

CURRICULUM VITAE

Correct to 05 January 2011

PERSONAL DETAILS

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ACADEMIC EMPLOYMENT

2006 - UNIVERSITY OF LEEDS
Senior Lecturer in Engineering Geology, School of Earth and Environment.
2001-2006: UNIVERSITY OF LEEDS
Lecturer in Engineering Geology, School of Earth and Environment.
1994-2000: UNIVERSITY OF PORTSMOUTH
Senior Lecturer in Engineering Geology, School of Earth, Environmental and
Physical Sciences.
1992-1994: UNIVERSITY OF PORTSMOUTH
Lecturer in Engineering Geology
1988-1992: UNIVERSITY COLLEGE, UNIVERSITY OF LONDON
Natural Environment Research Council funded research student

EDUCATION AND QUALIFICATIONS

1992: PhD in Geological Sciences, University College, University of London
Thesis Title: *Seismically-triggered landslides, Calabria, S. Italy.*
Supervisors: Prof. C. Vita-Finzi and Dr H. J. Milledge.
1988: B.Sc. Geography and Geology: Upper Second Class Honours, University of
Strathclyde, Glasgow.

PROFESSIONAL MEMBERSHIPS

Fellow, The Geological Society of London
Member, Society of Earthquake and Civil Engineering Dynamics, Institution of Civil Engineers

HONOURS AND AWARDS

The project 'The role of topographic amplification in the generation of landslides during seismic events' was the runner up for the Roy J. Shlemon Scholarship Award for the best research proposal within the field of engineering geology at the Geological Society of America Annual Conference, Denver, October 2002.

Consultant to SEACAP 21 which won the Ground Engineering award for the most Sustainable project of 2009. This project addressed landslide problems in the People's Democratic Republic of Laos combining engineering intervention, training and policy initiatives.

EXAMPLES OF INTERNATIONAL RESEARCH ROLE

- 2011- Member of the Geotechnique Advisory Panel, Institution of Civil Engineers.
- 2008- Member of the Advisory Board for the Commonwealth Scholarships Commission.
- 2007- Editorial Board Member: Engineering Geology
- 2002-2007: Editorial Board Member: Quarterly Journal of Engineering Geology and Hydrogeology.
- 2002: Session Chairman: *Seismic Hazards*. 12th European Conference on Earthquake Engineering, The Barbican, London.
- 2001-2004 Visiting Research Fellow, Joint Centre for Earth Systems Technology, University of Maryland Baltimore County, USA.
- 2001-2002 Member: Organizing Committee for the 12th European Conference on Earthquake Engineering, The Barbican, London.
- 2001-2002 Member: Technical Affairs Committee for the 12th European Conference on Earthquake Engineering, The Barbican, London.
- 2002-present: Advisory member of the Geological Society Working Party on Geological Hazards.
- 2000: Session Chairman: 8th International Symposium on Landslides, Cardiff.
- 1994-2004: Geological Society Representative to the Society of Earthquake and Civil Engineering Dynamics (SECED), Institution of Civil Engineers.

KEYNOTE AND INVITED LECTURES

- 2009: Keynote speaker: The impact of topographic amplification on seismically induced landslides. The Chi Chi Earthquake 10th anniversary workshop on the next generation of research on earthquake induced landslides.
- 2004: Invited speaker: Probabilistic assessment of slope stability. The Geological Society, Leeds.
- 2004: Short Course on Earthquake Geology, M.Sc. Civil Engineering, Nottingham Trent University.
- 2004: Invited Speaker: Applied Geomorphology Seminar Series, Department of Geography, University of Oxford.
- 2003: Invited keynote paper at the 8th Annual Conference of the International Association of Mathematic Geology.
- 2003: Short Course on Earthquake Geology, M.Sc. Civil Engineering, Nottingham Trent University.
- 2002: Keynote Speaker, NATO Advanced Research Workshop on Massive Rockslope Failure, Celano, Italy.
- 2001: Invited speaker: landslides triggered by the 13 January El Salvador Earthquake, Society of Earthquake and Civil Engineering Dynamics, Institution of Civil Engineers, London.
- 2001: Invited speaker: Applied Geomorphology Seminar Series, Department of Geography, University of Oxford.
- 2000: Meeting Champion and Speaker: Seismically-induced landslides, Society of Earthquake and Civil Engineering Dynamics, Institution of Civil Engineers, London.

PRINCIPAL AREAS OF RESEARCH

1. Earthquake triggered landslides

How earthquakes trigger landslides; topographic amplification and its impact on seismic slope stability; Geomorphological and Geotechnical Indicators of strong motion amplification; the role of groundwater during earthquakes and the mechanics of partially saturated soils during shaking; the behaviour of pyroclastic deposits subjected to seismic shaking.

Field sites: Italy; Taiwan; S. California, USA; New Zealand; Armenia, El Salvador.

Techniques: Rock Material and Rock Mass Characterisation; Geomorphological mapping; direct shear experimentation; numerical modelling using finite difference and finite element codes; landslide back analysis.

2. Landslide hazard and risk assessment

Terrain evaluation and mapping; triggering mechanisms; undrained loading; frequency - magnitude relationships; runout mechanisms and processes; landslide modelling; Rock Mass Classification used in dynamic environments. Testing models of landslide development using numerical modelling.

Field sites: Taiwan; Italy; N. California; Southern England.

Techniques: Geomorphological mapping; geological mapping; remote sensing; GIS analysis; statistical assessment; landslide monitoring; geological and stratigraphic methods; Rock Mass Classification and Geotechnical Assessment.

3. Ground models and terrain evaluation

The development of ground models and understanding of active processes based on geological and geomorphological data. Incorporation of these datasets into geotechnical engineering to inform ground performance under "in service" conditions. How strength is mobilised in the ground.

Field sites: Yorkshire Coast, UK, Dorset, UK; S. California, USA; Italy.

Techniques: Airborne and Satellite based remote sensing; geomorphological mapping and geotechnical assessment. GIS methods.

In the development of these areas I have established excellent contacts that continue to expand. I am constantly looking to develop new research collaborations while maintaining existing ones. Good links currently exist in New Zealand, Taiwan and the United States of America. New opportunities are emerging for research links with the Geological Survey in Malaysia and Scott Wilson Consulting Engineers. I am currently in discussion with Halcrow regarding a Knowledge Transfer Partnership.

Collaboration is developing with colleagues in the British Geological Survey. These projects vary from novel methods of assessing void migration hazard from underground mine and mineral extractions to aspects of landslide movement mechanics and groundwater flow in slope systems using shallow geophysics.

GRANTS AND RESEARCH FUNDING

Year	Awarding body	Role	Total Value	Status
2005-2011	Natural Environment Research Council	PI	£360,000	ongoing
Masters Training Grant - funding for Scholarships for the MSc Engineering Geology.				
2007	Natural Environment Research Council	PI	Flight time	ongoing
Correlating terrain systems and representative values - putting geotechnical numbers into geomorphological images, Difarsa River, Ethiopia. (in collaboration with Gareth Hearn, Scott Wilson)				

2003	North Atlantic Treaty Organization	Participant	£725	Current
Secondary seismic hazards from the Agri Fault, Armenia.				
2002	The Royal Society	Participant	£600	Completed
The 4th Sino-British Geological Congress, Padua, Italy				
2002	University of Leeds	Participant	£550	Completed
The 12 th European Conference on Earthquake Engineering				
2001	NASA	Investigator	\$139,530	completed
Water on Mars: Inferences from Mass Movement Studies (MASSMOVE) NASA MGS-DAP NAG5-12271				
2001	Natural Environment Research Council	Principal Investigator	£15,800	Completed
Landslides triggered by the 13 th January 2001 El Salvador Earthquake				
2000	NASA	Participant	\$100,000	Completed
Radar imagery provision for the investigation of interferometry in landslide monitoring				
2000	NASA/ESA	Participant	\$200,000	Completed
The use of radar interferometry for landslide monitoring				
2000	EU	Scholarship	£600	Completed
Attendance at conference				
2000	Natural Environment Research Council	Co- Investigator	equipment	Completed
Investigation of the spectral properties of landslide materials in the field and the laboratory (March – April 2000).				
1999	Natural Environment Research Council	Co-Investigator	£8100	completed
Topographic amplification in landslide initiation during the 1999 Chi-Chi earthquake, Taiwan				
1999	Ministry of the Interior, Taiwan	Principal Investigator	£2,000	Completed
Lndslide investigation during tropical cyclones				
1998	Benfield Greig Reinsurance Ltd.	Co-Investigator	£2445	Completed
Seismic hazards in Italy				
1998	Natural Environment Research Council	Co-Investigator	Flight time	Completed
Remote sensing investigation of post glacial faulting, Kintail, Scotland				
1997	EU FPIV	Joint Investigator	€82,000	Completed
Landslide runoff processes for large slope failures				
1994	Natural Environment Research Council	Principal Investigator	Flight time	Completed
Image characteristics of the 1994 Black Ven Landslide, West Dorset.				
1993	Her Majesty's Inspectorate of Pollution	Co-investigator	£16472	Completed
The 'memory effect' and its influence on the alteration of the geotechnical properties of building stones.				

POSTGRADUATE RESEARCH STUDENTS

- 2008-present Ferdaus Ahmed (PhD student, with Professor Steve Hencher, Dr James Lawrence, University of Leeds)
Testing the Hoek-Brown criterion for rock masses.
- 2007-present Rini Asnida (PhD student, with Dr R. J. Fowell, SPEME, University of Leeds)
A rock mass assessment method for the evaluation of shallow slope instability
- 2006-2009 Joseph Quinn (PhD student, University of Leeds)
Landslides and recession of the Holderness Coast, Yorkshire, UK.
- 2003-2008 Egerton Hingston (PhD student, University of Leeds).
Uncertainty in the evaluation of slope stability. Commonwealth Scholarship.
- 2001-2004 Sergio Sepulveda (PhD student, University of Leeds).

- The role of topographic amplification in the generation of landslides during seismic events. Government of Chile studentship
- 1997-2001: Firuz Ramli (full-time PhD student, completed)
The use of the Airborne Thematic Mapper (ATM) imagery in the detection and analysis of landslides in temperate regions. Government of Malaysia Scholarship.
- 1997-2004: Andrew Gibson (Full time to 2000, part time 2000-2004, completed)
Spectral properties of landslide materials, Black Ven, United Kingdom.
- 1996-1999: Joseph Mankelow (full-time PhD student, completed)
The GIS and probabilistic assessment of seismically-triggered landslides.

RESEARCH PEER REVIEW

Reviews of Research Grant Applications

- Natural Environment Research Council.
- National Science Foundation (USA).
- National Earthquake Hazards Reduction Programme, United States Geological Survey.
- Commonwealth Scholarships Commission.

Peer Review of Journal Articles

- Area
- Canadian Geotechnical Journal
- Catena
- Earth Surface Processes and Landforms
- Engineering Geology
- Environmental Geology
- Geographical Journal
- Geophysical Research Letters
- Geotechnique
- Journal of Geophysical Research
- Landslides
- Quarterly Journal of Engineering Geology and Hydrogeology
- Special Publications of the Geological Society

Reviews for Publishers

- Blackwell Scientific
- Cambridge University Press
- Routledge
- Geological Society Publishing House

PUBLICATIONS:

- Quinn, J. D., Rosser, N. J., **Murphy, W.** and Lawrence, J. A. 2010. Identifying the behavioural characteristics of clay cliffs using intensive monitoring and geotechnical numerical modelling. *Geomorphology*. **120**,(3-4), 107-122.
- Abdullah, R.A., Fowell R.J. & **Murphy, W.** 2010. Selecting shear strength models for joints - experience with modeling of complex rock slope failure in UDEC. EUROCC 2010.
- Quinn, J. D., Philip, L. K. & **Murphy, W.** 2009. Understanding the recession of the Holderness Coast, east Yorkshire, UK - a new presentation of temporal and spatial patterns. *Quarterly Journal of Engineering Geology and Hydrogeology*. **42**, 165-178.
- Thanaya, I. N. A., Rahman, M. W., Forth, J. P. and **W. Murphy**. 2009. Preliminary Development Of A Masonry Unit Composed Only Of Soil Aggregate. Proceedings of the 11th Canadian Masonry Symposium, Toronto, Ontario, May 31-June 3, 2009.

- Quinn, J. D., **Murphy, W.**, West, L. J. & Lawrence, J. A. 2008. The Use of Terrestrial Laser Scanning, Differential GPS Surveying and Panoramic Photography to Characterise the Landslides and Recession of the Holderness Coast, Yorkshire, England. *GeoEdmonton 2008. 61st Canadian Geotechnical Conference and 9th Joint CSG/IAH-CNC Groundwater Conference*. Edmonton, Canadian Geotechnical Society, International Association of Hydrogeologists-CNC, Geotechnical Society of Edmonton. 411 - 418.
- Bulmer, M. H., Petley, D. N., **Murphy, W.** & Mantovani, F. 2006. Detecting slope deformation using two-pass differential interferometry: Implications for landslide studies on Earth and other planetary bodies. *Journal Of Geophysical Research*, **111**. E06S16, doi:10.1029/2005JE002593.
- Murphy, W.** 2006. The role of topographic amplification on the initiation of rock slopes failures during earthquakes. In Evans, S. G. & Strom, A. (Eds). *Massive Rock Slope Failures. Nato Science Series: IV: Earth and Environmental Sciences*, 689pp. ISBN: 1-4020-4036-9.
- Sepulveda, S. A., **Murphy, W.**, Jibson, R. and Petley, D. N. 2005. Seismically-induced rock slope failures resulting from topographic amplification of strong ground motions: the case of Pacoima Canyon, California. *Engineering Geology*. **80**, 336- 348
- Whitworth, M. C. Z., Giles, D. P. and **Murphy, W.** 2005 Airborne remote sensing for landslide hazard assessment: a case study on the Jurassic escarpment slopes of Worcestershire, United Kingdom. *Quarterly Journal of Engineering Geology and Hydrogeology*, 38(3), 285 – 300.
- Sepulveda, S. A., **Murphy W.** & Petley, D.N. 2005. Topographic controls on coseismic rock slides during the 1999 Chi-Chi Earthquake, Taiwan, *Quarterly Journal of Engineering Geology and Hydrogeology*. **38**, 189-196
- Sepulveda, S.A., **Murphy, W.**, Petley, D.N., 2004. The role of topographic amplification on the generation of earthquake-induced rock slope failures. In Lacerda, W.A., Ehrlich, M., Fontoura, S.A.B. & Sayao, S.F. (eds.), *Landslides: Evaluation and Stabilization*. Balkema, Vol.1, pp.311-315.
- Murphy, W.** & Mankelov, J.M. 2004. Obtaining probabilistic estimates of displacement on a landslide during future earthquakes. *Journal of Earthquake Engineering*, **8** (1), p.133-157.
- Rolo, R., Bommer, J., Houghton, B. F., Vallance, J. W., Berdousis, P., Mavrommati, C. & **Murphy, W.** 2004. Geologic and engineering characterization of Tierra Blanca pyroclastic ash deposits. In Rose, W. I., Bommer, J. J., Lopez, D. L., Carr, M. J. & Major J. J. (Eds). *Natural Hazards in El Salvador, GSA Special Paper 375*, Geological Society of America, 55-67.
- Ramli, M. F., Petley, D. & **Murphy, W.** 2003. Optimum band selection evaluation for landslide studies in temperate environments. *Proceedings of the Second Conference on Remote Sensing for Environmental Monitoring. GIS Applications and Geology*, **II**, 342-350.
- Sepulveda, S.A., **Murphy, W.**, and Petley, D.N., 2003. Earthquake-triggered rockslides in Central Taiwan: mechanisms and controls. *Proceedings, X Congreso Geológico Chileno* (CD-Rom).
- Wilson, A., Petley, D.N., and **Murphy, W.** 2003. Geotechnical and pore fluid controls on large-scale landslide movement in the Alps *Geomorphology*, **54**, 1-2, 49-62
- Bommer, J. J., Benito, M. B., Ciudad-Real, M., Lemoine, A., Lopez-Menjivar, M. A., Madariaga, R., Mankelov, J., Mendez de Hasbun, P., **Murphy, W.**, Nieto-Lovo, M., Rodriguez-Pineda, C. and Rosa, H. 2002. The El Salvador earthquakes of January and February 2001: context, characteristics and implications for seismic risk. *Soil Dynamics and Earthquake Engineering*, **22**, 389-418.
- Bommer, J. J., B enito, B., Ciudad-Real, M., L opez Menj ivar, M., Mankelov, J. M., M endez de Hasbun, P., **Murphy, W.**, Rodr iguez-Pineda, C. 2002. The El Salvador Earthquakes Of 2001: Implication For Seismic Risk From Crustal And Subduction Seismicity. *Proceedings of the 12th European Conference on Earthquake Engineering*, Paper Reference 693
- Bulmer, M.H., Mantovani, F., **Murphy, W.**, and Petley, D.N. 2002. SAR Interferometry in landslide monitoring; experiences from Black Ven Landslide, Dorset 2001. In: Delahaye, D., Levoy, F., and Maquaire, O. (eds) *Geomorphology: From Expert Opinion to Modelling*, European Centre on Geomorphological Hazards, Strasbourg, France, pp 21-27.
- Murphy, W.**, Bommer J. J. & Mankelov, J. M. 2002. Mechanisms Of Slope Failure In Volcanic Soils During Earthquakes. *Proceedings of the 12th European Conference on Earthquake Engineering*, Paper Reference 782.

- Murphy, W.**, Petley, D.N., Bommer, J., and Mankelow, J.W., 2002. Geotechnical and seismological uncertainty in the assessment of slope stability during earthquakes. *Quarterly Journal of Engineering Geology and Hydrogeology*, **35**, 71-78.
- Petley, D.N., Bulmer, M.H.K., and **Murphy, W.** 2002. Patterns of movement in rotational and translational landslides. *Geology*, **30**, no. 8, 719-722.
- Ramli, M.F., Petley, D.N., **Murphy, W.**, Inkpen, R. J. 2002. Optimum band selection evaluation for landslide studies in temperate environments. *Proceedings of the 2nd International Symposium on Remote Sensing for Environmental Monitoring, GIS applications and Geology, Greece*, 342-350.
- Ramli, M. F., Petley, D.N., **Murphy, W.**, and Inkpen, R. 2002. Integration of high resolution thematic mapper and digital elevation model for landslide mapping. *Proceedings of the Regional Symposium on Environmental and Natural Resources, Kuala Lumpur*, 647-653.
- Papida, S., **Murphy, W.** & May, E. 2000. Enhancement of physical weathering of building stones by microbial populations. *International Biodeterioration and Biodegradation*, **46**, 305-317
- Petley, D.N., and **Murphy, W.** 2000. The development of a Landslide Hazard Assessment Scheme for a mountainous area in E. Taiwan. In Bromhead, E., Dixon, N. and Ibsen, M-L. *Landslides In Research, Theory and Practice*. Thomas Telford, London, 1203-1208.
- Whitworth, M., **Murphy, W.**, Giles, D.P., and Petley, D.N., 2000. Archaeological evidence for recent slope movements, Broadway, UK. *Geographical Journal*, **166**, 139-155.
- Ramli, F., Petley, D.N., **Murphy, W.**, and Inkpen, R. 2000. The detection of relict landslides using Airborne Thematic Mapper Imagery. In Bromhead, E., Dixon, N. and Ibsen, M-L. *Landslides In Research, Theory and Practice*. Thomas Telford, London, 1269-1274.
- Whitworth, M.C.Z., Giles, D.P., **Murphy, W.** and Petley, D.N. 2000. Spectral properties of active, suspended and relict landslides derived from Airborne Thematic Mapper imagery. In Bromhead, E., Dixon, N. and Ibsen, M-L. *Landslides In Research, Theory and Practice*. Thomas Telford, London, 1569-1574.
- Wilson. A., **Murphy, W.**, and Petley, D.N. 2000. Some observations on the geotechnics and movement of large volume earth flows in Alpine Regions. In Bromhead, E., Dixon, N. and Ibsen, M-L. *Landslides In Research, Theory and Practice*. Thomas Telford, London, 1581-1586.
- Gibson, A.D., **Murphy, W.**, Petley, D.N. and Inkpen, R.J. 2000. Quantitative landslide analysis using archive Airborne Thematic Mapper imagery. In Bromhead, E., Dixon, N. and Ibsen, M-L. *Landslides In Research, Theory and Practice*. Thomas Telford, London, 621-626.
- Mankelow, J.M. & **Murphy, W.** 1998. Using GIS in the probabilistic assessment of earthquake triggered landslide hazards. *Journal of Earthquake Engineering*, **2** (4), p.593-623.
- Mankelow, J. M., Giles, D. P & **Murphy, W.** 1998. Probability density function modelling for earthquake-triggered landslide hazard assessments. In Buccianti, A. Nardi, G & Potenza, R. (Eds). *Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology*. Ischia, Italy, **1**, 241-247.
- Murphy, W.**, Petley, D.N., Risdon, G. and Chen, M.C. 2000. Topographic Effects Influencing Large Scale Slope Failure during the 21st of September Chichi Earthquake, Taiwan, 1999. *Proceedings of the Second EuroConference on Global Change and Catastrophe Risk Management: Earthquake Risks in Europe*. International Institute for Applied Systems Analysis, Laxenburg, Austria. 12 pp. <http://www.iiasa.ac.at/Research/RMP/july2000/Papers/murphy0709.pdf>
- Murphy, W.** 1997. Sensitivity of palaeoseismological estimates derived from landslides to variations in geotechnical and geological inputs. *Journal of the Geological Society of China*, **40** (1), p.185-208.
- Murphy, W.** & Inkpen, R. J. 1996. Alteration of geotechnical properties of Portland Limestone and Monk's Park Limestone under simulated weathering. *8th International Congress on Deterioration and Conservation of Stone*, **II**, 739-750, 30, September - 4, October, Berlin.
- Murphy, W.**, Smith, J. D. & Inkpen, R. J. 1996. Errors associated with determining P and S wave velocities for rock weathering studies. In Smith, B. and Warke, P. (Eds). *Processes of urban stone decay*, 229-245, Donhead Publishing Ltd.

- Schuster, R. L. & **Murphy, W.** 1996. Structural damage, ground failure and hydrologic effects of the magnitude (M_w) 5.9 Draney Peak, Idaho, Earthquake of February 3, 1994. *Seismological Research Letters*. 67,3, 20-29.
- Murphy, W.** 1995. The geomorphological controls in seismically triggered landslides during the 1908 Straits of Messina earthquake, Southern Italy. *Quarterly Journal of Engineering Geology*, **28**, p.61-74.
- Murphy, W.** 1994. Techniques to assist the classification of fault activity for engineering projects by remote sensing. In Oliveira, R., Rodrigues, L. F., Coelho, A. G. & Cunha, A. P. (Eds). *Proceedings of the Congress of the International Association of Engineering Geologists*, Lisbon, 5-9, September, **1**, 9-16, Balkema, Rotterdam, ISBN 90 5410 503 8.
- Murphy, W.** & Bulmer, M. H. K. 1994. Evidence of pre-historic seismicity in the Wairarapa Valley, New Zealand as indicated by remote sensing. *Proceedings of the Tenth Thematic Conference: Geologic Remote Sensing*. 8-10, May, San Antonio, Texas. **2**, 441-455, Environmental Research Institute of Michigan.
- Murphy, W.** 1993. Mechanisms of slope failure during strong ground motion in southern Italy - some historical evidence. In *Soil Dynamics and Earthquake Engineering VI*, A. S. Cakmak & C. Brebbia (Eds). 45-60, Computational Mechanics Publications, Southampton.
- Murphy, W.** 1993. Remote sensing of active faults: case studies from southern Italy. *Zeitschrift fur Geomorphologie*, **Suppl.-Bd. 94**, 1993, 1-23.
- Murphy, W.** & Vita-Finzi, C. 1991. Landslides & Seismicity - some applications of remote sensing. *Proceedings of the 8th Thematic Conference: Geologic Remote Sensing, Denver, Co.* **2**, 771-784, Environmental Research Institute of Michigan, Ann Arbor.

Unpublished Reports

- Murphy, W.**, Bommer, J. J. & Mankelov, J. M. 2001. Landslides triggered by the 13 January 2001 El Salvador Earthquake. Report for NERC. 2 pp.
- Petley, D.N., and **Murphy, W.**, 2000. The role of topographic amplification in landslide initiation during the 20 September 1999 earthquake, Taiwan. Report for NERC. 8 pp.
- Murphy, W.** and Petley, D.N., 2000. The geotechnics of the Tessina and Bad Goisern landslides. Report completed for EU FP4. 10 pp.

Abstracts and Poster Presentations

- Murphy, W.** 2005. Terrain controls on earthquake-induced landslides. Royal Geographical Society-IBG Annual Conference, London, September 2005.
- Whitworth, M., Giles, D., **Murphy, W.**, Teeuw, R. and Gibson, A. 2004. Application of Airborne Remote Sensing and Digital Topographic Data to Identification of Landslides on Jurassic Escarpments of Central United Kingdom. *G. American Society for Photogrammetry and Remote Sensing 2004 Annual Conference, Baltimore*.
- Petley, D.N., **Murphy, W.**, Bulmer, M.H., and Keefer, D. 2002. Cross-slope Movement Patterns in Landslides. Invited paper (poster) presented at the American Geophysical Union Fall meeting, San Francisco, December 2002. *Eos* **83** (47), Fall Meeting Supplement, Abstract H12D-0947.
- Murphy, W.**, Bulmer, M.H., and Petley, D.N. 2002. Monitoring Movement Patterns on a Large Landslide Using Remote Methods. Poster presented at the American Geophysical Union Fall meeting, San Francisco, December 2002. *Eos* **83** (47), Fall Meeting Supplement, Abstract H12D-0946.
- Bulmer, M.H., Mantovani, F., **Murphy, W.**, Petley, D.N., Jibson, R., Keefer, D. 2002. SAR Interferometry in Landslide Monitoring. Invited paper (poster) presented at the American Geophysical Union Fall meeting, San Francisco, December 2002. *Eos* **83** (47), Fall Meeting Supplement, Abstract H12D-0945.

Sepúlveda, S.A., **Murphy, W.** and Petley, D.N., 2002. Rock slope failure during the 1999 Chi-Chi Earthquake, Taiwan: an example of topographic amplification effects? Poster presented at the Geological Society of America Annual Meeting, Denver, October 2002.

Sepúlveda, S., **Murphy, W.** and Petley, D.N. 2002. Gemorphologic controls on rock slope instability during the 1999 Taiwan earthquake. Poster presented at the BGRG Annual Meeting, Leeds, September 2002.

Sepulveda, S.A., **Murphy, W.** and Petley, D.N., 2002. Rock slope failure during the 1999 Chi-Chi Earthquake, Taiwan: an example of topographic amplification effects?

Ramli, M.F., Petley, D.N., Inkpen, R.J. and **Murphy, W.** 2002. Accuracy assessment of digital elevation model using automatic strategy of Helava Socet Set digital photogrammetry system. Poster presented at the 11th Australasian Remote Sensing and Photogrammetry Conference, Brisbane, Queensland, Australia. September 2002.

Bulmer, M.H., Mantovani, F., **Murphy, W.**, Petley, D.N., Jibson, R.W., and Keefer, D.K. 2002 Landslide Monitoring using ERS-SAR and RADARSAT Interferometric Data. IAG - International Association of Geomorphologists 2002, Dornbirn (Austria).

Bulmer, M. H., Jibson, R. W., Keefer, D. K., Mantovani, F., **Murphy, W.** and Petley, D. N. 2000. The application of SAR data to the interpretation of landslides. *EOS: Transactions of the American Geophysical Union*, Fall. U61A-07.

Mankelov, J. M. & **Murphy, W.** 1996. The use of GIS in a probabilistic assessment of earthquake-triggered landslide hazards in the Summit Ridge area, North Santa Cruz mountains, California. *Geological Society of America Abstracts with Programs*, A-526, Denver 28-31, October 1996.

Murphy, W. & Inkpen, R. J. 1996. Identifying landslide activity using airborne remote sensing data. *Geological Society of America Abstracts with Programs*, A-408, Denver 28-31, October 1996.

PROFESSIONAL ACTIVITIES & REPORTS

Murphy, W. Strength, deformability and discontinuity strength of itaberite from the Simandou Ore iron ore deposit, Equatorial Guinea. Consultants Report to SRK Consulting Ltd, January 2009. 11pp.

Murphy, W. Engineering Petrography of the White Whin for the Forth River Crossing. Consultants Report to Glover Site Investigations and Arup Ltd., September 2008. 15pp.

Murphy, W. Shear strength of rock wall-concrete interfaces for the Ryburn Dam, West Yorkshire. Consultants Report to Geotechnical Engineering Ltd., September 2008. 12pp.

Murphy, W. Strength and deformability of itaberite from the Simandou Ore iron ore deposit, Equatorial Guinea. Consultants Report to SRK Consulting Ltd, July 2008. 8pp.

Murphy, W. Strength and deformability of ore deposits from the Simandou Ore iron ore deposit, Equatorial Guinea. Consultants Report to SRK Consulting Ltd, June 2008. 28pp.

Murphy, W. Earthquake-Triggered Landslides in Natural Terrains. Consultants Report to Halcrow (China) Ltd. January 2008. 12pp

Murphy, W. The Shear strength of discontinuities for Plymstock Quarry. Consultants Report to Soil Mechanics Ltd. December 2007. 4pp

Murphy, W. & Quinn, J. D. Geotechnical report on pollution features at Studley Road, Ripon. Consultants report to Econ Engineering. November 2006. 24pp.

Murphy, W. & Banks, D. Petrography, mineralogy and weathering of the Sherwood Sandstone. Consultants report to Norwest Holst Soil Engineering. November 2005. 26pp.

Roberts, G. & Murphy, W. Seismic Hazards in Italy. Consultants Report to Benfield Greg Ltd. June 1998. 12pp

Murphy, W. & Inkpen, R. J. The 'memory effect' and its influence on the alteration of the geotechnical properties of building stones. Consultants report to Her Majesty's Inspectorate of Pollution August 1993. 72pp.

SHORT COURSES

- SEACAP 21_004: Theme 6.0 Engineering Geology. Short course on engineering geology and slope instability provided on behalf of Scott Wilson Consulting Engineers: 30 March – 3rd April 2009, National University of Laos, Vientianne, People's Democratic Republic of Laos.

EXTERNAL EXAMINING

Taught Programmes

2002-2006: External Examiner, MSc Applied Geology,
School of the Environment, University of Brighton

Research Degrees

- 2008 PhD Examiner for Florian Buech
Department of Geology, University of Canterbury, New Zealand.
Seismic Response of Little Red Hill: towards and understanding of topographic effects on ground motion and rock slope failure.
- 2007 PhD Examiner for Carlos Charles-Cruz
School of Civil Engineering, University of Leeds.
Thesis title: The geotechnical behaviour of hydraulically placed fills.
- 2007 PhD Examiner for Ioannis Fourniadis
School of Earth Science and Engineering, Imperial College London.
Regional Assessment of landslide impact in the Three Gorges, China, using Remote Sensing.
- 2006: PhD Examiner for Adriana del Pino Sanchez
School of Earth and Environment, University of Leeds.
Thesis title: The kinematic significance of small-scale remobilisation fabrics in deep-water sediments
- 2001: PhD Examiner for Anna Hopper
Department of Civil Engineering, Kingston University.
Thesis title: Landslides in the Lower Greensand Escarpment of South Kent.
- 1998: PhD Examiner for Stephen Wright
Department of Civil Engineering, University of Portsmouth.
Thesis title: Effects of anaerobic and aerobic environments on the passage of leechate through clay liners.
- 1995: PhD Examiner for Mustapha Heddi
Department of Civil Engineering, University of Salford

- Thesis Title: Application of remote sensing techniques in the study of linear features of the Guadix-Baza basin, southern Spain
- 1994: PhD Examiner for Eduardo Reinoso
Wessex Institute of Technology, Southampton.
- Thesis Title: Boundary element analysis applied to the scattering of seismic waves from buried topographic structures in the Mexico City Bay.

POSTGRADUATE TEACHING

2001-present: UNIVERSITY OF LEEDS

Lectures and practicals:

M.Sc. Engineering Geology: lectures, practicals, seminars and fieldwork (EARS5011 Engineering Geology and Site Investigation; EARS5020 Advanced Engineering Geology; EARS5040 Rock Mechanics and Tunnelling; EARS5080 Professional Skills)

M.Sc. Exploration Geophysics: lectures.

Field Courses

Broadway and the Malverns, North Yorkshire.

1992-2000: UNIVERSITY OF PORTSMOUTH

Lectures and practicals:

M.Sc. Geological Hazard Assessment: lectures, seminars and fieldwork

M.Sc. Engineering Geology: lectures and seminars

M.Sc. Ground Investigation Methods: lectures and seminars

M.Sc. Contaminated Land: lectures and seminars

Field courses:

Landslides of the Dorset Coast, Slope instability on the Isle of Wight; Rock Mass characterization in the Malverns; Geohazards in and around the Bay of Naples.

UNDERGRADUATE TEACHING

2001-present UNIVERSITY OF LEEDS

Lectures and practicals:

Applied Earth Observations (School of Geography), Geotechnics (School of Civil Engineering), Engineering Geology (School of Earth Sciences).

1992-2000: UNIVERSITY OF PORTSMOUTH

Lectures and practicals:

Terrain Studies, Professional Skills, Engineering Geology Practice, Environmental Geology Practice, Geological Hazards, Engineering; Seismology and seismic hazards assessment.

Field courses:

SW England, Lake District, Dorset, Malverns.

MEDIA PRESENTATIONS

- 2011 Interviewed on BBC Television News and BBC Radio Scotland about British Earthquakes

2008. Interviewed by CNN Special Report and Christian Science Monitor about the engineering behaviour of buildings during the Szechuan (M=7.6) Earthquake.
- 2006: Interviewed for an ITV documentary about the causes of the Banda Aceh earthquake and subsequent Tsunami.
- 2002: Interviewed by the BBC world Service regarding possible flank collapse on Gran Canaria.
- 1999: Interviewed on Sky News regarding the effects of the 21, September, Chi Chi earthquake, Taiwan.

ADMINISTRATION AND ACADEMIC LEADERSHIP

2001-present UNIVERSITY OF LEEDS

- 2003-2007 Member: Postgraduate Training Committee
- 2001-present M.Sc. Engineering Geology Course Convenor
- 2001-2004 Chairman, MSc Engineering Geology Internal Board of Examiners
- 2001-2004: Chairman, MSc Engineering Geology External Board of Examiners
- 2001-present Member, School of Earth Sciences Teaching and Learning Committee

1992-2000: UNIVERSITY OF PORTSMOUTH

- 1994-2000: Programme Manager: Applied Geoscience Masters Courses (Geohazard Assessment, Ground Investigation Methods and Contaminated Land)
- 1996-2000: Admissions Tutor, MSc Ground Investigation Methods, MSc Contaminated Land.
- 1994-2000: Admissions Tutor, MSc Geohazard Assessment
- 1994-1996: Second Year Co-ordinator: B.Sc. Applied Environmental Geology

OTHER INTERESTS

I am a Rugby Football Union referee and a competitive long distance triathlete.

REFEREES

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