



PREEMPTIVE
Apr-May 2020
New Zealand



April 22 – May 1, 2020



Te Papa Wellington / Univ. of Canterbury



The PREEMPTIVE (Pacific Rim Earthquake Engineering Mitigation Protective Technologies International Virtual Environment) will host six Advanced Studies Institutes (ASIs) for graduate students over several years:

- *Resilience of Aging Infrastructure — Costa Rica, Feb. 2019;*
- *Tsunami Hazards & Infrastructure Resilience — Thailand, June 2019;*
- ***Structural Control & Geotech. Challenges — New Zealand, Apr.–May 2020;***
- *Interdisciplinary Disaster Science — Japan, Sept. 2020;*
- *Hurricane and Multi-Hazards — Puerto Rico, Jan 2021; and*
- *Extreme Earthquake & Tsunami Hazards — Chile, May 2021*

The goal of the PREEMPTIVE ASIs is to build a diverse community of researchers across the Pacific Rim, and beyond, who share a focused interest in understanding, promoting and accelerating the adoption of protective systems to provide resilience for building and infrastructure systems and ensure sustainable societies.

Each week-long institute will consist of 2–3 days of workshops and presentations by local and U.S. faculty to highlight protective systems success, 1–2 days of cultural and technical tours to give the U.S. students context to the performance of protective systems in recent natural hazards, and 2–3 days of collaborative group projects providing guided experiential learning experiences to implement a multidisciplinary project. To provide an introduction to the material, students will be expected to complete some online modules prior to departing for their ASI.

16 U.S. graduate students will be joined by U.S. faculty mentors and local student and faculty hosts. To increase participation in the program, each graduate student will typically participate in only one ASI; a select few graduate students will be asked to participate in a second ASI.



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Te Hiranga Rū





The PREEMPTIVE ASI in New Zealand will be held April 22–May 1, 2020, in Wellington and at the University of Canterbury in Christchurch. A series of earthquakes in 2010–2011 destroyed, or caused considerable damage to, vast portions of the city of Christchurch (then New Zealand's second most populous city). Much of Christchurch's central business district was "red tagged" and demolished, and significant portions of its suburban areas exhibited extensive liquefaction and ground subsidence to a sufficient level that entire neighborhoods were condemned and had to be abandoned. This third Institute will explore resilience and particularly consider the effects of soil conditions and geotechnical aspects of natural hazards in the overall performance of protective systems and measures. Participants will also have the opportunity to attend the [Annual Conference 2020](#) of the New Zealand Society for Earthquake Engineering ([NZSEE](#)).

The U.S. National Science Foundation (NSF) has provided participant support (through grants OISE-1828948/-1829085) for graduate students at U.S. universities (who are U.S. citizens or permanent citizens) to participate in the PREEMPTIVE ASI in New Zealand. Funding (complying with NSF travel requirements) will cover: air ticket to/from New Zealand; travel for technical and cultural tours within New Zealand; ~11 hotel nights (at the ASI hotels); and the ASI registration fee.

Apply Students in Civil/Structural Engineering, as well as other disciplines related to protective systems and disaster science (e.g., Mechanical Engineering, Electrical Engineering, Geology, Anthropology), who are advanced in their Ph.D. studies, have demonstrated excellence in scholarship, and are passionate about providing societies that are resilient to natural hazards, are encouraged to apply, no later than **February 16, 2019**

by submitting the following at <https://goo.gl/forms/Q1nb1EWI9BFAJJK2> (you must log into your Google account to apply): your CV; your unofficial undergraduate and graduate transcripts; and a personal one-page statement, unique to the PREEMPTIVE New Zealand ASI theme of Structural Control and Geotechnical Challenges, demonstrating interest and relevance of the student's research to protective systems and multidisciplinary approaches to hazards mitigation and disaster science, the student's interest in engaging the global community in these efforts, and the uniqueness and diversity the student brings to the ASI. Additionally, each applicant must ensure that his/her advisor e-mail a letter of recommendation (that also notes institutional permission to be on travel for about two weeks) to the organizers (preemptive@usc.edu) by February 10.

