

### Profile

Colin Smith co-founded LimitState Ltd in 2006 with the aim of making available to practicing engineers a number of promising *computational limit analysis* techniques developed at the University of Sheffield. These techniques are now being successfully applied to a range of practical geotechnical and structural engineering problems.

He is a geotechnical engineer with over 20 years of research and teaching experience, and was co-developer of the innovative Discontinuity Layout Optimization computational analysis method utilised in the LimitState:GEO software. Organisations sponsoring his research whilst employed at the University of Sheffield have included EPSRC, NERC, and Network Rail.

### Education

- PhD, Geotechnical Engineering, University of Cambridge, 1991.
- BA (first class), MA, Engineering, University of Cambridge, 1987.

### Appointments held

- Director, LimitState Ltd, 2006-present.
- Erskine Visiting Fellow, University of Canterbury, New Zealand, Feb-June 2009.
- Lecturer / Senior Lecturer, University of Sheffield, 1992-present.
- Research Associate, University of Cambridge, 1990-92.

### Awards and Service to Professional Bodies

- Editorial Panel Member, 'Geotechnique'.
- Secretary to the International Society for Soil Mechanics and Geotechnical Engineering Technical Committee TC205 'Safety and Serviceability in Geotechnical Design'.
- Member Eurocode 7 Evolution Group 4 on Numerical methods.
- Institution of Civil Engineers Baker Medal, 2007.

### Selected Published Software

- LimitState:GEO geotechnical analysis software (2007-present; contributor).

### Selected Publications

- Gilbert, M., **Smith, C.C.**, and Pritchard, T.J. 'Masonry arch analysis using discontinuity layout optimisation', Proceedings of the Institution of Civil Engineers, *Engineering and Computational Mechanics*, Vol. 163, pp. 155-166, 2010.
- Merifield, R.S. and **Smith C.C.**, 'The ultimate uplift capacity of multi-plate strip anchors in undrained clay'. *Computers and Geotechnics*, 37 (4), June, pp 504-514, 2010.
- **Smith, C.C.** and Gilbert, M., 'Application of discontinuity layout optimization to plane plasticity problems', *Proceedings of the Royal Society A*, Vol. 463, pp. 2461-2484, 2007.
- Hulet, K.M., **Smith, C.C.** and Gilbert, M. 'Load-carrying capacity of flooded masonry arch bridges'. *Proceedings of the Institution of Civil Engineers, Bridge Engineering*, 159 (3), September, pp 97-103, 2006.
- **Smith, C.C.** 'Complete limiting stress solutions for the bearing capacity of strip footings on a Mohr-Coulomb soil'. *Geotechnique*, 55 (8), October, pp 607-612, 2005.