

# 2018 USER Program

## Overall Goals

- Communicate the science of earthquakes to the greater community in a way that is effective to them. (outreach and resources)
- Understand effects of shaking at a both a soil and building level from ground motions at a single location

## Timetabled Activities

Date	Time	Event	Speaker	Content	Location
15-Nov	12pm	Launch Meeting		USER kickoff	Jack Erskine 121
20-Nov	11am	Guest Lecture	John Hopkins		ENGCore Meeting Rm 3
3rd Dec	11 am	Guest Lecture	Tom Wilson	Multi-Disciplinary Resilience	E13
TBC		Effective Communications Lecture	Brandy Alger		
18th Dec	7:30 am	Fieldtrip	Chris Massey and more	Kaikoura Fieldtrip	Kaikoura (trip information to be provided later)

## Starting Tasks

1. Analyse and draw conclusions from plots / animations from the February 2011 Christchurch Earthquake
  - a. Download figures from [here](https://slack-files.com/T0C0R97U5-FE44W598X-247aff719c) (<https://slack-files.com/T0C0R97U5-FE44W598X-247aff719c>)
  - b. Gather initial thoughts about each figure after inspecting it without collaboration or research
  - c. Undertake individual research to understand each figure better
  - d. Talk with the rest of the USER group to compare their conclusions.
  - e. Collate your thoughts individually into a 1-2 page document. We are looking at this from the perspective of a person of the general public who wants to see more information about an earthquake
2. As a group determine the effects of ground motion at a point
  - Use [Seisfinder](https://quakecoresoft.canterbury.ac.nz/seisfinder) (<https://quakecoresoft.canterbury.ac.nz/seisfinder>) to retrieve ground motion data from a site closest to UC
  - Ground Effects
    - Geospatial liquefaction (Zhu et al)
    - Liquefaction Calculation
  - Shaking on a building
    - OpenSees model for (1, 3, 10, 20 story building)