### Curriculum Vitae of Prof. Dr. Md. Abul Hasan

### 1. Personal information

Born: December 31, 1988 (Married, Bangladeshi Citizen)

Language: Bengali and English

Home address: Vill. - Manikpur, P.O. - Rudrorampur, P.S. - Chatkhil,

Dist. - Noakhali, Bangladesh

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#### 2. Education

B.Sc. in Civil Engineering: Chittagong University of Engineering & Technology, 2011 M.Sc. in Disaster Engineering: Chittagong University of Engineering & Technology, 2015

PhD in Civil Engineering: Waseda University, Tokyo, Japan, 2020

Title of PhD Thesis: "Performance Assessment of RC Bridge Structure Retrofitted Using Stainless Steel Rebars and CFRP Sheets" supervised by Professor Mitsuyoshi Akiyama (Chief), Prof. Iwanami, Prof. Sato and Prof. Ono (co-advisors).

# 3. Work Experiences

2012 Jan. - 2015 Nov.: Lecturer, Department of Disaster Engineering & Management, CUET.
2015 Nov. - 2022 June: Assistant Professor, Department of Disaster Engineering & Management.
2022 June - 2024 March: Associate Professor, Department of Disaster Engineering & Management.

2024 March – Till now: Professor, Department of Disaster Engineering & Management. 2020 Oct. – Till now: Chief Consultant, Bangladesh Engineering and Landmark Limited.

2020 Oct. – Till now: Marine Infrastructure Expert.

# 4. Areas of Expertise

- Reliability-based Life-Cycle Assessment of RC Structures
- Life-Cycle Cost of RC Structures
- Retrofitting of RC Structures in Harsh Environment
- Finite Element Analysis
- Application of Machine Learning in Civil Engineering
- Performance Assessment of RC Structures through Experimental and Analytical Approaches

### 5. Awards

- CUET, Best Research Publication Award 2022, for the Faculty of Civil Engineering.
- CUET, Research Fair 2023, Winner (3<sup>rd</sup> Place) in Poster Presentation.
- JCI (Japan Concrete Institute) best paper award, 2018.
- MEXT (Monbukagusho) scholarship for pursuing PhD in Japan (2017 Oct. 2020 Sep.)
- DAAD scholarship for research stay in Germany (2013 Oct. 2014 Jan.)
- JICA funded scholarship to visit Japan for eighteen days (Nov. 3 18, 2012)
- CUET merit scholarship (2007 2011)
- EXIM Bank scholarship (2007 2015)

## 6. Plenary Lectures

- **Hasan M.A.**, Akiyama M. and Kashiwagi K., 2020. Experimental study on flexural behavior of RC beam retrofitted with stainless steel rebars and CFRP sheets. Proceedings of JCI Annual Convention, 2020, Hokkaido, Japan.
- Lim S., Hasan M.A., Akiyama M. and Frangopol D.M., 2020. Reliability-based approach to



- determine the distances from coastline for stainless steel application in RC bridges under airborne chloride hazard. Proceedings of the Seventh International Symposium on Life-Cycle Civil Engineering, 2020, Shanghai, China.
- **Hasan M.A.**, Yan K. and Akiyama M., 2019. Comparison of life-cycle cost of concrete structures using stainless steel rebars with that using carbon steel rebars. Proceedings of Ninth Japan Conference on Structural Safety and Reliability, 2019, Japan.
- **Hasan M.A.**, Yan K., Qi S. and Akiyama M., 2018. Effect of rebar types on the life-cycle cost of RC structures in a marine environment. Proceedings of JCI Annual Convention, 2018, Kobe, Japan.
- **Hasan M.A.**, and Bhuiyan A.R., 2014. Seismic performance evaluation of seismically isolated reinforced concrete building: A case study. 2<sup>nd</sup> International Conference on Advances in Civil Engineering, 2014, Chittagong, Bangladesh.
- Hasan M.A., Islam M.M., Kabir M.H., and Islam M.S., 2012. Strength behavior of mortar using slag as partial replacement of sand. 1<sup>st</sup> International Conference on Advances in Civil Engineering, 2012, Chittagong, Bangladesh.

### 7. Selected Papers

- **Hasan M.A.**, Akiyama M., Kojima K., and Izumi N., 2022. Shear behavior of reinforced concrete beams repaired using a hybrid scheme with stainless steel rebars and CFRP sheets, *Construction and Building Materials*, 363, 12817.
- **Hasan M.A.**, Akiyama M., Kashiwagi K., Kojima K., and Peng L., 2020. Flexural behaviour of reinforced concrete beams repaired using a hybrid scheme with stainless steel rebars and CFRP sheets, *Construction and Building Materials*, 265(2020).
- **Hasan M.A.**, Yan K., Lim S., Akiyama M., and Frangopol D.M., 2019. LCC-based identification of geographical locations suitable for using stainless steel rebars in reinforced concrete girder bridges, *Structure and Infrastructure Engineering*, 16(9), 1201-1227.
- **Hasan M.A.**, Parvin F., Islam M.B., and Hossain M.N., 2023. Investigation of mechanical behavior of mortar using slag as partial replacement of sand based on experimental and machine learning approaches, *Asian Journal of Civil Engineering*.
- **Hasan M.A.**, Islam M.B., and Hossain M.N., 2023. Reliability of artificial neural networks in predicting shear strength of reinforced concrete beams, *Asian Journal of Civil Engineering*.
- Zisan B., Biswas B.K., **Hasan M.A.**, Chanda M., and Dhar, A. 2023. Flexural performance of reinforced concrete beams retrofitted using ferrocement wire mesh, *Architecture and Engineering* 8(1), 71-81.
- Zisan B., **Hasan M.A.**, and Haque N., 2022. Performance assessment of buildings seismically isolated with scrap tire rubber pad isolators, *Asian Journal of Civil Engineering*.
- Zisan B., Haque N., and **Hasan M.A.**, 2022. Seismic vulnerability assessment of masonry building supported by STRP isolators, *Asian Journal of Civil Engineering*.
- **Hasan M.A.**, Akiyama M., and Kashiwagi K., 2020. Experimental study on flexural behavior of RC beam retrofitted with stainless steel rebars and CFRP sheets, *JCI Annual Convention*, 42(2), 1159-1164.
- **Hasan M.A.**, Yan K., Qi S., and Akiyama M., 2018. Effect of rebar types on the life-cycle cost of RC structures in a marine environment, *JCI Annual Convention*, 40(2), 1393-1398.
- **Hasan M.A.**, Lim S., Akiyama M., and Frangopol D.M., 2020. Life-cycle cost analysis for rebar type selection in RC bridge located in coastal region, *Proceedings of the 10<sup>th</sup> International Conference on Bridge Maintenance, Safety and Management*, Japan, 1063-1067.
- Lim S., **Hasan M.A.**, Akiyama M., and Frangopol D.M., 2020. Reliability-based approach to determine the distances from coastline for stainless steel application in RC bridges under airborne chloride hazard, *Proceedings of the Seventh International Symposium on Life-Cycle Civil Engineering*, China, 1103-1109.
- **Hasan M.A.**, Yan K., and Akiyama M., 2019. Comparison of life-cycle cost of concrete structures using stainless steel rebars with that using carbon steel rebars, *The Ninth Japan Conference on Structural Safety and Reliability*, Japan.
- Hasan M.A., and Bhuiyan M.A.R, 2018. Seismic fragility assessment and retrofit of a government

- hospital building in Chittagong, Bangladesh, *Malaysian Journal of Civil Engineering*, 30(1), 69-84.
- **Hasan M.A.**, 2016. Performance of reinforced concrete hospital building subjected to earthquake using base-isolation system, *Malaysian Journal of Civil Engineering*, 28(2), 257-269.
- Biswas S., **Hasan M.A.**, and Islam M.S., 2015. Stilt housing technology for flood disaster reduction in the rural areas of Bangladesh, *International Journal of Research in Civil Engineering, Architecture & Design*, 3(1), 1-6.
- **Hasan M.A.**, and Bhuiyan A.R., 2014. Seismic performance evaluation of seismically isolated reinforced concrete building: A case study, 2<sup>nd</sup> International Conference on Advances in Civil Engineering, Chittagong, Bangladesh.
- **Hasan M.A.**, Islam M.M., Kabir M.H., and Islam M.S., 2012. Strength behavior of mortar using slag as partial replacement of sand, *Ist International Conference on Advances in Civil Engineering*, Chittagong, Bangladesh.
- **Hasan M.A.**, and Bhuiyan A.R., 2015. Fragility assessment of an existing reinforced concrete hospital building, *National Conference on Earthquake and Environmental Disasters*, Chittagong, Bangladesh.