

Curriculum Vitae

Shujaat Hussain Ph.D.

Assistant Professor
Department of Civil Engineering
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Education

- **Doctor of Philosophy (Ph.D.) in Civil Engineering (07/2015-12/2019)**
Department of Civil Engineering, Indian Institute of Technology, Roorkee, India.
Ph.D. thesis: *Fire Resistance of Reinforced Concrete Columns.*
Supervisor: Dr. Umesh Kumar Sharma.
- **Master of Technology (M.Tech) in Structural Engineering (07/2008-11/2010)**
Department of Civil Engineering, National Institute of Technology, Srinagar, J&K.
Master thesis: *Seismic behaviour of wooden chowkat infill in RCC frame.*
Supervisor: Dr. Javed Ahmad Bhat.
- **Bachelors in Civil Engineering (B.Tech) (4 year degree) (08/2004-07/2008)**
Department of Civil Engineering, National Institute of Technology, Srinagar, J&K.
Bachelor's project: *Structural evaluation of a school building & its suitable retrofitting measures.*

Professional and Teaching Experience

Assistant professor (10/2010-present)

Department of Civil Engineering, Islamic University of Science and Technology

Teaching: Undergraduate courses: Drawing and Drafting, Structural Analysis, Structural Concrete & Steel Design, Advanced Concrete Design, Earthquake Engineering Analysis and Design, Dynamics of Structures, Concrete Technology, Architecture and Town Planning, Research Methodology and Ethics, Surveying and Drafting, Maintenance and Repair of Structures, Characterization of Construction Materials.

Research interests: Large-scale experiments, Fire Resistance Modelling and Design, Corrosion and serviceability analysis, Seismic behaviour of post-damaged structures, retrofitting and rehabilitation of structures, Thermal Insulation and Engineering of Structures.

▪ **Doctoral Researcher (07/2015 – 12/2019)**

Department of Civil Engineering, Indian Institute of Technology, Roorkee, India.

Tested full-scale column samples for developing their fire resistance under specific variations in reinforcement and load eccentricity. Calibrated in ABAQUS software the fire models and simulated the behaviour of fire resistant columns under specific fire conditions. Developed Empirical models for fire resistant behaviour of columns.

▪ **Master's Researcher (08/2008 – 10/2010)**

Department of Civil Engineering, National Institute of Technology, Srinagar, J&K.

Performed numerical studies with SAP 2000 software in order to develop the analytical model for lateral stiffness of the masonry infill panels under seismic loads. The same was performed under nonlinear static analysis (pushover).

▪ **Undergraduate Researcher (08/2004 – 07/2008)**

Department of Civil Engineering, National Institute of Technology, Srinagar, J&K.

Surveyed, analysed a masonry three storey school structure with structural damages, used NDT methods to evaluate its performance and prepared a repair and retrofitting report.

▪ **Internship in Baghlihar Dam** during its construction "JKPDC" (Jan 2007, March 2007). Address: Ramban, J&K, India. Nature of job: Training in project involving construction of Dam (Tunnelling, Mass concreting).

Journal Publications

1. **Buch, S.H., Sharma, U.K., "Fire Resistance of Eccentrically Loaded Reinforced Concrete Columns"** submitted to Fire Technology Journal-Springer.
2. **Buch, S.H., Sharma, U.K., "Empirical model for determining fire resistance of reinforced concrete columns"** submitted to Construction and Building Materials Journal- Elsevier.
3. **Buch, S.H., Sharma, U.K., "Role of confining reinforcement on fire resistance of RC columns"** to be submitted to Engineering structures Journal-Elsevier.
4. **Buch, S.H., Bhat, M.D., "Comparative Modelling of Infilled Frames: A Descriptive Review and analysis", Advances in Structural Engineering, 2169-2184, 2015.**
5. **Buch, S.H., Bhat, M.D., "Performance of Hollow Concrete Block Masonry Under Lateral Loads", Advances in Structural Engineering, 2435-2444, 2015.**

Conference Proceedings/Presentations

1. **Buch, S.H., Sharma, U.K., "Fire Resistance of Reinforced Concrete Columns: A Systematic Review", Manchester University, Manchester, UK, Sept 5-6, 2017.**
 2. **Buch, S.H., Sharma, U.K., "Fire resistance and spalling performance of eccentrically loaded reinforced concrete columns", proceedings from 5th International workshop on concrete spalling, RISE institute, Boras, Sweden, 12-13 October, 2017.**
 3. **Buch, S.H., Sharma, U.K., "Role of load eccentricity and transverse reinforcement in fire resistance of reinforced concrete columns", proceedings from 10th International conference on structures in fire, Ulster University, UK, June 6-8, 2018.**
 4. **Buch, S.H., Sharma, U.K., "Design of RC Columns for fire resistance: Revised Guidelines", Applications in Structural Fire Engineering 2019, NTU Singapore, June, 2019.**
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Workshops/Short Term Courses/Development Courses

1. Orientation Course JNU, Academic Staff College, November-December 2014.
2. Short Term Course, ADVANCES IN STRUCTURAL ENGINEERING, IIT Roorkee, February 20-24, 2017.
3. Short Term Course, Extreme Loading on Structures, Oct. 2017, IIT Roorkee.
4. Faculty Development Programme, Research Trends in Information Technology, Computer Sciences Department, IUST, September 2018.
5. Advances in Concrete Science and Technology, Research Scholars Symposium, IIT Mumbai, Dec. 2018.
6. Short Term Course, Safety Management for Construction Projects, November 2020, IIT Delhi
7. Short Term Course, Recent Advances in Civil Engineering, June 2020, VJTI Mumbai.
8. 2 Day Convention, "Experimental and Theoretical Study Of Reinforced Concrete Column Specimens At Elevated Temperatures", Student Research Convention 2021, March, IIT Kanpur.

Teaching Experience

Assistant Professor Department of Civil Engineering, Islamic University of S&T – 11 Years and 10 days of Teaching experience as on 26.10.2021. Three years of Research Experience included. Two years since Award of PhD Degree.

LATEST COURSES:

- 2021- Spring – Concrete Technology, 4th Semester UG – Batch 2019- Enrolment – 73.
- 2021-Spring – Architecture and Town Planning – 6th Semester UG – Batch 2018– Enrolment - 25
- 2020-Autumn – Design of Concrete Technology- 5th Semester UG- Batch 2018 - Enrolment – 78.
- 2020- Autumn – PhD Course Work – Characterization of Material of Concrete Structures and Maintenance and Repair of Structures
- 2020- Autumn – PhD – Research Ethics Course Work for SOE&T IUST.
- 2020-Spring – Earthquake Resistant Design of Structures – 8th Semester UG – Batch 2016– Enrolment – 125
- 2019- Autumn – Dynamics of Structures – 7th Semester UG Batch 2016– Enrolment -125
- 2019-Spring – Concrete Technology – 4th Semester UG – Batch 2017– Enrolment - 98
- 2018 AUTUMN- Design of Concrete Structures II- 7th Semester UG – Batch 2015- Batch 2015 UG level – Enrolment - 128
- Engineering Drawing – 1st Semester UG Batch 2018 –

Further Courses Taught:

- a. STRUCTURAL ANALYSIS I (Winter 2010)
- b. ENGINEERING DRAWING (Winter 2010)
- c. STRUCTURAL ANALYSIS II (Summer 2011)
- d. BUILDING MATERIALS AND CONSTRUCTION (Summer 2011)
- e. DESIGN OF CONCRETE STRUCTURE I (Winter 2011)
- f. STRUCTURAL ANALYSIS I (Winter 2011)

- g. DESIGN OF CONCRETE STRUCTURES (Summer 2012)
- h. BUILDING MATERIALS AND CONSTRUCTION (Summer 2012)
- i. DESIGN OF STEEL STRUCTURES (Winter 2012)
- j. DYNAMICS OF STRUCTURES (Winter 2012)
- k. DESIGN OF CONCRETE STRUCTURES II (Summer 2013)
- l. EARTHQUAKE RESISTANT DESIGN (Summer 2014)
- m. DYNAMICS OF STRUCTURES (Summer 2014)

FACULTY ADVISOR FOR THE UNDERGRADUATE STUDENTS)

1. Project title: Vulnerability study of old Srinagar city to earthquake response) 5 students- 2009 Batch (Summer 2013)-Muttahir Hussain, Mujeeb ur Rehman, Mir Sameem Nazir, Junaid Danish, Mudasir Majeed.
2. Project title: Use of Fly-ash in concrete) 4 students – 2009 Batch (Summer 2013) – Mohammad Akeeb Dar , Rameez Raja Malik, Burhan Andrabi, Zulqarnain.
3. Project title: Interlocking Hollow Block concrete) 4 students (Summer 2014) – Huzaifa Pandit,
4. Project title: Study of confinement of circular columns with DNA structured transverse reinforcement) 4 students (Summer 2019) –
5. Project Title: Design of Fire Facilities for IUST Awantipora – 6 Students – Batch 2015 (Summer 2019)
6. Project Title: Behaviour of RC Columns at Elevated Temperature – 6 Students – Batch 2016 (Summer of 2020)
Abdul Waris, Mehreen Farooq, Sherien Anab, Tawqeer Nabi, Zakir Hussain Mir, Zubair Ahmad Dar.
7. Project Title: Effect of Elevated Temperature on the Bond between Concrete and Reinforcing steel – 2 Students – Batch 2016 (Summer of 2020) – Mehak Waseem and Haziq Ahmad Qari
8. Project Title: Thermal Insulation and Analysis Of Buildings – 4 Students – Batch 2017 (Summer of 2021) – Students: Baruja Javeed, Kousar Bashir, Shanoo Firdous, Rounaq Khan.
9. Project Title: Comparison of durability properties of hollow concrete blocks and kilned bricks – 5 Students – Batch 2017 (Summer of 2021) – Students: Abu Ubaid, Haiqa Pervez Koul, Misbah Ul Amin, Muskan Nazir, Mir Faisal Jalal.

PhD Students

1. Ms Arsallan Farooq
2. Mr Abdul Majid Sayeem

Professional Memberships

NICEE (IIT Kanpur)
ASCE

2010-present

2014- present

Roles

Incharge Civil Engineering Department (IUST)

2014-2015

Presently:

Environmental coordinator TEQIP-III IUST Sept 2018-present

Nodal officer Civil Engineering Department for DIQA Oct 2018-present

Project Coordinator 7th Semester Sept 2018-Sept 2020

Incharge Civil Engineering Department (IUST) From November 2019 - Present

Technical Skills

Operating Systems: Windows, OS X (Mac)

Programming Languages: MATLAB, C, C+

Finite Element Analysis Software: ABAQUS

Civil Engineering Software: SAP2000, AutoCAD, ETABS

Text Software: Microsoft Office, LaTeX

Languages

- *Kashmiri (Native proficiency) English (proficiency)*
 - *Urdu (Intermediate proficiency) Hindi (Intermediate proficiency)*
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