# Utilization of Cybershake GMs

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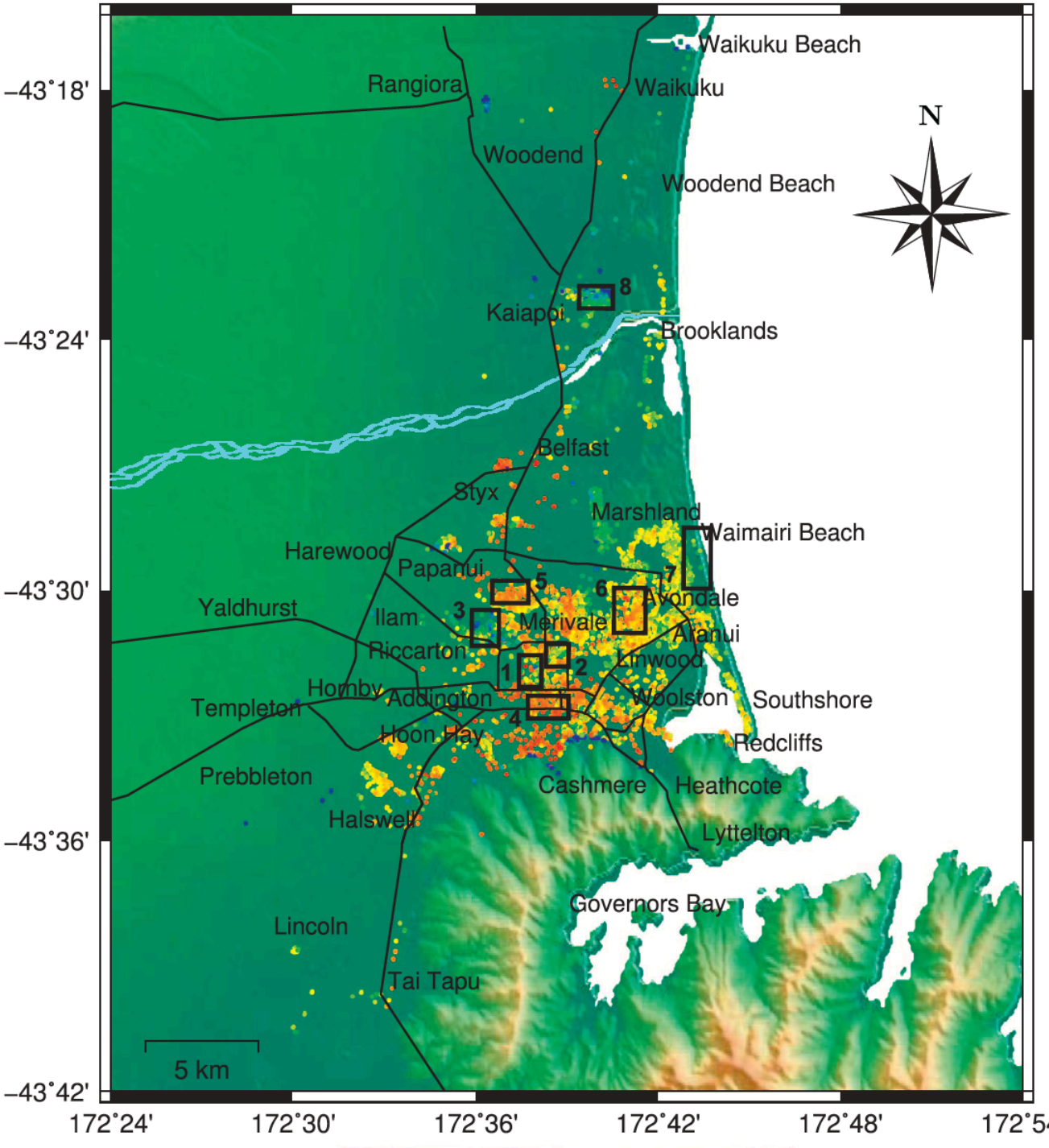
- Use the existing CPT dataset in Christchurch region to understand spatial variability in near surface soils
- Tie this in some way to the GM simulations. Either as some sort of way to do the high frequency part, a way to understand uncertainty/variability, or a way to explicitly consider site response
- Could perform a study to see how the spatial coherence of the simulated GMs across the region compares to empirical observations – important for analysis of distributed infrastructure

# Utiliz

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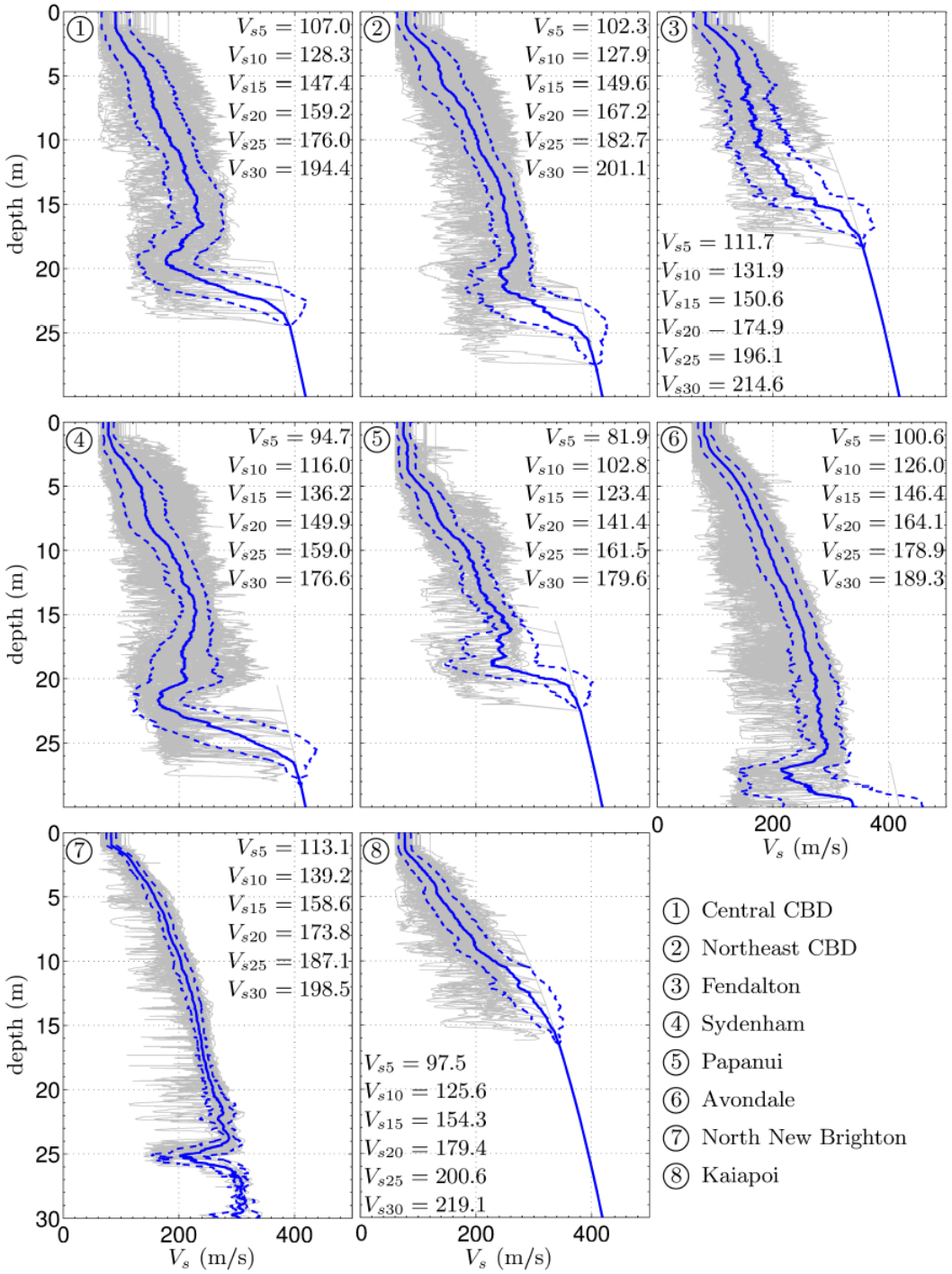


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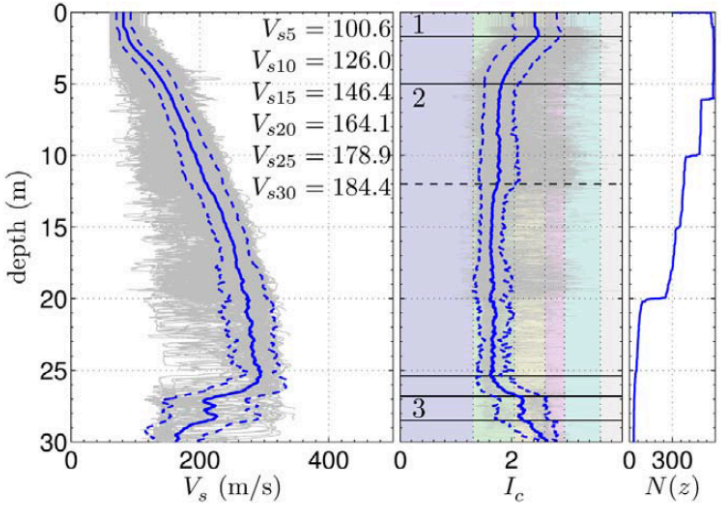


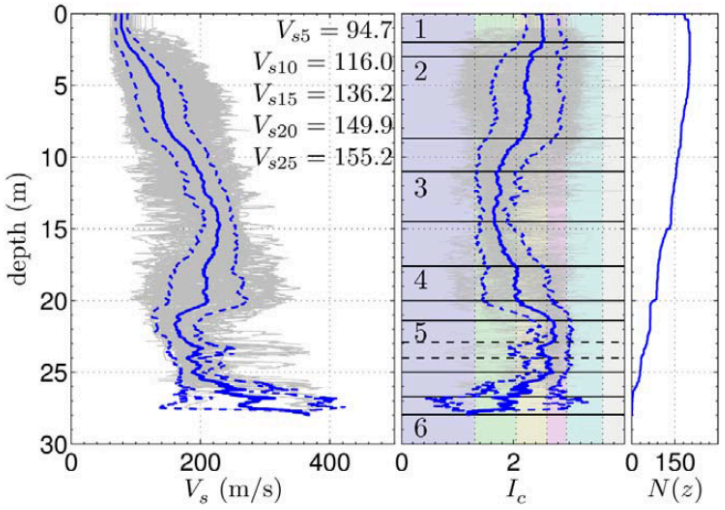

Simplified $I_c$ profile:

Layer 1: 0 to 1.8-5 m
$I_c = 2.4$, sandy silts

Layer 2: 1.8-5 to 25.2-26.9 m
$I_c = 1.7$, sands

Layer 3: 25.2-26.9 to 28.5-32 m
$I_c = 2.2$, silty sands

Layer 4: Riccarton Gravel
first: 26.5 m
all: 32 m




Simplified $I_c$ profile:

Layer 1: 0 to 2-3 m
$I_c = 2.5$, sandy silts

Layer 2: 2-3 to 8.6-11 m
$I_c = 2.3$, silty sands

Layer 3: 8.6-11 to 14.5-17.7 m
$I_c = 1.7$, sands

Layer 4: 14.5-17.7 to 20-21.4 m
$I_c = 2.0$, silty sands

Layer 5: 20-21.4 m to 25-28 m
$I_c = 2.65$, clayey silts

Layer 6: Riccarton Gravel
first: 20.5 m
all: 28 m