

# Dr. Naqeeb Ul Islam

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<b>Date of Birth</b>	<b>Gender</b>
1993/08/26	Male

I am an Assistant Professor in the School of Civil Engineering at Shri Mata Vaishno Devi University (SMVDU), Katra, J&K. Previously, I served as an Assistant Professor (on contract) at the National Institute of Technology (NIT) Srinagar, J&K. With a profound passion for research, teaching, and lifelong learning, my work primarily focuses on structural control and earthquake engineering—key areas vital for advancing resilient and sustainable infrastructure. My academic journey is driven by the aspiration to foster collaboration within diverse scholarly communities, share insights, and contribute to transformative advancements in civil engineering. I am committed to shaping the next generation of engineers and researchers while striving to make a significant and lasting impact on the profession and society at large.

## EDUCATION

Qualification	Institute	Board / University	Year	CGPA
PhD	Indian Institute of Technology (IIT) Bombay, Mumbai, India	IIT Bombay	2023	8.29
MTech. (Structures)	National Institute of Technology (NIT) Srinagar, J&K, India	NIT Srinagar	2019	7.80
BTech (Civil)	Islamic University of Science and Technology (IUST), Pulwama, J&K, India	IUST Pulwama	2017	8.21
XII	Delhi Public School (DPS), RK Puram, New Delhi, India	CBSE	2012	84.6%
X	Green Valley Educational Institute, Srinagar J&K	JKBOSE	2009	93%

## WORK EXPERIENCE

S.No.	Position	Institute	Tenure
1.	Assistant Professor	Shri Mata Vaishno Devi University (SMVDU), Katra, J&K	18 <sup>th</sup> November 2024 to Present
2.	Assistant Professor (On Contract)	National Institute of Technology, Srinagar, J&K	23 <sup>rd</sup> March 2024 to 17 <sup>th</sup> November 2024
3.	Institute Post Doctoral Fellow (IPDF)	Indian Institute of Technology (IIT) Bombay, Mumbai, India	6 <sup>th</sup> June 2023 to 22 <sup>nd</sup> March

**Research Work: Optimum Parameters and Performance of Negative Stiffness and Inerter Based Dampers for Vibration Control of Structures**

Advisor/Guide: **Prof R.S Jangid**

**CONTRIBUTIONS**

- Development of novel damper mechanism combining inerter and negative stiffness mechanisms named as negative stiffness inerter dampers (NSIDs) as potential alternatives for viscous and visco-elastic dampers.
- Optimal design methodology has been proposed for design of NSID for response control of flexible structures.
- Closed form expressions are developed for optimal design parameters of proposed NSIDs.
- Design guidelines for placement of NSD and NSIDs along the height of structure is proposed.
- Application of proposed dampers to base isolated structures, liquid storage tanks (both elevated and grounded) and fixed base tall building has been demonstrated.

**JOURNAL PUBLICATIONS**

1. Islam, N. U., & Jangid, R. S. (2024). Seismic Control and Performance Assessment of Isolated Bridges Using Integration of Negative Stiffness and Inerter-Based Supplemental Control Devices. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*. (Vol. 10 Issue 4) <https://doi.org/10.1061/AJRUA6.RUENG-1360>
2. Islam, N. U., & Jangid, R. S. (2024). Negative stiffness and inerter-based dampers: novel seismic response control approach for base isolated liquid storage tanks. *Structures* (Vol. 60, p. 105860). <https://doi.org/10.1016/j.istruc.2024.105860>
3. Islam, N.U., & Jangid, R. S. (2023). Seismic performance and control of elevated liquid storage tanks with negative stiffness and inerter-based dampers. *Practice Periodical on Structural Design and Construction*, 28(3), 04023022. doi:10.1061/PPSCFX/SCENG-1306
4. Islam, N. U., & Jangid, R. S. (2023). Closed form expressions for H2 optimal control of negative stiffness and inerter-based dampers for damped structures. *Structures* (Vol. 50, pp. 791-809). doi:10.1016/j.istruc.2023.02.065
5. Islam, N. U., & Jangid, R. S. (2023). Optimum parameters and performance of negative stiffness and inerter based dampers for base-isolated structures. *Bulletin of Earthquake Engineering*, 21(3), 1411-1438. doi:10.1007/s10518-022- 01372-5.
6. Islam, N. U., & Jangid, R. S. (2022). Optimum parameters of tuned inerter damper for damped structures. *Journal of Sound and Vibration*, 537, 117218. doi:10.1016/j.jsv.2022.117218
7. Dar, M. A., Anbarasu, M., Dar, A. R., Islam, N. U., Ghowsi, A. F., & Carvalho, H. (2022). Stiffening schemes for CFS built-up I-beams with large global imperfections: Capacity and behaviour. *Steel and Composite Structures, An International Journal*, 42(4), 447-458. doi:10.12989/scs.2022.42.4.447.

8. Islam, N. U., & Jangid, R. S. (2021). Seismic performance of the inerter and negative stiffness-based dampers for vibration control of structures. *Frontiers in Built Environment*, 7, 773622. doi:10.3389/fbuil.2021.773622.

## CONFERENCES & BOOK CHAPTERS

1. Islam, N.U., and Bajad K.N.(2024).Negative stiffness & inerter-based mechanisms: seismic hybrid control strategy for isolated bridges World Conference on Earthquake Engineering (WCEE) 2024, Milan Italy.
2. Bajad, K. N., Islam, N.U., & Jangid, R. S. (2024).Seismic mitigation of liquid storage tanks isolated with frictional slider and clutching inerter World Conference on Earthquake Engineering (WCEE) 2024, Milan, Italy
3. Islam, N. U., & Jangid, R. S. (2024, June). Seismic performance evaluation of adjacent structures connected with negative stiffness and inerter-based dampers. In *Journal of Physics: Conference Series* (Vol. 2647, No. 3, p. 032016). IOP Publishing. <https://doi.org/10.1088/1742-6596/2647/3/032016>
4. Bajad, K. N., Islam, N. U., & Jangid, R. S. (2024, June). Seismic assessment of an inerter-based hybrid control strategy for a base-isolated liquid storage tanks. In *Journal of Physics: Conference Series* (Vol. 2647, No. 3, p. 032014). IOP Publishing. <https://doi.org/10.1088/1742-6596/2647/3/032014>
5. Bajad, K. N., Islam, N. U., & Jangid, R. S. (2024 May) Seismic Analysis of Base-Isolated Liquid Storage Tanks Using Supplemental Clutching Inerter. In *Vibration Engineering: Modeling, Simulation, Experimentation, and Applications* (pp. 41-50). CRC Press. <https://doi.org/10.1201/9781003402695-5>
6. Islam, N.U, & Jangid, R. S. (2023, March). Seismic Performance of Isolated Liquid Storage Tanks Supplemented with Negative Stiffness and Inerter Based Dampers. In *Proceedings of The 17th East Asian-Pacific Conference on Structural Engineering and Construction, 2022: EASEC-17, Singapore* (pp. 169-186). Singapore: Springer Nature Singapore. [https://doi.org/10.1007/978-981-19-7331-4\\_15](https://doi.org/10.1007/978-981-19-7331-4_15)
7. Islam, N.U, Prakash, S., & Jangid, R. S. (2022, November). Seismic Response Control of Elevated Liquid Storage Tanks Using Negative Stiffness and Inerter-Based Dampers. In *Symposium in Earthquake Engineering* (pp. 615-625). Singapore: Springer Nature Singapore. [https://doi.org/10.1007/978-981-99-1608-5\\_44](https://doi.org/10.1007/978-981-99-1608-5_44)
8. Prakash, S., UI Islam, N., & Jangid, R. S. (2022, November). Unbonded Fiber-Reinforced Elastomeric Isolators Coupled with Negative Stiffness-Based Dampers. In *Symposium in Earthquake Engineering* (pp. 691-702). Singapore: Springer Nature Singapore. [https://doi.org/10.1007/978-981-99-1608-5\\_50](https://doi.org/10.1007/978-981-99-1608-5_50)
9. Islam, N. U., & Jangid, R. S. (2022). Optimal design of true negative stiffness damper as a supplemental damping device for base-isolated structure. In *A System Engineering Approach to Disaster Resilience: Select Proceedings of VCDRR 2021* (pp. 471-483). Singapore: Springer Nature Singapore. [https://doi.org/10.1007/978-981-16-7397-9\\_34](https://doi.org/10.1007/978-981-16-7397-9_34)

## POST GRADUATE THESIS

Research Work: Evaluation of Structural Performance of Strengthened Cold Formed Steel Distressed Beams (An Experimental Study)

Advisor/Guide: **Prof AR Dar**

## TECHNICAL SKILLS & SOFTWARE PROFICIENCY

- **Technical:** Structural Analysis, Dynamic Analysis, Earthquake Resistant Design; Reinforced

Concrete Design; Structural Steel Design

- **Commercial Software:** ABAQUS, SAP 2000, STAAD-PRO, ETABS; AutoCADD; MS Office
- **Programming & Applied Tools:** Matlab; Python; C++

## RELEVANT COURSES

- Structural Dynamics
- Advanced Structural Mechanics
- Computational Structural Dynamics
- Bridge Engineering
- Introduction to Earthquake Engineering
- Numerical Methods
- Applied Statistics

## ACHIEVEMENTS

- GATE qualified 2017 and 2018
- Editor of News Letter “Quake Zone” for Earthquake Engineering Research Institute (EERI)  
Students Chapter IIT Bombay

## SEMINARS

### **Earthquake Response of Base Isolated Buildings| PhD Credit Seminar | Aug’19-Nov’19**

- Analytical analysis of base isolated structure under various earthquake excitations
- Reviewed various base isolation techniques
- Studied the comparative performance of fixed base and base isolated structure
- Prepared a detailed report on dynamics of base isolation techniques and control performance

## POSITION OF RESPONSIBILITY

Taught following courses at **NIT Srinagar**

- Bridge Design
- Advanced Concrete Design
- Design of Structures III
- Engineering Mechanics
- Structural Dynamics

**Teaching assistant (TA)** at IIT Bombay from August 2019 to present for following courses

- CE102: Engineering Mechanics
- CE 221: Solid Mechanics
- CE 603: Numerical Methods

## HOBBIES & INTEREST

- Cricket
- Football
- Lawn Tennis
- Book Reading