NATURAL HAZARDS RISKS AND RESILIENCY RESEARCH CENTER (NHR3)

B. John Garrick Institute for the Risk Sciences
UCLA ENGINEERING

NHR3 GeoHazard Research Program
Selected Proposals for RFP-3A2 and RFP-3B

Introduction: NHR3 GeoHazard Program

Natural Hazards Risk and Resiliency Research Center (NHR3) is a multidisciplinary and multi-campus research center with headquarters at UCLA (https://www.risksciences.ucla.edu/nhr3). The GeoHazard Research Program has recently been established at NHR3, with the focus on advancing seismic hazard characterization, use of earthquake ground motions in performance-based seismic design of infrastructure, and improving the assessment of liquefaction hazard. The GeoHazard Program is funded by infrastructure agencies, especially California Department of Transportation (Caltrans).

Two requests for proposals (RFP) were issued in June 2020. A review panel reviewed all submitted proposals and selected the following proposals for funding (contingent on the contractual approval process by the State of California).

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RFP 3A2: Liquefaction Triggering Model Using Arias Intensity (AI) or Cumulative Absolute Velocity (CAV) as Intensity Measures

Proposal: "DEVELOPMENT OF DETERMINISTIC AND PROBABILISTIC SPT- AND CPT-BASED I_H AND CAV LIQUEFACTION TRIGGERING EVALUATION PROCEDURES"

Principal Investigator (PI): Russell A. Green, Virginia Tech
Co-PI: Adrian Rodriguez-Marek, Virginia Tech
Co-PI: Peter Stafford, Imperial College (London, UK)
Co-PI: James K. Mitchel, Virginia Tech

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RFP 3B: Predicting Large Liquefaction Induced Ground Displacement

Proposal: "DEVELOPMENT OF PRACTICAL GUIDANCE FOR PREDICTING LARGE LATERAL SPREAD DISPLACEMENTS USING MULTI-VARIATE MODELING AND CPT-BASED INVESTIGATION TOOLS"

Principal Investigator (PI): Bret Lingwall, South Dakota School of Mines and Technology
Co-PI: Youssef Hashash, University of Illinois at Urbana-Champaign
Co-PI: Armin Stuedlein, Oregon State University