



Dr. Tabish Izhar

**Assistant Professor, Department of Civil Engineering, Faculty of Engineering,
Integral University, Lucknow
(8400092423, tizhar@iul.ac.in)**

Hyperlinks of ([Google Scholar Citation](#), [Orcid Id](#))

PROFILE

Tabish Izhar is a Civil Engineer and Structural Engineering Specialist, holding a Ph.D. in Civil Engineering with strong civil and structural engineering educational and professional background complemented by work experience in industry, and higher academic teaching. Skilled Researcher with excellent programming skills in Python, MATLAB and Java script. Enthusiastic about supporting advancements in Civil Engineering. Passionate about increasing knowledge to drive growth and needed improvements. His works has been promising in the area of structural engineering with his exceptional knowledge of computational programming in optimization and machine learning. He has been currently working for attaining sustainability and application of artificial intelligence in civil engineering.

- PhD in Civil Engineering, Integral University, Lucknow.
- Masters of Technology, Structural Engineering, NIT Durgapur, Durgapur.
- Bachelors of Technology, Civil Engineering, AMU, Aligarh.

RESEARCH INTEREST:

- Design Optimization in Structural Engineering
- Application of Artificial Intelligence in Civil and Environmental Engineering.
- Sustainable Building Materials.

- Non-Destructive Testing of Concrete.
- Retrofitting of Concrete Structures.

SUMMARY OF RESEARCH ACCOMPLISHMENT:

- Developed India's 1st open-source package -StrucPy, for structural analysis of concrete framed structures. It is also 2nd in the world in terms of capability and generalization.
- Developed world's 1st open-source package -PyRCD, for design and optimization of concrete framed members and structures in terms of capability of including every code guideline as per user's demand. Further, it is also a great tool to assist learning in the field of design for graduating students.
- Engaged in interdisciplinary research collaborations with the other academic institutes and industry.

PROFESSIONAL MEMBERSHIP:

- Chartered Engineer
Certified by The Institution of Engineers, India. (May 2016- till date)
- Associate Member
The Institution of Engineers- AM167000-2
- Associate Professional Engineer
Engineering Council of India (ECI) and Constructional Industry Development Council, India. Registration No. APE/00038/16

COURSE TAUGHT:

- Strength of Materials.
- Design of Reinforced Concrete Elements.
- Advance Reinforced Concrete Design.
- Structural Analysis
- Advance Concrete Technology
- Numerical Techniques and Finite Element Method
- Computer Aided Design in Structural Engineering
- Artificial Intelligence in Civil Engineering

ADMINISTRATIVE/DEPARTMENTAL RESPONSIBILITY

- Coordinator, M.Tech -Structural Engineering, Department of Civil Engineering
- Time Table, In-charge, Department of Civil Engineering
- Head, Technical Society, Department of Civil Engineering
- In-charge of Consultancy, Criteria 3 NAAC, University Level
- Head, Criteria 3, Department of Civil Engineering
- In-charge of Consultancy, Department of Civil Engineering

- Head, Integral Learning Management System, Department of Civil Engineering
- Deputy Quality Manager, Civil Engineering Laboratories, NABL Recognized.
- Member, Flying Squad, Examination, University Level.
- Lab In-charge, Computer Aided Design Laboratory, Department of Civil Engineering
- Lab In-charge, Structural Analysis Laboratory, Department of Civil Engineering
- Faculty Coordinator, Enviro Olympiad- National Level Quiz for Environmental Awareness.
- Faculty Coordinator, Andaze Awadh- Cultural Program, University Level.

STUDENTS SUPERVISION

- M.Tech- 27

PUBLISHED/GRANT PATENTS

- "Patent"- Ultrasonic Concrete Mixer Device to Perform Analysis of Polymer Concrete, The Patent Office, Government of India, 2024-05-10.

PUBLISHED/ACCEPTED SCI/SCOPUS RESEARCH PAPERS

- Izhar, T., Ahmad, S.A. & Mumtaz, N. Multiobjective design optimization of reinforced concrete beam coupled with market practice based constructability function using simulated annealing. Asian J Civ Eng 25, 3901–3914 (2024). <https://doi.org/10.1007/s42107-024-01019-7>
- Izhar. Tabish, Ahmad. Syed Aqeel, Mumtaz. Neha, "PyRCD—Object-oriented Python package for detailed multi-objective design optimization of reinforced concrete beams", Software Impacts, 21(100691), 2024. <https://doi.org/10.1016/j.simpa.2024.100691>
- Izhar, T., Ahmad, S.A. & Mumtaz, N. Multiobjective design optimization of reinforced concrete beam coupled with market practice based constructability function using simulated annealing. Asian J Civ Eng 25, 3901–3914 (2024). <https://doi.org/10.1007/s42107-024-01019-7>
- Ahmad SA, Izhar T, Ahmed T, Mumtaz N. Transformative role of machine learning in design optimization of reinforced concrete frames. International Journal of Advanced Technology and Engineering Exploration. 2024; 11(112):437-458. <http://doi.org/10.19101/IJATEE.2023.10102336>.
- Syed Shuja Askari, Balendu Shekher Giri, Farrukh Basheer, Tabish Izhar, Syed Aqeel Ahmad, Neha Mumtaz, Enhancing sequencing batch reactors for efficient wastewater treatment across diverse applications: A comprehensive review, Environmental Research, 260, 119656,

2024. <https://doi.org/10.1016/j.envres.2024.119656>

- Izhar, T., and Dagar, R., “Comparison of reinforced concrete member design methods of various countries.” *International Journal of Civil Engineering and Technology*, 9(4), 637–646, 2018.
- Izhar, T., Bano, S., and Mumtaz, N. (2019a). “Comparative Study on Analysis and Design of Reinforced Concrete Building under Seismic Forces for Different Codal Guidelines.” *International Journal of Trend in Scientific Research and Development*, 3(4), 536–551.
- Mumtaz, N. & Izhar, T., An Overview of Effect of Fluorosis on Cognitive Health of Children and Its Outcome: an approach towards SDG 3, *Indian Journal of Natural Sciences Vol.13*, Issue 76, February 2023. 53034- 53047

PAPER PUBLISHED IN INTERNATIONAL CONFERENCES

- Izhar, T., and Ahmad, S.A. “Maximizing Efficiency and Sustainability in Concrete Building Frames through Multi-Objective Simulated Annealing” ISSN: 978-93-91303-89-9, Jupiter Publications Consortium, 2023. <http://doi.org/10.47715/JPC.B.978-93-91303-83-9>
- Bano, S., and Izhar, T. (2019). “Design of RC Member Using Different Building Code : A Review.” *Concrete: The Global Builder*, R. K. Dhirr, R. Bedi, S. P. Singh, and S. Goel, eds., UKIERI Concrete Congress, Punjab, India.
- Mumtaz N., Izhar T., Pandey G., Labhasetwar P.K., "Utilizing artificial intelligence for environmental sustainability", *Artificial Intelligence for Renewable Energy systems*, pp. 259 - 279, 2022. <http://doi.org/10.1016/B978-0-323-90396-7.00010-9>
- Mumtaz N., Izhar T., Abbas A., "Validation of Groundwater Quality Index and Proposing a Model Using Fuzzy Logic", *Lecture Notes in Engineering and Computer Science*, 2243, pp. 234 - 239, 2021. ISBN- 978-988140491-6
- Izhar, T., and Roy, P. (2016). “Application of Real Paste Concrete on Mix Design of Pumping Concrete as per Indian Standard Method.” *International Seminar on Emerging Building Materials and Construction Technologies*, New Delhi, India, 111–119.
- Roy, P., and Izhar, T. (2016). “An Efficient Technique for Selecting Mix Proportioning for Pumping Concrete.” *International conference on Advances in Concrete Technology, Materials & Construction Practices (CTMC-2016)*, Goa, 239–245.

PUBLISHED NON-SCI-SCOPUS BUT PEER REVIEWED RESEARCH PAPERS

- Izhar, T., Bano, S., and Mumtaz, N. (2019). “Comparative Study on Analysis and Design of Reinforced Concrete Building under Seismic Forces for Different Codal Guidelines.” *International Journal of Trend in Scientific Research and Development*, 3(4), 536–551.
- Izhar, T., and Raza, Q. (2019). “An Experimental Study to analyze the effect of using glass fiber reinforced polymer bars as main reinforcement in beam and column.” *International*

Journal of Technical Innovation in Modern Engineering & Science, 5(04), 736–743.

- Izhar, T., Singh, K., and Mumtaz, N. (2019). “Use of Artificial Neural Network and Fuzzy Logic in Optimization of Collapsible structure.” *International Journal of Computational Engineering Research*, 9(4), 38–50.
- Siddiqui, A. A., Mumtaz, N., and Izhar, T. (2019). “Assessment of Air Quality in Lucknow City and Proposing a Model Using MATLAB.” *Journal of Emerging Technologies and Innovative Research*, 6(4), 96–101.
- Izhar, T., Nayak, J., and Mumtaz, N. (2017). “Comparative Study between Pre-Engineered RCC Structure and Usual RCC Structure.” *International Journal for Scientific Research & Development*, 5(02), 1714–1717.

BOOK EDITED/ AUTHORED

- Book- Tabish Izhar, "Equation Based Concrete Mix Proportioning", LAP LAMBERT Academic Publishing, 2022. ISBN- 978-6204732497- Book
- Edited Book - *Advances in Structural Engineering*, Aargon Press, New Delhi, ISSN/ ISBN No -978-93-94070-85-1, 2022.

BOOK CHAPTERS

- *Artificial Intelligence Transforming Disaster Management Post-COVID-19 in Asian Continent*, Tabish Izhar, ISSN: 978-93-5470-897-8, Swaranjali Printers, 2023.
 - *COVID-19 impact on Indian Smart Cities: a step toward Build Back Better*, Neha Mumtaz & Tabish Izhar in *Advances in Construction Safety - Proceedings of HSFEA 2020*, Springer Nature Singapore. ISBN No- 9789811940002, 2023.
 - *Utilizing artificial intelligence for environmental sustainability*; Neha Mumtaz, Tabish Izhar, Govind Pandey & Pawan Kumar Labhassetwar in *Artificial Intelligence for Renewable Energy systems*, 1st Edition, Pages 259-279, Elsevier, ISBN No 9780323903967. <https://doi.org/10.1016/B978-0-323-90396-7.00010-9>. August 05, 2022.
 - *Perceptions of School Students regarding Air Pollution: A study of Aurangabad city in Maharashtra, India*; Geetanjali Kaushik, Monowar Alam Khalid, Neha Mumtaz & Tabish Izhar in *Handbook of Environmental Materials Management*, Springer Nature Switzerland. ISSN/ ISBN No 978-3-319-73645-7. https://doi.org/10.1007/978-3-319-58538-3_237-1. August 18, 2022.
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