

Profile

Thomas Pritchard's PhD work on 'Novel Techniques in Computational Layout Optimization' was a precursor to the technology that is now used in LimitState:GEO. He has been involved with LimitState Ltd since its inception in 2006 and is actively involved in refining emerging techniques and identifying new applications. Additionally he coordinates front-line support and the development of marketing literature.

Education

- PhD, Structural Engineering, University of Sheffield, 2005.
- MEng (Hons), Civil Engineering with Architecture, University of Sheffield, 2000.

Appointments Held

- Senior Engineer, LimitState Ltd, 2008 - Present.
- Research Associate, University of Sheffield / Engineering Consultant to LimitState Ltd, 2006 - 2008.
- Research Associate, University of Sheffield, 2005 - 2006.

Professional Affiliations

- Graduate Member, Institution of Structural Engineers, UK.

Expertise

- Application of computational 'layout optimization' techniques to engineering problems.
- Development of innovative computational techniques for application to a variety of engineering problems.
- Use of LimitState software to undertake assessment of masonry arch bridges.
- Coordinate the production of company technical and marketing literature.
- Development and day-to-day maintenance of company website.

Selected Published Software

- Contributed to the development of LimitState:RING masonry arch analysis software (2006 - present); LimitState:GEO geotechnical analysis software (2007 - present).

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.
- Gilbert, M, Smith, C.C., and **Pritchard, T.J.** (2010). Limit Analysis of Masonry Arch Bridges using DLO. *Engineering and Computational Mechanics*. To appear September 2010.
- Gilbert, M, Smith, C.C., Haslam, I.W. and **Pritchard, T.J.** (2010). Application of discontinuity layout optimization to geotechnical limit analysis problems. In Proc. 7th European Conference on Numerical Methods in Geotechnical Engineering, Trondheim, Norway.
- Gilbert M, Smith C.C., Haslam I.W. and **Pritchard T.J.** (2009) Plastic limit analysis using discontinuity layout optimization (DLO). In Proc. 17th UK Conference on Computational Mechanics (ACME-UK), Nottingham, UK.
- Gilbert M, Smith C.C., **Pritchard T.J.**, Haslam I.W. and Shepherd M (2009) Systematic identification of yield-line patterns in slabs. In Concrete Communication Symposium, Leeds, UK.
- Tyas A, Gilbert M and **Pritchard T** (2006) Practical plastic layout optimization of trusses incorporating stability considerations. *Computers and Structures*, 84 (3-4), January, pp 115-126.

Community Activities

- Trustee on the committee of the Sheffield Cats Shelter. Role involves development and nurturing of revenue streams, management of the charity website, development of promotional / marketing literature and advising on procedures.