

Meysam Jalali

Assistant Professor

mjalali@shahroodut.ac.ir; mei.jalali@gmail.com

Office: 3rd floor, Engineering Campus, Civil Eng. Bldng.

Website: <https://shahroodut.ac.ir/fa/as/index.php?id=S856>



Research Lab

- Concrete Structural Lab Head.

Professional Affiliations

- Professional Engineer of Terhran Engineering Organization, Iran.
- Canadian Standard Association: Technical Committee for CSA S304 - Design of Masonry Structures.
- Reviewer of SCI journals.
- Member of ISO: Quality requirements for additive manufacturing in building & construction (structural and infrastructure elements).
- Others

ISI journals Reviewer:

- Construction and Building Materials (Elsevier)
- Journal of Building Engineering (Elsevier)
- Composites: part a (Elsevier)
- Engineering Structures (Elsevier)
- Advances in Structural Engineering (SAGE)
- Canadian Journal of Civil Engineering
- Journal of Steel and Composite Structures (Techno press)
- Graduate Study Opportunity

PhD Position:

Two full-time Ph.D. position in Structural Engineering at the Faculty of Civil Engineering, Shahrood University of Technology, is open for application. I am seeking an ambitious and hard-working graduate student to carry out original research on topics within the fields of:

- Fiber-reinforced cementitious composites (ECC, UHPC, FRC, SIFCON,...), (Non-experimental and/or Experimental)
- Application of soft computing in concrete or fibrous composites, (Non-experimental)
- 3D printing of cement-based composites (Non-experimental and/or Experimental)
- Numerical/Analytical/Computational modelling of structures (Non-experimental)
- Passive dampers

The work will be carried out in a joint program with a highly reputable university in Canada.

Recent and Current Research Projects

1. Invention of novel fibers for reinforcing Ultra High-Performance Cementitious Composites/UHPC and Engineered Cementitious Composites/ECC., Under Patent. (Paper is under preparation for Cement and Concrete Composites Journal)
2. Mechanical behavior of spiral fibers for reinforcing concrete. (Paper is under review in Construction and Building Materials Journal)
3. Development and construction of an innovative apparatus (and molds) for direct tension test of fibrous composites, Patented.
4. Prediction of fiber pull-out from cement-based composites parameters using soft computing methods (ANN/GEP/ANFIS/GMDH). (Paper is under review in Journal of Building Engineering)
5. Prediction of Engineered Cementitious Composites (ECC) behavior using adaptive network-based fuzzy inference system.
6. Ductility Improvement of FRP RC Beams. (Experimental/Analytical/Numerical). (Papers are: accepted for publication in the Journal of composite materials / under review in Composite Structures Journal)
7. Precast RC tunnel lining (segment) under high concentrated loads (proposing an innovative geometry), Patented. (Paper is accepted for publication in Saze va Sakht Persian Journal)
8. Experimental study of bond behavior of headed bars in FRC/UHPC.
9. Numerical investigation of rebar pull-out from cement base matrixes.
10. Experimental evaluation of the effect of steel and polypropylene fibers and recycled aggregates on the mechanical properties of concrete. (Paper is accepted for publication in Sharif University Persian Journal)

Courses Taught

- Prestressed Concrete
- Advanced Concrete Technology
- Soft Computing Methods
- Others

Research Interests

- Cement-based materials, ECC, HPC, FRC, and SIFCON;
- Concrete structures;
- Soft computing
- Multi-scale testing;
- Net-zero construction;
- Sustainability;

- Numerical modeling;
- Application of additive manufacturing (3D concrete printing) in construction
- Earthquake engineering.

Sources of Research Funding

- Various private companies and governmental agencies/University Grant/ Semnan Science and Technology Park.

Publications:

- See MY Google Scholar:

<https://scholar.google.com/citations?user=SshWcLwAAAAJ&hl=en>