WJE

Saeed Nejad | Senior Associate

EDUCATION
- University of Tehran
  - Bachelor of Science, Civil Engineering, 2009
  - Master of Science, Civil Engineering, 2011
- University of Illinois Chicago
  - Doctor of Philosophy, Civil Engineering, 2015

PRACTICE AREAS
- Bridge Engineering
- Field Inspection
- Testing and Instrumentation
- Nondestructive Testing
- Bridge Asset Management

PROFESSIONAL AFFILIATIONS
- American Society of Civil Engineering

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EXPERIENCE

Saeed Nejad joined WJE in 2019. From 2016–2018, Dr. Nejad was a project lead and research associate with Rutgers Center for Advanced Infrastructure and Transportation in Piscataway, New Jersey, where he led a staff of twenty delivering multiple projects under the Long-Term Bridge Performance Program, sponsored by the Federal Highway Administration. Prior to his work at Rutgers, starting in 2012, Dr. Nejad was a research assistant at the University of Illinois Chicago, where he conducted multiple projects in the areas of structural health monitoring, advanced structural analysis, condition assessment, nondestructive evaluation (NDE), and field testing. His work included the development of an integrated fiber-optic structural health monitoring system for large-scale structures.

Dr. Nejad also served as a project engineer at the Construction Materials Institute in Tehran, Iran, before his work at the University of Illinois at Chicago. During his five years there, he completed projects on: durability assessment of high-performance concrete, triaxial behavior of ultra-high-performance concrete, performance assessment of different pozzolans (silica fume, slag), shear capacity evaluation of RC beams strengthened by FRP laminates, design of self-consolidating concrete for mass concrete, and simulated high-performance fiber-reinforced concrete under impact loadings using LS-DYNA software.

As an engineering intern at ALASTI-PLAN Ing. Büro für Bauwesen, Germany, Dr. Nejad performed structural analysis and modeling, field inspection, and NDE of three historical bridges.

Dr. Nejad's construction experience at the POLODEJ Construction Company, Tabriz, Iran, included performing engineering calculations, conducting basic analysis, and assisting the field manager in leading inspection crews.

REPRESENTATIVE PROJECTS
Bridge Engineering
- Development of data-driven performance assessment and life cycle analysis of 614,000 bridges in the United States
- Study of 1,200 bridges' as-built plans to develop a comprehensive legacy data mining platform for untreated bridge decks, joints, and bearings
- Development of data collection protocols for short- and long-term instrumentation, legacy data mining, and automated NDE data collection
- Analysis and quality assurance/quality control of NDE data collected from RABIT™ robot from thirty-five bridges in the United States (ongoing) *
- Quantifying of long-term bridge performance through full-scale, accelerated testing at the Center for Advanced Infrastructure and Transportation's Bridge Evaluation and Accelerated Structural Testing facility (ongoing) *
- Improvement of infrastructure assessment through the integration of NDE and structural health monitoring paradigms (ongoing) *
- Development of an integrated fiber-optic structural health monitoring system for Manhattan Bridge
- Development of a quantitative reference-free damage detection method using dynamic distributed Brillouin Optical Time Domain Analysis technique
- Evaluation of the effects of cable loss on the deck response of lab-scaled "Dongshuimen - Chongqing, China" cable-stayed bridge under different loading configurations
- Two Bridges - CA and IL: Development of a copyrighted system of an automated structural health monitoring system to weigh trucks moving at full highway speed, the so-called Bridge Weigh-in-Motion system; monitoring of the condition of the bridges via real-time measurements of strain, temperature, vehicle class, and axle weights using fiber-optic sensors

* Ongoing WJE project but started prior to working with WJE

WJE | ENGINEERS ARCHITECTS MATERIALS SCIENTISTS