

Ali Shirazi, PhD, PE | Forensic & Seismic Civil Engineer

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Professional Summary:

Mr. Shirazi is a licensed professional Civil Structural Engineer with the expertise as follows.

- 18+ years of experience in computer-based Structural Analysis using Finite Element Method
- 13+ years of experience in Seismic Risk Assessment (SRA)
- 13+ years of experience in Structural Design & Analysis (residential, commercial, industrial)
- 10+ years of experience in Building Condition Assessment and Structural Integrity Evaluation
- 6+ years of experience in Seismic Forensic Investigation
- 6+ years of experience in Seismic Retrofit System Design and construction oversight

Licenses and Certifications:

Professional Civil Structural Engineer, CA, C85164

Project Experience:

Energy Sector:

Seismic Response Analysis, "CCW Pump-House, Isolated Cooling Pump and Station Black-Out Buildings, Exelon Energy Generation, Dresden Nuclear BWR Station (Illinois, USA)"

Developed an ANSYS model from the structural plans, performed Time History dynamic analysis, obtained ISRS (In Structure Response Spectra) in support for the subsequent Fragility assessment.

Seismic Response Analysis of the Reactor and Auxiliary Buildings, "Duke Energy, Catawba PWR Nuclear Station, (North Carolina, USA)"

Developed a SAP2000 finite element model from the structural plans and converted it to an equivalent SASSI model, generated time history ground motion by spectra-matching using SHAKE computer code, performed probabilistic SSI analyses, obtained ISRS (In-Structure Response Spectra) and elements forces.

Structural Seismic Risk Evaluations, "Tennessee Valley Authority, Sequoyah PWR Nuclear Plant, (Tennessee, USA)"

Planned and led the project to develop fragility for all of the nine safety related buildings at the Sequoyah Nuclear Plant in support for the plant's Seismic PRA Quantification 1.

Solar Panel Support Analysis, Damage Assessment and Design-Modification, "Borrego Solar, (Borrego Spring, CA)"

Conducted forensic investigation and performed design check analysis on the solar panel supports which was overstressed due to excessive wind load. Performed structural analysis of the supports

for wind load per ASCE-7 design code, designed a retrofit program for the under-designed panel supports and footings.

Real Estate Seismic Due Diligence and Forensic Investigation: Completed over 3,000 SRA/PML projects. Highlight of the recently completed projects includes:

Forensic Investigation and SRA: The Los Angeles Film School – Los Angeles CA
Forensic Investigation and SRA: Marriott Hotel – Anchorage, AK
Forensic Investigation and SRA: Park Newport Apartments – Los Angeles CA
Forensic Investigation and ASCE 41-13 Tire 1 Evaluation: Marriott Hotel – Anchorage, AK
ASCE 41-13 Tire 1 Evaluation: Cedar Assisted Living – Northridge, CA
SRA (PML): Portfolio of 40 Albertson/Vons/Pavilion Supermarket Stores in Southern California
SRA (PML): Portfolio of 30 Lucky/SaveMart/FoodMaxx Supermarket Stores in California
SRA (PML): Kaiser Permanent – Los Angeles, CA
SRA (PML): The Burbank Studios – Burbank, CA
SRA (PML): Marriott Hotel– Memphis, TN
SRA (PML): InTown Suites – Memphis, TN
SRA (PML): Monarch Beach Resort – San Diego, CA
SRA (PML): Saks Fifth Avenue – Santa Barbara, CA
SRA (PML): Hotel Casta Del Mar – Santa Monica, CA
SRA (PML): Staple Distribution Center – Rialto, CA
SRA (PML): LAX La Quinta Hotel – Los Angeles, CA
SRA (PML): Desert Oasis Apartments – Palm Desert, CA
SRA (PML): Sears – Baldwin Hills, CA
SRA (PML): StorQuest Self Storage – Palm Spring, CA
SRA (PML): Macy's – Los Angeles, CA
SRA (PML): Encino Office Park – Encino, CA

Seismic Retrofit Design or Oversight | New Building Design | Remodeling Design:

Country Club Drive, Costa Mesa, CA
California Ave, Santa Monica, CA
Via Calzada Drive, Mission Viejo, CA
Via Espiritu Drive, San Clemente, CA
Williwaw Drive, Irvine, CA
Lyon Ridge Drive, Laguna Niguel, CA

Professional Experience:

EFI Global, Forensic & Seismic Civil Structural Engineer, Feb 2023 – Present

Shirazi & Associates Engineering Services. Inc, Forensic & Seismic Civil Structural Engineer,
July/2019 – Jan/2023

AEI Consultants, Senior Project Manager, , Torrance, CA May/2017 – Jun/2019



ENERCON Services, LLC. Lead Structural Engineer, Jan/2016 – Apr/2017

Senior Structural Engineer, NuScale Power, Dec/2014 – Dec/2015

Simpson Gumpertz & Heger, Inc., Senior Structural Engineer, Jun/2012 – Nov/2014

SC Solution, Inc., Senior Structural Engineer, Oct/2010 – May/2012

Education:

Ph.D., Structural Engineering, University of California, San Diego, USA, 2010

M.Sc., Structural Engineering, University of California, San Diego, USA, 2007

B.Sc., Structural Engineering, University of California, San Diego, USA, 2005