Design Time Histories 2027

February - April

Days & Times TBA

REGISTER

Members	$700
Nonmembers	$1000

Dr. Norm Abrahamson
Adjunct Professor
University of California Berkeley

This 10-week class will cover development of time histories for use in dynamic analyses of structures. The student is expected to have a basic understanding of PSHA either from work experience or from the CalGeo PSHA class.

Week 1
- Design spectra and target ranges for secondary parameters including period-dependent duration, Arias intensity, CAV, PGV, and near-fault parameters

Week 2
- Selection of candidate seed time histories (recorded and/or simulations) and limits on scale factors
- What ranges of seismological parameters should be used?

Week 3
- Documentation in a PSHA report
- Summary of plots and tables for documenting the design time histories

Week 4
- Review Problem Set 1 (scaled)

Week 5
- Target range for peak-to-trough variability
- Where does the variability belong?

Week 6
- Spectral matching methodology (approach and math)

Week 7
- How to use the spectral matching computer program

Week 8
- Review Problem Set 2 (matching)

Week 9
- Evaluation of the realism of the modified (scaled or matched) time histories

Week 10
- Review

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