

Ground motion simulation and validation workshop

31 Aug 2016, Taupo, New Zealand

<https://wiki.canterbury.ac.nz/pages/viewpage.action?pageId=53379935>

This workshop intends to provide closer personal connections between NZ researchers, end-users and international collaborators on ground motion simulation through a mix of invited presentations and open floor discussion on research challenges and implementation issues.

QuakeCoRE's ground motion simulation activities strive for in a paradigm shift in strong ground motion prediction through the use of high-fidelity physics-based simulation methods; merging state-of-the-art knowledge in strong motion seismology and geotechnical earthquake engineering; validating simulations via application to advanced numerical models of engineering infrastructure; and developing guidance for the use of such simulation methods in engineering design and assessment.

Time	Speaker	Topic
12:45-1:15	Lunch available	
1:15	Welcome and workshop aims	
1:20	Validation (10min talks)	
	Christine Goulet	SCEC efforts in ground motion simulation validation
	Ricardo Taborda	Validation of physics-based ground motion simulations of past earthquakes
	Hoby Razafindrakoto	Validation of ground motion simulations in the Canterbury, NZ, region
	Paul Somerville / Andreas Skarlatoudis	Validation of strong ground motion simulations of two historical NZ subduction zone earthquakes on the SCEC BBP
	John Anderson	The composite source model: Calibrations and validation for the SCEC BBP and precariously balanced rocks
	Sanaz Rezaeian	Implementation of GMSV TAG validation gauntlets on the SCEC BBP for engineering applications
	Brendon Bradley	Explicit validation of uncertainties in ground motion simulation
2:40	<i>Open Discussion: Advancing simulation validation</i>	
3:00	<i>Coffee break</i>	
3:20	Advances in GM Sim: High frequencies and shallow soil response (10min talks)	
	Ricardo Taborda	Current efforts and future challenges in high frequency ground motion simulation
	Seokho Jeong	Improvements in ground motion prediction via explicit simulation of near-surface site response at Heathcote Valley during the Canterbury earthquakes
	Liam Wotherspoon	Near surface site characterization
4:00	<i>Open Discussion: Advancing modeled physics in simulations</i>	
4:20	Utilization of simulated ground motions (10min talks)	
	Didier Pettinga / Brendon Bradley	Guidelines for the utilization of ground motion simulations in engineering practice
	Christine Goulet / Sanaz Rezaeian	Utilization of simulated ground motions in the US hazard and design maps
4:40	<i>Open Discussion: Utilization of simulations</i>	
5:00	Workshop close	