QAZI INAAM UL QUADIR, Ph.D.

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RESEARCH SUMMARY

Research Specialization:

Analysis and behavior of corrugated web girders | FEM Analysis | Optimization studies

- Behavior of corrugated web steel girders subjected to different loadings.
- Optimization using Genetic Algorithm (GA).
- Preliminary guidelines for the design of corrugated web steel girder.
- Applications for buildings and novel bridges.

Professional Highlights:

- (Academia) **10+ years** of corrugated web girders research experience in **steel structures, and FEA** and **scientific writing** as highlighted through peer-reviewed publications such as Journal of Constructional Steel Research (JCSR) and Structures (Elsevier), international conferences, and a book chapter.

- Excellent **problem-solving, teaching,** and **research skills** as demonstrated by assisting students in graduate courses and quality publications.

EDUCATION

Ph.D. in Civil Engineering, Indian Institute of Technology Roorkee. [Aug 2022]
Thesis: "Behavior and Optimum design of steel girders with Corrugated web." Link
Advisor: Prof. Akhil Upadhyay (Link)

Master of Technology in Structural Engineering, NIT Srinagar.
Thesis: "Experimental study of flexural behavior of corrugated webs in cold-formed steel sections" [Jul 2015]
Advisor: Prof. A.R.Dar (Link) **8.05**

Bachelors of Technology in Civil Engineering, National Institute of Technology, Srinagar. [Jun 2012]
8.40

RESEARCH EXPERIENCE

NATIONAL POST-DOCTORAL FELLOW (NPDF), *NIT Srinagar, Hazratbal, India,190006* [May 2024 – **Present**]

- **Optimization studies** on corrugated web steel girders.
- **FEM work** on the behavior of corrugated web girders.
- Part of a research group mentoring undergraduate and graduate students.

GRADUATE RESEARCHER, *IIT Roorkee, Uttarakhand* [Jul 2017 – May 2022]

- **Optimization studies** on corrugated web steel girders.

- **FEM work** on the behavior of corrugated web girders.
- **Published 3 peer-reviewed articles** in leading journals and presented my work at **4 conferences.**
- Mentored a graduate researcher.

GRADUATE RESEARCH ASSISTANT, *IIT Roorkee, Uttarakhand* [Aug 2015 – Jul 2017]

- **Numerical analysis** of the behavior of corrugated web girders.
- **Graduate courses:** 'Behavior and design of Steel structures' and 'Analysis and design of bridges'.

EXPERIENCE

ASSISTANT ENGINEERING MANAGER, *L&T CONSTRUCTION, Technology Development, R&D Group PT&D IC, Chennai* [Jan 2023 – April 2024]

- Renewable Department: Solar Tracker, Solar MMS (Module Mounting Structure), and Floating solar (FPV) projects.

LECTURER, *Islamic University of Science and Technology, Awantipora* [Jun 2022 – Dec 2022]

- Undergraduate courses: Design of steel Structures, Structural Analysis II to about 70+ students.

GRADUATE TEACHING ASSISTANT, *Indian Institute of Technology Roorkee* [Jul 2016 – May 2022]

- Graded assignments in courses like Behavior and design of steel structures and Analysis and Design of bridges for graduate students in Structural engineering.
- Evaluated research presentations in the course titled Behavior and design of Steel Structures.

PEER-REVIEWED SCIENTIFIC PUBLICATIONS

- Inaam, Qazi, & Upadhyay, Akhil (2022). **Accordion effect in bridge girders with corrugated webs**. ***Journal of Constructional Steel Research***, 188, 107040 (Link).
- Inaam, Qazi, & Upadhyay, Akhil (2020). **Flexural behaviour of steel I-girder having corrugated webs and slender flanges**. ***Structures*** (Vol. 27, pp. 12-21). Elsevier (Link).
- Inaam, Qazi, & Upadhyay, Akhil (2020). **Behavior of corrugated steel I-girder webs subjected to patch loading: Parametric study**. ***Journal of Constructional Steel Research***, 165, 105896 (Link).

BOOK CHAPTERS

- Inaam, Q., & Upadhyay, A. (2020). **Shear Resistance Models of Girders with Corrugated Webs**. In ***Structural Integrity Assessment*** (pp. 487-498). Springer, Singapore (Link).

ORAL TALKS AND CONFERENCES

- Qazi Inaam, Arsalaan R. Beigh, Fayaz A.Sofi, "**Parametric influence of trapezoidal corrugation –web profiles on flange stress distribution in steel girders**." ***14th International Symposium on Plasticity and Impact Mechanics (IMPLAST-2025), Department of Civil Engineering IIT Roorkee***, Oct 12 – 16, 2025.
- Arsalaan R. Beigh, Qazi Inaam, & Fayaz A.Sofi " **Patch-loading Resistance of Steel Girders with Sinusoidal Corrugated Webs** ." ***14th Structural Engineering Convention (SEC-2024), Department of Civil Engineering NIT Tiruchirappali***, Dec 12 – 14, 2024.

- Rufqa Mushtaq, Qazi Inaam, & Fayaz A.Sofi " **Nonlinear finite element modeling for determining patch loading resistance of steel girders with multiple corrugated-web profiles**." ***14th Structural Engineering Convention (SEC-2024), Department of Civil Engineering NIT Tiruchirappali***, Dec 12 – 14, 2024.

- Basit M. Dar, Qazi Inaam, & Fayaz A.Sofi " **Simplified four plastic hinge mechanism approach for the patch loading resistance of steel I-girders**." ***14th Structural Engineering Convention (SEC-2024), Department of Civil Engineering NIT Tiruchirappali***, Dec 12 – 14, 2024.

- Inaam, Qazi, & Upadhyay, Akhil " **State of the art bending resistance models of girders with corrugated webs**." ***12th International Symposium on Plasticity and Impact Mechanics, Busan, South Korea***, September 29 – October 04, 2019.

- Inaam, Qazi, & Upadhyay, Akhil " **Shear buckling performance of I-girders with corrugated webs**". In: ***International Conference on Advances in Construction Materials and Structures ACMS-2018 IIT Roorkee***, Roorkee, Uttarakhand, India, March 7-8, 2018.

- Inaam, Qazi, & Upadhyay, Akhil " **Shear resistance models of girders with corrugated webs**". In: ***ICONS 2018, 14-17 December 2018, IIT Madras***, Chennai.

- Inaam, Qazi, & Upadhyay, Akhil " **FRP panels subjected to in-plane compression and shear: Stiffened vs Corrugated panels** ". In: ***ICCMS 2017, 27-29 December 2017, IIT Hyderabad***, Telangana.

SKILLS AND EXPERTISE

- ANSYS APDL
- AutoCad
- Fortran
- Origin Pro
- STAAD Pro

Graduate level courses:

- Behavior and Design of Steel Structures
- Analysis and design of Bridges
- Finite Element Analysis
- Advanced Structural Analysis

Languages:

- English
- Urdu
- Hindi
- Kashmiri

HONORS AND ORGANIZATIONS

Achievements & Awards

- NPIU-**Engagement as Assistant Professor** under TEQIP III at IUST Awantipora, J&K. (2018)
- Selected as **Junior Engineer (Civil) in Public Health Engineering** (PHE Dept.) in J&K State Govt (2015)
- Selected as **Junior Engineer (Civil) in JKSPDC** (2014)
- Employed at **Egis India Consulting engineers private Ltd. as Assistant design engineer** (2013).
- **8th position at state level in 12th board exams** (Topper in Tyndale Biscoe School, 88.5%).
- Qualified **State level science merit scholarship test** conducted and certified by Sakhawat Centre, J&K (2007).

Memberships

- Institution of Engineers India (IEI) Member
- ASCE Student Member

- SEFI Member

REFERENCES

Dr. Akhil Upadhyay (Ph.D. Advisor)
Professor, Department of Civil Engineering
Indian Institute of Technology (IIT) Roorkee, Uttarakhand, 247667
Tel: +91-1332-285716
Email: a.upadhyay@ce.iitr.ac.in

Dr. Fayaz Sofi (Research Collaborator)
Assistant Professor, Department of Civil Engineering
National Institute of Technology (NIT) Srinagar, 190006
Email: sofifayaz@nitsri.ac.in

Dr. Umesh Kumar Sharma
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