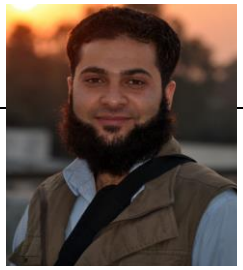
Asif H. Shah



Male |Date of Birth: 1989
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EXECUTIVE SUMMARY

A doctorate with 5+ years of experience in research and teaching in Construction and Structural Engineering at IUST Kashmir, Shaqra University, The University of Sheffield, IIT Roorkee and NIT Srinagar, India. Enthusiastic, highly motivated researcher and teacher with a unique combination of experimental research and teaching skills. **Awarded MSCA Seal of Excellence by the European Commission for High quality research project proposal "Development of all waste fire resistant sustainable concrete"**. **Awarded University Gold Medal in Structural Engineering for highest CGPA at Masters Level.**

PROFESSIONAL EXPERIENCE

Islamic University of Science & Technology — **Awantipora, Kashmir**
Assistant Professor in Civil Engineering — Jan-21- Till date

Shaqra University — **Kingdom of Saudi Arabia**
Assistant Professor in Civil Engineering — Dec-18- Dec-20

The University of Sheffield — **Sheffield UK**
Postdoctoral Research Associate in Civil and Structural Engineering. — May 2017-July 2018

- Developed a state of art closed loop Radiant Panel to test concrete slabs against fire spalling using electrical power. Developed a better understanding of fire-induced spalling and the spalling-mitigation mechanism of recycled tyre polymer fibers. **Developed spalling resistant sustainable concrete using fibres from waste tyres**. Contributed to the standardization of fire-spalling characterization testing.

National Institute of Technology Srinagar — **Srinagar, India**
Assistant Professor in Civil Engineering (1 year 2 months) — March 2016-April 2017

- Taught the graduate and undergraduate students in **structural engineering and construction management.** Designed and supervised the projects on fire effects on concrete and concrete durability for master and bachelors students in civil and structural engineering.

***Indian Institute of Technology Roorkee** — **Roorkee, India**
Senior Research Fellow in Civil Engineering (3 years 1 month) — Feb. 2013- Feb. 2016

***Indian Institute of Technology Roorkee** — **Roorkee, India**
Junior Research Fellow in Civil Engineering (6 months) — Aug. 2012- Feb. 2013

- *Worked on two different projects sponsored by ***UKIERI (United Kingdom-India Educational Research Initiative) Edinburgh Research and Innovation Ltd., the University of Edinburgh, Scotland and BRNS-DAE (Department of Atomic Energy, Govt. of India)*** **worth USD 200000** on strength and deformability of reinforced concrete (RC) frames in **earthquake and fire**.
- ***Tested two full scale RC frames first under earthquake forces and then a full scale compartment fire. Developed guidelines on safety of **damaged structures in fire.**
- ***Developed India's first full scale fire column furnace** and developed an empirical model for fire resistance of RC columns.

EDUCATION

Indian Institute of Technology Roorke — **Roorkee, India**
Ph.D. in Civil Engineering (Advisor: Dr. Umesh kr. Sharma) — Jan. 2013- Sept. 2015

- Thesis: **An Experimental Investigation of Fire Performance of Earthquake Damaged Structures**
  (Defended: Feb. 13, 2016; Awarded: September 30, 2016)

NIT Srinagar — **Srinagar, India**
M-Tech in Structural Engineering (Advisor: Prof. A.R.Dar) — Aug.2010-July 2012

- Thesis: Seismic Behavior of Different Configurations of Brick-Nogged Timber Frame (Dhajji-Dewari) system (A Comparative Study) **(CGPA: 9.301/10) (Gold Medalist)**

NIT Srinagar **Srinagar, India**

B-Tech in Civil Engineering (Advisor: Prof. A.R.Dar) Aug.2006-July 2010

(CGPA: 9.227/10)

RESEARCH INTEREST

- Structural Fire Engineering
- Fire Effects on Concrete.
- Full Scale testing
- Experimental Reseach in Structural Engineering
- Sustainable Concrete and Sustainable Constructions
- Evaluation and Strengthening of Concrete Structures
- Durability of Concrete structures
- Traditional Constructions

TEACHING EXPERIENCE

- Design of Concrete Structures
- Cost Estimation in Construction
- Design of Steel Structures.
- Foundation Engineering
- Solid Mechanics.
- Construction Techniques and Management
- Civil Engineering Project Management
- Advanced Structural Analysis.
- Soil mechanics

PUBLICATIONS

Journal Articles

1. **Shah, A.H.,** Hashmi, A.A., (2020), "Fragility Analysis of Confined Reinforced Concrete Columns with different Fire Resistance" Construction and Building materials (under Review)
2. Danie Roy A.B., **Shah, A.H**., Shermi C., (2020), "Behaviour of Square and Circular Heat Damaged Reinforced Columns after Strengthening." Construction and Building materials (under Review)
3. Fabio P. Figueiredo, **Shah, A. H**, Huang S. S, Angelakopoulos H, Pilakoutas K, Burgess I, (2017), "Fire Protection of Concrete Tunnel Linings with Waste Tyre Fibres", Procedia Engineering, 210, 472–478**(Scopus/ISI Indexed, ISSN: 1877-7058, Impact factor 0.783)**
4. **Shah, A. H**., & Sharma, U. K. (2017) **"**Fire Resistance and Spalling Performance of Confined Concrete Columns." Construction and Building materials, 156 (2017): 161-174 **(SCI/Scopus/ISI Indexed. ISSN: 0950-0618, Impact Factor 3.7)**
5. **Shah, A. H**., Sharma, U. K., Bhargava, P. (2017) "Outcomes of a Major Research on Full Scale Testing of RC Frames in Post-Earthquake Fire". Construction and Building materials, 155, 1224-1241 (https://doi.org/10.1016/j.conbuildmat.2017.07.100**) (SCI/Scopus/ISI Indexed. ISSN: 0950-0618, Impact Factor 3.7)**
6. **Shah, A. H**., Sharma, U. K., Kamath, P., Bhargava, P., Reddy, G. R., & Singh, T. (2016). "Effect of Ductile Detailing on the Performance of a Reinforced Concrete Building Frame Subjected to Earthquake and Fire." *Journal of Performance of Constructed Facilities*, 30 (5), 04016035. **(SCI/Scopus/ISI Indexed. ISSN (print): 0887-3828 Impact Factor 1.192)**
7. **Shah, A. H**., Sharma, U. K., Kamath, P., Bhargava, P., Reddy, G. R., & Singh, T. (2016). "Fire Performance of Earthquake-Damaged Reinforced-Concrete Structures." *Materials and Structures*, 49 (7), 2971-2989. **(SCI/Scopus/ISI Indexed, ISSN: 1359-5997. Impact Factor 2.6)**
8. **Shah, A. H**., Sharma, U. K., Kamath, P., Bhargava, P., Reddy, G. R., Singh, T., & Lakhani, H. (2015). "A Full Scale Fire Test on a Pre Damaged RC Framed Structure." *The Indian Concrete Journal,* 89(1), 17-26. **(Scopus Indexed, ISSN 0019-4565)**
9. **Shah, A. H**., Sharma, U. K., Danie Roy A.B., & Bhargava, P. (2013). **"**Spalling Behavior of Nano SiO2 High Strength Concrete at Elevated Temperatures". *MATEC Web of Conferences*, 6, pp. 01009-p.1-8. **(Scopus Indexed, eISSN: 2261-236X)**

Book Chapters

1. **Shah, A. H**., Sharma, U. K., Bhargava, P., Reddy, G. R., Singh, T., & Lakhani, H. (2015). "A Full Scale Fire Test on a Pre Damaged RC Framed Structure", *Advances in Structural Engineering*, 3, 2259-2274, Springer, India, 2015 **(ISI) (ISBN: 978-81-322-2186-9) (DOI: https://doi.org/10.1007/978-81-322-2187-6_171)**

Conference Proceedings

1. **Shah, A.H.** (2019) "Fire Performance of a Masonary Infilled Earthquake Damaged RC Frame", 2nd International conference on Civil Engineering-Palestine, Palestine, 25-26 November 2019
2. **Shah, A.**H., Fabio Figueiredo (2019), "Fire Spalling Characteristics of Recycled Tyre Polymer Fibre Concrete" 2nd International conference on Civil Engineering-Palestine, Palestine, 25-26 November 2019
3. Fabio Figueiredo, Ieuan Rickard, **Asif Hussain Shah**, Shan-Shan Huang, Harris Angelakopoulos, Luke Bisby, Ian Burgess & Kypros Pilakoutas (2017) "Recycled Tyre Polymer Fibres to Mitigate Heat-induced Spalling of Concrete", *FIRE SPALLING 2017. 5th International Workshop on Concrete Spalling due to Fire Exposure.* Sweden, 12 - 13 October 2017, pp. 395-364
4. **Shah, A. H**., Sharma, U. K (2017) "Effect Of Strength And Confining Reinforcement on Fire Performance of Reinforced Concrete Columns", *IFireSS 2017 – 2nd International Fire Safety Symposium* Napoli, Italy, June 7-9, 2017, pp. 233-240
5. **Shah, A. H**., Sharma, U. K., Bhargava, P (2017), "Influence of Masonry Infill on Fire Performance of an Earthquake Damaged RC Frame", *IFireSS 2017 – 2nd International Fire Safety Symposium* Napoli, Italy, June 7-9, 2017 pp. 479-286.
6. **Shah, A. H**., Sharma, U. K., Bhargava, P., Reddy, G. R., & Singh, T. (2015). "Outcomes of a Major Research on Full Scale Testing of RC Frames in Post Earthquake Fire". *2nd R.N. Raikar International Conference and Banthia-Basheer International Symposium on Advances in Science and Technology of Concrete.* 18-19 December 2015, Mumbai, India, pp.507-517.
7. **Shah, A. H**., Sharma, U. K., Bhargava, P., Reddy, G. R., & Singh, T. (2015). "Effect of Pre-damage and reinforcement detailing on the spalling behavior of reinforced concrete building frame in Post earthquake fire." *FIRE SPALLING 2015. 4th International Workshop on Concrete Spalling due to Fire Exposure.* Leipzig, 08 - 09 October 2015, pp. 269-279
8. **Shah, A. H**., Sharma, U. K., Bhargava, P., Reddy, G. R., Singh, T., & Lakhani, H. (2015). "A Full Scale Fire Test on a Pre Damaged RC Framed Structure". *SEC-14, Structural Engineering Convention*, Indian Institute of Technology Delhi, Delhi, 22-24 December 2014, pp 2259-2274.
9. **Shah, A. H**., Kamath, P., Sharma, U. K., Bhargava, P., Usmani, A., Reddy, G. R., Singh, T., & Lakhani, H. (2014). **"**Influence of Ductility on the Behavior of RC Frame in Post Earthquake Fire". *In the Proceedings of SIF'14, 8th International Conference on Structures in Fire, Progress on Safety of Structures in Fire*, Tongji University, Shanghai, China, 11-13 June 2014, pp 279-286.
10. **Shah, A. H**., Sharma, U. K., Danie Roy A.B., & Bhargava, P. (2013). **"**Performance at High Temperature of Nano SiO2 High Strength Concrete". *AME2B-2013 International Conference on Advanced Materials for Energy Efficient Buildings.*
11. **Shah, A. H.,** Dar, A.R., Shahnaaz, G. (2012). **"**Reliability and Experimental Study on the Seismic Resistance Capabilities of Brick Nogged Timber Frame Construction (Dhajji-Dewari)". *15-WCEE, 15th World Conference on Earthquake Engineering.* Lisbon, Portugal 24 – 28 September 2012. Paper No.1420.
12. Shafi, I., Naqash, J.A., & **Shah, A.H** (2012). "Cold Weather Concreting by Using Chemical Depressants (Sodium Nitrite and Potassium carbonate) ---- An experimental Study in Kashmir." *SCACT 2012, International Conference on Sustainability Challenges & Advances in Concrete Technology*. Coimbatore, India 2-4 May 2012. pp 307-310.
13. **Shah, A. H**., & Dar, A.R (2012). **"**Experimental study on Recycled Aggregate Concrete". *SCACT 2012, International Conference on Sustainability Challenges & Advances in Concrete Technology*. Coimbatore, India 2-4 May 2012. pp 513-516.
14. **Shah, A.H**., & Masudi A. A. (2012), "Using Waste Brick Bats as aggregate to prepare light weight concrete". *SCACT 2012 International Conference on Sustainability Challenges & Advances in Concrete Technology*. Coimbatore, India 2-4 May 2012. pp 392-395.
15. **Shah, A. H**., Dar, A.R., Shahnaaz, G. (2011). "Experimental Study on the Seismic Resistance Capabilities of Dhajji-Dewari Frames" *EQADS 2011, International Conference on Earthquake Analysis and Design of Structures.* Coimbatore, India 2-4 Dec. 2011. pp 458-464
16. **Shah, A.H**., (2013) "Effects of Fire on Reinforced Concrete Structures- A Review" *International Conference on Sustainable Innovative Techniques in Civil and Environmental Engineering (SITCEE- 2013)* JNU, New Delhi. 5-6 June 2013.
17. **Shah, A. H**., & Dar, A.R., (2013) "Wooden Frame Residential Construction in Kashmir Valley" *International Conference on Sustainable Innovative Techniques in Civil and Environmental Engineering (SITCEE- 2013)* JNU, New Delhi. 5-6 June 2013.

CONTIBUTION TO LAB DEVELOPMENT

Developed India's first **"Full Scale Fire Column Furnace"** at IIT Roorkee. First of its kind in the country, the test furnace was designed and built to produce conditions such as temperature, loads and heat transfer to which a column might be exposed during a fire event.

Developed **State of art Radiant Panel (at The University of Sheffield)** for the testing of concrete slabs against spalling at elevated temperature. The radiant panel is an electrically driven closed loop with a capacity to take the feedback from the concrete surface temperature rather than the gas temperature in the traditional furnaces.

PAPERS REVIEWED FOR

- Construction and Building Materials, Elsevier
- Journal of Performance of constructed Facilties, ASCE
- Physics of Fluids
- Structures and Buildings, ICE

KEYNOTE LECTURES

1. **Shah, A. H**., (2015). "Outcomes of a Major Research on Full Scale Testing of RC Frames in Post Earthquake Fire". *2nd R.N. Raikar International Conference and Banthia- Basheer International Symposium on Advances in Science and Technology of Concrete.* 18-19 December 2015, Mumbai, India, pp.507-517.
2. **Shah, A. H**., (2015). "A Full Scale Fire Test on a Pre Damaged RC Framed Structure". *SEC-14, Structural Engineering Convention*, Indian Institute of Technology Delhi, Delhi, 22-24 December 2014, pp 2259-2274.

FELLOWSHIP/MEMBERSHIP OF PROFESSIONAL BODIES:

- 216 - Fire Resistance and Fire Protection of Structures--Joint ACI-TMS (Associate Member)
- American Concrete Institute (ACI) (Associate Member No. 01248509)
- International Associate for Fire Safety Science (IAFSS)
- American Society of Civil Engineers (ASCE)
- Institution of Civil Engineers U.K (70711836)

SHORT-TERM COURSES/TRAINING ATTENDED

- TEQIP Short Term Course on Advances in Structural Engineering, February 20-24, 2017 at the Department of Civil Engineering, Indian Institute of Technology Roorkee, Roorkee
- Summer Camp-2008: A rigorous one month training programme for top 60 Civil Engineering B-Tech students from all over India to various aspects and challenges of civil engineering, organized by Indian Institute of Technology Kanpur, Kanpur from June4-July1, 2008.
- Winter IISC, National Training for entry to research. A State of art training programme to expose the undergraduate civil engineering students to different aspects and opportunities in research in civil engineering, organized by Indian Institute of Scinece Banglore, from 28th December 2009 to 2nd Jan 2010.
- A training programme on construction of ROB's (Rail Over-Bridges), FOB's (Foot Over-Bridges), laying of rail track for the length of approximately 72 kilometers, organized by Ircon International Ltd from 12th Jan to 20th Feb 2009.
- Part of the team that supervised a 100 member workforce (skilled labor) while constructing a traditional earthquake resistant single storey structure in Seismic Zone 5 (Kashmir, J&K, India), organized by United Nations Development Programme in collaboration with Divisional administration J&K Govt. and NIT Srinagar from 21st Feb-26th Feb 2009

AWARDS/DISTINCTIONS

- Awarded "**European Seal of Excellence**"
- **Awarded institute Gold medal for obtaining highest CGPA in M-Tech programme.**
- Awarded Certificate of Merit for securing Second rank in B-Tech.
- Achieved distinction throughout the academic career.
- Nominated as Member of Institute Academic Research Committee of IIT Roorkee for the year 2013-14.
- Won "Best in Sports" award in "Summer Camp-08" organised by IIT Kanpur.
- Won Award for "Positive Living" in "Summer Camp-08" organised by IIT Kanpur.

SCHOLARSHIPS

- Islamic Development Bank Jeddah Under-Graduate Scholarhsip — B-Tech programme
- Ministry of Human Resource Development (MHRD) Graduate Scholarship — M-Tech programme
- DAE-BRNS Fellowship (Department of Atomic Energy, Govt. of India) — Ph.D. programme

PERSONAL INFORMATION

Name: Dr. Asif Hussain Shah

Fathers name: Gias ud Din Shah

Permanent Address: 3-Al Farooq Colony, Opposite CRPF Camp, Ahmad Nagar Road, Upper Umer Heer, Buchpora, Srinagar 190020, J&K, India

Date of Birth: xx-xx-1989

Languages: English (Fluent:Medium of education and communication), Urdu, Kashmiri (Native)