



DR. TAHMINA NASNIM NAHAR

ড. তাহমিনা তাসনিম নাহার

ASSOCIATE PROFESSOR

Department of Civil Engineering, Pabna University of Science and Technology, Pabna-6600, Bangladesh

PERSONAL INFORMATION

- ❖ Gender: Female
- ❖ Date of Birth: December 17, 1988
- ❖ Father's Name: Md Idris Ali
- ❖ Mother's Name: Shuly
- ❖ Nationality: Bangladeshi
- ❖ Blood Group: A+
- ❖ Religion: Islam
- ❖ Marital status: Married
- ❖ Present Address: Afser Tower, Road#02, Block#Ka, Munsurabad R/A, Pabna Sadar, Pabna, Bangladesh
- ❖ Permanent Address: Kuralia, Kuralia-6712, Sirajganj Sadar, Sirajganj, Bangladesh

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RESEARCH INTERESTS

- ❖ Earthquake engineering
- ❖ Structural dynamics
- ❖ Structural system identification
- ❖ Soil-Structure interaction
- ❖ Seismic hazard analysis
- ❖ Retrofitting of concrete structures
- ❖ Structural vibration control
- ❖ Structural health monitoring

EDUCATION

Ph.D. in Civil Engineering (2021)

Graduate School of Civil and Environmental Engineering, [Kunsan National University](#), Gunsan-si, Republic of Korea.

Thesis Title: "Probabilistic Seismic Risk Prediction and Safety Assessment of Concrete Gravity Dam Subjected to Earthquake Load"

Supervisor: [Prof. Dookie Kim, Ph.D.](#)

M.Sc. in Civil Engineering (2017)

Department of Civil Engineering, [Bangladesh University of Engineering and Technology](#), Dhaka, Bangladesh

Thesis Title: "Experimental Investigation on Strengthening of Flat Plate Slab Using Steel Beam"

Supervisor: [Prof. Raquib Ahsan, Ph.D.](#)

B.Sc. in Civil Engineering (2010)

Department of Civil Engineering, [Rajshahi University of Engineering and Technology](#), Rajshahi, Bangladesh

Thesis Title: "Effect of Wire Mesh on The Strength of R.C.C. Beams Repaired Using Ferrocement Layers"

Supervisor: Prof. Shaikh Md. Nizamud-doulah, Ph.D.

H.S.C. (2005)

[New Govt. Degree College](#), Rajshahi, Bangladesh

S.S.C. (2003)

[Rajshahi Govt. Girls' High School](#), Helenabad, Rajshahi, Bangladesh

TEACHING EXPERIENCE

Associate Professor September 05, 2021–Present

Department of Civil Engineering, Pabna University of Science and Technology, Pabna, Bangladesh.

Assistant Professor September 1, 2015–Sep. 4, 2021

Department of Civil Engineering, Pabna University of Science and Technology, Pabna, Bangladesh.

Lecturer September 1, 2013–August 31, 2015

Department of Civil Engineering, Pabna University of Science and Technology, Pabna, Bangladesh.

Lecturer January 1, 2013–August 31, 2013

Department of Civil Engineering, World University of Bangladesh, Dhaka, Bangladesh.

Lecturer January 1, 2011–December 31, 2012

Department of Civil Engineering, America Bangladesh University, Dhaka, Bangladesh.

MEMBERSHIP/ EXT. AFFILIATIONS

- ❖ Member, IEB, BD.
- ❖ Doctoral Fellow, KSNU, ROK.
- ❖ Alumni, Structural System Lab., KOR
- ❖ Researcher, Korean National R&D Project, ROK.
- ❖ Alumni, K-Water, KOR
- ❖ E-T Member, BSAK, KOR (Mar. 1, 2021-Oct. 31, 2019)

AWARDS / HONOURS RECEIVED

- ❖ Research Excellence Award 2022 from Pabna University of Science and Technology.
- ❖ BK21+ Scholarship (Mar. 1 2018 to Feb. 28, 2021).
- ❖ Research Grant, KETEP & MOTIE of the ROK (No. 20171510101960, Prof. Dookie Kim)
- ❖ Research Grant, The NRF of Korea Grant funded by the Korean Government (NRF-2018R1A2B2005519, Prof. Dookie Kim).
- ❖ Research Grant, Fundamental Technology Development Program for Extreme Disaster Response, MOIS, (2017-MOIS31-002, Prof. Dookie Kim).
- ❖ Research grants, UGC, Bangladesh (Year: 2014, 2015, 2021).
- ❖ HEQEP Subproject: 2093 research grand under "Seismic Risk Mitigation through Retrofitting of Civil Infrastructure in Bangladesh".
- ❖ Research fund from BUET for M.Sc. Engineering.
- ❖ Merit scholarship (B.Sc.) from RUET (2006, 2007, 2008, 2009).
- ❖ Award and scholarship at HSC examination level from Mayor of Rajshahi division, BD
- ❖ Scholarship at HSC examination from RAKUB, Rajshahi, BD
- ❖ Scholarship at SSC examination from RAKUB, Rajshahi, BD
- ❖ Primary school merit scholarship from government of Bangladesh in Rajshahi Division, BD
- ❖

ADMINISTRATIVE/OTHER ACTIVITIES

- ❖ Chairman, Department of CE, PUST (Mar. 12, 2016-Mar. 17, 2018).
- ❖ Member, Academic Council, PUST (12 March 2016 to 17 March 2018).
- ❖ Member, Planning Committee, Department of CE, PUST (Sep. 1, 2014-Mar. 11, 2016).
- ❖ Chairman, Planning Committee, Department of CE, PUST (Mar. 12, 2016-Mar. 17, 2018).
- ❖ Chairman, Exam Committee, Department of CE, PUST (Session: 2012-2013 (3rd year, and 4th year), 2013-2014 (2nd year and 3rd year), 2014-2015 (2nd year and 3rd year), 2016-2017 (1st year))

PUBLICATIONS

Journal Articles

2023

1. Kamrul Hasan, Md Mafuzur Rahaman, Muaz Bin Ali, Mst. Arefin Jannat Urmi, Noshin Anjum Fariha, Md. Toriqule Islam, Tahmina Tasnim Nahar and Fadzil Mat Yahaya, A comprehensive review of the application of waste tire rubber in concrete/mortar as fine aggregate replacement, *Architecture, Structures and Construction*, 2023. DOI: <https://doi.org/10.1007/s44150-023-00102-y>

2022

2. Md Ikram Uddin, Tahmina Tasnim Nahar, Dookie Kim and Kee-Dong Kim (2022), *Dynamic behavior of intake tower considering hydrodynamic damping effect*, *Structural Engineering and Mechanics*, 82, 3, 2022, pp. 355-367. DOI: <https://doi.org/10.12989/sem.2022.82.3.355>.
3. Tahmina Tasnim Nahar, Md Motiur Rahman, Dookie Kim (2022), *Variation of reliability-based seismic analysis of an electrical cabinet in different NPP location for Korean Peninsula*, *Nuclear Engineering and Technology*, 54, 3, 2022, pp. 926-939. DOI: <https://doi.org/10.1016/j.net.2021.09.026>
4. Md Motiur Rahman, Tahmina Tasnim Nahar, Dookie Kim and Dae Wook Park (2022), *Seismic performance evaluation of base-isolated nuclear power plant reactor building considering aging effect of isolation device*, *Journal of Nuclear Science and Technology*, DOI: <https://doi.org/10.1080/00223131.2022.2063959>.
5. Md Motiur Rahman, Tahmina Tasnim Nahar, Dookie Kim and Dae Wook Park (2022), *Numerical modeling and shake table test for seismic response evaluation of an auxiliary building in NPP with reinforced concrete shear wall*, *Nuclear Technology*, DOI: <https://doi.org/10.1080/00295450.2022.2033597>.
6. Md Motiur Rahman, Tahmina Tasnim Nahar, Dookie Kim and Dae Wook Park (2022), *Location Sensitivity of non-structural component for channel-type auxiliary building considering primary-secondary structure interaction*, *International Journal of Engineering*, 35, 5, pp. 1268-1282. DOI: <https://dx.doi.org/10.5829/ije.2022.35.07a.06>.

2021

7. Tahmina Tasnim Nahar, Md Motiur Rahman and Dookie Kim (2021), *Damage index based seismic risk generalization for concrete gravity dams considering FFDI*, *Structural Engineering and Mechanics*, 78, 1, pp. 53-66, DOI: <http://dx.doi.org/10.12989/sem.2021.78.1.053>.
8. Tahmina Tasnim Nahar, Md Motiur Rahman and Dookie Kim (2020), *Effective safety assessment of aged concrete gravity dam based on the reliability index in a seismically induced site*, *Applied Sciences*, Vol. 11, No. 5: 1987, pp. 1-23, DOI: <https://doi.org/10.3390/app11051987>.
9. Tahmina Tasnim Nahar, Md Motiur Rahman and Dookie Kim (2021), *Seismic capacity evaluation of fire-damaged cabinet facility in a nuclear power plant*, *Nuclear Engineering and Technology*, 53, 4, pp. 1331-1344, DOI: <https://doi.org/10.1016/j.net.2020.09.004>.
10. Md Motiur Rahman, Tahmina Tasnim Nahar and Dookie Kim (2021), *Seismic response characterization of shear wall in auxiliary building of nuclear power plant*, *Journal of the Earthquake Engineering Society of Korea*, 25 (3), pp. 93-102. DOI: <http://doi.org/10.5000/EESK.2021.25.3.093>.
11. Md Motiur Rahman, Tahmina Tasnim Nahar and Dookie Kim (2021), *FeView: Finite element model (FEM) visualization and post-processing tool for OpenSees*, *SoftwareX*, 15(July), pp. 1-8. DOI: <https://doi.org/10.1016/j.softx.2021.100751>.
12. Md Motiur Rahman, Tahmina Tasnim Nahar and Dookie Kim (2021), *Effect of Frequency Characteristics of Ground Motion on Response of Tuned Mass Damper Controlled Inelastic Concrete Frame Buildings*, *Buildings*, Vol. 11, No. 2: 74, pp. 1-17, DOI: <https://doi.org/10.3390/buildings11020074>.

- ❖ Member, Exam Committee, Department of CE, PUST (Session: 2012-2013 (1st year and 2nd year), 2013-2014 (1st year), 2014-2015 (1st year), 2015-2016 (1st year and 2nd year), 2016-2017 (1st year)).
- ❖ Co-Convener, Venue Maintenance Committee, Admission Test, PUST (Session: 2017-2018).
- ❖ Member, Venue Maintenance Committee, Admission Test, PUST (Session: 2016-2017, 2015-2016 and 2014-2015).
- ❖ Convener, Staff Recruitment Committee, PUST, 2017.
- ❖ Joint-Secretary, Teachers Association of PUST (From January 01, 2017 to December 31, 2017)
- ❖ Executive Member, Teachers Association of PUST (From January 01, 2018 to March 17, 2018).

LANGUAGE

- ❖ Bengali (native) ■■■■■
- ❖ English ■■■■■
- ❖ Hindi (speaking) ■■■■■

COMPUTER PROGRAMMING

- ❖ MATLAB ■■■■■
- ❖ Python ■■■■■
- ❖ Fortran ■■■■■

COMPUTER SOFTWARE SKILLS

- ❖ ABAQUS ■■■■■
- ❖ SAP2000, ETABS ■■■■■
- ❖ CSiBridge, STAAD.Pro ■■■■■
- ❖ midas Gen, Civil ■■■■■
- ❖ OpenSees ■■■■■
- ❖ ANSYS ■■■■■
- ❖ AutoCAD ■■■■■
- ❖ LS-DYNA ■■■■■
- ❖ MS Word, Excel, PowerPoint, Visio ■■■■■

CONDUCTED COURSES

Theoretical Courses:

- ❖ CE 1203: Engineering Mechanics
- ❖ CE 2103: Engineering Materials
- ❖ CE 2111: Mechanics of Materials-I
- ❖ CE 2151: Structure-I (Arch. Dept.)
- ❖ CE 2213: Mechanics of Materials-II
- ❖ CE 2251: Structure-II
- ❖ CE 2207: Elements of Civil Engineering Structures (URP Dept.)
- ❖ CE 3111: Structural Analysis & Design-I
- ❖ CE 3115: Reinforced Concrete-I
- ❖ CE 3151: Structure-III (Arch. Dept.)
- ❖ CE 3213: Structural Analysis & Design-II
- ❖ CE 3217: Reinforced Concrete-II

2020

13. Tahmina Tasnim Nahar, Anh-Tuan Cao and Dookie Kim (2020), *Risk assessment of aged concrete gravity dam subjected to material deterioration under seismic excitation*, International Journal of Concrete Structures and Materials, Vol. 14, No. 53, 2020, pp. 1-17, DOI: <https://doi.org/10.1186/s40069-020-00430-z>.
14. Tahmina Tasnim Nahar, Md Motiur Rahman and Dookie Kim (2020), *PSHRisk-Tool: A python-based computational tool for developing site seismic hazard analysis and failure risk assessment of infrastructure*, Applied Sciences, Vol. 10, No. 21: 7487, pp. 1-26, DOI: <https://doi.org/10.3390/app10217487>.

2019

15. Anh-Tuan Cao, Tahmina Tasnim Nahar, Dookie Kim and Byoungan Choi (2019), *Earthquake risk assessment of concrete gravity dam by cumulative absolute velocity and response surface methodology*, Earthquakes and Structures, Vol. 17, No. 5, 2019, pp. 511-519, DOI: <http://dx.doi.org/10.12989/eas.2019.17.5.511>.

2017

16. Tahmina Tasnim Nahar and Md Motiur Rahman (2017), *Performance of different bracing system on displacement of first soft storied steel building under seismic load*, International Journal for Research in Applied Science & Engineering Technology, Vol. 5, No. 9, pp. 530-534, DOI: <https://doi.org/10.22214/IJRASET.2017.9077>.
17. Md Motiur Rahman, Md Abdul Alim and Tahmina Tasnim Nahar (2017), *Variability in the geotechnical properties of soils of Barind tract in Bangladesh*, International Journal of Engineering Applied Sciences and Technology, Vol. 2, No. 6, pp. 58-64.

2015

18. Tahmina Tasnim Nahar and Md Motiur Rahman (2015), *Strengthening of RCC Beams Using Bamboo Sticks*, International Journal of Advanced Science and Technology, 79, pp. 15-24, DOI: <http://dx.doi.org/10.14257/ijast.2015.79.02>.
19. Tahmina Tasnim Nahar, Md Motiur Rahman (2015), *Performance of solid waste ash (SWA) as partial replacement of cement and glass powder (GP) as partial replacement of sand in concrete*, International Journal for Research & Development in Technology, 4, 2, pp. 23-27.
20. Md Motiur Rahman, Tahmina Tasnim Nahar (2015), *Influence of marble dust on shear strength behavior of sand*, International Journal for Research & Development in Technology, 4, 2, pp. 28-35, 2015.
21. Md. Motiur Rahman, Tahmina Tasnim Nahar (2015), *Effect of pH on shear strength behavior of granular soil*, Global Journal of Researches in Engineering (E), 15, 1, pp. 31-34.

2014

22. Tahmina Tasnim Nahar, Md Motiur Rahman, Md Rashedul Haque, Ashish Kumer Saha (2014), *Effect of wire mesh on the strength of R.C.C. beams repaired using ferrocement layers*, International Journal for Research & Development in Technology, 1, 1, pp. 13-18.

2013

23. Md Motiur Rahman, Ashish Kumer Saha, Md Rashedul Haque, Tahmina Tasnim Nahar (2013), *Effect of burnt solid wastes on shear strength behavior of granular soil*, International Journal of Advanced Scientific Engineering & Technological Research, 2, 3, pp. 10-16.
24. Ashish Kumer Saha, Md Rashedul Haque, Tahmina Tasnim Nahar, Md Motiur Rahman (2013), *Application of traffic management plan a sustainable solution*, International Journal of Recent Development in Engineering and Technology, 1, 3, pp. 11-15.
25. Ashish Kumer Saha, Bulbul Ahmed, Md Motiur Rahman, Tahmina Tasnim Nahar (2013), *Analysis of traffic congestion and remedial measures at traffic mor in Pabna city, Bangladesh*, International Journal of Recent Development in Engineering and Technology, 1, 2, pp. 23-26.

Conference Proceedings

2021

- ❖ CE 3251: Structure-IV (Arch. Dept.)
- ❖ CE 4151: Transportation Engineering-II
- ❖ CE 4213: Pre-stressed Concrete
- ❖ CE 4251: Structure-VI (Arch. Dept.)

Sessional Courses:

- ❖ CE 1202: Practical Surveying
- ❖ CE 1210: Civil Engineering Drawing-II
- ❖ CE 2104: Engineering Materials Sessional
- ❖ CE 2214: Mechanics of Materials Sessional-II
- ❖ CE 2250: Building Materials and Constructions Workshops (Arch. Dept.)
- ❖ CE 3112: Structural Analysis & Design Sessional-I
- ❖ CE 3142: Environmental Engineering Sessional-I
- ❖ CE 3218: Reinforced Concrete Sessional-II
- ❖ CE 4112: Structural Analysis & Design Sessional-II
- ❖ CE 4210: Structural Analysis & Design Sessional-III

CONFERENCE/SEMINAR ATTENDED

- ❖ Earthquake Engineering Society of Korea Conference; Period: Jun. 19-22, 2011; Mar. 19, 2021; Organized by: EESK, ROK; Venue: online.
- ❖ The K-water & UNESCO i-WSSM Summer Program on Water Management-Integrated Water Resources Management; Period: Jun. 29-Jul. 03, 2020, Organized by: K-water, ROK.
- ❖ Korea Institute for Structural Maintenance and Inspection Autumn Conference; Period: Oct. 9-10, 2019; Organized by: KSMI; Venue: Hanwha Resort Haeundae, Busan, ROK.
- ❖ International Conference on Earthquake Engineering and Post Disaster Reconstruction Planning; Period: Apr. 25-27, 2019; Organized by: KhEC & KhCE; Venue: KhEC, Bhaktapur, Nepal.
- ❖ International Conference on Planning, Architecture and Civil Engineering, Period: Feb. 7-9, 2019, Organized by: Faculty of CE; Venue: Dept. of CE, RUET, BD.
- ❖ International Conference on Planning, Architecture and Civil Engineering, Period: Feb. 9-11, 2017, Organized by: Faculty of CE; Venue: Dept. of CE, RUET, BD.

TRAININGS

- ❖ Course: "SPSS Statistics Basic" Institute: Data Solution Inc., ROK
- ❖ Course: "Community Participation and Management of Water Supply & Sanitation" Institution: ITN-BUET, BD

HOBBIES

- ❖ Travelling
- ❖ Reading books
- ❖ Outing with family and friends

1. Tahmina Tasnim Nahar, Md Motiur Rahman, Dookie Kim (2021), *Seismic capacity estimation of fire-damaged electrical cabinet in NPP due to material strength degradation*, Proceedings of the Earthquake Engineering Society of Korea (EESK) Conference 2021, Online, Earthquake Engineering Society of Korea, 24, 19 March 2021.

2019

2. Tahmina Tasnim Nahar, Md Motiur Rahman, Sungkyu Chang, Dookie Kim, *Failure risk deaggregation for concrete gravity dam based on different damage stages in seismic zone*, *Seismic safety assessment technology for dam reservoirs and bridges*, Special Session, Proceedings of the Korea Institute for Structural Maintenance and Inspection (Fall 2019 Conference), Hanwha Resort Haeundae, Busan, Republic of Korea, 10-11 October 2019.
3. Tahmina Tasnim Nahar, Anh-Tuan Cao, Md Motiur Rahman, Md Ariful Islam and Dookie Kim, *Seismic analysis of concrete gravity dam considering various water levels and soil-structure interaction*, Proceedings of the International Research Colloquium, ASEAN-Korea Centre, Seoul, Republic of Korea, 29 June 2019.
4. Tahmina Tasnim Nahar, Md Motiur Rahman, Anh-Tuan Cao, and Dookie Kim, *Strategy of cumulative absolute velocity for earthquake risk assessment of concrete gravity dam*, Proceedings of the 2nd International Conference on Earthquake Engineering and Post Disaster Reconstruction Planning, Bhaktapur, Nepal, 25-27 April 2019.
5. Tahmina Tasnim Nahar, Anh-Tuan Cao, Dookie Kim, Byung Han Choi, *Earthquake risk prediction of dam using time-varying cumulative absolute velocity (CAV)*, Proceedings of the Korea Institute for Structural Maintenance and Inspection (Spring Conference 2019), Lekai Sandpine, Gangneung, Rep. of Korea, 10-12 April 2019.
6. Tahmina Tasnim Nahar, Anh-Tuan Cao, Dookie Kim, Jang Seong-kyu, *Time-dependent seismic risk assessment of gravity dams considering concrete deterioration*, Proceedings of the Korea Institute for Structural Maintenance and Inspection (Spring Conference 2019), Lekai Sandpine, Gangneung, Republic of Korea, 10-12 April 2019.
7. Tahmina Tasnim Nahar, Md Motiur Rahman, Anh-Tuan Cao, and Dookie Kim, *Seismic risk assessment based on drift ratio for steel frame using high dimensional model representation and incremental dynamic analysis*, Proceedings of the 2nd International Conference on Planning, Architecture and Civil Engineering, RUET, Rajshahi, Bangladesh, 07-09 February 2019.
8. Md Motiur Rahman, Tahmina Tasnim Nahar, Sungkyu Chang, Dookie Kim, *Vibration control of concrete structure by TMD considering non-linear effects of materials under seismic excitation*, Proceedings of the Korea Institute for Structural Maintenance and Inspection (Autumn 2019 Conference), Hanwha Resort Haeundae, Busan, Republic of Korea, 10-11 October 2019.
9. Md Motiur Rahman, Tahmina Tasnim Nahar, and Dookie Kim, *Seismic reliability assessment of calibrated concrete gravity dam using high-dimensional model representation and Cornell's approach: a case study*, Proceedings of the 2nd International Conference on Earthquake Engineering and Post Disaster Reconstruction Planning, Bhaktapur, Nepal, 25-27 April, 2019.
10. Anh-Tuan Cao, Tahmina Tasnim Nahar, and Dookie Kim, *Optimization of vibration control using outrigger and pendulum tuned mass damper system for high-rise building*, Proceedings of the 2nd International Conference on Planning, Architecture and Civil Engineering, RUET, Rajshahi, Bangladesh, 07-09 February 2019.

2017

11. Tahmina Tasnim Nahar, Abu Zakir Morshed, *Seismic analysis of first soft storied steel frame building with and without steel bracing*, Proceedings of International Conference on Planning, Architecture and Civil Engineering, RUET, Rajshahi, Bangladesh, 09-11 February 2017.

Book Chapter

2021

1. Anh-Tuan Cao, Thanh-Tuan Tran, Tahmina Tasnim Nahar, and Dookie Kim (2020), "A proposed method for inspecting and predicting the seismic vulnerability of dam structures in Korea," Lecture Notes in Civil Engineering book series, 80, Springer, Singapore, DOI: https://doi.org/10.1007/978-981-15-5144-4_99.

ACADEMIC REFERENCES

Prof. Dookie Kim, Ph.D.

Dept. Civil and Env. Eng., Kongju National University

Address: Room#404-1, Hall of Civil & Env. Eng., Cheonan, Chungnam 31080, Rep. of Korea.

Phone: +82-41-521-9315; E-mail: kim2kie@kongju.ac.kr

Prof. Dae Wook Park, Ph.D.

Dept. of Civil and Env. Eng., Kunsan National University

Address: Room#6302, Engineering Building 4, Kunsan National University, Gunsan, Jeollabuk-54150, Rep. of Korea.

Phone: +82-63-469-4876; E-mail: dpark@kunsan.ac.kr

Prof. Raquib Ahsan, Ph.D.

Dept. of CE, BUET

Address: Room#638, Dept. of CE, BUET, Dhaka-1000, BD.

Mobile: +880 1789-170046; E-mail: raquibahsan@ce.buet.ac.bd

DECLARATION

I swear that all of the following information is accurate and true.

Dr. Tahmina Tasnim Nahar
