



Patrick “Paddy” Smith



Research Fellow, Volcano-Seismology

Patrick Smith

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Biography

Originally from Leicestershire in the UK, obtained a bachelors degree in Natural Sciences from the University of Durham in 2004, primarily focused on Geophysics. This was followed by 5 years at the University of Leeds, studying for a Masters by Research degree in Physics of the Earth and Atmosphere (2006) and a PhD on the Attenuation of Volcanic Seismic Signals (2010), working with Prof. Jurgen Neuberg, the current chair of the SAC.

First visited Montserrat as part of PhD studies in 2007 before returning several times, including a 3 month period as acting seismologist at MVO in 2009. Employed full time by the Seismic Research Centre, University of the West Indies, as a Research Fellow in Volcano-Seismology based at MVO since September 2010.

Responsibilities at MVO

- Responsible, together with MVO technical staff, for the efficient operation and maintenance of the MVO seismic monitoring network, including both hardware and software.
- To interpret seismic data in terms of volcanic activity and regularly report to MVO Director, with particular regard to the timeliness of warnings and significant changes in seismicity.
- To coordinate seismological research and projects within MVO and with its partners.
- To manage the training of local staff in seismic interpretation in order to enhance the long-term technical ability of MVO seismic team.
- To supervise modifications and upgrades to the MVO seismic network as appropriate.

Research

Research interests cover a range of topics spanning geophysics, seismology and volcanology. Currently the main focus is ongoing research into volcanic seismic phenomena at Soufrière Hills Volcano, Montserrat.

This includes interests in:

- VLP (Very-long period) seismic signals and their link to strain and deformation



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processes

- Low-frequency or long-period (LP) earthquakes: their characteristics, generation mechanisms and links to magma properties (attenuation) and conduit dynamics and cyclicity
- Volcano Tectonic (VT) seismicity in general, but particularly the recently recognised phenomenon of VT ‘strings’ or high-frequency spasmodic bursts at SHV
- The seismic signals associated with rockfalls, pyroclastic flows and explosions.