Taimur Rahman

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As an academician and researcher in Structural Engineering, I am committed to advancing the field through innovative research at the intersection of structural mechanics and artificial intelligence. My work focuses on developing predictive models and leveraging data-driven techniques, particularly machine learning and deep learning, to address complex structural challenges. I also engage in editorial and peer-review activities to support the rigorous dissemination of knowledge in civil engineering. Through interdisciplinary collaboration, I aim to enhance the resilience and performance of built infrastructure using advanced analytical and computational tools.

Work History

Dec 2022 - Current
Assistant Professor, Civil Engineering Department
World University of Bangladesh, Dhaka

Apr 2015 - Nov 2022
Senior Lecturer, Civil Engineering Department
World University of Bangladesh, Dhaka

Sep 2012 - Mar 2015
Lecturer, Civil Engineering Department
World University of Bangladesh, Dhaka

Education

Aug 2017 - Jul 2020
M.Sc. in Structural Engineering
Zhengzhou University [ZZU] - Zhengzhou, China.
- CGPA: 3.93 (out of 4.3)
- Received CSC (China Scholarship Council) Scholarship

Feb 2008 - Jan 2012
B.Sc. in Civil Engineering (Major: Structural Engineering)
Ahsanullah University of Science & Technology [AUST] - Dhaka, Bangladesh
- CGPA: 3.806 (out of 4)
- Dean's List of Honor (2012)
- Received full Scholarship (2008 to 2012)

Publications

- **Rahman, T.,** Momin, M. F., Podder, S. K., Li, H., & Zheng, P. (2025). Optimizing NGBoost with Dynamic Sequential Model-Based Optimization for Predicting UHPC Compressive Strength on Heterogeneous Datasets. Materials Today Communications, 112405.
- **Rahman, T.,** Momin, M. F., & Provasha, A. A. (2025). Comprehensive analysis of structural parameters influencing the fundamental period of steel-braced RC buildings using machine learning interpretability. AI in Civil Engineering, 4(1), 7.
- **Rahman, T.**, Zheng, P., & Sultana, S. (2024). Bayesian Optimized LightGBM model for predicting the fundamental vibrational period of masonry infilled RC frames. Frontiers of Structural and Civil Engineering, 18(7), 1084-1102.
- **Rahman, T.**, Sultana, S., Ahmed, T. et al., (2024). Deep symbolic regression for numerical formulation of fundamental period in concentrically steel-braced RC frames. Asian J Civ Eng 25, 4725–4744.
- **Rahman, T.**, Hasan, M.H., Momin, M.F. et al., (2024). Data-driven approach to predict the fundamental period of steel-braced RC frames using stacked generalization machine learning models. Asian J Civ Eng 25, 2379–2397.
- **Rahman, T.** (2024). Unsupervised Machine Learning-Driven Assessment of Infill Wall Systems for Structural Performance in Soft Stories. Journal of Structural Technology, 8-26.
- **Rahman, T.** and Zheng, P. (2020) 'Numerical Assessment of Temperature Distribution in the Orthotropic Steel Deck and Main Truss of a Rail-cum-road Bridge', American Journal of Engineering Research, 9, pp. 82–93.

Research Works

M.Sc. Thesis

"Study on Thermal Distribution Behavior of the Main Girder of Steel-Concrete Composite Truss Bridge with Highway and Railway Decks". M.Sc. Thesis, Department of Civil Engineering, ZZU, June 2020: Under the supervision of Prof. Guichun Wang, ZZU, China.

B.Sc. Thesis

"Investigation on Reducing Soft Ground Story Problem of an Existing Residential Building by Infill Wall System for Seismic Loading.". B.Sc. Thesis, Department of Civil Engineering, AUST, January 2012: Under the supervision of Prof. Dr. Md. Mahmudur Rahman, AUST.

Reviewing and Editorial Activities

Editorial Board Member: International Journal of Structural Analysis and Advanced Construction Techniques (IJSAACT) (Since 2024)

Reviewer: Engineering Applications of Artificial Intelligence (2024- Present)

Skills

Academic research — Very Good

Professional Skills: Structural simulation; Finite Element Analysis; Building Design, Analysis, and Estimation; Bridge Analysis. — Excellent

Software Skills: ANSYS Parametric Design Language; ETABS; STAAD Pro; Auto CAD (2D); SAP; SAFE; Origin Pro.; MATLAB, Python. — Excellent

Machine learning — Very Good

Accomplishments

- Awarded Chinese Government Scholarship (CSC Scholarship, 2017).
- Enlisted in Dean's List of Honor (Ahsanullah University of Science and Technology, 2012).
- Member of the Institution of Engineers, Bangladesh. (Membership No. A-13343)

Certifications

Jul 2022 Supervised Machine Learning: Regression & Classification [Stanford | Online]

Languages

Has knowledge about Bengali as mother language, Good in spoken and written English.

Reference

Prof. Guichun Wang
Professor, Department of Civil Engineering.
Zhengzhou University, 100 Kexue Ave, Zhongyuan District, Zhengzhou, Henan, China.
Phone: +86 13526573093; E-mail: guichunwang@163.com

Certification

I do hereby certify that all the information given above is true to my knowledge, and if any wrong information is made, I will be liable for it.

Signature: Taimur Rahman