

Curriculum Vitae

1. Personal Information

Prof. Sandeep Chaudhary

Professor, Department of Civil Engineering

Indian Institute of Technology Indore, Simrol, Indore-453552, India

Email: schaudhary@iiti.ac.in | Mobile: +91-9549654195

2. Academic and Research Qualifications

Ph.D. - Indian Institute of Technology Delhi (2006) - Structural Engineering

M.Tech. - Indian Institute of Technology Delhi (2001) - Structural Engineering

B.E. - MBM Engineering College, Jodhpur (2000) - Civil Engineering

3. Work Experience

Professor, IIT Indore (Dec 2018 - Present)

Associate Professor, MNIT Jaipur (2012 - 2018)

Assistant Professor, MNIT Jaipur (2007 - 2012)

Lecturer, MNIT Jaipur (2006 - 2007)

4. Specialization

5. Research Credentials

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|-------------------------------------|---------------------------------------|
| • Sponsored Research Projects: 0 | • Patents: 0 |
| • Journal Publications: 0 | • Books: 0 |
| • Book Chapters: 1 | • Conference Proceedings: 75 |
| • Ph.D. Dissertations Supervised: 0 | • M.Tech. Dissertations Supervised: 0 |

6. Courses Taught

7. Awards / Achievements / Recognitions / Fellowships

8. Sponsored Research Projects

9. Patents

10. List of Publications

Book Chapters

1. 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

, pp. 169–177. ISBN: 9789811616884, 9811616884

Conference Proceedings

1. 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.

2. 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 geopolymer concretes based on granulated ground blast furnace slag."

International Conference on Industrial Engineering

, Sochi, Russia.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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

, .

23. 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

, .

24. Choudhary, S., Chaudhary, S., Jain, A., Gupta, R. (2020). "Assessment of effect of rubber tyre fiber on functionally graded concrete".

Materials Today: Proceedings

, .

25. Gupta, V., Pathak, D. K., Kumar, R., Chaudhary, S. (2020). "Application of Raman Spectroscopy for Characterization of Natural Stone Sludge Waste".

Materials Today: Proceedings

, .

26. Jain, A., Choudhary, R., Gupta, R., Chaudhary, S. (2020). "Abrasion resistance and sorptivity characteristics of SCC containing granite waste".

Materials Today: Proceedings

, .

27. Choudhary, S., Chaudhary, S., Jain, A., Gupta, R. (2020). "Valorization of waste rubber tyre fiber in functionally graded concrete".
Materials Today: Proceedings
, .
28. 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.
29. 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
, .
30. 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.
31. 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.
32. 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.
33. 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.
34. Kumar, P., Chaudhary, S. and Gupta, R. (2017). "Behaviour of adhesive bonded and mechanically connected steel concrete composite under impact loading".
Procedia Engineering
, .
35. 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.
36. 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.
37. 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.
38. 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.
39. 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.

40. Tripathi, B., Chandra, T., & Chaudhary, S. (2015). "Durability and dimensional stability of concrete containing zinc slag as sand".

ACI Special Publication

, .

41. 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.

42. 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.

43. 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.

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.

45. 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.

46. Tripathi, B. and Chaudhary, S. (2013). "Suitability of ISF Slag as fine aggregate in concrete".

Proc., Fifth Asia-Pacific Young Researchers & Graduates Symposium

, Jaipur.

47. 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.

48. 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.

49. 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.

50. 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.

51. 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.

52. 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.

53. 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

, .

54. 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.

55. 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.

56. 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.

57. 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.

58. 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.

59. 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.

60. 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.

61. 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.

62. 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.

63. 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.

64. Chaudhary, S., and Kumari, S. (2009). "Neural network-based structural monitoring and damage detection".

Proc., Civil Engg. Conference- Innovation without limits

, Hamirpur, India.

65. 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.

66. 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.

67. 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.

68. 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.

69. 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.

70. 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.

71. 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.

72. 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.

73. 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.

74. 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.

75. 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.

11. Translational Contributions

12. Professional Affiliations

13. Administrative Positions Held

Dean (Alumni & Corporate Relations), IIT Indore

Head, Department of Civil Engineering, IIT Indore

Dean (Student Welfare), IIT Indore (Past)

14. Facilities and Centres Established

15. Conferences Organised

N/A

16. Continuing Education Programs

N/A

17. International Collaborations

18. Major Outreach

1. Expert (*National Contributions*) - Faculty Selections in Thapar Institute of Engineering & Technology, Patiala
2. Technical Committee Member (*National Contributions*) - International Conference on Advances in Civil Engineering