, S.**(2018). "Residual mechanical properties of rubber fiber concrete exposed to elevated temperature". *Proc., National Conference on Advances in Sustainable Construction Materials*, Warangal, India, March 15-16, 2018.
34. Gupta, T., Chouhan, D. S., Jain, A., Sharma, R. K., **Chaudhary, S.**, and Jain, S. (2018). "Assessment of fresh and hardened properties of concrete containing polythene bag". *Proc., Advances in Concrete, Structural and Geotechnical Engineering*, New Delhi, India, .
35. Kumar, P., **Chaudhary, S.**and Gupta, R. (2017). "Behaviour of adhesive bonded and mechanically connected steel concrete composite under impact loading". *Procedia Engineering*, , .
36. Banu, S., Choudhary, S., and **Chaudhary, S.**(2016). "Strength and carbonation study on fly ash based geopolymer mortar". *Proc., 7th International Conference of Asian Concrete Federation on Sustainable Concrete for now and the future*, Hanoi, Vietnam, Oct. 30-Nov. 02, 2016.
37. Banu, S., Dave, U., and **Chaudhary, S.**(2016). "Effect of different type of curing on fly ash and slag based geopolymer concrete". *Proc., International Conference on Recent Innovations in Engineering and Technology*, Gunupur, India, November 05-06, 2016.
38. Banu, S., and **Chaudhary, S.** (2016). "Effect of elevated temperatures on rubberized geopolymer mortar". *Proc., International Conference on Recent Innovations in Engineering and Technology*, Gunupur, India, November 05-06, 2016.
39. Tripathi, B., Boehme, L., Chandra, T., and **Chaudhary, S.**(2016). "Research, education and training as part of an action plan to start up a recycling policy in Jaipur, India". *Proc., Central Europe towards Sustainable Building 2016*, Prague, Czech Republic, June 22-24, 2016.
40. Banu, S., Dave, U., and **Chaudhary, S.**(2016). "Effect of different parameters on the compressive strength of rubberized geopolymer concrete". *Multi-disciplinary Sustainable Engineering: Current and Future Trends: Proc., 5th Nirma University International Conference on Engineering*, Ahmedabad, India, November 26-28, 2016.

41. Tripathi, B., Chandra, T., & **Chaudhary, S.**(2015). "Durability and dimensional stability of concrete containing zinc slag as sand". *ACI Special Publication*, , .
42. Haldia, A., Siddique, S., Shrivastava, S., and **Chaudhary, S.**(2015). "A comparative study of fly ash bricks made with blend of clay brick waste and stone dust". *Proc., Advances in Construction Technology and Management*, Nagpur, India, February 19-20, 2015.
43. Gupta, T., **Chaudhary, S.**, and Sharma, R. K. (2015). "Influence of waste rubber tyre particles in concrete pavement". *Proc., Seventh Asia-Pacific Young Researchers & Graduates Symposium*, Kuala Lumpur, Malaysia, August 20-21, 2015.
44. **Chaudhary, S.**, Pendharkar, U., Patel, K. A., and Nagpal, A. K. (2014). "Rapid prediction of long term deflection in high rise composite frames using neural networks". *Proc., Sixth Asia-Pacific Young Researchers & Graduates Symposium*, Thailand, July 31-Aug 01, 2014.
45. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2014). "An analytical-numerical procedure incorporating cracking in RC Frames at service load". *Proc., Sixth Asia-Pacific Young Researchers & Graduates Symposium*, Thailand, July 31-Aug 01, 2014.
46. Kumar, P. and **Chaudhary, S.**(2013). "Experimental investigations for shear bond strength of steel and concrete bonded by epoxy". *Proc., Fifth Asia-Pacific Young Researchers & Graduates Symposium*, Jaipur, October 15-16, 2013.
47. Patel, K. A., **Chaudhary, S.**, and Nagpal, A. K. (2013). "An element incorporating cracking in reinforced concrete beams at service load". *Proc., Fifth Asia-Pacific Young Researchers & Graduates Symposium*, Jaipur, October 15-16, 2013.
48. Tripathi, B. and **Chaudhary, S.** (2013). "Suitability of ISF Slag as fine aggregate in concrete". *Proc., Fifth Asia-Pacific Young Researchers & Graduates Symposium*, Jaipur, October 15-16, 2013.
49. Gupta, T., Tripathi, B., Sharma, R. K., and **Chaudhary, S.**(2013). "Flexural strength, compressive strength and workability of waste rubber concrete". *Proc., Fifth Asia-Pacific Young Researchers & Graduates Symposium*, Jaipur, October 15-16, 2013.
50. Alankar, K. and **Chaudhary, S.**(2012). "Cost optimization of composite beams using genetic algorithm and artificial neural network". *Proc., 2012 International Conference on Computer Technology and Science* , New Delhi, August 18-19, 2012.
51. Tripathi, B. and **Chaudhary, S.**(2012). "Experimental assessment of drying shrinkage of ISF slag concrete". *Proc., Fourth Asia-Pacific Young Researchers & Graduates Symposium*, Hong Kong, December 04-05, 2012.
52. Gupta, R. K ., Patel, K. A., **Chaudhary, S.**and Nagpal, A. K. (2012). "An efficient finite-element model for flexible composite structures". *Proc., Fourth Asia-Pacific Young Researchers & Graduates Symposium* , Hong Kong, December 04-05, 2012.
53. Tripathi, B., and **Chaudhary, S.**(2012). "Corrosion performance of high volume slag concrete at different W/C". *Proc., Twelfth International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Oct. 30-Nov. 02, 2012.
54. Tripathi, B., Misra, A., and **Chaudhary, S.**(2012). "Permeability of concrete containing pyrometallurgical slag as partial replacement of sand". *D.H., Bager, and J., Silfwerbrand, ed., Concrete Structures for Sustainable Community*, , fib Symposium Stockholm 2012, June 14-21, Stockholm, Sweden.
55. Tripathi, B., Misra, A., and **Chaudhary, S.**(2012). "Durability of concrete containing ISF slag as partial replacement of sand". *H., Justnes, and S., Jacobsen, ed., Proc., International Congress on Durability of Concrete*, Norway, June 18-21, 2012.
56. **Chaudhary, S.**, Kim, D., Cho, S. G., Joe, Y. H., and Patel, K. A. (2011). "Seismic behaviour of steel-concrete composite floors in thermal power plants". *Proc., Earthquake Engineering Society of Korea 2011* , Seoul, Korea, March 18, 2011.
57. Cho, S. G., Li, Y. Il, Kim, D., **Chaudhary, S.**, and Yoo, J. S. (2011). "A study on the nonlinear characteristics of electrical equipment cabinets under strong seismic motion". *Transactions, SMiRT 21*, New Delhi, India, November 06-11, 2011.

58. **Chaudhary, S.**, Ali, A., Kim, D., and Cho, S. G. (2011). "Seismic analysis of steel-concrete composite walls of nuclear power plant structures". *Transactions, SMIRT 21*, New Delhi, India, November 06-11, 2011.
59. **Chaudhary, S.**, Ali, A. Patel, K. A., Kim, D., and Cho, S. G. (2011). "Dynamic behaviour of steel-concrete composite shear wall". *Proc., The 2011 World Congress on Advances in Structural Engineering and Mechanics*, Seoul, Korea, September 18-22, 2011.
60. **Chaudhary, S.**, Patel, K. A., Kim, D., Cho, S. G., and Ali, A. (2011). "Dynamic behaviour of steel-concrete composite floors". *Proc., 27th Conference of Korea Institute of Structural Maintenance Inspection and Korea Infrastructure Safety Corporation (Spring 2011)*, Seoul, Korea, May 20, 2011.
61. Patel, K. A., Kim, D., Chaudhary, I. P., and **Chaudhary, S.**(2011). "Service load behaviour of epoxy bonded steel-concrete composite bridges". *Proc., Asia-Pacific Young Researchers & Graduates Symposium 2011*, Taipei, Taiwan, March 25-26, 2011.
62. Kim, D., Park, J., **Chaudhary, S.**, and Miah, M. S. (2011). "Spherical elastomeric bearing for noise and vibration reduction in railway bridges". *Proc., Asia-Pacific Young Researchers & Graduates Symposium 2011*, Taipei, Taiwan, March 25-26, 2011.
63. Kumari, S., and **Chaudhary, S.** (2010). "Strengthening of Steel-concrete composite beams". *Proc. International conference on Innovative World of Structural Engineering (ICIWSE-2010)*, Aurangabad, India, December 25-27, 2010.
64. Kumari, S., Patel, K. A., and **Chaudhary, S.**(2010). "Finite element study of a bonded steel and concrete composite beam". *Proc., International Conference on Innovative World of Structural Engineering (ICIWSE-2010)*, Aurangabad, India, December 25-27, 2010.
65. Patel, K. A., Kumari, S., and **Chaudhary, S.**(2009). "Non-Linear behaviour of steel-concrete composite frames". *Proc. Sustainable Concrete Infrastructure Development (SCID-2009)*, Jaipur, India, May 19-20, 2009.
66. **Chaudhary, S.**, and Nagpal, A. K. (2009). "Simplified technique for the design of steel concrete composite beams using artificial neural networks". *Proc., the First International Conference on Soft Computing Technology in Civil, Structural and Environmental Engineering*, Funchal, Madeira, Portugal, September 01-04, 2009.
67. **Chaudhary, S.**, and Kumari, S. (2009). "Neural network-based structural monitoring and damage detection". *Proc., Civil Engg. Conference- Innovation without limits*, Hamirpur, India, Sept. 18-19, 2009.
68. **Chaudhary, S.**, and Nagpal, A. K. (2009). "Analysis and behaviour of composite structures at service load". *Proc., Int. Conf. Advances in Concrete, Structural and Geotechnical Engineering*, Pilani, India, October 25-27, 2009.
69. **Chaudhary, S.**, and Kumari, S. (2009). "Effect of flexibility of shear connectors on service load behavior of steel-concrete composite structures". *Proc., Int. Conf. Advances in Mechanical and Building Sciences in the 3rd Millenium*, Vellore, India, December 14-16, 2009.
70. **Chaudhary, S.**, Pendharkar, U., and Nagpal, A. K. (2007). "Time-dependent behavior of continuous composite beams". *Proc., Third Int. Conf. Steel and Composite Structures*, Manchester, UK, July 30-August 01, 2007.
71. Naqvi, S. A. A., and **Chaudhary, S.** (2007). "Mortarless Masonry: An Overview". *Proc. International Conference on Recent Developments in Structural Engineering (RDSE-2007)*, Manipal, India, August 30-September 01, 2007.
72. Pendharkar, U., **Chaudhary, S.**, and Nagpal, A. K. (2007). "Neural network model for short term inelastic moments at interior supports of continuous composite beams". *Proc. National Seminar on Soft Computing Methodology-07*, UEC Ujjain, India, March 19-20, 2007.
73. Naqvi, S. A. A., Bajpai, S., and **Chaudhary, S.**(2007). "Mortarless masonry system for accelerated construction". *Proc. Recent Trends in Geotechnical and Structural Engineering (RTGSE-2007)*, Jaipur, India, December 22-23, 2007.
74. Pendharkar, U., **Chaudhary, S.**, and Nagpal, A. K. (2006). "Sensitivity analysis for predicting parameters for ANN for bending moment in continuous composite beams considering concrete cracking". *Proc., Recent Advances in Computational Mechanics and Simulation*, IIT Guwahati, India, December 08-10, 2006.

75. **Chaudhary, S.**, and Gupta, R. C. (2002). "Effect of grouting and reinforcement on hollow block masonry". *Proc., National Seminar on Recent Trends in Civil Engineering*, MBM Engg. College, Jodhpur, India, Feb. 22-23, 2002.
  76. Bharti, S. D., and **Chaudhary, S.** (2002). "Composite steel-concrete construction". *Proc., National Seminar on Recent Trends in Civil Engineering*, MBM Engg. College, Jodhpur, India, Feb. 22-23, 2002.
- Chapters/Video Chapters Published (5)**
01. Gupta, S., and **Chaudhary, S.**(2024). "Conventional and Emerging Materials Used in FRP-Concrete Composites for Earthquake Resistance". In *RC Structures Strengthened with FRP for Earthquake Resistance*, 193-205. (ISBN: 978-981-97-0101-8)
  02. **Chaudhary, S.** (2022). "Sustainable Construction". In *Technology of Home Knowledge Series – MASTERCLASS, created by Association of Infrastructure Industry (India) and JK Cement Limited*, . (ISBN: )
  03. Gupta, S., and **Chaudhary, S.**(2021). "Large Scale Waste Utilisation in Sustainable Composite Materials for Structural Applications". In *Emerging Trends of Advanced Composite Materials in Structural Applications*, 169–177. (ISBN: 9789811616884, 9811616884)
  04. Gupta, S., and **Chaudhary, S.**(2020). "Use of Fly Ash for the Development of Sustainable Construction Materials". In *New Materials in Civil Engineering*, 677–689. (ISBN: "sf #f " sS2Â #f " sS"•
  05. Mandolia, R., Siddique, S., and **Chaudhary, S.**(2020). "Effect of Different Hydrophobic Treatments on Properties of Recycled Aggregate Concrete". In *Lecture Notes in Civil Engineering*, 121–130. (ISBN: 9789811533631)

### Translational Contributions

#### *Naturally Colored Bi-layer Bricks (2021-2022) Technology Transferred*

Developed a novel, naturally coloured bi-layer brick by upcycling dimensional stone processing waste. The novel building product offers three key advantages: (i) environment-friendly, safely disposes of the dimensional stone processing waste, which is a major concern in Rajasthan; (ii) economic, costs lower than the conventional painted masonry wall; and (iii) aesthetically pleasing, natural colouring provides an appealing look to the product. The Technology has been successfully transferred to M/s Abhishek Bricks, Indore, M. P., India, for the period 2022-2025 and is the first technology transfer from IIT Indore (Amount 3.00 Lakh+2% royalty).

#### *GOBAiR™ - a cow dung based foaming agent (2024-2025)*

Developed a first-of-its-kind foaming agent using cow dung, named GOBAiR. The novel foaming agent is a low-cost environment friendly alternative to commercially available foaming agents. The foaming agent has been used to prepare sustainable lightweight bricks. Field trials have been conducted across multiple cities for manufacturing and testing of lightweight bricks, with different industry partners.

#### *Kapila – process of producing handicraft material using cow dung (2023-2024)*

Developed a process of producing handicraft materials using cow dung as the raw material. The developed process can stabilize 100% pure cow dung, i.e., without any additive. The process is designed to promote cow dung as an alternative material for handicraft industry, and provide a second revenue stream for rural communities. A training workshop has been conducted and developed products are currently undergoing market fit trials at the commercial establishment of IIT Indore.

### Professional Affiliations

- Fellow of the Indian Association of Structural Engineers (India). F530
- Fellow of the Institution of Engineers (India). F1268025
- Life Member of Indian Concrete Institute, Chennai (India). LM8595
- Life Member of The Indian Society for Technical Education. LM 36714
- Member of RILEM technical committee 273-RAC, Structural behavior and innovation of recycled aggregate concrete.



- Member of the Indian Green Building Council. (2022-2023) IGBC - IM - 1100283
- Member, Fire and Security Association of India. (2022-2025) IDR-I-0322-1197
- Member, Indian Road Congress, 2023-2024 Member Ship No. 402431

### **Administrative Positions Held**

- Dean, Administration, Indian Institute of Technology (IIT) Indore (Feb 20, 2023 – present)
- Scientific Supervisor, Fuel Energy Waste Recycling Lab, South-Russian State Polytechnic University, NPI, Russia (June 2022 – present)
- Head/Professor-Incharge, Centre for Rural Development and Technology, Indian Institute of Technology (IIT) Indore (April 2020 –April 2023)
- Head, Department of Civil Engineering, Indian Institute of Technology (IIT) Indore (October 2017-March 2019)
- Associate Dean, Planning-III, Indian Institute of Technology (IIT) Indore (September 2017-March 2019)
- Coordinator, Technical Education Quality Improvement Programme (TEQIP), Indian Institute of Technology (IIT) Indore (September 2017 – October 2018)
- Associate Dean, Planning & Development, Malaviya National Institute of Technology (MNIT), Jaipur (June 2016 – May 2017)
- Associate Dean, Research & Consultancy, Malaviya National Institute of Technology (MNIT), Jaipur (November 2013 – May 2016)
- Associate Dean, Academic, Malaviya National Institute of Technology (MNIT), Jaipur (March 2012 – November 2013)
- Core Committee Member/Hub Governing Body Member/Strategic Task Force Member, DRISHTI CPS Foundation, Technology Innovation Hub, Indian Institute of Technology (IIT) Indore (August 2020-contd.)

### **Facilities and Centres established**

- Fuel Energy Waste Recycling Lab at the South-Russian State Polytechnic University, NPI, Russia, as Scientific Supervisor, under the Mega Grant received by the Government of Russian federation
- Centre for Rural Development and Technology (CRDT) at the Indian Institute of Technology Indore, as founding Head
- DRISHTI-CPS Technology Innovation Hub at the Indian Institute of Technology Indore, as founding team Member
- Centre for TEQIP-III at the Indian Institute of Technology Indore, as founding Coordinator
- Department of Civil Engineering at the Indian Institute of Technology Indore, as founding Head

### **Conferences Organised**

01. Joint Organising Secretary of National Conference on Sustainable Concrete Infrastructure Development 2009, May. 19-20, 2009, by Indian Concrete Institute and MNIT Jaipur, Jaipur.
02. Symposium Chair of Fifth Asia and Pacific Young Researchers and Graduates Symposium on “Current Challenges in Structural Engineering”, October 15-16, 2013, MNIT Jaipur.
03. Co-Convener of 8th International Congress on Computational Mechanics and Simulation, December 09-11, 2022, by Indian Association for Computational Mechanics, IIT Indore.
04. Co-Convener of International Conference on Applied Mathematics and Mechanics (ICAMM 2023), October 18-20, 2023, IIT Indore.

05. Chairperson of Rural Innovators Conclave 2024, January 05-06, 2024, Centre for Rural Development and Technology (CRDT), IIT Indore.
06. Co-Convener of 1st International Symposium on Materials for Sustainable Development (ISMSD 2024), December 20-21, 2024, organised under SPARC, IIT Indore.
07. Chairperson of Rural Innovators Conclave II, 2025, March 21-22, 2025, Centre for Rural Development and Technology (CRDT), IIT Indore.

### **Workshops Organised**

01. Indian Lead of One-month short-term training program as part of a joint international research capacity building program, under the project titled “Inspiring the researchers of tomorrow in sustainable concrete construction”, jointly organised by IIT Indore, India, and UoP, UK, sponsored project by SPARC and UKERI, July 13, 2024, to August 09, 2024, IIT Indore.
02. Coordinator of Training Program on Active Learning: Phase A for faculty members of JEC Jabalpur, June 11-15, 2018, IIT Indore.
03. Coordinator of Training Program on Active Learning: Phase B for JEC Jabalpur and MITS Gwalior faculty members, June 18-22, 2018, IIT Indore.
04. Coordinator of Training Program on Active Learning: Phase C for faculty members of MITS Gwalior and GEC Sundarnagar, June 25-29, 2018, IIT Indore.
05. Coordinator of Short Term Course on Sustainable Construction Practices, October 13-15, 2019, IIT Indore.
06. Coordinator of Short Term Course on Precast and Prefabricated Buildings, January 27-31, 2020, IIT Indore.
07. Coordinator of QIP Short Term Course on Sustainable Construction Practices, October 12-18, 2020, IIT Indore.
08. Coordinator of AICTE ATAL Faculty Development Program on Sustainable Construction Technology, July 26-30, 2021, IIT Indore.
09. Coordinator of Short Term Course on Low-Cost Housing for Rural Development, June, 12-14, 2021, IIT Indore.
10. Coordinator of Short Course on Recent Advances in Geotechnical and Structural Engineering, March 8-10, 2018, IIT Indore.
11. Organising Secretary and Convenor of National Seminar on Recent Trends in Geotechnical and Structural Engineering, December 22-23, 2007, MNIT Jaipur.
12. Coordinator of Workshop on AUTOCAD, September 20-21, 2008, under TEQIP, MNIT Jaipur.
13. Coordinator of AUTOCAD workshop, October 23- 24, 2009, MNIT Jaipur.
14. Coordinator of Online Workshop on Mechanics of Metamaterials, January 18 & 25, 2021, IIT Indore.
15. Coordinator of Workshop on Local Waste Utilisation in Rural Construction Activities, December 07, 2021, IIT Indore.
16. Coordinator of Technical Orientation Programme on “Soil & Other Material Properties and Base Map for Urban Infrastructure” for RUIDP Engineers, December 21-23, 2012, MNIT Jaipur.
17. Convener of Technical Seminar on Reimagining Construction Paradigms: Steel for the Next Generation, January 22, 2026, IIT Indore.
18. Coordinator of TEQIP-funded staff development programme on “Finite Element Method”, July 09-13, 2007, MNIT Jaipur.
19. Coordinator of Training programme for Rajasthan Housing Board Engineers on “Multistoried Residential Apartments”, December 08-09, 2007, MNIT Jaipur.
20. Coordinator of MHRD/AICTE sponsored summer school on “Management and Mitigation of Natural Disasters”, July 14-26, 2008, MNIT Jaipur.

21. Coordinator of Two-week MHRD/AICTE sponsored winter school on “Soft Computing Skills in Engineering”, December 11-24, 2008, MNIT Jaipur.
22. Coordinator of Technical Orientation Programme on “Construction of Bridge, CD Works, ROB and RUB for Urban Areas” for RUIDP Engineers, February 24-26, 2012, MNIT Jaipur.
23. Coordinator of Technical Orientation Programme on “Soil & Other Material Properties and Base Map for Urban Infrastructure” for RUIDP Engineers, June 22-24, 2012, MNIT Jaipur.
24. Coordinator of Short-Term Training Programme on “Natural Disaster Management”, October 29-31, 2012, MNIT Jaipur.
25. Coordinator of Workshop on Emerging Trends in Sustainable Construction, March 26-27, 2022, under SERB, IIT Indore.
26. Coordinator of Short Term Faculty Development Programme on “Numerical & Computational Techniques in Engineering”, December 17-22, 2012, MNIT Jaipur.
27. Coordinator of Short Term Training Programme on “Building Materials Characterisation & Testing”, June 1-5, 2015, MNIT Jaipur.
28. Coordinator of Short Term Training Programme on “Building Materials Characterisation & Testing”, June 06-10, 2016, MNIT Jaipur.
29. Coordinator of Short Term Training Programme on “Precast and Prefabricated Buildings”, December 26-30, 2016, MNIT Jaipur.
30. Coordinator of Faculty Induction Workshop: Phase A for faculty members of UEC Ujjain and SGSITS Indore, January 17-21, 2018, IIT Indore.
31. Coordinator of Faculty Induction Workshop: Phase B for faculty members of JEC Jabalpur and SGSITS Indore, January 23-27, 2018, IIT Indore.
32. Coordinator of Faculty Induction Workshop: Phase C for faculty members of REC Rewa, SATI Vidisha, SEI Pithoragarh and SGSITS Indore, January 29, 2018 - February 02, 2018, IIT Indore.
33. Coordinator of Workshop on Properties of Fresh Concrete, March 24-25, 2023, under SERB, IIT Indore.
34. Coordinator of Workshop on Metamaterials, March 26, 2023, under SPARC, IIT Indore.
35. Coordinator of Workshop on Preservation and Protection of Heritage Structures, September 16-17, 2023, under SPARC, IIT Indore.

### **International Collaborations**

- University of Plymouth, UK
- Imperial College London, UK
- King Mongkut’s University of Technology Thonburi, Thailand
- Northeastern University, Boston, USA
- Rostov State Transport University, Russia
- South-Russian State Polytechnic University, NPI, Russia
- The Hong Kong Polytechnic University, Hong Kong
- Université Aix- Marseille, France
- University of Carthage, Tunisia
- University of Edinburgh, UK
- University of Plymouth, UK
- Walailak University, Thailand
- Zhejiang University, China

### **Major Outreach**

#### *Contributions*

01. Associate Editor - Journal of The Institution of Engineers (India): Series A, Springer
02. International Scientific Committee Member - 10th International Symposium on Innovation & Utilization of High-Performance Concrete
03. Session Chair - 7th International Conference of Asian Concrete Federation on Sustainable Concrete
04. Chair - Technical Committee 1: Design of the Asian Concrete Federation
05. International Steering Committee Member - The 9th Asia-Pacific Young Researcher Graduate Symposium 2019
06. International Steering Committee Member - The 10th Asia-Pacific Young Researcher Graduate Symposium 2019
07. Secretary - Technical Committee on "Life Cycle Maintenance of Concrete Infrastructures (TC-LCM)" of Asian Concrete Federation
08. International Steering Committee Member - The 4th Asia-Pacific Young Researcher Graduate Symposium 2012
09. Session Chair - The 6th Asia-Pacific Young Researcher Graduate Symposium 2014
10. International Steering Committee Member - The 7th Asia-Pacific Young Researcher Graduate Symposium 2015
11. Scientific Committee Member - 3rd ACF Symposium on Assessment and Intervention of Existing Structures
12. Co-Chairman - Mini Symposium on Durability and Life Cycle Maintenance of Structure
13. Session Chair - The 7th Asia-Pacific Young Researcher Graduate Symposium 2015
14. Chairman - Expert Advice Group of Scientific School "Green Future" for young scientists
15. Associate Editor - "Cleaner Materials", Elsevier
16. Invited Lecturer - International Symposium on "Structural Assessment and Remediation of Infrastructure"
17. Chair - The 5th Asia-Pacific Young Researcher Graduate Symposium 2013
18. International Steering Committee Member - The 6th Asia-Pacific Young Researcher Graduate Symposium 2014
19. International Steering Committee Member - The 8th Asia-Pacific Young Researcher Graduate Symposium 2017

*Government Advisory Roles*

01. Member - Expert Committee of All India Council for Technical Education
02. Program Evaluator - National Board of Accreditation, All India Council for Technical Education
03. Member - Construction and Related Engineering Services Sectional Committee of Bureau of Indian Standards, New Delhi
04. Member - Pre Construction Services Sub Committee SSD 06: 01
05. Convener - Panel for Preparing Roadmap, SSD 06/P1, Bureau of Indian Standards, New Delhi
06. Expert - Selection Boards of Public Service Commission of different states of India
07. Member - Working Group (WG02) for revision of IS 1542: 1992 Sand for Plaster – Specification