Prof. Andy Hooper

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Background

Andy Hooper has been Professor of Geodesy and Geophysics at Leeds since May 2013. He has pioneered the development of new algorithms to accurately extract deformation of the ground from time series of satellite radar images, which are now widely used in the community (StaMPS).
He has also developed new methods for modelling the volcanic and tectonic processes that lead to ground deformation. He led the geodetic monitoring from space and subsequent modelling for the 2010 Icelandic volcanic eruptions and also discovered a new link between ice cap retreat and volcanism there. Following the 2011 Tohoku earthquake in Japan, he led a joint study involving geodetic and oceanic modelling of the earthquake and tsunami, which demonstrated the unprecedented contribution of horizontal seafloor motion to the tsunami generation. He is currently leading the long-term deformation effort in the €6M European FUTUREVOLC project, which aims to develop a volcano monitoring system for the future.

Selected publications

- **A Hooper**, A statistical-cost approach to unwrapping the phase of InSAR time series, Proceeding of International Workshop on ERS SAR Interferometry, Frascati, 2010.
- F Sigmundsson, S Hreinsdóttir, **A Hooper**, T Árnadóttir, R Pedersen et al., Intrusion triggering of the 2010 Eyjafjallajokull explosive eruption, Nature 468 (7322), 426-430, 2010.
- **A Hooper**, B Ófeigsson, F Sigmundsson, B Lund, P Einarsson, H Geirsson et al., Increased capture of magma in the crust promoted by ice-cap retreat in Iceland, Nature Geoscience 4 (11), 783-786, 2011
- **A Hooper**, D Bekaert, K Spaans, M Arıkan, Recent advances in SAR interferometry time series analysis for measuring crustal deformation, Tectonophysics 514, 1-13, 2012.
- F Sigmundsson, **A Hooper**, S Hreinsdóttir, KS Vogfjörd, BG Ófeigsson et al., Segmented lateral dyke growth in a rifting event at Barðarbunga volcanic system, Iceland, Nature, 2014