

University College Dublin (UCD/NUID)

Seismology Lab chris.bean@ucd.ie / geophysics@ucd.ie

- **University College Dublin, largest university in Ireland**
- **School of Geological sciences, approx 65 people**
- **Seismology Lab, approx 15 people**
 - **2 x academics**
 - **1 x research manager**
 - **1 x senior technical officer**
 - **remainder Post Docs & PhDs**
- **Equipment**
 - **56 x Guralp broad band seismometers**
 - **2 x infrasound sensors**
 - **5 x tilt meters**

- **Equipment (continued)**
 - **engineering geophysics equipment**
 - **parallel compute cluster (+National Computing Centre)**
 - **Collaborate with University College London (UCL) Rock and Ice Physics Lab – on physical laboratory experiments**

- **Research topics**
 - **Very Shallow Volcano Seismicity (LPs/Tremor): locations, source mechanisms etc; underlying causes? ... Italy, Costa Rica, Peru, Iceland, Indonesia**
 - **Wave propagation in heterogeneous fractured media (in past, with fluids) e.g. for numerical Green's functions (path effects)**
 - **Microseismic noise and shallow structural imagery (volcanoes and sedimentary basins)**

- **Current FutureVolc related collaborative research projects**
 - **NEMOH ITN**
 - **QUEST ITN**
- **FutureVolc work (mainly in WP6)**
 - **#1 To identify unequivocal seismic signals associated with eruption onset – especially for glacier covered volcanoes in Vatnajökull ice cap**
 - **#2 To identify seismic signals associated with glacier movement and sub-glacial flooding**
 - **#3 Help develop a methodology and strategy for the joint interpretation of multi disciplinary 'eruption phase data'**
 - **#4 Install two 'tremor detection' seismic arrays at Vatnajökull glacier (that will supply real time data)**
 - **#5 Involvement with Guralp in the development of an instrument for deployment on the glacier.**